Consumers Energy
Count on Us

December 16, 2025

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 West Saginaw Highway
Post Office Box 30221
Lansing, MI 48909

Re: MPSC Case No. U-21981 – In the matter of the application of Consumers Energy Company for authority to increase its rates for the distribution of natural gas and for other relief.

Dear Ms. Felice:

Enclosed for electronic filing in the above-captioned case, please find **Consumers Energy Company's Application, a Proposed Notice of Hearing, non-modifiable Protective Order, and the Testimony and Exhibits of Consumers Energy Company's Witnesses**. Also included is a Proof of Service showing service upon the parties in Consumers Energy Company's last two gas rate cases (Case Nos. U-21490 and U-21806). This is a paperless filing and is therefore being filed only in PDF.

Confidential materials of Company witnesses **Stacy H. Baker and Kendra K. Grob** are being filed under seal with the Michigan Public Service Commission.

In accordance with filing procedures adopted by the Michigan Public Service Commission in Case No. U-18238: (i) exhibits that were prepared in Microsoft Excel format are being filed in Excel with formulas intact in addition to PDF; (ii) tariff changes are being filed in Microsoft Word in addition to PDF with changes shown in redline format; and (iii) workpapers and economic models used to support the rate increase request will be provided to parties upon request in Microsoft Excel with formulas intact. Also provided to the Michigan Public Service Commission is Consumers Energy Company's Part II – Financial Information materials in the above docket via a secure link.

Digital copies of the public rate case filing, including native and PDF testimony, exhibits, workpapers, and models of Consumers Energy Company's witnesses, and Consumers Energy Company's Part II – Financial Information and Part III – Supplemental Data materials are being provided to the MPSC Staff and parties to Case Nos. U-21490 and U-21806 concurrently with this filing via a secure link and this link will be made available to any parties to Case No. U-21981 who were not previously served.

Sincerely,

Anne M. Uitvlugt
Phone: 517-788-2112
Email: anne.uitvlugt@cmsenergy.com

cc: Mike Byrne, Executive Director, MPSC Staff
Bill Stosik, MPSC Staff
Paul Proudfoot, MPSC Staff
Bob Nichols, MPSC Staff
David Chislea, MPSC Staff
Parties to Case Nos.U-21490 and U-21806

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

APPLICATION

Consumers Energy Company ("Consumers Energy" or the "Company") respectfully requests that the Michigan Public Service Commission ("MPSC" or the "Commission") authorize the Company to increase its rates for the distribution of natural gas and grant it additional relief as set forth herein. In support of its request, Consumers Energy states as follows:

I. INTRODUCTION

1. Consumers Energy is, among other things, engaged as a public utility in the business of purchasing, storing, transporting, distributing, and selling natural gas to approximately 1.8 million customers in the state of Michigan. The natural gas system of Consumers Energy is an integrated and interconnected system and is operated as a single utility system in which the same rates and tariffs are applicable.

2. Consumers Energy's retail natural gas business, including its retail transportation, storage, and distribution business, is subject to the jurisdiction of the Commission pursuant to various statutory provisions of 1909 PA 300, as amended, MCL 462.2 *et seq.*; 1919 PA 419, as amended, MCL 460.54 *et seq.*; 1939 PA 3, as amended, MCL 460.1 *et seq.*; and 1982 PA 304, as amended, MCL 460.6h(1) *et seq*. Pursuant to these statutory provisions, the Commission has the power and jurisdiction to regulate Consumers Energy's retail natural gas sales, transportation, storage, and distribution rates.

3. On September 30, 2025, in Case No. U-21806, the Commission issued an Order which approved Consumers Energy's current retail natural gas transportation, storage, and distribution rates. Consumers Energy recovers its cost of gas associated with sales to its retail natural gas sales customers by means of a gas cost recovery clause authorized by the Commission pursuant to the provisions of 1982 PA 304, MCL 460.6h. In addition, the Commission has authorized, through various orders, the recovery of certain additional costs as set forth in the tariffs on file with the Commission.

II. REQUESTED RATE INCREASE

4. For purposes of this case, Consumers Energy has undertaken a complete examination, using a projected test year for the 12-month period ending October 31, 2027, of relevant items of investment, expense, and revenues for the determination of just and reasonable natural gas rates. The Company has chosen to utilize this projected test year as it will allow the rates established in this case to more closely reflect the investments made and expenses incurred during the time the rates established in this case will be in effect. Through its examination, Consumers Energy has determined that an increase in its natural gas rates is required to afford the Company a reasonable opportunity to recover its reasonable costs of providing natural gas service, including a reasonable return on common equity, as more fully described in the accompanying direct testimony and exhibits. Consumers Energy has calculated that, without rate relief, it will experience an annual jurisdictional revenue deficiency of approximately $240 million for the 12-month period ending October 31, 2027.

5. There are several factors contributing to Consumers Energy's need for additional gas revenues above levels currently recovered in base rates. These factors include:

(i.) Ongoing investments in the gas utility assets to provide safe, clean, reliable, and efficient service, and to comply with environmental and legal requirements;

(ii.) Ongoing investments in enhanced technology to provide improved operational efficiencies and increased customer satisfaction; and

(iii.) The Operation and Maintenance ("O&M") expenses necessary to, among other things, support long-term investments and improve customer interactions.

The net impacts of these and other factors described in more detail in the supporting direct testimony and exhibits, when examined in total, necessitate an increase in Consumers Energy's retail natural gas rates.

6. The rate relief requested in this filing is driven by the need to serve Consumers Energy's customers and reflects the Company's continued investment in Michigan. Consumers Energy is committed to customer value and system safety. Consumers Energy's ongoing investment in its transmission system, compression and storage system, and distribution system are part of Consumers Energy's capital investment plan to maintain and improve utility infrastructure, enhance safety of aging distribution assets, and ensure continued customer safety and a reliable system so that customers receive the service and value that they expect from the Company.

7. In order to provide an overview of the Company's long-term investments needed for the supply and delivery of natural gas, the Company is presenting the newest version of its Natural Gas Delivery Plan. The Natural Gas Delivery Plan provides a clear and transparent framework for the next decade of investments in the Company's natural gas assets, planning for natural gas supply and demand, continuing to evolve how the Company operates in accordance

with the Gas Pipeline industry standard American Petroleum Institute Recommended Practice 1173, and developing a strategic framework in response to the decarbonization goals of the Company's natural gas customers and future carbon policy relevant to the utility.

8. The Natural Gas Delivery Plan is built around four objectives: providing customers with safe, reliable, affordable, and cleaner natural gas service. The principal factor necessitating rate relief is Consumers Energy's ongoing infrastructure investments in its Michigan natural gas utility system, which will enable it to execute its Natural Gas Delivery Plan. Examples of the investments being made are in the Company's Enhanced Infrastructure Replacement Program, Material Conditions Program, Compression and Storage Program, Well Rehabilitation Program, Regulatory Compliance Programs, and Capacity/Deliverability Programs. These continued investments in natural gas infrastructure reflect the Company's commitment to identify and replace at-risk natural gas distribution pipe across the state, and include investments required to maintain compliance with pipeline integrity requirements, transmission, compression, and storage system upgrades to better serve customers, and distribution system improvements. These investments will help ensure that the Company is able to deliver natural gas safely and reliably to customers.

Enhanced technology investments are also ongoing at the Company. Continually improving on customer service and internal operations will require significant Information Technology upgrades. An example of a technology upgrade project being undertaken is the SAP S/4HANA Implementation Project ("SAP Project"). This project is required to modernize the Company's current Enterprise Resource Planning SAP solution that will reach the end of mainstream vendor maintenance on December 31, 2027. Additionally, the Company's investments and O&M spending address the new digital capabilities and foundational technology

required to realize the outcomes of the Natural Gas Delivery Plan, as well as those that enable residential and business programs that engage customers and adapt with their needs and behaviors. Without these new digital capabilities, the Company will be limited in its ability to achieve key outcomes of these plans, including: the ability to provide customers with the data, technology, and tools needed to interact with the Company; improvements in system monitoring via high resolution system visibility; and investments in risk modeling and predictive technologies to help avoid reactive events on the Company's system.

9. The Company strives to keep O&M costs at a reasonable level. Contributors to the Company's O&M expense include the effects of inflation, upgrades to the Company's system, and the Company's Natural Gas Delivery Plan. As the Company continues to invest in its technology assets, utilize cloud solutions, and increase cyber security requirements, O&M expenses are necessary to operate, support, secure, and maintain the technology systems in place. In addition, the Company is requesting rate recovery for a portion of incentive compensation costs that the Company incurs to attract and retain a talented workforce. Increases in revenue requirements have been offset, in part, by Company efforts to control O&M expenses and mitigate cost increases. Specifics regarding the Company's requests are described in the direct testimony and exhibits which are being filed in support of this Application.

10. In order to carry out its operational and customer-related goals, it is important that the financial health of Consumers Energy be sufficient to maintain adequate service quality and reliability, and to ensure the ability of the utility to access capital markets at reasonable terms so needed investments can be made. The investments that Consumers Energy plans to make in the next five years are not only necessary to provide safe, reliable natural gas utility service; they also will create other economic benefits, including Michigan jobs and tax base. To maintain its

financial health and support these investments, Consumers Energy requests that rates be established in this case based on an authorized return on common equity of 10.25% and reflect an overall rate of return on total rate base of 6.40% on an after-tax basis. The Company also requests that the Commission recognize for ratemaking purposes that the Company needs an equity ratio of 50.75%. Consumers Energy submits that the requested returns reasonably balance the interests of customers and investors.

11. Without a rate increase, Consumers Energy's gas revenues and overall rate of return will be below a just and reasonable level. Without rate relief, Consumers Energy's retail natural gas rates will be so low as to deprive Consumers Energy of a reasonable return on the Company's property and to amount to confiscation and deprivation of the Company's property, contrary to the Company's rights under the Constitutions of the United States and the State of Michigan.

III. RATE DESIGN, TARIFF, AND OTHER PROPOSALS

12. Consumers Energy proposes to use a cost-based rate design by customer class. The Company proposes to allocate the required gas revenue increase among rate classes as set forth on Attachment A to this Application. A comparison of present and proposed rates is set forth on Attachment B to this Application.

13. Consistent with the Cost-of-Service Study ("COSS") methodologies approved by the Commission in prior cases and the Commission's rate case filing requirements established in Case No. U-18238, Consumers Energy is sponsoring two primary versions of the COSS (Version I and II). Consumers Energy supports the use of COSS Version II. These COSS are discussed in testimony which is being filed in support of this Application. The Company has designed rates based on COSS Version II so that the revenue recovered from each customer class reflects the

costs for that customer class. The Company is not proposing any significant changes to its rate design.

14. In addition to seeking authority to increase the level of rates and charges, Consumers Energy is proposing various revisions to its gas rules, regulations, and tariffs. Reference to Consumers Energy's direct testimony and exhibits provides additional details on the relief being sought.

15. Consumers Energy is requesting the continuation of a Defined Benefit ("DB") Pension/Other Post-Employment Benefits ("OPEB") Volatility Mechanism. DB Pension and OPEB expenses are sensitive to changes in asset returns or other assumptions which creates significant potential for large variability in future expenses. Customers will continue to benefit from a mechanism that eliminates the risk of future volatility in expense. This mechanism would continue allowing the Company to defer annually the difference between the DB Pension/OPEB expense included in rates versus the actual annual DB Pension/OPEB expense recorded by the Company. If the Company's actual annual DB Pension/OPEB expense is less than the expense approved in rates, this difference would be recognized as a regulatory liability and be amortized over 10 years. Similarly, if actual annual DB Pension/OPEB expense is greater than the expense approved in rates, the Company proposes that this difference would continue to be recognized as a regulatory asset and be amortized in the same manner. Any amortization of these regulatory assets or liabilities would be included in future general rate cases. Further details supporting the Company's proposal regarding the mechanism are described in the direct testimony and exhibits which are being filed in support of this Application.

16. The Company is also asking to implement a new revenue decoupling mechanism ("RDM"). Under the Company's proposal, the RDM would be applicable to all retail and

transportation gas customers. The RDM would establish a baseline sales volume for each customer rate class as approved by the Commission in the most recent general rate case test year. Annually thereafter, the Company would determine the actual sales volume per rate class and compare that to the established baseline. The difference in sales volume would be multiplied by the approved distribution charge to calculate the revenue difference. Any revenue above the baseline amount would be refunded to customers through a 12-month volumetric credit. Any revenue below the baseline amount would be collected from customers through a 12-month volumetric surcharge. The Company proposes to file the RDM reconciliation within 90 days following the conclusion of the test year period. Further details supporting the Company's proposal regarding the mechanism are described in the direct testimony and exhibits which are being filed in support of this Application.

17. In addition to other relief described in this Application, Consumers Energy is seeking Commission approval of certain accounting requests. The Company requests accounting approval for use of regulatory assets or regulatory liabilities, as needed, for the DB Pension/OPEB Volatility Mechanism. The Company is also requesting approval of certain cost deferrals associated with operation costs. Specifically, the Company is requesting to defer for refund or recovery any O&M expenses related to its Staking and Locating Program that are below, or above, amounts included in rates for the test year.

18. Public Act 341 of 2016, MCL 460.6a(5), specifies a 10-month timeframe for processing rate cases. In Case No. U-18238, the Commission established new standard rate case filing forms and instructions based on the 10-month statutory rate case processing timeframe. As directed, the Company has provided the information related to these requirements.

IV. TESTIMONY, EXHIBITS, AND RESERVATION OF RIGHT TO AMEND

19. Concurrently with the filing of this Application, Consumers Energy is filing written direct testimony and exhibits in support of natural gas rate relief and the other relief it is seeking in this case. Reference to this material will provide additional details regarding the proposals and relief being sought. The relief described in the direct testimony and exhibits should be considered as if specifically requested in this Application. Consumers Energy reserves the right to revise, amend, or otherwise change the relief it is requesting in any way appropriate depending upon the duration and progress of hearings in this proceeding, the issuance of orders that have an impact upon this case, or the occurrence of other material events.

20. In addition to the issues described above, it is possible that other pending or to-be-filed proceedings or other events may have impacts upon the rate adjustments requested in this filing. These impacts will be evaluated for materiality and may need to be considered in the results of this proceeding.

V. REQUEST FOR RELIEF

WHEREFORE, Consumers Energy Company respectfully requests that the Michigan Public Service Commission:

A. Authorize Consumers Energy to adjust its retail natural gas rates so as to provide additional revenue of approximately $240 million annually above the level established in Case No. U-21806 based on a projected 12-month test year ending October 31, 2027;

B. Authorize Consumers Energy to adjust its existing retail natural gas rates so as to produce a rate of return on common equity of not less than 10.25%;

C. Approve the DB Pension/OPEB Volatility Mechanism proposed by the Company in this case;

D. Approve the Revenue Decoupling Mechanism proposed by the Company in this case;

E. Grant the accounting authorizations described in the accompanying direct testimony;

F. Approve the modifications to the rates, rules, and regulations as described in the direct testimony and exhibits that accompany this Application; and

G. Grant Consumers Energy such other and further relief as is just and reasonable.

Respectfully submitted,

CONSUMERS ENERGY COMPANY

Dated: December 16, 2025

By: _____

Kelly M. Hall
Senior Vice President, Regulatory and
Legal Affairs and Deputy General Counsel

_____

Bret A. Totoraitis (P72654)
Anne M. Uitvlugt (P71641)
Gary A. Gensch, Jr. (P66912)
Spencer A. Sattler (P70524)
Evan B. Keimach (P83418)
Michael C. Rampe (P58189)
One Energy Plaza
Jackson, Michigan 49201
Attorneys for Consumers Energy Company
(517) 788-2112

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

VERIFICATION

Kelly M. Hall states that she is Senior Vice President, Regulatory and Legal Affairs and Deputy General Counsel of Consumers Energy Company; that she has executed the foregoing Application for and on behalf of Consumers Energy Company; that she has read the foregoing Application and is familiar with the contents thereof; that the facts contained therein are true, to the best of her knowledge and belief; and that she is duly authorized to execute such Application on behalf of Consumers Energy Company.

Dated: December 16, 2025 By: Kelly M. Hall

Kelly M. Hall
Senior Vice President, Regulatory and Legal Affairs and Deputy General Counsel

ATTACHMENTS

Consumers Energy Company **ATTACHMENT A**
Summary of Present and Proposed Revenue by Rate Schedule
Total Revenue
Case No. U-21981

Line No.	(a) Description	(b) Present Revenue	(c) Proposed Revenue	(d) Difference Revenue	(e) Difference Percent
		$000	$000	$000	%
	Residential Service				
1	Single Family Dwelling A	$ 1,757,849	$ 1,900,034	$ 142,185	8.1
2	Multifamily Dwelling A-1	58,560	62,100	3,540	6.0
3	Total Residential Service	1,816,409	1,962,134	145,725	8.0
	General Service				
4	Small Service GS-1	275,139	305,792	30,653	11.1
5	Medium Service GS-2	249,203	273,934	24,731	9.9
6	Large Service GS-3	60,261	66,121	5,860	9.7
7	Total General Service	584,603	645,847	61,244	10.5
8	Total Gas Sales [(1)]	2,401,012	2,607,981	206,969	8.6
	Transportation				
9	Small Transport ST	46,483	55,610	9,127	19.6
10	Large Transport LT	32,086	38,711	6,625	20.6
11	Extremely Large Transport XLT	34,378	42,363	7,985	23.2
12	Extra Extremely Large Transport XXLT	10,383	19,584	9,201	88.6
13	Total Transportation	123,330	156,268	32,938	26.7
	Transmission-Only				
14	Small Transport STT	491	561	70	14.2
15	Total Transmission-Only	491	561	70	14.2
16	Total Service (Delivery & Fuel)	$ 2,524,834	$ 2,764,811	$ 239,977	9.5
17	Additional Late Payment Charge Revenue	0	540	540	
18	Revenue Increase/(Decrease) Due to Rounding	0	(561)	(561)	
19	Revenue (Sufficiency)/Deficiency	$ 2,524,834	$ 2,764,790	$ 239,956	9.5

Notes
[(1)] Includes aggregate billed transportation accounts.

Line No.	(a) Description	(b) Units	(c) Present	(d) Proposed
	Residential Class			
	Single Family Dwelling A			
1	Customer Charge	$/Mth	$ 17.00	$ 20.00
2	Income Assistance - RIA Program	$/Mth	$ (17.00)	$ (20.00)
3	Income Assistance - LIAC Pilot	$/Mth	$ (30.27)	$ (30.27)
4	Distribution Charge	$/Mcf	$ 5.7786	$ 6.3310
	Multifamily Dwelling A-1			
5	Customer Charge	$/Mth	$ 17.00	$ 20.00
6	Excess Peak Charge	$/Mcf	$ 0.1035	$ -
7	Distribution Charge	$/Mcf	$ 5.7786	$ 6.3310
	General Service			
	Small Service GS-1			
8	Customer Charge - Principal	$/Mth	$ 21.00	$ 27.00
9	Customer Charge - Contiguous	$/Mth	$ 21.00	$ 27.00
10	Distribution Charge	$/Mcf	$ 4.9461	$ 5.7171
	Medium Service GS-2			
11	Customer Charge - Principal	$/Mth	$ 133.73	$ 144.85
12	Customer Charge - Contiguous	$/Mth	$ 45.00	$ 75.00
13	Distribution Charge	$/Mcf	$ 3.5935	$ 4.3027
	Large Service GS-3			
14	Customer Charge - Principal	$/Mth	$ 330.17	$ 375.28
15	Customer Charge - Contiguous	$/Mth	$ 125.00	$ 185.00
16	Distribution Charge	$/Mcf	$ 3.3578	$ 4.0262
	Transportation			
	Small Transport ST			
17	Customer Charge - Principal	$/Mth	$ 1,160.00	$ 1,320.00
18	Customer Charge - Contiguous	$/Mth	$ 105.00	$ 195.00
19	Distribution Charge	$/Mcf	$ 1.8446	$ 2.2067
	Large Transport LT			
20	Customer Charge - Principal	$/Mth	$ 4,685.01	$ 5,223.81
21	Customer Charge - Contiguous	$/Mth	$ 105.00	$ 210.00
22	Distribution Charge	$/Mcf	$ 1.4216	$ 1.7382
	Extremely Large Transport XLT			
23	Customer Charge - Principal	$/Mth	$ 18,384.33	$ 20,060.33
24	Customer Charge - Contiguous	$/Mth	$ 105.00	$ 400.00
25	Remote Meter Charge	$/Mth	$ 70.00	$ 70.00
26	Distribution Charge	$/Mcf	$ 1.0928	$ 1.3821
	Extra Extremely Large Transport XXLT			
27	Customer Charge - Principal	$/Mth	$ 35,089.70	$ 66,237.89
28	Remote Meter Charge	$/Mth	$ 70.00	$ 70.00
29	Distribution Charge	$/Mcf	$ 0.4601	$ 0.8678
	Transmission-Only Transportation Service Rate TOT			
30	Transmission Charge	$/Mcf	$ 0.6229	$ 0.7114

Line No.	(a) Description	(b) Units	(c) Present	(d) Proposed
	Authorized Tolerance Level (ST, LT, XLT, XXLT) [2]			
31	2.0% ATL	$/Mcf	$ (0.0738)	$ (0.1459)
32	4.0% ATL	$/Mcf	$ (0.0511)	$ (0.1010)
32	6.5% ATL	$/Mcf	$ (0.0227)	$ (0.0449)
33	7.5% ATL	$/Mcf	$ (0.0113)	$ (0.0225)
33	8.5% ATL	$/Mcf	$ -	$ -
34	9.5% ATL	$/Mcf	$ 0.0113	$ 0.0225
34	10.5% ATL	$/Mcf	$ 0.0227	$ 0.0449
	Customer Attachment Program			
35	Discount Rate	%	7.08	7.43
36	Carrying Cost Rate	%	8.73	9.19
	Other Transportation			
37	Authorized Gas Use Charge	$/Mcf	$ 1.00	$ 1.00
38	Unauthorized Gas Use Charge	$/Mcf	$ 10.00	$ 10.00
39	Load Balancing Charge	$/MMBtu	$ 0.25	$ 0.25
40	EUT Gas In Kind	%	2.57	2.38
	Non-Transmitting Gas Meter - Automated Meter Reading (AMR) Provision			
41	One Time Charge Prior to AMR Install	$/Customer	$ 109.94	$ 109.94
42	One Time Charge After AMR Install	$/Customer	$ 177.53	$ 177.53
43	Monthly Charge	$/Customer	$ 6.03	$ 6.03

Notes

[1] Excludes Outdoor Lighting GL

[2] Only the 2.0% ATL adjustment is available to XXLT and the 4.0% ATL credit is subtracted to get a credit of $(0.0449)

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

PROOF OF SERVICE

STATE OF MICHIGAN)
) SS
COUNTY OF JACKSON)

Melissa K. Harris, being first duly sworn, deposes and says that she is employed in the Legal Department of Consumers Energy Company; that on December 16, 2025, she served an electronic copy of **Consumers Energy Company's Application, a Proposed Notice of Hearing, a Proposed Protective Order, and the Public Testimony and Exhibits of Consumers Energy Company's Witnesses** upon the persons listed in Attachment 1 hereto, at the e-mail addresses listed therein.

She further states that she provided the public versions of (i) Consumers Energy Company's Application, a Proposed Notice of Hearing, a Proposed Protective Order, and the Testimony and Exhibits of Consumers Energy Company's Witnesses in PDF format; (ii) exhibits in Excel format that were filed in Excel format; (iii) tariff changes in Word format that were filed in Word format; (iv) Workpapers in PDF format of Consumers Energy's witnesses; and (v) Consumers Energy Company's Part II and Part III Standard Filing requirements via secure filing sharing link at the email addresses listed in Attachment 1.

Melissa K. Harris

Subscribed and sworn to before me this 16th day of December, 2025.

Crystal L. Chacon

Crystal L. Chacon, Notary Public
State of Michigan, County of Eaton
My Commission Expires: 05/25/30
Acting in the County of Jackson

ATTACHMENT 1 TO CASE NO. U-21981
(Including Parties to Case Nos. U-21490 and U-21806)

Party	Email Address
Counsel for Consumers Energy Company	
Bret A. Totoraitis, Esq. Gary A. Gensch, Jr., Esq. Anne M. Uitvlugt, Esq. Spencer A. Sattler, Esq. Evan B. Keimach, Esq. Michael C. Rampe, Esq.	Bret.Totoraitis@cmsenergy.com Gary.GenschJr@cmsenergy.com Anne.Uitvlugt@cmsenergy.com Spencer.Sattler@cmsenergy.com Evan.Keimach@cmsenergy.com Michael.Rampe@cmsenergy.com mpsc.filings@cmsenergy.com
Counsel for the Michigan Public Service Commission Staff	
Michael J. Orris, Esq. Amit T. Singh, Esq. Anna B. Stirling, Esq. Alena Clark, Esq.	orrism@michigan.gov singha9@michigan.gov stirlinga1@michigan.gov clarka55@michigan.gov
Michigan Public Service Commission Staff	
Mike Byrne Bill Stosik David Chislea Bob Nichols Nick Revere Lori Mayabb*	byrneM@michigan.gov stosikb@michigan.gov chislead@michigan.gov nicholsb1@michigan.gov reveren@michigan.gov mayabbl@michigan.gov
Counsel for Attorney General Dana Nessel	
Celeste R. Gill, Esq.	gillc1@michigan.gov AG-ENRA-Spec-Lit@michigan.gov
Counsel for Citizens Utility Board of Michigan ("CUB"), Michigan Environmental Council ("MEC") and Sierra Club ("SC")	
Christopher M. Bzdok, Esq. Holly L. Hillyer, Esq. Natasha Fowles	chris@tropospherelegal.com holly@tropospherelegal.com natasha@tropospherelegal.com
Counsel on behalf of Sierra Club ("SC")	
Nihal Shrinath, Esq.	Nihal.shrinath@sierraclub.org
Counsel for the Association of Businesses Advocating Tariff Equity ("ABATE")	
Stephen A. Campbell, Esq. Michael J. Pattwell, Esq. Benjamin J. Holwerda, Esq.	scampbell@clarkhill.com mpattwell@clarkhill.com bholwerda@clarkhill.com
Counsel for Retail Energy Supply Association ("RESA")	
Jennifer Utter Heston, Esq.	jheston@potomaclaw.com
Counsel for the Lansing Board of Water & Light ("LBWL") and Michigan State University ("MSU")	
Nolan J. Moody, Esq. Cole V. Lussier, Esq. Joseph A. Vacante, Esq.	nmoody@dickinsonwright.com clussier@dickinsonwright.com jvacante@dickinsonwright.com
Counsel for LBWL	
Mark Matus, Esq.	mark.matus@lbwl.com
Counsel for Energy Michigan	
Timothy J. Lundgren, Esq. Laura A. Chappelle, Esq. Justin K. Ooms, Esq.	tjlundgren@varnumlaw.com lachappelle@varnumlaw.com jkooms@varnumlaw.com

* Receives Confidential Materials

ATTACHMENT 1 TO CASE NO. U-21981
(Including Parties to Case Nos. U-21490 and U-21806)

Counsel for The Ecology Center, The Environmental Law & Policy Center ("ELPC"), Union of Concerned Scientists ("UCS"), and Vote Solar (collectively, "CEO")	
Daniel Abrams, Esq. Alondra Estrada Carolyn Boyce	dabrams@elpc.org aestrada@elpc.org cboyce@elpc.org MPSCDocket@elpc.org

* Receives Confidential Materials

Proposed Notice of Hearing
MPSC Case No. U-21981

S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

NOTICE OF HEARING
FOR THE NATURAL GAS CUSTOMERS OF CONSUMERS ENERGY COMPANY

CASE NO. U-21918

- Consumers Energy Company is requesting approval from the Michigan Public Service Commission to increase its rates for the distribution of natural gas and for other relief.

- **A TYPICAL RESIDENTIAL CUSTOMER WHO USES 89 Mcf (THOUSAND CUBIC FEET) OF NATURAL GAS PER YEAR MAY SEE AN INCREASE IN NATURAL GAS DISTRIBUTION COSTS OF APPROXIMATELY $85.16 PER YEAR IF THE MICHIGAN PUBLIC SERVICE COMMISSION APPROVES THE REQUEST.**

- The information below describes how a person may participate in this case.

- You may call or write Consumers Energy Company, One Energy Plaza, Jackson, Michigan 49201, (800) 477-5050 for a free copy of its application. Any person may review the application at the offices of Consumers Energy Company.

- The first public hearing in this matter will be held:

DATE/TIME: _____, 2025, at 9:00 a.m.
This hearing will be a prehearing conference to set future hearing dates and decide other procedural matters.

BEFORE: Administrative Law Judge _____

LOCATION: Michigan Public Service Commission
7109 West Saginaw Highway
Lansing, Michigan

PARTICIPATION: Any interested person may attend and participate. The hearing site is accessible, including handicapped parking. Persons needing any accommodation to participate should contact the Commission's Executive Secretary at (517) 284-8090 in advance to request mobility, visual, hearing or other assistance.

The Michigan Public Service Commission (Commission) will hold a public hearing to consider Consumers Energy Company's (Consumers Energy) December 16, 2025 application, which seeks Commission approval to: 1) adjust its retail natural gas rates to provide additional

revenue of up to $240 million annually for the 12-month test period ending October 31, 2027; 2) adjust the Company's existing retail natural gas rates to produce a return on common equity of not less than 10.25%; 3) continue the Defined Benefit Pension/Other Post-Employment Benefits Volatility Mechanism to annually reconcile the difference between the Defined Benefit Pension/Other Post-Employment Benefits expense included by the Commission in rates versus the actual annual expense recorded; 4) approve a Revenue Decoupling Mechanism that would reconcile actual sales volumes by rate case to the baseline sales volume for each customer rate class as approved by the Commission; 5) modify its rates, rules, and regulations; 6) grant certain accounting authorizations as described in the Company's filing; and 7) grant any other further relief as is just and reasonable.

All documents filed in this case shall be submitted electronically through the Commission's E-Dockets Website at: michigan.gov/mpscedockets. Requirements and instructions for filing can be found in the User Manual on the E-Dockets help page. Documents may also be submitted, in Word or PDF format, as an attachment to an email sent to mpscedockets@michigan.gov. If you require assistance prior to e-filing, contact Commission staff at (517) 284-8090 or by e-mail at mpscedockets@michigan.gov.

Any person wishing to intervene and become a party to the case shall electronically file a petition to intervene with this Commission by _____, 2025. (Interested persons may elect to file using the traditional paper format.) The proof of service shall indicate service upon Consumers Energy Company Legal Department - MPSC Regulatory, One Energy Plaza, Jackson, Michigan 49201.

Any person wishing to make a statement of position without becoming a party to the case may participate by filing an appearance. To file an appearance, the individual must attend the hearing and advise the presiding administrative law judge of his or her wish to make a statement of position. All information submitted to the Commission in this matter will become public information, available on the Michigan Public Service Commission's Web site, and subject to disclosure.

Requests for adjournment must be made pursuant to the Commission's Rules of Practice and Procedure R 792.10422 and R 792.10432. Requests for further information on adjournment should be directed to (517) 241-6060.

A copy of Consumers Energy's request may be reviewed on the Commission's website at michigan.gov/mpscedockets, and at the office of Consumers Energy Company, One Energy Plaza, Jackson, MI. For more information on how to participate in a case, you may contact the Commission at the above address or by telephone at (517) 284-8090.

Jurisdiction is pursuant to 1909 PA 106, as amended, MCL 460.551 et seq.; 1919 PA 419, as amended, MCL 460.51 et seq.; 1939 PA 3, as amended, MCL 460.1 et seq.; 1982 PA 304, as amended, MCL 460.6h et seq.; 1969 PA 306, as amended, MCL 24.201 et seq.; and the Commission's Rules of Practice and Procedure, as amended, 1999 AC, R 460.17101 et seq.

CONSUMERS ENERGY COMPANY HAS REQUESTED THE INCREASES AND OTHER PROPOSALS DESCRIBED IN THIS NOTICE. THE MICHIGAN PUBLIC SERVICE COMMISSION MAY GRANT OR DENY THE REQUESTED INCREASES AND OTHER PROPOSALS IN WHOLE OR IN PART, MAY GRANT LESSER OR GREATER INCREASES THAN THOSE REQUESTED, AND MAY AUTHORIZE A LESSER OR GREATER RATE FOR ANY CLASS OF SERVICE THAN THAT REQUESTED.

Month __, 20XX

NON-MODIFIABLE PROTECTIVE ORDER

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

PROTECTIVE ORDER

This Protective Order governs the use and disposition of Protected Material that any Party discloses to another Party during the course of this proceeding. This Protective Order protects non-public, confidential information and materials so designated by the Disclosing Party as Protected Material, as defined herein. Accordingly, it is ordered:

I. "Protected Material" and Other Definitions

A. "Protected Material" consists of trade secrets or confidential, proprietary, or commercially sensitive information provided in Disclosing Party's application, exhibits, discovery or audit responses, any witness' related exhibits and testimony, motions, objections, briefing, responses to an order issued by the presiding hearing officer or the Michigan Public Service Commission ("MPSC" or the "Commission), and any arguments of counsel describing or relying upon the Protected Material. Subject to challenge under Paragraph IV.A, Protected Material shall also consist of non-public confidential information and materials including, but not limited to, the following information disclosed during the course of this case if it is marked as required by this Protective Order:

1. To the extent permitted, information obtained under license from a third-party licensor, to which the Disclosing Party or witnesses engaged by the Disclosing Party is a licensee, that is subject to any confidentiality or non-transferability clause. This information includes reports; analyses; models

(including related inputs and outputs); trade secrets; and confidential, proprietary, or commercially sensitive information that the Disclosing Party or one of its witnesses receives as a licensee and is authorized by the third-party licensor to disclose consistent with the terms and conditions of this Protective Order.

2. Information that is protected as confidential in another jurisdiction that the Applicant provides utility service, and the source of the other jurisdiction's protective designation is made known to the Receiving Party.

B. The information subject to this Protective Order does not include:

1. Information that is or has become available to the public through no fault of the Receiving Party or Reviewing Representative and no breach of this Protective Order, or information that is otherwise lawfully known by the Receiving Party without any obligation to hold it in confidence;

2. Information received from a third party free to disclose the information without restriction;

3. Information that is approved for release by written authorization of the Disclosing Party, but only to the extent of the authorization;

4. Information that is required by law or regulation to be disclosed, but only to the extent of the required disclosure; or Information that is disclosed in response to a valid, non-appealable order of a court of competent jurisdiction or governmental body, but only to the extent the order requires.

C. "Applicant" refers to the filing party in this proceeding.

D. "Disclosing Party" means a Party producing Protected Material in this proceeding.

E. "Party" refers to the Applicant, MPSC Staff ("Staff"), Michigan Attorney General, or any other person, company, organization, or association that is granted intervention in this case under the Commission's Rules of Practice and Procedure, Mich Admin Code, R 792.10401 et al.

F. "Receiving Party" means any Party to this proceeding who requests or receives access to Protected Material. A Receiving Party is responsible for assuring that persons,

representatives, or agents under its control or supervision comply with this Protective Order.

G. "Reviewing Representative" means a representative of the Receiving Party who is:

1. An attorney who has entered an appearance in this proceeding for a Receiving Party;

2. An attorney, paralegal, or other employee associated, for the purpose of this case, with an attorney described in Paragraph I.G.1;

3. An expert or employee of an expert retained by a Receiving Party to advise, prepare for, or testify in this proceeding; or an employee or other representative of a Receiving Party with significant responsibility in this case.

H. "Nondisclosure Certificate" refers to Attachment 1 to this Protective Order.

Except as otherwise provided herein, the Reviewing Party and Reviewing Representatives will be required to sign Nondisclosure Certificates. However, Nondisclosure Certificates will not be required from administrative law judges, members of the Commission and its support staff, Staff (excluding consultants, third-party experts, agents or other similar persons), and Staff counsel, for whom by virtue of their employment are presumed to be bound by the terms of this Protective Order.

II. Access to and Use of Protected Material

A. This Protective Order governs the use of all provided Protected Material. This Protective Order protects: (i) the Protected Material; (ii) any copy or reproduction of the Protected Material made by any person; and (iii) any memorandum, handwritten notes, or any other form of information that copies, contains, or discloses Protected Material. All Protected Material in the possession of a Receiving Party and a Reviewing Representative shall be maintained in a secure place. Access to Protected Material shall be limited to the Receiving

Party and the Reviewing Representative, after each has executed the Nondisclosure Agreement and provided a copy of the Nondisclosure Agreement to the Disclosing Party, subject to the limited exception in Paragraph I.H.

B. Protected Material must be used and disclosed by the Receiving Party solely in accordance with the terms and conditions of this Protective Order. A Receiving Party and Reviewing Representative may analyze the Protected Material; make or respond to discovery; present evidence; prepare testimony, argument, briefs, or other filings; prepare for cross-examination; consider strategy; and evaluate settlement. A Reviewing Representative shall not release or disclose the content of Protected Material to any other person or use the information for any other purpose.

C. The Disclosing Party may request the Receiving Party withhold certain information from a Reviewing Representative and retains the right to object to any designated Reviewing Representative if the Disclosing Party has reason to believe that there is an unacceptable risk of misuse of confidential information. If a Disclosing Party objects to a Reviewing Representative, then the Disclosing Party shall submit the dispute to the presiding hearing officer simultaneously upon objection. If the Disclosing Party notifies a Receiving Party of an objection to a Reviewing Representative, then the Protected Material shall not be provided to that Reviewing Representative until the objection is resolved by agreement or by the presiding hearing officer.

D. If a Receiving Party seeks access to Critical Energy Infrastructure Information ("CEII") as defined in 16 U.S.C § 824o-1(a)(3) and FERC rules, specifically 18 CFR § 388.113(c), the Receiving Party and Reviewing Representative shall also sign the CEII Nondisclosure Certificate (Attachment 2 to this Protective Order) and provide a copy of the

executed CEII Nondisclosure Certificates to the Disclosing Party.

E. The obligations under this Protective Order do not expire by entry of a final order in this case and are enforceable by the MPSC or a court of competent jurisdiction. To the extent Protected Material is not returned to a Disclosing Party, it remains subject to this Protective Order. Members of the Commission, Commission staff assigned to assist the Commission with its deliberations, and the presiding hearing officer shall have access to all Protected Material that is submitted to the Commission under seal.

F. A Party retains the right to seek further restrictions on the dissemination of Protected Material to persons who have or may subsequently seek to intervene in this MPSC proceeding.

G. Nothing in this Protective Order precludes a Party from asserting a timely evidentiary objection to the proposed admission of Protected Material into the evidentiary record for this case.

III. Procedures

A. The Disclosing Party shall identify what portion(s) of any document designated confidential it considers confidential. This can be done through highlights or other clear identifier. The Disclosing Party must mark any information that it considers confidential as "CONFIDENTIAL: SUBJECT TO THE PROTECTIVE ORDER ISSUED IN CASE NO. U-21981." Software executable files containing Protected Material may not be capable of being marked with the foregoing required protective language. The inability to mark software executable files containing Protected Material with such protective language shall not diminish the requirements of this Protective Order. It shall be sufficient if the medium used to deliver software executable files containing Protected Material is marked with the required protective

language. However, any output from the software executable files containing Protected Material that is generated only as a reproducible document, whether electronic or non-electronic, that is capable of being marked with the required protective language, shall be marked by the party who generated the output with such protective language and subject to the requirements of this Protective Order. If the Receiving Party or a Reviewing Representative makes copies of any Protected Material, they shall conspicuously mark the copies as Protected Material. Notes of Protected Material shall also be conspicuously marked as Protected Material by the person making the notes.

B. If a Receiving Party wants to quote, refer to, or otherwise use Protected Material in pleadings, pre-filed testimony, exhibits, cross-examination, briefs, oral argument, comments, or in some other form in this proceeding (including administrative or judicial appeals), the Receiving Party shall do so consistent with procedures that will maintain the confidentiality of the Protected Material. For purposes of this Protective Order, the following procedures apply:

1. Written submissions using Protected Material shall be filed in a sealed record to be maintained by the MPSC's Docket Section, or by a court of competent jurisdiction, in envelopes clearly marked on the outside, "CONFIDENTIAL – SUBJECT TO THE PROTECTIVE ORDER ISSUED IN CASE NO. U-21981." Simultaneously, identical documents and materials, with the Protected Material redacted, shall be filed and disclosed the same way that evidence or briefs are usually filed;

2. Oral testimony, examination of witnesses, or argument about Protected Material shall be conducted on a separate record to be maintained by the MPSC's Docket Section or by a court of competent jurisdiction. These separate record proceedings shall be closed to all persons except those furnishing the Protected Material and persons otherwise subject to this Protective Order. The Receiving Party presenting the Protected Material during the course of the proceeding shall give the presiding officer or court sufficient notice to allow the presiding officer or court an opportunity to take measures to protect the confidentiality of the Protected Material; and

3. Copies of the documents filed with the MPSC which contain Protected Material, including the portions of the exhibits, transcripts, or briefs that refer

to Protected Material, shall be marked or identified as, "CONFIDENTIAL - SUBJECT TO PROTECTIVE ORDER IN CASE NO. U-21981" and shall be maintained in a separate portion of the record under seal, segregated in the files of the Commission, and withheld from inspection by any person not bound by the terms of this Order.

C. The Protected Material subject to this Order shall be shielded from disclosure to the extent permitted by law. If any person files a request under the Freedom of Information Act ("FOIA") with the MPSC or the Michigan Attorney General seeking access to documents subject to this Protective Order, the MPSC's Executive Secretary, Staff, or the Attorney General shall promptly notify the Disclosing Party, and the Disclosing Party may take whatever legal actions it deems appropriate to protect the Protected Material from disclosure. In light of Section 5 of the Freedom of Information Act, MCL 15.235, the notice must be given at least five (5) business days before the MPSC, Staff, and/or the Michigan Attorney General grant the request in full or in part.

IV. Termination of Protected Status

A. A Receiving Party reserves the right to challenge by motion whether a document or information is Protected Material and whether this information can be withheld under this Protective Order. The Receiving Party challenging the protected status of the document must explicitly state its reason for challenging the confidential designation. In response to a motion, the Commission or the presiding hearing officer in this case may revoke a document's protected status after notice and hearing. If the presiding hearing officer revokes a document's protected status, then the document loses its protected status after 14 days unless a Party files an application for leave to appeal the ruling and a request for a stay to the Commission pursuant to R 792.10433. If the application for leave is timely, the document's protected status will continue during the Commission appeal process. Any Party opposing the application for leave to appeal

and the stay shall file an answer with the Commission no more than 14 days after the filing and service of the appeal. Continued protected status post order, will be determined by the Commission in its order addressing the application for leave and the request for stay. Nothing in this paragraph shall prohibit the Disclosing Party from seeking a stay on appeal of the Commission's decision regarding the revocation of any document's protected status.

B. The Disclosing Party bears the burden of proving that the document should continue to be protected from disclosure.

V. Retention of Documents

Protected Material remains the property of the Disclosing Party and, except as required by applicable law and State retention schedules, only remains available to the Receiving Party until the time expires for petitions for rehearing of a final MPSC order, until the MPSC has ruled on all petitions for rehearing in this case (if any), or until judicial review is completed and the time to take further appeal has expired. If the Disclosing Party seeks to have the Receiving Party return all Protected Material in the Receiving Party's possession or in the possession of its Reviewing Representatives, or certify in writing that all Protected Material has been destroyed, it is the responsibility of the Disclosing Party to contact the Receiving Party and make its request no earlier than the expiration of time for filing petitions for rehearing of a final MPSC order, until the MPSC has ruled on all petitions for rehearing in this case (if any), or until judicial review is completed and the time to take further appeal has expired. Further, for a Receiving Party that is associated with the State, the request must be consistent with the expiration of the State retention requirement.

Notwithstanding the foregoing, counsel for the Receiving Party may maintain a single confidential file of Protected Material subject to all other provisions in this Order. Should

counsel seek to refer to the Protected Material in another Commission proceeding, the Disclosing Party must be the Applicant in said proceeding and counsel must ensure there is a protective order in said proceeding which protects the Protected Material from public disclosure.

VI. Limitations and Disclosures

This Protective Order does not apply to a particular document, or portion of a document, described in Paragraph II.A if a Receiving Party can demonstrate that it has been previously disclosed by the Disclosing Party on a non-confidential basis or meets the criteria set forth in Paragraphs I.B.1 through I.B.4. A Receiving Party intending to disclose information taken directly from materials identified as Protected Material must-before actually disclosing the information-do one of the following: (i) contact the Disclosing Party's counsel of record and obtain written permission to disclose the information, or (ii) challenge the confidential nature of the Protected Material and obtain a ruling under Paragraph IV that the information is not confidential and may be disclosed in or on the public record.

VII. Remedies

If a Receiving Party violates this Protective Order by improperly disclosing or using Protected Material, the Receiving Party shall take all necessary steps to remedy the improper disclosure or use. This includes promptly notifying all Parties and the presiding hearing officer in writing. The written notice must identify the person known or reasonably suspected to have obtained the Protected Material. A Party or person that violates this Protective Order remains subject to this paragraph regardless of whether the Disclosing Party could have discovered the violation earlier than it was discovered. This paragraph applies to both inadvertent and intentional violations. Nothing in this Protective Order limits the Disclosing Party's rights and remedies, at law or in equity, against a Party or person using Protected Material in a manner not authorized by this Protective Order, including the right to obtain injunctive relief in a court of competent jurisdiction to prevent violations of this Protective Order.

VIII. Modification

Formal Addendums to this agreement may be established by an ALJ upon motion by any party and after notice and hearing.

MICHIGAN ADMINISTRATIVE HEARING SYSTEM
For the Michigan Public Service Commission

_____
Administrative Law Judge

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

Attachment 1

NONDISCLOSURE CERTIFICATE

By signing this Nondisclosure Certificate, I acknowledge that access to Protected Material is provided to me under the terms and restrictions of the Protective Order issued in Case No. U-21981, that I have read the Protective Order, and that I agree to be bound by the terms of the Protective Order.

Reviewing Representative:

Date:_____ _____

Receiving Party:

_____

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

Attachment 2

NONDISCLOSURE CERTIFICATE

FOR CRITICAL ELECTRIC INFRASTRUCTURE INFORMATION

I hereby agree and certify my understanding that access to Critical Electric Infrastructure Information ("CEII") as defined at 16 USC Section 824o-1(a)(3) and 18 CFR Section 388.113(c) is provided to me pursuant to the terms and restriction of this CEII Nondisclosure Certificate and the Protective Order issued in Case No. U-21981, that I have been given a copy of and have read the Protective Order, and I agree to be bound by the terms of this CEII Nondisclosure Certificate and the Protective Order. I further agree that:

1. I will use CEII only for the purpose for which it was requested;

2. I will only discuss CEII with a Party and/or Reviewing Representative;

3. I will keep CEII in a secure place in a manner that prevents unauthorized access;

4. I will destroy CEII or return it to the disclosing party upon request;

5. I understand that CEII is not subject to release under the Freedom of Information Act;

6. I understand that I am obligated to protect CEII even after a designation as CEII has lapsed until a determination by the administrative law judge that the information should no longer be designated as CEII; and

7. I will report all unauthorized disclosures of CEII to the Disclosing Party.

Reviewing Representative:

Date:_____ _____

Title:_____

Receiving Party:_____

Printed Name:_____

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

HEIDI J. MYERS

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Heidi J. Myers, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. In what capacity are you employed?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company") as the Executive Director of Revenue Requirements and Regulatory Affairs.

Q. What is your educational background?

A. I received a Bachelor of Arts degree in Accounting in 2003 from Michigan State University. I received a Master of Business Administration degree in 2012 from the University of Michigan – Flint. I am also a Certified Public Accountant licensed in the state of Michigan.

Q. Please describe your professional experience.

A. From 2004 to 2008 and from 2012 to 2015, I was employed by the Michigan Public Service Commission ("MPSC" or the "Commission") as an auditor and later as the Manager of the Revenue Requirements Section. From 2008 to 2012 and 2015 to 2017, I was employed by the Lansing Board of Water and Light ("BWL"). During my tenure at the BWL, I held the following positions: Senior Rate Analyst, Executive Financial Assistant, Field Services Supervisor, Manager of Human Resources, and Supervisor of Finance and Planning. I joined Consumers Energy in January of 2017 as a Principal Rate Analyst and was promoted to Director of Revenue Requirements and Analysis in March 2018 and was promoted to Executive Director of Revenue Requirements and Regulatory Affairs in June 2020.

Q. What have your job responsibilities entailed with Consumers Energy?

A. As the Executive Director of Revenue Requirements and Regulatory Affairs, I am responsible for regulatory stakeholder collaboration and project management for the development of regulatory filings and communications as well as managing and preparing studies related to the level of the Company's revenue requirements, including the preparation and monitoring of gas and electric rate case filings before the Commission and other financial analyses. In addition, I oversee the calculation of the Company's Gas Cost Recovery and Power Supply Cost Recovery monthly billing factors. Beginning in July 2023, I also assumed responsibility for cost, pricing, and regulatory policy.

Q. Have you previously filed testimony with the Commission?

A. Yes. I sponsored testimony in the following cases:

Case No. U-14347 – Consumers Energy electric rate case;

Case No. U-14547 – Consumers Energy gas rate case;

Case No. U-17087 – Consumers Energy electric rate case;

Case No. U-17473 – Consumers Energy securitization;

Case No. U-18322 – Consumers Energy electric rate case;

Case No. U-20102 – Consumers Energy electric credit A;

Case No. U-20103 – Consumers Energy gas credit A;

Case No. U-20134 – Consumers Energy electric rate case;

Case No. U-20165 – Consumers Energy integrated resource plan;

Case No. U-20286 – Consumers Energy electric credit B;

Case No. U-20287 – Consumers Energy gas credit B;

Case No. U-20309 – Consumers Energy calculation C;

Case No. U-20697 – Consumers Energy electric rate case;

Case No. U-20889 – Consumers Energy securitization;

Case No. U-21389 – Consumers Energy electric rate case;

Case No. U-21490 – Consumers Energy gas rate case;

Case No. U-21585 - Consumers Energy electric rate case;

Case No. U-21806 – Consumers Energy gas rate case;

Case No. U-21870 – Consumers Energy electric rate case;

Case No. U-21911 – Consumers Energy incentive/disincentive case; and

Case No. U-21918 – Consumers Energy distribution Investment Recovery Mechanism ("IRM") reconciliation

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide an overview of the Company's gas rate case filing. I introduce key proposals included in this case and provide a brief introduction to the Company's witnesses and the topics supported in their respective testimonies. I also discuss the requirements for this gas rate case as set forth in the Commission's September 30, 2025 Order in Case No. U-21806. Finally, I describe the Company's gas revenue decoupling proposal.

Q. Are you sponsoring any exhibits?

A. No.

COMPANY OVERVIEW

Q. Please provide a brief description of Consumers Energy and its service territory.

A. Consumers Energy is a combination electric and gas utility that has powered Michigan's progress for 139 years. The Company provides natural gas service to approximately 1.8 million customers in Michigan's lower peninsula.

CASE OVERVIEW

Q. Please summarize the key drivers of the Company's request in this case.

A. The Company requests rate relief in the amount of $240 million, which is summarized in Table 1:

Table 1

	(In Millions)
Investment	$ 108
Cost of Capital	$ 66
Gross Margin	$ 1
Operating Expenses	$ 65
Rate Relief	**$ 240**

Q. How does this request impact residential customer bills?

A. The Company anticipates that the average monthly residential bill for the 12 months ending October 2027 will increase by 8.2% over current rate levels. If the entirety of this request is approved, Consumers Energy expects that the average residential natural gas customer will pay approximately $3.14 per day in 2027 for the natural gas service that provides an affordable fuel for heating, cooking, and hot water.

The Company is aware that this increase will challenge some customers more than others. Recognizing the challenges some customers face, the Company offers a range of

assistance options, including the Consumers Affordable Resource for Energy Program, a Residential Income Assistance credit, and a Low-Income Assistance Credit for qualifying customers. These programs are designed to assist customers with the management of their energy use and bills. In addition to these provisions and programs, the Company and its employees are generous contributors to community-based groups, including the United Way, the Salvation Army, The Heat and Warmth Fund, and many community service organizations. The Company works to keep its requested price increases to the lowest level it believes is reasonable, while balancing the need for safety, reliability, improved customer service, and increasingly clean natural gas service.

INTRODUCTION OF WITNESSES

Q. Please identify the other witnesses presenting direct testimony in support of the Company's filing and the topic that each witness will be addressing.

A. The following witnesses will also be providing testimony on behalf of Consumers Energy in this filing:

- **Stacy H. Baker** supports the IT Department's, capital expenditures and O&M expenses that are needed to maintain existing IT systems, enable new security capabilities, and support other technology needs as proposed in the case. Ms. Baker also describes the Company's capital spending and O&M expenses related to cyber security operations and physical security, as well as the need for increased staffing and O&M to respond to evolving security threats and a changing regulatory landscape.

- **Trevor M. Blattner** provides an overview of the Company's gas transmission, distribution, and storage and compression systems along with an updated version of the Company's 10-year plan or the Natural Gas Delivery Plan ("NGDP").

- **Marc R. Bleckman** supports the Company's proposed capital structure and cost of capital which should be used in computing overall rate of return. Mr. Bleckman also provides support for the level of cash included in the Company's test year working capital.

- **Luther A. Bonner** supports the Company's administration of the Customer Attachment Program ("CAP") tariff Rule C8.

- **Ann E. Bulkley** supports the Company's proposed return on equity that should be used in computing the overall rate of return.

- **Amy M. Conrad** describes the Company's overall compensation philosophy and provides support for the recovery of costs related to the Company's annual Employee Incentive Compensation Program ("EICP") at target levels.

- **Matthew J. Foster** supports the Company's Corporate Services O&M expense which includes uncollectible expense, and injuries and damages. Mr. Foster's testimony also supports Corporate Services capital spending, IT projects supporting Corporate Services, manufactured gas plan remediation cost recovery, and the request for certain accounting approvals.

- **Angel L. Green** discusses operational performance goals included in the Company's EICP and how the EICP goals provide benefits to customers.

- **Michael P. Griffin** supports certain gas transmission and distribution capital and O&M expenses primarily related to the operations of the Company's high-pressure distribution and transmission system.

- **Kendra K. Grob** supports the Company's costs related to retirement, health care, life insurance, long-term disability plans, and other benefits provided to its employees and retirees. Ms. Grob's testimony also supports the continuation of the Defined Benefit ("DB") Pension/Other Post-Employment Benefits ("OPEB") Volatility Mechanism.

- **Quentin A. Guinn** describes the function and needs of the Company's facilities and supports proposed capital spending and O&M expenses related to the gas business portion of Facility Operations.

- **Timothy K. Joyce** supports the Company's Gas Compression and Gas Storage capital spending and IT projects supporting Gas Compression and Gas Storage. Mr. Joyce's testimony also supports cost of gas sold and underground, lost and unaccounted for gas, and company use gas.

- **Joshua J. Judy** describes the function and needs of the Company's fleet services and supports the fleet capital investment and electrification strategy.

- **Lynne McCollum** presents the Company's proposed tariff language and changes to its gas rate schedules.

- **Kristine A. Pascarello** supports Gas Engineering and Supply O&M expense as well as certain gas distribution capital investments.

- **James P. Pnacek** supports Gas Operations Division O&M expense including Gas Compression and Gas Storage O&M, as well as certain gas distribution capital investments

- **Heather M. Prentice** describes former manufactured gas plant sites at which the Company has a present or former ownership interest and provides environmental requirements for investigation and remediation. Ms. Prentice also identifies and describes expenditures for associated environmental response.

- **Heather L. Rayl** presents the historic and test year revenue deficiency.

- **Mustafa Sherwani** supports the Company's gas revenues and deliveries in the test year.

- **S. Austin Smith** sponsors the Company's gas Cost-of-Service Study (COSS) and the Company's proposed rate design. Mr. Smith presents two versions of the COSS. Version 1 employs the methodologies previously adopted by the Commission in Case No. U-21806, updated to incorporate the financial information and supporting data provided by other witnesses in this case. Version 2 starts with the Version 1 COSS and incorporates five additional Company proposals, which are explained in his testimony.

- **Brian J. VanBlarcum** supports the Company's real and personal property taxes as well as the excess deferred federal income taxes being returned to gas customers because of the Tax Cuts and Jobs Act of 2017.

- **Lincoln D. Warriner** supports certain gas distribution capital investments related to the New Business, Asset Relocation, Regulatory Compliance, and Capacity/Deliverability programs.

- **Melissa N. Wiersema** describes the work performed by the Company's Customer Experience & Operations organization and how this work benefits customers. Ms. Wiersema also supports the capital investment and O&M expense associated with executing this work.

CASE HIGHLIGHTS

Q. How does the outcome of Consumers Energy's most recent gas general rate case impact the requested rate relief in this case?

A. Consumers Energy's most recent gas rate case, Case No. U-21806, resulted in a Commission Order with new rates that were implemented in November 2025. Consumers Energy continues to invest in its natural gas system and supporting infrastructure, therefore,

this application includes the request to recover actual and projected costs related to these ongoing investments. As shown in Table 1, this request is largely driven by new investment.

Q. Are there any provisions from the Order in Case No. U-21806 that impact this filing?

A. Yes. The Company has addressed the following list of requirements that were included in the Commission's Order in Case No. U-21806:

- **CAP**– The U-21806 Order included a requirement to ensure the line extension model is sharable in a secure, electronic medium and available for in-person demonstration. Company witness Bonner addresses this requirement.

- **CAP** - The U-21806 Order included a requirement that the Company shall provide a thorough justification of its customer attachment program methodology, inclusive of an explanation as to whether it is appropriate to revise its assumptions to include declining natural gas demand, customer adoption rates for the customer attachment programs based on historical experience when calculating new attachment surcharges, and how to avoid unfair subsidization by existing customers. Company witness Bonner addresses this requirement.

- **Enterprise Corrective Action Plan ("ECAP")** - The U-21806 Order included a requirement for the ECAP to be explained and justified. Company witness Pascarello addresses this requirement.

- **Facilities** - The U-21806 Order included a requirement that approval of investments in service center projects—including actual expenditures—will require information about when amounts were spent (or are projected to be spent) and how they advanced the steps in the overall effort. Company witness Guinn addresses this requirement.

- **SAP S/4HANA Implementation** - The U-21806 Order included a requirement to find a way to provide non-confidential information for any capital expenditures and O&M expenses that will directly affect the calculation of the revenue deficiency. Company witness Baker addresses this requirement.

- **SAP S/4HANA Expense** - The U-21806 Order included a requirement for the Company to meet with the Commission Staff on a quarterly basis to report on the progress of the SAP S/4HANA Implementation Project. In addition, Consumers Energy shall record any over- and under-recovery of each projected expense associated with the SAP S/4HANA Implementation Project as compared to the 80% base that the Company expects to include in any future natural gas rate case until the project is complete. The Company had its first

quarterly meeting with Staff on December 9, 2025. Company witness Baker addresses the requirements related to SAP S/4HANA expense.

- **Website Redesign** - The U-21806 Order directed that the Commission expects to see real progress on the website design project before being asked to revisit expenditures for Web Chat AI. Company witnesses Baker and Wiersema address this requirement.

- **Working Capital** - The U-21806 Order included a requirement that the Company continue to justify the use of the 1% benchmark for setting the working capital cash balance and to demonstrate why this approach remains reasonable and appropriate for approval. Company witness Bleckman addresses this requirement.

- **Short-Term Debt Cost Rate** - The U-21806 Order included a requirement that the Company address the Staff's noted concerns relating to its short-term debt facilities and cash on hand by providing additional information including an explanation and justification of the size and expense associated with its short-term borrowing facilities. Company witness Bleckman addresses this requirement.

- **Sales Forecast** - The U-21806 Order included three requirements for the sales forecast. First, the Commission ordered the Company to provide all raw data and inputs used to develop the Company's deliveries and customer count forecast models and to work with the Staff to improve the Company's exhibits and testimony regarding its RIA projections. Next, the Commission directed the Company to include forecasted yearly sales for each major customer class for the 10-year NGDP horizon and include for each year a list of the amount of throughput expected on a peak demand day. Finally, the Commission directed the Company to use out-of-sample data to test its regression model in the next gas rate case. Specifically, to use its regression model to predict the next future period and to predict recent past periods that predate the data used to train the model. Company witness Sherwani addresses these requirements.

- **LAUF** - The U-21806 Order included a requirement that the Company should make efforts to assess and quantify the impacts of the company's anticipated emission reductions, including what portion of those anticipated reductions compromise LAUF gas volumes. Company witness Joyce addresses this requirement.

- **Fleet** - The U-21806 Order included three requirements regarding fleet. First, the Commission ordered the Company to provide historical and projected fleet responsibility costs by capital and O&M, with more detailed information on the types of work these dollars support and the value received for these expenditures, by cost category and business unit. Next, the Commission directed the Company to conduct a more specific study as to the expected savings of electrifying its fleet assets, by asset type (light duty car, pickup, van,

heavy-duty, etc.) to be provided in the Company's next gas rate case and the results incorporated into future cost recovery requests. Finally, the Commission ordered the Company to prepare a detailed analysis of vehicle idling. The Company's analysis shall include, at a minimum, the following: (1) an assessment, based on research and best practice, of waste versus necessary idling by vehicle type; (2) an estimate of the fuel costs for waste and necessary idling by vehicle type based on the Company's annual average cost of fuel; (3) an estimate of the wear-and-tear from waste and necessary idling, in terms of equivalent miles driven, based on research and best practice, by vehicle type; and (4) an estimate of the tons of carbon dioxide released during waste and necessary idling, by vehicle type, based on research and best practice. Once the analysis is complete, the Company should use its findings to support efforts to reduce idling, with the results incorporated into future gas rate cases. Company witness Judy addresses these requirements.

- **Customer Order Service Tracker ("COST") expense** - The U-21806 Order included a requirement that the Company track and quantify O&M savings realized from this project in the company's next gas rate case Company witness Wiersema addresses this requirement.

- **Inflation Rate and Productivity Increases** - The U-21806 Order included a requirement that the Company disclose, by operating unit and cost function, any forecasted inflationary cost increases that are different from Consumer Price Index forecast inflation rates. The Order also requires the Company to present detailed evidence to demonstrate the efforts that the Company is taking to offset inflation with productivity increases. I will address these requirements later in my testimony.

- **Probabilistic Modeling** - The U-21806 Order included a requirement that the Company should continue to work to incorporate both risk and cost effectiveness into its planning and decision making, to continue to prudently develop its probabilistic risk modeling capabilities and apply them as available, and continue to better understand the interactions of safety and cost effectiveness in its planning process. Company witnesses Griffin, Pascarello, and Warriner address this requirement.

Q. How do the Company's proposals in this case support the Company's NGDP?

A. Consumers Energy has plans for investing in its natural gas system over the course of the next decade to ensure customers continue to receive safe, reliable, and affordable natural gas while transforming the system to deliver cleaner fuels for a decarbonized future. The NGDP outlines the Company's 10-year plan to provide a transparent investment plan considering a safe and reliable gas supply, how the Company plans to evolve its assets in

accordance with the Gas Pipeline Safety Management Systems framework, and a strategic framework in response to decarbonization goals of the Company's natural gas customers and future carbon policy relevant to the utility. The proposals in this rate case support the objectives of the NGDP. Company witnesses Blattner, Joyce, Griffin, Warriner, Pascarello, and Pnacek provide support for the transmission and distribution system investments and O&M programs.

Q. Why is Consumers Energy making significant natural gas investments?

A. Consumers Energy has built and maintained a complex natural gas system comprising of approximately 30,700 miles of distribution and transmission pipelines. The Company operates 15 storage fields and 8 compressor stations, and all of these systems have served customers well for decades, allowing access to a diverse natural gas supply and leveraging the unique size of the Company's storage fields to time gas purchases and stabilize pricing. It is crucial that Consumers Energy continues to invest in the system to ensure natural gas is delivered safely, reliably, and affordably to the approximately 1.8 million natural gas customers who rely on it every day.

Q. How should stakeholders view the Company's natural gas investment?

A. The Company's natural gas system is a critical component of Michigan's energy infrastructure and provides essential service to Michigan homes and businesses. Consumers Energy's investment represents its commitment to modernizing the Company's natural gas pipelines and continued improvements in energy efficiency. The EIRP continues to replace significant portions of the Company's infrastructure annually, resulting in a safer, more resilient system that has fewer leaks, thereby reducing carbon emissions. Additionally, the Company continues to work with third parties through its

damage prevention program and third-party coordination efforts to mitigate and reduce third party-caused leaks on the system. The investments, outlined in the NGDP, express the multitude of initiatives the Company is undertaking to ensure sustainable delivery of safe, reliable, clean, and affordable energy to customers.

Q. Is the Company proposing any changes related to critical gas operation costs?

A. Yes. The Company proposes a change to the methodology and technology for leak survey. As described in the testimony of Company witnesses Pnacek and Pascarello, Consumers Energy is transitioning from the traditional walking leak survey to mobile Advanced Methane Detection ("AMD"). Instead of utilizing handheld instrumentation and foot patrol, the new methodology will employ a grid-based approach and the use of AMD technology. Traditional leak surveys will continue in situations where necessary (such as compliance schedule adherence, or if gaps in data capture are identified).

The proposed change in methodology and technology for leak survey will deliver benefits for customers. The higher sensitivity instrumentation of AMD will provide leak detection of much smaller amounts of gas release, while also covering a larger area in less time. Early detection of leaks reduces the likelihood of small leaks progressing to hazardous situations, improving public safety. The grid approach allows leak surveys to be conducted in a logical route, saving time, fuel and milage, and wear and tear on vehicles. The new approach will also lead to a reduction in Odor Investigation related to leaks in the future.

Q. Is the Company proposing any deferrals related to critical gas operation costs?

A. Yes. In Case No. U-21806, the Commission approved a deferred accounting mechanism to address fluctuations in ticket volume related to staking and locating. Under the current

mechanism, refunds or recoveries are calculated as the difference between actual and base ticket volumes, multiplied by the base unit cost of $45.67, with a range from $(0.7) million to a cap of $2.298 million. The Company proposes to continue this mechanism, with updates to the base unit ticket volume and projected average unit cost. In addition, the revised mechanism would remove refund and recovery limits to better address variability in staking volumes. Company witness Pnacek's testimony provides details on the proposed changes and explains why they are necessary.

Q. How do IT and security proposals provide value to customers?

A. As described in the testimony of Company witness Baker, the Company is beginning a critical upgrade to its SAP system that has a direct tie to being able to keep Company and customer information safe and secure. In addition to investments in IT, the Company proposes continuing investments in the Security Department's ability to provide 24/7 physical and cyber security to ensure protection for the Company's critical infrastructure and maintain customers' privacy by keeping their sensitive data safe. Security risks to the Company have never been greater, and the Company must keep pace with the rising threats to maintain essential services and recover quickly in the event of a security incident. The Company is improving its focus on security across its operations with increased staffing levels to support 24/7 security monitoring through the Fusion Center – a dedicated team with oversight for physical and cyber security, increased use of cloud computing solutions, and ongoing investment in maturing security capabilities to protect technology and physical infrastructure. Company witness Baker addresses the Company's proposals for security and IT.

Q. Does the Company evaluate major capital projects and O&M expenses on an ongoing basis?

A. Yes. The Company continually evaluates and adjusts its planning for a variety of factors including (i) sales and revenue expectations and results, (ii) infrastructure investments and the cost of capital, (iii) O&M expense expectations and results, and (iv) the impact of several other variables that may change over time (including changes to environmental laws and requirements, Commission orders, weather, customer demands, commodity prices, financing costs, changes in economic expectations, etc.). In any one period, the Company's capital investments and its O&M expenses may vary from what was expected in a prior period. The Company plans for this continually changing environment, and its witnesses have provided highly detailed and thorough support for capital expenditures and O&M expenses.

The individual witnesses addressing capital and O&M costs in this case explain the reasons for these expenditures. The Company employs a rigorous management review process, which ensures that the allocations of O&M and capital resources are optimized such that the Company's strategic, financial, and operational goals are aligned to deliver customer value. The Company maintains a portfolio of investment opportunities from which to make investment decisions, with the goal of maximizing customer value while minimizing the cost impact to customers. While the Company must retain the flexibility to react to changing conditions, the proposed expenditure levels included in this case reflect the Company's commitment to meet its legal obligations and improve service reliability and quality for customers.

Q. Does the Company anticipate the need to flex spending between programs in the test year?

A. Yes. The Company's plans provide its best estimate of the total cost it expects to spend on each program. However, when actual dollars are spent in the test year, unforeseen circumstances (such as new business, extreme weather, or unanticipated civic improvement projects undertaken by state or local governments, for example) may require the Company to adjust the spending between programs. In any given year, the Company may be required to undertake unplanned natural gas distribution infrastructure replacement projects. In this circumstance, the Company would need to compensate for this unforeseen spending by adjusting the amount it intended to spend on another program. It is not possible for Consumers Energy to anticipate every event or circumstance which may cause it to incur costs on behalf of its customers, so it is prudent to allow for some flexibility in spending.

Q. Is the Company requesting the continuation of a DB Pension/OPEB Volatility Mechanism?

A. Yes. DB Pension/OPEB expenses are sensitive to changes in asset returns or other assumptions that create significant potential for volatility in future expenses. As discussed in the testimony of Company witness Grob, the Company is requesting the ability to continue its currently in place mechanism which provides benefit to customers by eliminating the risk of future expense volatility.

INFLATION RATE AND PRODUCTIVITY INCREASES

Q. The Order in Case No. U-21806 required the Company to disclose forecasted inflationary cost increases that are different from the CPI forecast inflation rates. Has the Company presented forecasted inflationary cost increases by operating unit and cost function?

A. Yes. The Company has provided detailed exhibits and testimony that clearly identify and explain forecasted inflationary cost increases by operating unit and cost function. Each witness sponsoring O&M costs provides exhibits comparing projected O&M costs to CPI-based inflation assumptions. Variances are clearly identified and explained in testimony. This information is consolidated in Exhibit A-13 (HLR-42), Schedule C-5.1, which highlights where projected costs diverge from CPI.

Q. Why do some forecasted cost increases differ from CPI?

A. CPI reflects general consumer price trends, but it does not always capture natural gas program-specific cost increases. For example, insurance premiums have risen faster than CPU due to increased risk from extreme weather and natural disasters. Material and equipment costs (steel, concrete, and specialized equipment) may outpace CPI because of global and domestic supply chain pressures. Software maintenance agreements, such as those for AMI gas modules referenced in Company witness Pnacek's testimony, include contractual escalation clauses that may exceed CPI. These differences are documented and justified in the Company's filing.

Q. In the Order in Case No. U-21806, the Commission directed Consumers Energy to present detailed evidence, in its next natural gas rate case, to demonstrate the efforts that the Company is taking to offset inflation with productivity increases. Has the Company taken steps to offset inflationary cost increases through productivity improvements?

A. Yes. The Company continuously implements initiatives such as process automation, workforce optimization, and strategic sourcing to reduce costs and improve efficiency. These efforts help keep customer rates lower than they otherwise would be while maintaining reliability and safety.

Q. Has the Company presented detailed evidence to demonstrate the efforts that the Company is taking to offset inflation with productivity increases in this case?

A. Yes. The Company provides measurable evidence of productivity improvements that help offset inflationary pressures and reduce costs for customers. These improvements often manifest through process efficiencies, technology integration, and workforce optimization, enabling the Company to deliver more value at the same or lower cost. While productivity does not always appear as a direct dollar reduction, it frequently results in avoided cost increases and improved service delivery without additional resources. Examples include:

- Distribution Cathodic Protection Sub-Program: Projected O&M costs are approximately $49,419 lower than historical costs adjusted for inflation, driven by installation of remote monitoring units that reduce bi-monthly site visits.
- Pipeline Transmission Sub-Program: MISS DIG 811 ticket volumes have declined due to process improvements that allow more tickets to be processed in-office, reducing field labor requirements.
- IT Operations: Company witness Baker explains that inflation is not applied to most IT O&M categories. Cost optimization efforts—such as renegotiated cloud subscription contracts and reduced non-labor business expenses—offset projected labor increases.

- Customer Experience & Growth: Company witness Wiersema details initiatives that have lowered customer service costs through automation and streamlined processes.

- Facilities Maintenance & Real Estate: Company witness Guinn demonstrates that O&M expense growth is maintained at or below historical levels plus inflation, reflecting disciplined cost management.

The Company also provides metrics such as average cost per unit in the Asset Refresh Program (Exhibit A-24 (SHB-9)), cost per mile for the EIRP Program, and details on improvements to mitigate the cost-pre-mile in Company witness Pascarello's testimony.

Q. How do these productivity improvements translate into cost savings?

A. Productivity improvements reduce resource requirements, streamline operations, and enhance service delivery. For example:

- Company witness Pascarello explains how redistributing Gas Construction headquarters closer to projects saved customers $2 million in EIRP costs.

- Meter reading optimization has kept projected cost increases below the rate of inflation.

- Utilization of a fleet cost tool is expected to lead to improved asset management and more cost-effectives vehicle purchase plans by enabling the Company to identify the right vehicles for replacement, reducing capital replacement needs and maintenance costs.

These savings are reflected in the Company's forecasted expense reductions and help offset inflationary pressures, ultimately benefiting customers by keeping rates lower than they otherwise would be.

DECOUPLING

Q. Please describe what is meant by the term "revenue decoupling".

A. Revenue decoupling is the separation of the utility's revenue recovery from its actual volumetric sales levels. This is accomplished through a revenue adjustment mechanism

that trues-up the actual revenue collected with the level of revenue authorized on a prospective basis.

Q. What is the purpose of revenue decoupling?

A. When natural gas usage decreases, gas commodity costs could be reduced, but the Company's fixed distribution costs are unaffected by reduced usage. Decoupling mechanisms make the utility relatively agnostic to reductions in gas consumption because the utility retains the ability to collect its authorized level of revenue despite changes in natural gas usage levels. Reductions in natural gas usage can occur for a variety of reasons including weather variability, electrification, rising natural gas prices, declining use per customer, and customer participation in energy efficiency programs.

Q. Has the Company had a revenue decoupling mechanism ("RDM") before?

A. Yes, a gas RDM was first approved in Case No. U-15986. In that case, the Commission approved a pilot decoupling mechanism that reconciled non-GCR revenue by customer class based on 15-year weather normalized sales. The RDM compared actual weather adjusted sales per customer class during the 12-month test year period to the base sales per customer class as established in the case. Any sales per customer difference was multiplied by the distribution charge per Mcf to obtain the non-GCR revenue difference per customer. That difference was multiplied by the actual average monthly number of customers during the reconciliation period to obtain the total amount for refund or surcharge. The mechanism was modified in subsequent cases, including a change in Case No. U-17643 to limit RDM to residential and General Service Rates GS-1 and GS-2 and to limit the reconciliation period to the first month following the end of the projected test year until implementation of new rates. The Company eventually proposed to eliminate the RDM in

Case No. U-21308 due to the immaterial nature of the limited reconciliation period and administrative effort to reconcile, file, and implement the resulting surcharge or credit. The Commission approved the Company's request in that case. As will be described, the most recently approved RDM will not address the current need for a decoupling mechanism. An effective mechanism needs to address differences in approved and actual rate case test year sales and it cannot be based on weather normalized sales.

Q. What is driving the Company's request to establish a new decoupling mechanism in this case?

A. Weather variability and anticipated electrification efforts are driving the need. Weather is volatile, very rarely aligning with normal weather. Weather variability impacts the Company's ability to collect its authorized level of revenue. This creates a mismatch of revenue collected with revenue needed to cover costs approved for recovery**.**

Q. Please explain the impact that electrification and energy waste programs can have on the ratemaking process.

A. As customers adopt electric technologies for heating and other end uses and participate in energy waste reduction programs, gas consumption declines, reducing the Company's ability to recover fixed infrastructure costs under traditional volumetric rate structures. This dynamic creates revenue risk as the Company must continue to maintain its extensive pipeline network and storage facilities even as throughput decreases. Establishing an RDM now allows the Company to be more agnostic to electrification and continue its support of the energy waste reduction programs while still recovering the revenue needed to maintain a safe and reliable gas system, ensuring that Michigan's homes and businesses can continue to be served by the Company's natural gas system.

Q. Does the Company's RDM align with Michigan's MI Healthy Climate Plan?

A. Yes. As outlined in the Company's NGDP filed by Company witness Blattner, the Company is committed to net zero Scope 3 emissions by 2050. Scope 3 emissions include all emissions traced to natural gas purchases and activities by customers and suppliers. Work towards this goal involves being closely connected with customers to understand their needs and to help design solutions to accelerate progress. The Company's proposed RDM removes barriers created by an incentive to protect revenues to ensure the fixed costs of the gas utility are recovered timely through rates. The RDM is critical to the Company's Scope 3 emission reduction work.

Q. How will the Company's proposed RDM be structured?

A. The Company is proposing the RDM be applicable to all retail and transportation gas customers. The RDM would establish a baseline sales volume for each customer rate class as approved by the Commission in the most recent general rate case test year. Annually thereafter, the Company would determine the actual sales volume per rate class and compare that to the established baseline. The difference in sales volume would be multiplied by the approved distribution charge to calculate the revenue difference. Any revenue above the baseline amount would be refunded to customers through a 12-month volumetric credit. Any revenue below the baseline amount would be collected from customers through a 12-month volumetric surcharge. The Company would file the RDM reconciliation within 90 days following the conclusion of the test year period.

Q. Is the Company proposing to use weather normalized sales in the reconciliation calculation?

A. No. Reconciling to weather-normalized sales would undermine the core purpose of a revenue decoupling mechanism. Weather variability is one of the most significant drivers of revenue risk for a gas utility, as actual temperatures can deviate substantially from the "normal" assumptions used in ratemaking. For example, a mild winter can reduce gas usage significantly, creating a shortfall in recovering fixed infrastructure costs, while an unusually cold winter can produce revenue above that assumed in rates. If the reconciliation were based on normalized volumes, these swings would persist, defeating the stabilizing effect of decoupling. Using actual sales ensures that the mechanism addresses real-world conditions, providing revenue certainty for the Company and fairness for customers through timely credits or surcharges.

Q. Please highlight customer benefits of the RDM?

A. Customers benefit from the RDM's effect of making the Company's natural gas business more agnostic to future electrification and energy waste reduction efforts, both of which result in lower natural gas sales. Making the natural gas utility more agnostic to reductions in usage of natural gas fosters the adoption of technological innovation such as electrification, increased energy efficiency measures, and emerging technologies such as fuel pumps.

Importantly, it must be recognized that Consumers Energy's natural gas service and system is an essential component of Michigan's energy infrastructure, and will continue to be for the foreseeable future. The Company must have the means to continue to invest in its natural gas system, even if natural gas sales decline due to factors such as weather,

future electrification, energy waste reduction, and technology advances. Declines in natural gas sales due to these factors do not diminish the need for the Company to continue to invest in its natural gas system to be able to serve customers on the coldest winter days when natural gas usage peaks in Michigan. The Company's proposed RDM is a reasonable means of ensuring that the Company has the means to continue to make its system safe, reliable and cleaner, while reasonably recognizing the impacts of weather volatility, electrification, and energy efficiency efforts.

Q. If the Commission approves an RDM, is it correct that a lower ROE should be established due to the decreased revenue risk to the Company?

A. No, the Company does not agree that approval of an RDM decreases risk. This is discussed further by Company witness Bulkley.

Q. Please summarize your direct testimony.

A. Consumers Energy respectfully submits this request for $240 million in annual relief. Consistent with Consumers Energy's commitment to provide exceptional value and service to every customer, caring for the communities where we live and work, and delivering on investor expectations, the Company is requesting revenue recovery for infrastructure investments that primarily support the NGDP, as well as other programs that will enhance the customer experience. Consumers Energy is committed to delivering customer value and improving customer service and believes that this filing is a representation of the commitment put forth in the Company's purpose – World Class Performance Delivering Hometown Service.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

STACY H. BAKER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Stacy H. Baker, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. How long have you worked for Consumers Energy Company ("Consumers Energy" or the "Company") and what positions have you held?

A. I have worked for the Company for over 25 years in various individual contributor and leadership positions. The first nine years were in the Finance Department as an Accounting Analyst performing responsibilities to support Payroll and Accounts Payable and later as the Payroll Manager during the Systems, Applications, and Products in Data Processing ("SAP") implementation. Thereafter, I moved to the Information Technology ("IT") Department where I have held a number of positions including Enterprise Resource Planning ("ERP") Portfolio Manager, Director of Business Relationship Management – Corporate Services, and Executive Director of IT Business Technology – Corporate Services. In these roles I focused on technology supporting corporate areas of the Company and had IT departmental responsibility for the delivery and operation of IT applications for Finance, Human Resources ("HR"), Supply Chain, Legal and Government, Regulatory & Public Affairs. I am currently the Director of Technology Portfolio Office responsible for portfolio management of the Company's IT, Security, and Operational Technology ("OT") assets, project management office including agile services, project delivery organization, technology vendor management, and organizational change management. This includes the management of the IT long-term financial plan, administration of portfolio management, development of testimony and exhibits, and supporting rate cases for the IT Department.

Q. Would you please state your educational background?

A. I earned a Bachelor of Science in Business Administration degree from Central Michigan University in December 1992 with a major in Accounting.

Q. Have you ever testified in any other proceedings before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes. I testified in the following cases:

- Case No. U-21308 – 2022 Gas Rate Case;
- Case No. U-21490 – 2023 Gas Rate Case;
- Case No. U-21806 – 2024 Gas Rate Case; and
- Case No. U-21870 – 2025 Electric Rate Case.

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose of my direct testimony is to describe the Operating and Maintenance ("O&M") expenses and capital expenditures needed by the IT Department to maintain and secure existing IT and security systems and enable new capabilities and services to support safety, reliability, and resiliency. I also provide an overview of increasing threats in both Cyber Security and Physical Security areas, their evolution over time, and the changing regulatory landscape that necessitates increased O&M funding. These increases are essential for advancing cloud computing solutions, maturing security capabilities, and protecting the Company's technology and physical infrastructure.

Furthermore, my direct testimony provides an explanation of the Company's plans for deterring threats before they impact the Company and its customers, detecting malicious activity, and recovering quickly with minimal impact while complying with all regulations.

The benefits of increasing technology use for customers, and the Department's support of the Company's commitments outlined in the Natural Gas Delivery Plan ("NGDP"), will also be highlighted. Lastly, the importance of achieving full recovery of the requested expenses and expenditures to provide the best value to the Company's customers will be demonstrated.

Q. Please summarize the main portions of this testimony.

A. My direct testimony discusses the following:

- The importance to customers of digital investments and the role of IT to build and support those investments.
- Increasing and evolving cyber and physical threats.
- Leveraging increased cloud capabilities.
- Support for Operational O&M expense funding.
- A description of the investment, both O&M and capital, needed to keep the Company's systems secure, current, stable, and supporting new capabilities.
- Definition and rationale for the use of reduced Rough Order of Magnitude ("ROM") estimates and explanation of the difference from contingency requests.
- An explanation of the projects included in this rate case filing for the IT Department and their supporting business plans, as described in Exhibits A-20 (SHB-5) and Exhibit A-22 (SHB-7).
- Company action to address previous Commission concerns, including:
  - Company total one time project cost across multiple years;
  - Total Company cost of ownership of each project beyond initial one-time project investment;
  - Recurring hard savings over the life of the investment; and
  - Cost benefit ratio calculated by the Company's internal Business Planning System ("BPS").
- Individual project synopses and requests to support gas and customer plans.

- Further information to address concerns raised by the Commission Staff ("Staff") in the past related to the website redesign project.

- Further information on the name change of the Business Continuity – Program Management to the Incident Command System ("ICS") Management Software.

- Individual project synopses and requests to support corporate functions crucial to running an efficient business.

- Individual IT project synopses with supporting, detailed exhibits for the Asset Refresh projects and the Application Currency projects.

- Individual IT project synopses with a supporting, detailed exhibit (Exhibit A-27 (SHB-12)) for Enhancement projects including explanation of the changes to how enhancement costs projections are supported based on a three-year historical average.

- Individual IT project synopses for the IT/Digital Foundations and Capabilities projects.

- Further information to address concerns raised by Staff in the past related to lack of information provided by the Company regarding the method used to calculate the total projected costs for new purchases for Asset Refresh Program ("ARP")-Field Device Asset Management ("FDAM") and ARP-Workstation Asset Management ("WAM").

- Further information about and justification, of several larger and more complex projects for which projected spending varies from amounts forecasted in Case No. U-21806, including the following projects:

    - ARP-FDAM;

    - ARP-Physical Security;

    - ARP-WAM;

    - Gas Distribution Probabilistic Risk Model;

    - Gas Supervisory Control and Data Acquisition ("SCADA") Software Solution;

    - Digital-Hybrid Cloud and Data Center Migration; and

    - SAP High-performance ANalytic Appliance ("HANA") Database Migration.

- Explanation of the changes to ARP-Cyber Security, subdividing it into the following new ARP projects relevant to this case:

- ARP-Cyber-Common; and
- ARP-Cyber-Gas.

- Explanation of the changes to ARP-Local Area Network ("LAN"), ARP-InfoBlox, and ARP-OT Gas, consolidating them into the following new ARP projects:
  - ARP-Network-Common; and
  - ARP-Network-Gas.
- Further information about and justification for the OT Data Center Migration project.
- Further information about and justification of the complex SAP S/4HANA Implementation project.
- Explanation of the reason for confidential treatment information related to the SAP S/4HANA Implementation project and explanation of Confidential Exhibits A-21 (SHB-6), A-23 (SHB-8), A-28 (SHB-13), and A-29 (SHB-14).

Q. What exhibits are you sponsoring in this proceeding?

A. I am sponsoring the following exhibits:

Exhibit A-17 (SHB-1)	Summary of Actual and Projected Information Technology Operations O&M Expense for the Years 2024 and Test Year 12 Months Ending October 31, 2027;
Exhibit A-18 (SHB-2)	Historical and Projected 13-Month Average of IT Cloud Computing Prepaid Balance for the historical years 2024 - 13-month balance ending December 31, 2024, and for the projected years 2026 – 13-month balance ending October 31, 2027;

Exhibit A-19 (SHB-3)		Summary of Actual and Projected Information Technology Investments O&M Expense for the Years 2024 and Test Year 12 Months Ending October 31, 2027;
Exhibit A-12 (SHB-4)	Schedule B-5.1	Projected Capital Expenditures Information Technology Summary of Actual and Projected Gas and Common Capital Expenditures;
Exhibit A-20 (SHB-5)		Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Electric & Common Capital Expenditures and O&M Expenses for the Years 2024, 2025, 2026, and 2027;
Confidential Exhibit A-21 (SHB-6)		Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Projected Gas & Common Capital Expenditures and O&M Expenses for the Years 2025, 2026, and 2027 for the SAP S/4HANA Implementation Project;
Exhibit A-22 (SHB-7)		Business Case Executive Summaries for Historical, Bridge Period, and Test Year Projects;
Confidential Exhibit A-23 (SHB-8)		Business Case Executive Summary for Bridge Period and Test Year for the SAP S/4HANA Implementation project;

Exhibit A-24 (SHB-9)	Asset Refresh Programs Projected Gas and Common Capital Expenditures, For the Projected Year 2026 and Test Year Ending October 31, 2027, and For the Historical and Projected Years 2024 and 2025;
Exhibit A-25 (SHB-10)	ARP-FDAM and ARP-WAM New Purchases Four-Year Historical Average;
Confidential Exhibit A-26 (SHB-11)	Application Currency Programs Projected Gas and Common Capital and O&M Expenditures for the Years 2026, 2027, and Test Year 12 Months Ending April 30, 2027;
Exhibit A-27 (SHB-12)	Enhancements Three-Year Historical Average;
Confidential Exhibit A-28 (SHB-13)	Projected 13-Month Average of IT S/4HANA Regulatory Asset for the projected years 2026 – 13-month balance ending April 30, 2027; and
Confidential Exhibit A-29 (SHB-14)	Projected SAP S/4HANA Implementation Project Reconciliation for Case Nos. U-21806 and U-21981.

Q. Were these exhibits prepared by you or under your supervision?

A. Yes.

DESCRIPTION OF THE IT DEPARTMENT

Q. Please describe the purpose of the IT Department.

A. The purpose of the IT Department is to consistently provide and maintain reliable, secure, simple, and intuitive digital solutions and services that support the delivery of business

objectives, including execution of the Company's NGDP. Inherent in those objectives are the Company's goals to provide exceptional service to its customers by supplying safe, reliable, affordable, clean, and equitable energy.

The IT Department strives to find the appropriate balance of value and cost in digital solutions. The Company's evolving and pragmatic approach to digital solutions supports many best practices, including:

- Executing work in an efficient and effective manner while remaining flexible as deliverables change by adopting agile frameworks, platforms, and product centric operating models that allow the Company to adjust to changing demands on the IT system;
- Equipping coworkers with digital skills through training that enables them to deliver business value faster to ensure the Company meets customer expectations;
- Moving to cloud solutions where and when appropriate to reduce cost, improve security, and increase the speed of providing new capabilities;
- Treating data as an asset and deploying analytics on a larger scale for effective decision making, optimization of existing assets, and efficient investment prioritization;
- Deployment of a consistent asset management system and integrated control systems to reduce risk, optimize and digitize processes, and monitor the health of the system to identify necessary preventative maintenance that reduces waste and long-term costs;
- Ensuring customer data is safe and secure, their privacy is protected, and both critical technology assets as well as critical infrastructure assets are secure; and
- Managing security risks and mitigating associated threats.

Q. Please describe the functions the IT Department performs.

A. The IT Department provides reliable, secure, and simple digital solutions and services to the Company's customers and internal business units. This includes identification, delivery, operational support, and maintenance of both on-premise and cloud software solutions and computing and communications infrastructure and analytics to support

customer safety and reliability. The IT Department also provides the day-to-day operational support for coworkers using technology, whether that technology is a desktop, laptop, or mobile device (e.g., ruggedized field device, tablet computer, cell phone, smartphone, or other handheld device).

The scope of the IT Department also includes OT. OT is the set of real-time industrial control systems that monitor and control the Company's critical gas infrastructure, such as the Gas SCADA systems.

Additionally, the scope of the IT Department includes Security. This includes emergency management, physical security, and cyber security. Security exists to deter threats prior to impacting the Company, detect when malicious activity does occur, recover quickly with minimal effect if or when a threat is successful in causing impact, and comply with all governmental and industry regulations. Security sets standards based on external threats and guides security work required by the IT and OT teams.

Q. How does technology support the Company's gas plans?

A. Technology is an integral part of all aspects of the Company's gas strategy from gas delivery all the way to the customer. The NGDP outlines the need to invest in both IT and OT to provide the following essential digital capabilities that will enable the Company to deliver safe, reliable, and affordable natural gas to customers while transforming the system to deliver cleaner fuels for a decarbonized future. These include: (1) expanding system monitoring to support 24/7 system control; (2) improving data analytics to support asset reliability and identification of optimal utilization of compression and storage assets; (3) modernizing the distribution and transmission system; (4) incorporating predictive and condition-based maintenance; (5) transforming work and asset management; (6) ensuring

cyber security of Company assets and complying with security-related regulations; and (7) achieving methane reductions.

This requires investments in new technology, as well as enhancing existing technological assets and processes to keep them operating safely and securely in support of the Gas Safety Management System and increasing regulation which I describe later - specifically in the areas of asset management, work management, system automation and control, security and privacy, and advanced analytics.

The use of technology is also essential to establishing data analysis techniques to understand, communicate, and engage with the Company's customers in a meaningful way; connecting with customers using their channel of choice; enhancing the Company's digital resources in response to growing customer feedback that they prefer "self-service" through digital channels; providing customers accurate, timely energy bills, and consistent payment processes; and offering options for customers to understand their energy consumption.

Q. What are some of the biggest challenges the IT Department currently faces?

A. A big challenge the IT Department currently faces is the integration and implementation of emerging technologies, data, and analytics needed to achieve the Company's goals described in the NGDP. The Company relies heavily on accurate data and high performing systems that can handle higher transactions and data volumes. Customers depend on these same systems to report gas leaks, receive timely information on consumption, and start or stop service. It is important that the Company achieve full recovery of requested expenses and expenditures to keep these systems updated with the latest security and maintenance patches while delivering new capabilities to help restore customers faster.

Another challenge is that security continues to be a significant risk area and challenge for utilities. Traditional physical security issues of protecting publicly accessible, geographically dispersed critical infrastructure are and will continue to be exacerbated as resources become more distributed. Cyber security concerns include privacy, data breaches, ransomware, ransom extortion, denial of service, and critical infrastructure attacks. For example, a February 7, 2024 Cybersecurity Advisory from the Cybersecurity and Infrastructure Security Agency ("CISA") states that the CISA, National Security Agency, and Federal Bureau of Investigation assess that People's Republic of China ("PRC") state-sponsored cyber actors are seeking to pre-position themselves on IT networks for disruptive or destructive cyberattacks against U.S. critical infrastructure in the event of a major crisis or conflict with the United States.[1] The U.S. authoring agencies have confirmed that the PRC state-sponsored cyber group known as Volt Typhoon has compromised the IT environments of multiple critical infrastructure organizations - primarily in Communications, Energy, Transportation Systems, and Water and Wastewater Systems Sectors - in the continental and non-continental United States and its territories, including Guam.

While cyber security is no longer a new area, each year impacts from cyber security incidents increase. According to a 2025 Sophos report, which provides comprehensive insights into attack trends, exploited vulnerabilities remain the most common technical root cause for the third consecutive year with ransomware, involved in 32% of incidents. Over a three-year span (2023-2025), the average total cost of recovery was approximately $2.03 million, while the average ransom payment was around $1.13 million. The Company

[1] Available at sophos-state-of-ransomware-2025.pdf

must protect against data breaches and threats to critical infrastructure. In light of increasing global geopolitical tensions and federal warnings about potential cyberattacks targeting critical infrastructure—particularly from Russia and China—it is imperative that the Company proactively safeguards against data breaches and threats to essential systems. Compliance with federal and state regulations such as Transportation Security Administration ("TSA") security directives and American Petroleum Institute standard 1164 v2 is crucial, as failure to adhere may result in significant penalties. In this environment, utility security teams must be fully prepared with comprehensive strategies that prioritize the protection of customer data, ensure regulatory compliance, uphold privacy standards, and secure the infrastructure that supports the Company's operations and customers.

Q. Please further explain the current environment with respect to cyber threats facing utility companies.

A. Cyber threats are increasing. The most glaring example is ransomware as discussed above. These threats have increased, not only in their impact but also their level of sophistication. Criminal groups are profiting on ransomware, and it has become such a lucrative business that they now conduct cyberattacks in a more sophisticated manner with teams of people who focus on an individual target. Such groups are more focused on Fortune 500 companies because of the potential for large ransom payments.

The Progress Software "MoveIT" extortion event demonstrates this increase in sophistication. A zero-day vulnerability (a flaw in a system or device that is unknown and does not have a fix available to correct the flaw, rendering the system vulnerable) was used to compromise the data of hundreds of MoveIT customers across all industries. The ability

to exploit zero-day vulnerabilities has historically only been within reach of nation-state actors, not criminal groups. The amount of money being made has allowed these groups to invest in finding such vulnerabilities and dramatically increased their capabilities. The Company sees, on average, several hundred cyber security events daily. This volume demands a robust security program with various layers of defense. No single tool, person, or process can protect the Company's assets 100% of the time; therefore, the Company must rely on multiple lines of defense to meet these challenges.

Beyond ransomware, nation-state actors have a strong interest in United States critical infrastructure. The federal government has repeatedly called out this risk and has been imploring critical infrastructure owners to increase their capabilities. On July 28, 2021, the Biden Administration released a memo titled "National Security Memorandum on Improving Cybersecurity for Critical Infrastructure Control Systems" ("July 28 Memo").[2] The implications of the National Security Memo are clear.

First, the threat to critical infrastructure is real and no longer theoretical. Even the Company has seen intrusion attempts from nation-state level actors. The July 28 Memo provided that "[t]he cybersecurity threats posed to the systems that control and operate the critical infrastructure on which we all depend are among the most significant and growing issues confronting our Nation."

Second, cyber security of critical infrastructure is a national security issue and priority. The July 28 Memo explained that "[t]he degradation, destruction, or malfunction of systems that control this infrastructure could cause significant harm to the national and economic security of the United States." Utilities have had strong cyber security programs,

[2] Available at https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/07/28/national-security-memorandum-on-improving-cybersecurity-for-critical-infrastructure-control-systems/.

and the Company is no different. However, by calling out cyber security of critical infrastructure as a national security issue, the Biden Administration signaled that the Company, as an owner of critical infrastructure, should meet an even higher standard moving forward. The National Security Memo suggested that utilities need to have capabilities matching those of the top government agencies and contractors. This increased expectation will take time to develop and increased funding to achieve.

Third, as ordered by the Biden Administration, the CISA has established Cross Sector Cybersecurity Performance Goals, which signals the federal government's interest in gaining further assurances that owners and operators of critical infrastructure are meeting the expectations set forth in the memo. The Company expects this to include new, mandatory regulatory standards for natural gas.

As for the Trump Administration, it recently issued an executive order suggesting that it may shift responsibility for investments in cybersecurity and other critical infrastructure to state and local governments. In doing so, the White House recognized that "[c]itizens are the immediate beneficiaries of sound local decisions and investments designed to address risks, including cyber attacks, wildfires, hurricanes, and space weather."[3] Thus, the White House continues to support further investment in cybersecurity, even if state and local governments are ultimately asked to assume more responsibility. The executive order directed federal officials to reevaluate national critical infrastructure policy, including several National Security memorandums, but the July 28 Memo was not on the list of memorandums being reviewed.

[3] Presidential Actions, *Achieving Efficiency Through State and Local Preparedness*, THE WHITE HOUSE (March 29, 2025), https://www.whitehouse.gov/presidential-actions/2025/03/achieving-efficiency-through-state-and-local-preparedness/.

Q. Please describe how physical threats are increasing or evolving.

A. Cyber security receives much of the national headlines because it is a relatively new risk and does not require physical proximity to execute an attack. However, physical security risks are still extremely relevant in the critical infrastructure space, and they continue to evolve. In the past year, multiple incidents have occurred at other gas utilities where equipment was broken into and tampered with to the point of impacting gas delivery to customers. One utility reported that in December 2020, three separate gas sites were criminally vandalized, all at the same time, causing service disruption of over 3,500 customers for over three days with no gas during extremely cold temperatures.

Furthermore, as gas becomes more of a target for environmental scrutiny, the Company may see more attempts to tamper with gas assets. One such example is an incident at a gas city gate where an individual used a stolen excavator to dig at night and nearly hit a gas line. Potential damage could have included thousands of customers without gas and over $10 million in repair costs.

Q. What physical security challenges are you experiencing in securing critical infrastructure assets?

A. The very nature of certain utility assets makes them very challenging to secure. Large assets such as a headquarters building or power plants can be secured using traditional physical security measures such as video cameras, card access, fencing, locks, keys, gates, and guards. The smaller, more distributed assets are significantly more challenging to secure. Placing guards at each asset would be untenable from a cost perspective. Technology solutions have historically been challenging because of limited feature sets (enhancements and capabilities) and network capacity at many of these remote locations.

These limitations have led utilities to implement basic physical protections and accept remaining risk. Responses to security issues in these environments are, therefore, reactive and have become insufficient. These factors have made these critical assets soft targets to those who would do harm intentionally and attractive for opportunistic crimes. A shift to a more proactive approach will minimize the impacts to customers from outage, safety, and cost perspectives. The Company continues to be proactive in its approach to better protect its assets and increase safety.

Q. What is changing in the regulatory landscape?

A. The current cyber and physical regulatory landscape is highly uncertain. The current administration aims to reduce regulatory oversight, but their position on cyber and physical security and its national security implications remains unclear. The recent executive order indicates that the administration may propose more state control over these areas. Regardless, the Company anticipates a continued push for more cyber incident reporting and mandatory standards in gas distribution, whether driven by federal or state authorities. The industry is expecting additional mandatory cyber security standards across the regulatory landscape.

Q. Has the work required to meet cyber security regulations and requirements increased in recent years?

A. Yes. The current and emerging cyber-attack trends are evolving, and the number of threats are increasing, in impact and sophistication as described earlier in my direct testimony. As the security industry best practices evolve, security requirements change, and new regulations, such as TSA security directives and American Petroleum Institute standard 1164 v2 also affect the Company's gas and corporate systems, which are a part of this case.

The IT Department must strive to keep pace with the time and expense of retrofitting existing infrastructure and applications to maintain compliance and an appropriate security posture.

Q. Do cyber security requirements increase the frequency of IT patching and upgrades?

A. Yes. To address changing security threats and vulnerabilities, vendors regularly release security fixes or "patches" to their products. The increased volume of threats to digital assets heightens the need to keep systems current, and timely security patching is a key control for any security program. Technology vendors establish timelines for versions of their product they no longer support or no longer provide security updates or patches for. Where the Company may have had more discretion in the past to defer upgrades, it now must ensure the appropriate upgrade or replacement frequency to meet security requirements. Patching analysis, patch application, and patch tracking activities are all considered IT Operations O&M expenses. The Company focuses on mitigating exposure to "Known Exploited Vulnerabilities" that the Cybersecurity and Infrastructure Security Agency has confirmed have been used to breach other companies' IT systems in the past. Reducing vulnerabilities requires timely patching, as well as upgrades and replacements to IT software and systems. The operational expenses related to security are important for the protection of Company assets and customer information.

Q. Please explain why the Company is proposing to use more Software as a Service ("SaaS") based products.

A. SaaS based offerings are often the only option for certain technology services/vendors. For those that do also have on-premise options, many are stating that they will not be updated as quickly or may lack certain capabilities of their cloud counterparts. Vendors are making

this shift for many reasons. First, as technology moves more and more to the cloud, security services need to adapt as well. Second, vendors can much more quickly build new capabilities for customers in a cloud-based scenario where they control all the underlying hardware and infrastructure. Finally, the massive scale of security data requires much more flexibility which the cloud offers, and on-premise does not.

In addition to the industry drivers, there are benefits to both the Company and customers. More SaaS means fewer large capital outlays for large hardware purchases, vendor integrations, and less asset refresh cost. The Company anticipates fewer large capital projects in its future year planning for cyber security as capital requests have reduced, while physical security requests are increasing. Finally, using SaaS allows the Company to receive the best security capability available and allows vendors to adapt to changes much more quickly than on-premise solutions.

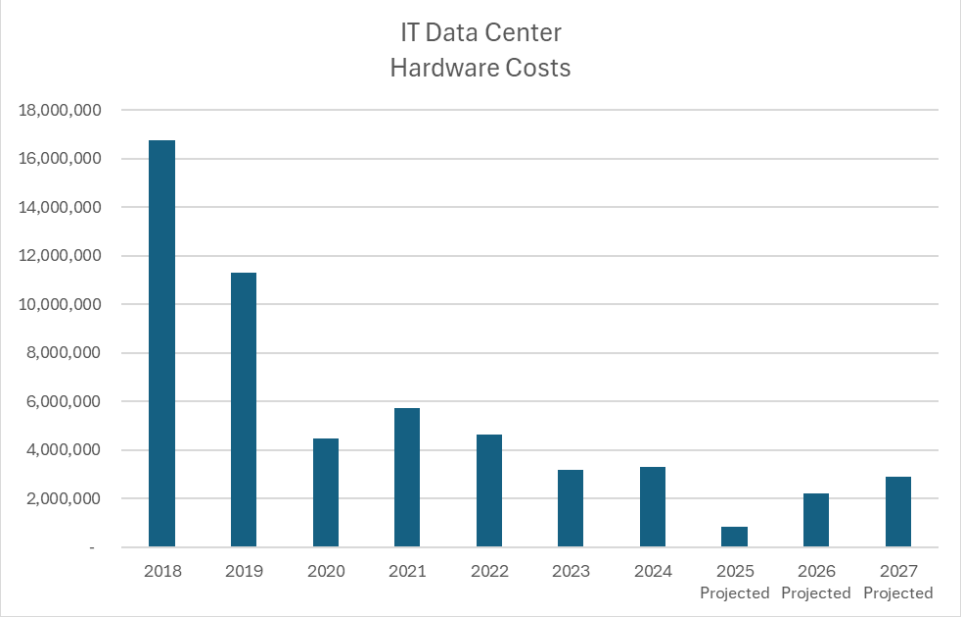
Q. Is the Company migrating to the cloud and what are the advantages of leveraging increased cloud capabilities?

A. Yes, the Company is migrating most of its IT data center to cloud-based services. Leveraging increased cloud capabilities offers several advantages, including the ability to scale capacity, pay only for resources that are used, avoid capital investment and O&M expense for hardware and maintenance, enhance security, and employ built-in backup and recovery solutions.

First, cloud capabilities offer scalability, enabling the Company to easily adjust their computing resources based on demand. This allows the Company to increase or decrease capacity as needed, unlike traditional data centers that would require longer implementation times. For example, during peak periods like storm response, the

Company can quickly scale up resources to handle increased traffic. Conversely, during off-peak periods, cloud resources can be reduced to optimize costs.

Second, cloud capabilities also offer cost efficiencies by only paying for the resources that are used. It reduces the Company's capital expenditures in physical hardware and the associated ongoing maintenance costs, as well as the cost of a physical location. The Digital-Hybrid Cloud and Data Center Migration project, which began in 2022, has enabled the Company to avoid the capital investment for IT data center hardware asset refresh based on a five- to seven-year refresh cycle, as shown in the table below. This initiative includes migrating or retiring applications out of existing Company and co-location data centers into cloud services.



Third, cloud capabilities offer advance security features and regular updates to protect sensitive data, ensuring compliance with industry standards and regulations.

Fourth, the Company's owned data center is aging and beginning to have challenges with operational stability. Moving to the cloud allows the Company to avoid the large capital expense of building a new data center.

Finally, cloud capabilities offer reliable backup and disaster recovery solutions through redundant infrastructure to ensure high availability and reliability, minimizing downtime and providing consistent access to services.

Q. How does the Company prioritize, balance, and manage the delivery of new capabilities that support the NGDP with operational work that includes meeting the security requirements described above?

A. The Company's critical security and operational fixes are given priority over new capabilities to ensure safe, secure, and reliable operation of its digital assets. There is a high demand for new and enhanced technology capabilities across the Company. New investments are prioritized based on an evaluation of the benefits, costs, customer value, and necessity to Company goals through a series of reviews by cross-functional business teams. The highest-ranking projects are approved through the Company's budget and rate case processes and ultimately implemented.

Q. What business categories has the Company defined in the IT Organization?

A. The Company has defined the following business categories in the IT Department supporting the NGDP and customer offerings in this case: (1) Gas; (2) Electric & Gas Shared; (3) Corporate; (4) Customer; (5) IT/Digital Foundation; and (6) Security. These business categories are used to group investment spending in my exhibits to better connect rate case filings with the Company's plans. I will describe each of the business categories later in my testimony.

IT OPERATIONS O&M EXPENSES—MAINTAIN AND OPERATE EXISTING ASSETS

Q. What is IT Operations O&M expense for IT?

A. The Company uses IT Operations O&M expense to provide the required level of operational support, reliability, and security for technology investments; maintenance for security facilities and systems to ensure system reliability, vulnerability assessments, and penetration tests; and fulfillment of all state and federal laws and regulations, perimeter protection, guards, card access, cameras, executive protection, and investigative services. IT Operations O&M expenses include fixed and variable ongoing costs. Fixed costs include software vendor maintenance agreements, cloud subscription contracts, annual license contracts, and application or appliance support through managed services contracts. Software and cloud solution vendors typically increase these fixed costs on an annual basis. Variable costs include labor for equipment monitoring, break/fix activity, maintenance activity, disaster recovery, security improvements, software patching, and cloud usage costs. Operations costs also include physical security site assessments, vulnerability and penetration test remediation, additional guard support, system break/fix or maintenance activity, privacy program maturity, staffing support to meet emerging regulatory laws and regulations, and additional security system improvements. The activities associated with the fixed and variable costs are required to keep the Company's digital, information, and physical assets protected and performing at sufficient levels. The Company's customers benefit from the system stability and reliability that result from the activities funded by IT Operations O&M expense. These activities include emergency response, 24/7 billing, payment and usage services, contact center support, new service installations, and various other digital offerings, as well as physical and cyber security activities. Any unrecovered

IT Operations O&M cannot be recovered in future rate case filings, which is why any disallowance could impede the Company's ability to maintain and secure its facilities and systems.

Q. Please describe the operational work required to keep information and physical assets protected from cyber threats.

A. There is a variety of operational work required to keep information and physical assets protected from cyber threats. First, regarding information assets, security tools must be kept functional when they are called on to protect the technology vital to serving the Company's customers. This technology includes software to collect logs, scan for vulnerabilities, detect intrusions, and provide antivirus and encryption services. Second, IT resiliency must be kept up to date ensuring backup data and redundant infrastructure are in place in the event of a cyber intrusion. Third, as described previously, systems must be patched on a regular basis in accordance with security requirements. Vendors regularly release security updates that must be tested to ensure these updates do not introduce negative impacts to Company-specific configurations when deployed. Fourth, as cyber security standards and requirements change, IT teams must implement the appropriate corresponding technical changes on existing systems to ensure Company assets remain secure. These requirements evolve and adapt as threats change in our environment. Security regularly reviews and updates physical and cyber security standards to maintain the appropriate posture with various industry frameworks, as well as compliance with cyber security regulations. This includes the technical requirements for IT to follow, which increases operational costs while continuing to best protect Company assets.

Regarding physical assets and employee safety, first, routine assessments must be performed on all assets and facilities to ensure proper maintenance is performed and security protections are properly placed including perimeter protection, cameras, and card readers for facility access. Second, additional security support is needed for employees when threats are present near field project work, storm restoration activities, or Company sponsored public events or forums. Third, additional security guard support is needed at facilities on an ad hoc basis (based on intelligence collected from facilities or crews, threats of violence against the Company, increased protest activity as seen in 2020, increased contractor traffic, and potential employee issues) to ensure the safety of employees and any visitors to the Company's facilities.

Q. What value will customers receive for the projected test year O&M expenses?

A. Foundational technologies, such as infrastructure, user devices, and collaboration tools, play a crucial role in supporting the systems that deliver services to the Company's customers.

Infrastructure includes physical and virtual systems that support all Company operations. These systems are essential for running critical applications, managing data, and maintaining communication that ensure efficient and reliable service to customers. User devices provide workers access to real-time data, help manage work, and facilitate communication to serve customers. Collaboration tools enable workers to collaborate effectively, address issues efficiently, and share information to serve customers.

Further, foundational technology systems support predictive analytics and machine learning algorithms that can forecast demand and identify potential issues before they become critical, allowing for proactive maintenance and response. Additionally, these

systems support the integration of renewable energy sources, enabling a more sustainable energy supply.

Customers are required to provide certain types of data as part of the service provided to them and want to know that the Company has a world-class cyber security program working to protect data provided. Data breaches can cause identity theft, fraudulent charges, and time lost addressing related associated impacts. Beyond data breaches, customers also expect their data to be handled properly and only for the purposes intended. The discipline which addresses these concerns is broadly referred to as privacy, which is also within the corporate responsibility of the IT Department. In addition to data-related concerns, customers expect the Company's core services to be available 24/7. This is relevant on both the corporate and operational sides of the business. A ransomware attack would limit the service the Company can provide to customers and could lead to delays in resolving issues, obtaining service, outages, or significant safety concerns. An attack against the Company's operational systems could lead to a protracted loss of electricity or natural gas service for large portions of the service territory. Interruption of gas or electric service due to a cyberattack is not acceptable, and customers expect the utility to have all the protections necessary to ensure this does not occur.

In addition, physical security measures are essential in protecting the infrastructure that delivers and stores gas. This includes securing city gates and regulator stations, gas compression plants, gas storage fields, and gas transmission and distribution pipelines from physical threats such as vandalism, theft, and natural disasters. Implementing robust physical security protocols, such as surveillance systems, access control, and perimeter security, helps safeguard these critical assets. By integrating physical security with

technological systems, the Company can create a comprehensive approach to protecting the natural gas assets and ensuring uninterrupted service to its customers.

Together, these foundational technologies and cyber and physical security measures ensure that gas is delivered efficiently, reliably, and safely to customers.

Q. Please describe Exhibit A-17 (SHB-1).

A. Exhibit A-17 (SHB-1) is a Summary of Actual and Projected IT Operations O&M Expense for the Years 2024 and 12 months ending October 31, 2027. Page 1 summarizes the gas allocation of actual and projected IT Department operational expenses. Specifically:

- Column (a) provides the IT Operations O&M expense category;
- Column (b) identifies the total 2024 historical IT Operations O&M expense as $31,064,000;
- Column (c) identifies the Test Year projected IT Operations O&M expense as $38,614,000; and
- "Labor" line items include employee labor and indirect labor; "Material" line items include individual computer peripherals, tools, supplies, and replacements for failed components such as hard drives; "Contractor" line items include outside services, hardware and software licenses and maintenance, and software subscriptions and "Non-Labor Overheads" line items include non-labor related overheads, chargebacks, and loadings; "Non-Labor Other" line items include employee training, wireless plans, and supplies.

Page 2 presents the amounts of the projected IT Operations O&M expenses that were developed by applying an inflation rate to the historical O&M expense. Specifically:

- Column (a) describes the categorical expense;
- Column (b) provides the historical IT Operations O&M expense;
- Column (c) calculates the projected inflation increases to the historical O&M amounts;
- Columns (d) includes the scope/cost increases net of productivity gains; and
- Column (e) provides the Test Year projected IT Operations O&M and is the sum of columns (b), (c), and (d).

Q. Please describe the Scope/Cost Increases Net of Productivity Gains in Exhibit A-17 (SHB-1), page 2, column (d).

A. IT does not apply inflation in all categorical spend projections for IT Operations O&M expense. Labor is the only categorical spend projection that includes a merit increase based on the inflation rate. Inflation is not used to project any other categorical spend projections for IT Operations O&M expense. Future contractor expenses reflect current commitments to increase payments under existing contracts, as well as the addition of new contracts needed for ongoing and new project work taking place before or during the test year. Material and Non-labor Other are projected based on historical spend and known adjustments for employee training needs, wireless plans, and supplies.

Q. Please describe the projected IT Department IT Operations O&M expense for the test year, as reflected in Exhibit A-17 (SHB-1).

A. The projected IT Operations O&M expense for the test year is $38,614,000, comprised of $30,973,000 for IT and $7,640,000 for Security, representing an increase over 2024 historical costs of $31,064,000. The reason the Company is projecting an increase in the test year is the necessity to fund continued investment in programs to sustain and improve customer reliability as the Company continues investing to maintain, improve, and secure critical enterprise systems and migrate applications to the cloud. Known increases that are projected for IT from 2024 to the test year include: (1) net labor increase ($0.7 million) due to insourcing data & analytics and cloud resources and merit increases offset by other resource efficiencies; and (2) increase in contractor costs for cloud subscriptions and license and maintenance agreements ($4.3 million), including costs related to the Digital-Hybrid Cloud and Data Center Migration and SAP HANA Database Migration projects

offset by reduction in contractor resources and other subscription and license and maintenance agreements efficiencies.

Known increases that are projected for Security from 2024 to the test year include: (1) labor increase ($0.2 million) based on merit increases offset by resource efficiencies; and (2) increase in contractor for cloud subscriptions and license and maintenance agreements ($2.6 million) due migrating applications to the cloud, multi-factor authentication, risk management, and IT service management tools offset by other cost optimization efforts to minimize increases.

Q. What does the Company's IT Operations O&M expense include?

A. As described earlier, IT Operations O&M expense is made up of several components, such as labor, business expenses, material costs, contractor support, and vendor licensing and maintenance contracts.

"Labor" includes operational and governance costs for the IT employees who perform activities such as maintaining and supporting capital assets; disaster recovery and business continuity planning and testing; cyber security analysis and mitigation, such as security patching; and implementing performance measures to control IT costs and ensure compliance. These activities are variable and dependent on the outcome of risk analyses and other factors.

"Non-Labor Other" includes costs such as: business expense, employee training, wireless plans, and supplies. These costs are variable and dependent on the needs of the organization.

"Material" includes costs such as individual computer peripherals, tools, supplies, and replacing failed components such as hard drives. These costs are variable and dependent on the needs of the organization.

"Contractor" are costs of managed services and third parties that maintain and operate the Company's IT assets. Similar to "Labor," the activities include system monitoring, system break/fix, disaster recovery activities, system analysis, and patching. The use of third parties to maintain and operate the Company's IT assets provides value by helping to control labor costs, offering up to 24/7/365 support, and providing increased access to specialized IT expertise. "Contractor," also including "On-Premise Contracts" and "Cloud Subscriptions," reflects the Company's IT operations expenses for contracts with vendors who provide software and hardware licensing, support, and maintenance services so systems remain safe from mechanical and software failures and cyber intrusions. Lapses in licensing, support, or maintenance coverage caused by financial constraints would expose the Company to unfavorable security and operational risks or issues.

The Company relies heavily on vendors and their products to run the utility's digital systems and, as a result, the number of contracts and the corresponding costs are a significant piece of the total IT Operations costs.

Q. Is the method used by the Company to project IT Operations O&M an accurate and prudent approach?

A. Yes, the method used by the Company to project IT Operations O&M expenses in Exhibit A-17 (SHB-1) is the most accurate method. The Company's approach uses a detailed analysis of known fixed and variable expenses for the test year. These include increases

that result from new investments and assets tied to growth in digital, new cyber security regulations and requirements, and outcomes of cost optimization efforts. By using known and expected expenses that are coupled with the evolving digital landscape, the projection is the best representation of the Company's required IT Operations O&M expenses in the test year.

Q. Please describe Exhibit A-18 (SHB-2).

A. Exhibit A-18 (SHB-2) is the IT Cloud Computing Prepaid Balance for Gas and Common operations for the historical 13 months ended June 30, 2025 and the projected 13 months ending October 31, 2027. It provides a summary of the gas allocation of actual and projected IT Department operational expenditures. Specifically:

- Column (a) provides the prepaid balance category;
- Columns (b) through (n) provide each month's ending IT cloud computing prepaid balance; and
- Column (o) provides the 13-month average of columns (b) through (n).

Q. Please describe the purpose of Exhibit A-18 (SHB-2).

A. The move to utilize cloud computing is resulting in an increase in prepaids associated with cloud computing subscriptions and implementation costs. The Company has identified cloud computing as a viable alternative for several technology solutions, which are described in more detail for the associated projects below. To support the adoption of cloud computing, the Company is adjusting working capital to reflect projections for cloud computing subscriptions and implementation costs. Cloud computing costs are projected based on existing cloud computing subscription agreements plus projected new cloud computing costs based on planned implementations. This working capital adjustment is provided by Company witness Heather L. Rayl on Exhibit A-12 (HLR-34), Schedule B-4.

IT INVESTMENTS O&M EXPENSES—MAINTAIN A CURRENT SYSTEM AND BUILD NEW CAPABILITIES

Q. How is IT Investments O&M for IT used by the Company?

A. IT Investments O&M is used by the Company to fund the O&M portion of upgrade projects, asset refresh projects, and technology investments that are needed to provide new capabilities for internal business units, security operations, and customers.

Q. Please describe the importance of upgrading IT systems for cyber security requirements and operational stability.

A. Upgrading applications, appliances, operating systems, database management systems, and security devices, such as cameras and card readers, are essential to delivering safe, reliable, affordable gas to the Company's customers. Implementing current versions of technology enables the Company to operate secure and stable systems, remediate security vulnerabilities, keep customer and Company data secure, maintain vendor support, address defects that impair stability and functionality, and address version interdependencies and compatibility between systems.

Q. What cyber security risks could occur if the Company does not keep its systems upgraded?

A. Technologies and security devices that are not upgraded are often no longer supported by vendors, which increases security risk as well as system operations risk, as security patches are regularly released by vendors based on known vulnerabilities. Security patches are typically not produced for products no longer supported by the vendor, referred to as end-of-life products; therefore, an end-of-life product may have known vulnerabilities and no method to remediate the risk. This increases the risk of a significant cyber event impacting Company operations, data, and services to its customers.

Q. How does the Company determine which systems need to be upgraded?

A. While the Company's preferred upgrade strategy is to stay, at most, one version behind the vendor's currently available version, the Company considers multiple factors to determine when upgrades are needed. These include application criticality to business and customer operations, severity of existing vulnerabilities and operational risk, operational impacts of performing the upgrade, ability to defer, resource availability, organizational change impact, and cost. Deferring an application upgrade for too long has the potential to increase the overall cost of the upgrade since the larger number of differences between versions generally adds complexity and cost to an upgrade effort.

Until recently, the Company has lacked funds to maintain and keep systems current. This led to technical obsolescence, and the Company is in a position of playing catch-up, adding risk that a significant cyber security or technical issue might not be remediated or mitigated, which would cause direct impact to Company operations, its customers, or both. The Company prioritizes operational support over new investments when resources are limited, thus putting the NGDP at risk when important systems cannot be kept current with available resources.

Q. Please describe Exhibit A-19 (SHB-3).

A. Exhibit A-19 (SHB-3) is a Summary of Actual and Projected IT Investments O&M Expenses for the Years 2024 and the 12 months ending October 31, 2027. Page 1 provides a summary of the gas allocation of actual and projected IT Investments O&M expenditures. Specifically:

- Column (a) provides the IT Investments O&M expense category;
- Column (b) identifies the 2024 historical IT Investments O&M expense as $5,731,000;

- Column (c) identifies the Test Year projected IT Investments O&M expense as $6,166,000;

- For Investments Planning expense, "Labor" line items include employee labor, and "Contractor" line items include outside services; and

- For Investments expense, "Labor" line items include employee labor and indirect labor; "Material" line items include hardware purchases and maintenance costs; "Non-Labor Overheads" line items include non-labor related overheads, chargebacks, and loadings; "Non-Labor Other" line items include employee training and business expenses.

Page 2 presents the amounts of the projected IT Investments O&M expenses that were developed by applying an inflation rate to historical O&M expense. Specifically:

- Column (a) is a description of the categorical expense;

- Column (b) provides the historical IT Investments O&M expense;

- Column (c) calculates the projected inflation increases to the historical O&M amounts;

- Columns (d) includes the scope/cost increases net of productivity gains; and

- Column (e) provides the Test Year projected IT Investments O&M and is the sum of columns (b), (c), and (d).

Q. Please describe the Scope/Cost Increases Net of Productivity Gains indicated in Exhibit A-19 (SHB-3), page 2, column (d).

A. IT does not apply inflation for categorical spend projections for Investments Planning expense. The investments planning projection of $340,000 for IT and $5,000 for Security is for anticipated decreases in the test year for investments planning activities that directly support business case development and cost estimate refinement for projects that support the NGDP and other Company long-term plans. Inflation is also not used to project future IT Investments O&M expense. The projections for IT Investments O&M expense of $5,025,000 for IT and $796,000 for Security are based solely on expected project costs for

the test year as compared to the historical period, as detailed later in my testimony and in Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6).

Q. Are the preliminary project stage activities that must be part of IT Investments O&M expense per Financial Accounting Standards Board ("FASB") guidelines important in technology investment projects?

A. Yes. The preliminary project stage activities are essential to ensure the Company makes prudent investments in technology that benefits customers. The activities cover much of the work included in the Company's investment planning for IT projects. Investment planning activities gather information that is required by the MPSC in Case No. U-18238 as part of the rate case filing requirements for IT and OT.

Q. Is the investment planning activity speculative?

A. No, it is not speculative. Investment planning is a pragmatic process that results in documented technology investment details. The process documentation includes: a project description and description of system functionality, project timelines including expected implementation date and spending plans, project benefits, a description of alternatives considered and rationale behind the decision, and cost benefit ratio, which were required by the MPSC in Case No. U-18238. Other important activities of investment planning are: identifying high-level business requirements, determining whether the functionality needed is already present in the Company's IT environment, identifying performance and security requirements, working with software vendors and cloud solution providers to demonstrate the effectiveness and security of their products and services, and developing the business case with project costs and benefits to confirm whether a proposed project should be approved for development and implementation.

During the investment planning phase, the Company spends the necessary time on up-front planning and due diligence for the technology investment. As an example, to maintain the reliability and safety of the Company's field dispatch communications, the Company needed to replace the aging core radio system infrastructure. The Company spent time on up-front planning for the 800 MHz Modernization upgrade project to build and confirm the scope, estimates, and alternatives. Investment planning is time needed to better understand the vendor solution and organize the work. Investment planning is based on key outcomes and fact-gathering to ensure it is not merely speculative.

Q. Should the Company be allowed recovery for the planning expense tied to technology investments?

A. Yes, the Company should be allowed recovery for this up-front planning activity. This work is required by the MPSC for technology investment, and for good reason. It is in the best interest of the Company's customers that the Company perform these investment planning activities to ensure potential investments provide sufficient value to justify the expense. The Company considers many ideas, but not all are feasible or even warrant investment planning. Critical as these expenses are, the Company does strive to minimize planning expenses; only those potential investments with the highest expected value even reach the planning phase. This reasonable and prudent work has associated costs and is required by the MPSC for technology investment planning. Accordingly, the Company should receive recovery for this required expense.

Q. Would it be more accurate to use a different method to project the Company's IT Investments O&M expenses?

A. No. The level of IT Investments O&M expense is closely coupled with the projected capital expenditures for IT and the upgrade and replacement cycles for existing assets. To fully and appropriately execute plans to spend the capital that has been deemed prudent to deliver value to its customers, keep its technology assets as current and secure as reasonably possible, and adhere to the FASB ASC 350-40 guideline for project activities that should be expensed, the Company requires the specific and forward-looking IT Investments O&M requested for the Test Year period. Other methods such as a historical average, which would be lower than the requested amount in this case, would not allow the Company to keep its systems current for security and reliability and make necessary and prudent capital expenditures to achieve the outcomes of the Integrated Resource Plan ("IRP"), Electric Distribution Infrastructure Investment Plan ("EDIIP"), and improve customer service. Additionally, the Company projects an increase in cloud solutions, which often have a higher level of IT Investments O&M than projects in earlier years.

INVESTMENTS CAPITAL EXPENDITURES

Q. Please describe the capital expenditures shown on Exhibit A-12 (SHB-4), Schedule B-5.1.

A. Exhibit A-12 (SHB-4), Schedule B-5.1, identifies the gas allocation of actual and projected capital expenditures to procure, install, and implement the software and infrastructure described in my testimony to meet business requirements. Specifically:

- Column (a) provides the business category designation for the capital expenditures:
    - Corporate;

- Customer;
- Electric & Gas Shared;
- Gas;
- IT/Digital Foundation; and
- Security.

- Page 1 of 2
  - Column (b) identifies the 2024 historical year capital expenditures as $26,616,000;
  - Column (c) identifies the 12 months ending December 31, 2025 projected bridge year capital expenditures as $25,363,000;
  - Column (d) identifies the 10 months ending October 31, 2026 projected bridge year capital expenditures as $34,336,000;
  - Column (e) identifies the 22 months ending October 31, 2026 projected bridge year capital expenditures as $59,699,000; and
  - Column (f) identifies the 12 months ending October 31, 2027 projected test year capital expenditures of $39,720,000.
- Page 2 of 2
  - Column (b) identifies the 10 months ended October 31, 2025 capital expenditures as $19,272,000;
  - Column (c) identifies the 12 months ending October 31, 2026 capital expenditures as $40,427,000;
  - Column (d) identifies the 12 months ending October 31, 2027 projected bridge year capital expenditures as $39,720,000; and
  - Column (e) identifies the 34 months ending October 31, 2027 projected bridge year capital expenditures as $99,419,000.
- For Investments expenditures, "Labor" line items include employee labor; "Software" line items include software licenses and maintenance contracts; "Material" line items include hardware purchases and maintenance contracts; "Contractor" line items include staff augmentation, managed services, and other contracted services; "Non-Labor Overhead" line items include overheads; and "Non-Labor Others" line items include pension expense,

administrative/general expense, Allowance For Funds Used During Construction ("AFUDC"), and business expenses.

Q. Please explain Exhibit A-20 (SHB-5).

A. Exhibit A-20 (SHB-5) identifies the gas allocation of projected capital and O&M expenditures to procure, install, and implement the software and infrastructure requested in my testimony to meet business requirements. Both O&M and capital are required to complete the projects included in the test year. This exhibit provides details regarding all projects included in this rate case filing for the IT Department. Specifically, within this exhibit:

- Column (a) provides the year of spending for each line item project;
- Column (b) identifies the project name associated with each line item capital and O&M expenditure for the applicable year or years;
- Column (c) identifies the Federal Energy Regulatory Commission ("FERC") category relative to the line item project's asset type;
- Column (d) identifies the Business Category of the project;
- Column (e) provides a synopsis of the project, including the project description and information on project scope, functionality, and benefits;
- Column (f) identifies the project's start date;
- Column (g) identifies the project's end date;
- Column (h) provides the project's cost/benefit ratio;
- Column (i) provides the total Company expected project capital costs;
- Column (j) provides the total Company expected projected O&M costs;
- Column (k) identifies the project's estimate type;
- Column (l) provides the project's gas portion total capital expenditure for the applicable year or years;

- Columns (m) through (r) provide the details of categorical spend that sum to the total line item Project Capital Spend for the applicable year or years broken down by:
    - Software costs (m);
    - Material costs (n);
    - Labor costs (o);
    - Contractor costs (p);
    - Non-Labor Overhead costs (q); and
    - Non-Labor Other costs (r).
- Column (s) provides the project's gas portion total O&M spend for the applicable year; and
- Columns (t) through (y) provide the details of categorical spend that sum to the total line item Project O&M Spend for the applicable year or years by the following categories:
    - Software costs (t);
    - Material costs (u);
    - Labor costs (v);
    - Contractor costs (w);
    - Non-Labor Overhead costs (x); and
    - Non-Labor Other costs (y).

Q. Please explain Confidential Exhibit A-21 (SHB-6).

A. Confidential Exhibit A-21 (SHB-6) is structured identically to Exhibit A-20 (SHB-5), however it is specific to the SAP S/4HANA Implementation project.

Q. Please explain the difference between Exhibit A-12 (SHB-4), Schedule B-5.1, Exhibit A-20 (SHB-5), and Confidential Exhibit A-21 (SHB-6).

A. Exhibit A-12 (SHB-4), Schedule B-5.1, Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6) are each capital expenditure exhibits that display different views to address the different requirements of the MPSC, as well as the IT Department, as outlined below:

- Exhibit A-12 (SHB-4), Schedule B-5.1, is a high-level summary of capital expenditures by year, by business category or product line, and by categorical spend; and
- Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6) are a more comprehensive exhibit displaying the detail of each project over the four-year time periods of 2024, 2025, 2026, and 2027.

Q. Please explain Exhibit A-22 (SHB-7).

A. Exhibit A-22 (SHB-7) is an Executive Summary report generated from the Company's internal BPS. This exhibit provides the approved business case information for each IT project in Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6). Exhibit A-22 (SHB-7) addresses the Commission's interest in:

- projects having approved business cases;
- total project cost for multi-year projects;
- associated hard savings; and
- benefit-cost overall value utilized by the Company.

This exhibit provides the same view the Company uses internally to review the Executive Summary of each business case approved to be included in the test year. It also outlines the total Company cost of ownership of each project, including the initial one-time project investment which could fund work occurring over multiple years, and the projected ongoing support costs after project implementation. Additionally, it identifies recurring

hard savings over the life of the investment and provides the cost benefit ratio with a zero breakeven point calculated by the Company's internal BPS. Specifically, within each section of this exhibit:

- Header Information section includes project name, the date the report was generated, and BPS identification number. Specifically:
  - Project Name is the name of the project that indicates the project objective;
  - Report Pulled is the date the Executive Summary report was generated from BPS; and
  - Item ID is the unique identifier from BPS.
- Basic Information section includes work category, work type, alias, brief description, portfolio, organization, business unit, and department. Specifically:
  - Work Category identifies classification of work and activities based on the Company methodology;
  - Work Type identifies "project" as the type of work for all IT investments;
  - Alias identifies historical project names for reference;
  - Description identifies a brief description of the project's intent and the expected outcome;
  - Portfolio identifies the financial planning portfolio for whom the work will be performed;
  - Org identifies the financial planning organization for whom the work will be budgeted;
  - Business Unit identifies the business unit for whom the work will be budgeted; and
  - Dept identifies the department for whom the work will be budgeted.
- Work Objectives includes a synopsis of the project, including the problem statement; objectives; information on project scope, functionality, and benefits; and alternatives considered. Specifically:

- Problem Statement provides an explanation of the problem(s) the work addresses;
- Objectives provides information about the business value the project will deliver;
- Scope describes the high-level business functionality and a list of high-level project deliverables; and
- Alternatives provide a summary of each of the alternatives considered, why each alternative was not selected and the rationale behind the alternative selected.

- Dates section includes the projected implementation phase start or end dates for projects, with the exception of the Annual Spend Programs such as Asset Refresh Programs, Application Currency, and Enhancements. Specifically:
  - Initiation is the start date of the project Plan phase;
  - Project Plan & Scope Definition is the end date of the project Plan phase;
  - Final Engineering, Planning & Design is the end date of the Design phase;
  - Execution is the end date of the Execute phase;
  - In-Service/Go-Live is the project's implementation date; and
  - Closeout is the end date of the Close phase.

- Funding Summary section includes a Total Company summary and detailed breakdown of projected categorical spend by year for each project. Specifically:
  - Summary of the Total Cost of Ownership of projected capital expenditures and O&M expense for each project, including ongoing maintenance, where:
    - Cap+COR is the total of all the capital expenditures; and
    - O&M is the total of all the O&M expense for the project implementation and ongoing maintenance.
  - Total Project Cost contains a detailed categorical breakdown for projected capital expenditures and O&M expense for each project, excluding ongoing maintenance, where:
    - Labor includes the internal staffing costs for project implementation;

- Outside Services includes the external labor and services for project implementation;
- Business Expenses/Overheads includes costs for items such as training, travel, lodging, and meals and Loadings & Allocations for Corporate Overheads and AFUDC;
- Employee Benefits includes costs for employee benefits;
- Material includes costs for hardware purchases;
- Licenses, Permits & Fees includes costs for software and hardware licenses and maintenance; and
- Other includes miscellaneous costs.

- Value & Impacts Summary Section provides a summary of the projected cost and benefits, risk and other value associated with a project for Capital expenditures and O&M expense, including ongoing maintenance, where:
  - For purposes of O&M:
    - Reduction includes the hard O&M savings;
    - Initial includes the implementation and ongoing maintenance costs;
    - Incremental includes any other O&M costs; and
    - Net is the difference of the reduction, initial, and incremental O&M costs.
  - For purposes of Cap+COR:
    - Reduction includes any hard capital savings;
    - Initial includes the implementation costs;
    - Incremental includes any other capital costs; and
    - Net is the difference of the reduction, initial, and incremental capital costs.
  - For purposes of Revenue:
    - Reduction includes any expenses;
    - Initial includes implementation revenue;

- Incremental includes any increase in revenue; and
- Net is the difference of the reduction, initial, and incremental revenue.

- For purposes of determining financial value of a project, the B/C Ratio (Overall), as shown in the figure below, is the net present value of the change in O&M, plus change in Capital, plus change in Revenue, divided by Total Cost of Ownership set with a breakeven point at zero.

$$\textbf{\textit{Financial Value}}\ (F_{Overall}) = \frac{\sum B}{\sum C} - 1$$

Where
B = Benefits
C = Total Costs

- For purposes of identifying risk:
  - Type of Corporate Risk;
  - Level of impact;
  - Likelihood of risk; and
  - Description of risk.
- And, for purposes of identifying other value:
  - Type of other value; and
  - Description of other value.

Q. Please explain Confidential Exhibit A-23 (SHB-8).

A. Confidential Exhibit A-23 (SHB-8) is structured identically to Exhibit A-24 (SHB-7), however it is specific to the SAP S/4HANA Implementation project.

Q. Please explain the breakeven point for the Company's B/C Ratio (Overall).

A. Using the Company's internal BPS B/C Ratio (Overall), the breakeven point is equal to zero where financial benefits and total costs are equal. If the result of the calculation is

greater than zero, financial benefits exceed costs. If the result is less than zero, total cost of ownership exceeds the financial benefit.

Q. Does the cost summary component in the Company's B/C Ratio (Overall) use the total one-time project cost, or the total one-time project cost plus the ongoing support costs?

A. The Company's internal BPS B/C Ratio (Overall) cost summary denominator uses total one-time project cost plus the ongoing support costs.

Q. Where is the total Company project cost number distinguished from the total Company project cost number that includes ongoing maintenance cost?

A. The total one-time Company project cost is the Total Project Cost at the bottom right corner of the Funding Summary Section of Exhibit A-22 (SHB-7) and Confidential Exhibit A-23 (SHB-8). This section of the Funding Summary section, starting with Labor, lists the breakdown of different cost categories for this investment. The total projected Company cost of ownership, including annual ongoing support costs, is the Total Cost of Ownership value on the right of the Funding Summary Section.

INVESTMENT IDENTIFICATION, PRIORITIZATION, APPROVAL, AND PROJECT PLANNING

Q. Please describe how technology projects are initiated, prioritized, and approved within the Company.

A. The initiation of a technology project begins with identification of a need for new or updated technology to meet the requirements of the Company's customers, including technology that customers interact with directly, and technology that sustains and improves reliability in service of customers. For example, IT collaborated closely with Company witnesses and representatives from the gas departments to identify technology projects and

foundational digital investments necessary to enable the NGDP. The joint teams prepared business cases for each of the projects utilizing standard format and content.

After sponsor approval, individual projects are prioritized based on an evaluation of the benefits, costs, customer value, and necessity to Company goals through a series of reviews by cross-functional business teams. The highest-ranking projects within the level of IT funding approved through the Company's budget and rate case process are selected for implementation and approved by each business area, followed by approval of the overall IT budget by the senior officer team. Due to the rapid pace of technology change and quickly changing business conditions, emergent projects are identified and vetted through IT and the affected internal business areas throughout the year as business objectives, Company goals, and customer needs and expectations evolve.

Q. Please explain how IT's investment forecasts evolve over the course of project planning and implementation.

A. IT's investment forecasts begin with a ROM estimate. The Company uses the term "ROM" to characterize an initial estimate that includes research, analysis, and a business case. ROM estimates are typically determined by technology and subject matter experts inside and outside the Company in comparison to historical actual costs for similar projects. The purpose of the ROM estimate is to determine whether the estimated costs justify the value provided by the new capabilities without spending an inordinate amount of investment planning O&M developing the bottom-up estimate. From that point, investment forecasting depends on the method used to deliver the intended solution. In the case of Agile delivery, the project team targets the delivery of the highest business value capabilities within the projected funding. In the case of traditional waterfall delivery, once

the formal design of a project has concluded, IT subject matter experts perform a detailed definitive estimate for execution. Factors may arise during project execution, such as resource needs, delays in receiving materials, changes in project schedule that shift spending between years, and changes in project scope or complexity that results in funding needs being lower or higher than initially estimated through the ROM process.

Q. Do the Company's total IT capital projections reflect a 20% reduction for those projects whose projections are based on a ROM?

A. Yes. Despite ROM cost-cutting concerns, the total capital projections include a 20% reduction for those projects whose projections are based on a ROM. In order to prevent over recovery, a 20% ROM adjustment is calculated by Business Category for those projects with a ROM estimate with the expectation that the full costs of approved projects may be recovered in a future rate case. These reductions are included in the table below and further reflected in Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6). Additionally, the ROM Adjusted Test Year Capital is identified for each project later in my testimony.

Year	Projected	Adjusted Projected (20% ROM Adjustment)
2024	$26,616,485	$26,616,485
2025	$25,656,624	$25,362,621
2026	$49,823,339	$42,646,526
2027	$41,256,091	$35,539,833
Test Year	$46,429,133	$39,720,416

Q. Was this 20% reduction to capital expenditures for all ROM estimate projects a reaction to the Commission's decision on page 128 of its December 22, 2021 Order in Case No. U-20963?

A. Yes, in Case No. U-20963, Staff recommended a 20% disallowance for ROM estimates (Case No. U-20963, 6 TR 4081), and the Commission agreed saying that the ROM estimates are akin to contingency costs. The 20% reduction to capital expenditures for all ROM estimate projects used by IT in this case differentiates the Company's ROM estimates from the ROM estimates it used in Case No. U-20963 (in fact, the 20% reduction reflects Staff's position in Case No. U-20963) and further shows that the ROM estimate projects do not include contingency. Contingency is a project management best practice to add and reserve a percentage of a project's budget for unforeseen circumstances encountered during the course of the project. Due to previous disallowances, IT estimates do not include contingency. The ROM estimate is (1) intended to cover the full cost of the project rather than a portion, (2) built to address specific scope rather than unforeseen events, and (3) is calculated by technology and subject matter experts for a specific project whereas contingency is a percentage allocation based on an industry percentage value and/or project risk rating.

Q. Which exhibits contain the estimate breakdown for each project?

A. Exhibit A-20 (SHB-5) and Confidential Exhibit A-21 (SHB-6) contains each project's gas allocation spend for the applicable year or years broken down by software, materials, labor, contractor costs, non-labor overhead, and non-labor other costs. Exhibit A-22 (SHB-7) and Confidential Exhibit A-23 (SHB-8) contains Company spend for each project in the historical, bridge, and test years, broken down by year, that shows:

- Staffing;
- Outside Services;
- Business Expenses/Other;
- Employee Benefits;
- Materials, Licenses, Permit & Fees; and
- Other.

Q. Do all the projects included in the test year have project plans and schedules?

A. All projects included in the test year will have project plans and target dates at levels commensurate with their current phase. Some projects are continuing from an earlier period into the test year and have more definitive project plans for delivery. When the budget is released to a project to begin the official Plan phase, the product team will develop a more specific project plan that includes progressively more detail as the project moves through its different phases. In the case of projects executed using Agile methods, a high-level plan will be developed at the start of the project that includes an estimated number of time-bound delivery cycles, or sprints, in which the targeted scope backlog will be delivered.

INVESTMENT PROJECTS

Q. Please provide a description of the various IT investment business categories or product lines to be highlighted in testimony.

A. Costs, descriptions, benefits, alternatives, and other relevant project information for each individual project can be found in Exhibits A-20 (SHB-5), Confidential A-21 (SHB-6), A-22 (SHB-7), and Confidential A-23 (SHB-8). The IT investment projects are grouped into the following areas for explanation in testimony:

- **Gas and Electric & Gas Shared** projects that enable the NGDP for Asset Management; Work Management; System Automation and Control, Security and Privacy; and Advanced Analytics that are necessary components to enable the Company to be an energy partner that customers, regulators, and the people of Michigan can count on to provide a safe, affordable, reliable, clean, and equitable gas system;

- **Customer** projects that are necessary to enable the Company to comply with regulatory billing changes, improve billing functionality, implement capabilities to assist low-income customers with energy assistance, increase the Company's ability to serve customers within the channel of their choice, and engage customers to enroll in demand response and energy waste reduction programs;

- **Corporate** projects that support internal departments of the Company are crucial to running an efficient business such as Treasury; Tax; Legal; HR, also known as People and Culture; Governmental, Regulatory and Public Affairs; Supply Chain and Facilities, also known as Operations Support; Finance; and Risk & Compliance;

- **IT/Digital Foundation** projects create the technology platforms, tools, processes, and frameworks that are required to enable IRP, EDIIP, and customer service outcomes. This includes ARP, application currency, upgrade and replacements, and digital and foundation capabilities projects; and

- **Security** projects are necessary to deter threats prior to impacting the Company, detect when malicious activity does occur, recover quickly with minimal effect if or when a threat occurs, comply with all governmental and industry regulations, and enable the Company to secure customer data.

IT Projects Enabling Other Areas

Q. Please explain the Gas and Electric & Gas Shared projects enabling NGDP.

A. Below are the projects enabling the NGDP. Investments in digital capabilities are essential to achieving the Company's NGDP business plan and Work Management improvements. A synopsis of each project with its value is included in the testimony of other Company witnesses, as indicated below.

Project	Projected Test Year Capital	ROM Adjusted Test Year Capital	Test Year O&M	Witness	Exhibit References
Gas SCADA Software Solution	$218,157	$0	$111,815	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Gas T&D Historian	$8,546	$0	$3,180	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Tracking & Traceability	$6,619,263	$5,295,411	$508,607	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Gas Nominations Replacement Solution	$406,968	$325,575	$48,465	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Compression Air Permit And Compliance Digitalization	$311,945	$249,556	$61,121	T. Joyce	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Replacement for Gas Automated Meter Reading (AMR) Technology	$180,839	$144,671	$18,737	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Gas Distribution Probabilistic Risk Model*	$1,494,796	$1,195,836	$12,733	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 4 A-19 (SHB-3), line 1
Spatial Asset Management	$20,085	$16,068	$3,299	K. Pascarello	A-12 (SHB-4), Schedule B-5.1, line 3 A-19 (SHB-3), line 1
Customer Consecutive Estimate Reduction Enablement	$4,006	$3,205	$2,969	L. Warriner	A-12 (SHB-4), Schedule B-5.1, line 3 A-19 (SHB-3), line 1

*See further information about a change in the projected costs for the Gas Distribution Probabilistic Risk Model project later in my testimony.

Additionally, the Application Currency-Gas-O&M and Capital, Application Currency-Electric & Gas Shared-O&M and Capital, Product Family Enhancements-Gas-O&M and Capital, and Product Family Enhancements-Electric & Gas Shared-O&M and Capital will be discussed later in my testimony.

Q. Are there any Gas projects with variances from the previous Case No. U-21806 that you would like to discuss?

A. Yes. The following Gas project is addressed below.

- Gas Distribution Probabilistic Risk Model

Q. What were the total projected capital expenditures and O&M expense for the Gas Distribution Probabilistic Risk Model in Case No. U-21806?

A. The Case No. U-21806 projected capital expenditures and O&M expense by year and cost category for the Gas Distribution Probabilistic Risk Model project are in the table provided below.

Gas Distribution Probabilistic Risk Model			
Case No. U-21806			
Cost Category	**Total Company/ Gas Allocation**		**U-21806 Reference**
	Capital	**O&M**	
2025 Projected			
Software	$1,800,000	$0	A-20 (SHB-5), line 260, column m and t
Material	$0	$0	A-20 (SHB-5), line 260, column n and u
Labor	$210,000	$7,440	A-20 (SHB-5), line 260, column o and v
Contractor	$175,000	$17,227	A-20 (SHB-5), line 260, column p and w
Non-Labor Overhead	$26,950	$1,727	A-20 (SHB-5), line 260, column q and x
Non-Labor Other	$219,470	$0	A-20 (SHB-5), line 260, column r and y
Total 2025 Projected	**$2,431,420**	**$26,394**	A-20 (SHB-5), line 260, column l and s
2026 Projected			
Software	$0	$0	A-20 (SHB-5), line 341, column m and t
Material	$0	$0	A-20 (SHB-5), line 341, column n and u
Labor	$420,000	$7,440	A-20 (SHB-5), line 341, column o and v
Contractor	$350,000	$0	A-20 (SHB-5), line 341, column p and w
Non-Labor Overhead	$53,900	$521	A-20 (SHB-5), line 341, column q and x
Non-Labor Other	$215,740	$0	A-20 (SHB-5), line 341, column r and y
Total 2026 Projected	**$1,039,640**	**$7,961**	A-20 (SHB-5), line 341, column l and s
2027 Projected			
Software	$0	$0	
Material	$0	$0	
Labor	$420,000	$4,220	
Contractor	$350,000	$0	
Non-Labor Overhead	$53,900	$295	
Non-Labor Other	$215,740	$0	
Total 2027 Projected	**$1,039,640**	**$4,515**	
Total Projected			
Software	$1,800,000	$0	
Material	$0	$0	
Labor	$1,050,000	$19,100	
Contractor	$875,000	$17,227	

Non-Labor Overhead	$134,750	$2,543	
Non-Labor Other	$650,950	$0	
Total Projected	**$4,510,700**	**$38,870**	

Q. What are the current projected total project costs broken down by year for the Gas Distribution Probabilistic Risk Model project?

A. The total project costs broken down by year for the Gas Distribution Probabilistic Risk Model project are in the table provided below.

Gas Distribution Probabilistic Risk Model			
Case No. U-21981			
	Total Company/ Gas Allocation		
Cost Category	**Capital**	**O&M**	**U-21981 Reference**
2026 Projected			
Software	$1,800,000	$0	A-20 (SHB-5), line 224, column m and t
Material	$0	$0	A-20 (SHB-5), line 224, column n and u
Labor	$434,430	$11,424	A-20 (SHB-5), line 224, column o and v
Contractor	$856,128	$17,227	A-20 (SHB-5), line 224, column p and w
Non-Labor Overhead	$0	$0	A-20 (SHB-5), line 224, column q and x
Non-Labor Other	$1,388,830	$0	A-20 (SHB-5), line 224, column r and y
Total 2026 Projected	**$4,479,388**	**$28,651**	A-20 (SHB-5), line 224, column l and s
2027 Projected			
Software	$0	$0	A-20 (SHB-5), line 295, column m and t
Material	$0	$0	A-20 (SHB-5), line 295, column n and u
Labor	$166,025	$9,550	A-20 (SHB-5), line 295, column o and v
Contractor	$461,082	$0	A-20 (SHB-5), line 295, column p and w
Non-Labor Overhead	$0	$0	A-20 (SHB-5), line 295, column q and x
Non-Labor Other	$270,770	$0	A-20 (SHB-5), line 295, column r and y
Total 2027 Projected	**$897,877**	**$9,550**	A-20 (SHB-5), line 295, column l and s
Total Projected			
Software	$1,800,000	$0	
Material	$0	$0	
Labor	$600,455	$20,974	
Contractor	$1,317,210	$17,227	
Non-Labor Overhead	$0	$0	
Non-Labor Other	$1,659,600	$0	
Total Projected	**$5,377,265**	**$38,201**	

Q. Has the Company identified any adjustments to the projected total project costs for the Gas Distribution Probabilistic Risk Model project in this Case No. U-21981?

A. Yes. The Company identified that corporate overheads were inadvertently applied to software and contractor costs. Based on the revised cost estimates, the gas allocation

Non-Labor Other for 2026 and 2027 are $340,295 and $91,981, respectively. The table below provides the revised total Company and gas allocation capital expenditures for 2026 and 2027 for the Gas Distribution Probabilistic Risk Model project.

This change was identified after the Company finalized its exhibits for this Case No. U-21981. The Company will reduce gas allocation capital by $873,780 ($699,024 ROM Adjusted) for the Bridge Period and $323,747 ($258,998 ROM Adjusted) for the Test Year for the Gas Distribution Probabilistic Risk Model project. The Company will include this change in a revised revenue requirement calculation.

Gas Distribution Probabilistic Risk Model (Revised)		
Case No. U-21981		
	Total Company/ Gas Allocation	
Cost Category	**Capital**	**O&M**
2026 Projected		
Software	$1,800,000	$0
Material	$0	$0
Labor	$434,430	$11,424
Contractor	$856,128	$17,227
Non-Labor Overhead	$0	$0
Non-Labor Other	$340,295	$0
Total 2026 Projected	**$3,430,853**	**$28,651**
2027 Projected		
Software	$0	$0
Material	$0	$0
Labor	$166,025	$9,550
Contractor	$461,082	$0
Non-Labor Overhead	$0	$0
Non-Labor Other	$91,981	$0
Total 2027 Projected	**$719,088**	**$9,550**
Total Projected		
Software	$1,800,000	$0
Material	$0	$0
Labor	$600,455	$20,974
Contractor	$1,317,210	$17,227
Non-Labor Overhead	$0	$0
Non-Labor Other	$432,275	$0
Total Projected	**$4,149,940**	**$38,201**

Q. In the Commission's September 30, 2025 Order in Case No. U-21806, pages 109-112, did the Commission adopt the proposal to cap and set the allowable recovery to $11.49 million in capital expenditures for the Gas SCADA Software Solution project?

A. Yes. In Case No. U-21806, the Commission adopted the proposal to cap and set the allowable recovery to the $11.49 million in capital expenditures approved in the July 23, 2024 Order in Case No. U-21490 (as part of the approved settlement agreement.) for the Gas SCADA Software Solution project. The Commission found that the Company did not adequately refute the concerns about inadequate planning and unjustified or reasonably foreseeable cost increases, specifically the need for longer licensing requirements and the Company's decision to switch to virtual servers. Given this finding, the Company is providing more information on these topics in this case.

Q. Did the Company perform adequate Investment Planning for the Gas SCADA Software Solution project?

A. Yes. The Company performed the investment planning or preliminary project stage activities that are essential to ensure the Company made a prudent decision to replace the current Gas SCADA software with a more standardized software package enabling the Company to more efficiently meet Federal and MPSC requirements. By completing the preliminary project stage activities the Company developed a business case, as provided in Case No. U-21490, Exhibit No. A-21 (SHB-6), page 94, that included the project description, description of system functionality, project timeline including expected implementation date, spend plans, project benefits, description of alternatives considered and rationale behind the decision for the alternative selected, and cost benefit ratio.

Q. Are the costs increases for the longer licensing requirements justified or difficult to foresee?

A. Yes. The longer licensing requirements are justified. Based on historical capital software projects, the Company's standard has been to purchase licenses and maintenance based on a five-year period. Therefore, the project initial cost estimate was based on this standard of a five-year period for licenses and maintenance. As the Company refined the implementation plan, it was determined that it would be more than two years. The Company also requires that a software asset have at least a three-year expected life after implementation for capitalization. This required the Company to purchase licenses and maintenance for six years to ensure there was a three-year expected life.

Q. Are the cost increases for the decision to utilize virtual servers justified or difficult to foresee?

A. Yes. The decision to utilize virtual servers rather than physical servers was based on a new operational technology standard that was put in place after the initial cost estimate was developed and difficult to foresee. The use of virtual servers costs more upfront due to the hypervisor software licensing required for the hardware to function. The cost efficiencies gained are less on-going support and the flexibility to maximize the use of available server resources without purchasing additional servers. Managing the life cycle of virtual servers is more efficient. For example, rolling out firmware, operating system ("OS") upgrades, and patches is more efficient with virtual servers, as it can be done once and deployed automatically and dynamically across many virtual servers. In contrast, physical servers require scheduling an outage, taking down each server, and applying the firmware and OS upgrades one by one.

Q. Are the cost increases for contractor costs for a third-party vendor to support testing justified or difficult to foresee?

A. Yes. The cost increases for contractor costs for a third-party vendor to support testing is justified. The Company found that it lacked sufficient internal resources and skills to support user acceptance and parallel testing. Therefore, the Company contracted a third-party vendor to provide additional resources to assist, guide, and support testing of the solution. It is critical that the system is thoroughly tested due to the impact an unstable or not functioning system could have on the Company's ability to operate and monitor real-time system conditions, maintain safe operations, and comply with regulatory requirements.

Q. What were the total projected capital expenditures for the Gas SCADA Software Solution project in Case No. U-21490?

A. The Case No. U-21490 projected capital expenditures by year and cost category for the Gas SCADA Software Solution project are in the table provided below.

Gas SCADA Software Solution			
Case No. U-21490			
Cost Category	**Total Company Capital**	**Gas Allocation Capital**	**U-21490 Reference**
2023 Projected			
Software	$400,000	$400,000	A-22 (SHB-5), line 170, column l
Material	$200,000	$200,000	A-22 (SHB-5), line 170, column m
Labor	$353,273	$353,273	A-22 (SHB-5), line 170, column n
Contractor Costs	$1,133,000	$1,133,000	A-22 (SHB-5), line 170, column o
Overhead & Other Costs	$426,345	$426,345	A-22 (SHB-5), line 170, column p
Total 2023 Projected	**$2,512,618**	**$2,512,618**	A-22 (SHB-5), line 170, column k
2024 Projected			
Software	$985,282	$985,282	A-22 (SHB-5), line 247, column l
Material	$1,147,152	$1,147,152	A-22 (SHB-5), line 247, column m
Labor	$901,900	$901,900	A-22 (SHB-5), line 247, column n

Contractor Costs	$2,144,475	$2,144,475	A-22 (SHB-5), line 247, column o
Overhead & Other Costs	$1,006,673	$1,006,673	A-22 (SHB-5), line 247, column p
Total 2024 Projected	**$6,185,482**	**$6,185,482**	A-22 (SHB-5), line 247, column k
2025 Projected			
Software	$212,500	$212,500	A-22 (SHB-5), line 317, column l
Material	$0	$0	A-22 (SHB-5), line 317, column m
Labor	$653,720	$653,720	A-22 (SHB-5), line 317, column n
Contractor Costs	$1,357,238	$1,357,238	A-22 (SHB-5), line 317, column o
Overhead & Other Costs	$569,642	$569,642	A-22 (SHB-5), line 317, column p
Total 2025 Projected	**$2,793,100**	**$2,793,100**	A-22 (SHB-5), line 317, column k
Total Projected			
Software	$1,597,782	$1,597,782	
Material	$1,347,152	$1,347,152	
Labor	$1,908,893	$1,908,893	
Contractor Costs	$4,634,713	$4,634,713	
Overhead & Other Costs	$2,002,660	$2,002,660	
Total Projected	**$11,491,200**	**$11,491,200**	

Q. What were the total projected capital expenditures for the Gas SCADA Software Solution project in Case No. U-21806?

A. The Case No. U-21806 projected capital expenditures by year and cost category for the Gas SCADA Software Solution project are in the table provided below.

Gas SCADA Software Solution			
Case No. U-21806			
Cost Category	**Total Company Capital**	**Gas Allocation Capital**	**U-21806 Reference**
2023 Actuals			
Software	$708,742	$708,742	A-20 (SHB-5), line 67, column l
Material	$946,533	$946,533	A-20 (SHB-5), line 67, column m
Labor	$53,782	$53,782	A-20 (SHB-5), line 67, column n
Contractor Costs	$219,054	$219,054	A-20 (SHB-5), line 67, column o
Non-Labor Overhead	$4,241	$4,241	A-20 (SHB-5), line 67, column p
Non-Labor Other	$17,212	$17,212	A-20 (SHB-5), line 67, column q
Total 2023 Actuals	**$1,949,564**	**$1,949,564**	A-20 (SHB-5), line 67, column k
2024 Projected			
Software	$555,511	$555,511	A-20 (SHB-5), line 171, column l

Material	$855,345	$855,345	A-20 (SHB-5), line 171, column m
Labor	$1,194,638	$1,194,638	A-20 (SHB-5), line 171, column n
Contractor Costs	$4,957,904	$4,957,904	A-20 (SHB-5), line 171, column o
Non-Labor Overhead	$23,030	$23,030	A-20 (SHB-5), line 171, column p
Non-Labor Other	$441,113	$441,113	A-20 (SHB-5), line 171, column q
Total 2021 Projected	**$8,027,542**	**$8,027,542**	A-20 (SHB-5), line 171, column k
2025 Projected			
Software	$2,083,987	$2,083,987	A-20 (SHB-5), line 261, column l
Material	$7,264	$7,264	A-20 (SHB-5), line 261, column m
Labor	$956,112	$956,112	A-20 (SHB-5), line 261, column n
Contractor Costs	$3,856,564	$3,856,564	A-20 (SHB-5), line 261, column o
Non-Labor Overhead	$324,519	$324,519	A-20 (SHB-5), line 261, column p
Non-Labor Other	$810,488	$810,488	A-20 (SHB-5), line 261, column q
Total 2021 Projected	**$8,038,934**	**$8,038,934**	A-20 (SHB-5), line 261, column k
Total Actuals/Projected			
Software	$3,348,240	$3,348,240	
Material	$1,809,142	$1,809,142	
Labor	$2,204,532	$2,204,532	
Contractor Costs	$9,033,522	$9,033,522	
Non-Labor Overhead	$351,790	$351,790	
Non-Labor Other	$1,268,814	$1,268,814	
Total Actuals/Projected	**$18,016,040**	**$18,016,040**	

Q. After further investigation did the Company identify an issue with the projected 2024 contractor costs in the previous Case No. U-21806?

A. Yes. After further investigation, the Company identified that projected contractor costs for 2024 in previous Case No. U-21806, had incorrectly included approximately $3.7 million in contractor costs that should not have been included in 2024.

Q. When did the Company identify this issue and provide a revised estimate in Case No. U-21806 that reflected the corrected contractor costs for 2024?

A. In Discovery Request No. U21806-AG-CE-0613, the Company provided a revised estimate that included the 2024 Preliminary Actuals contractor costs of $1,284,033 in

capital expenditures, which was $3,673,871 less than the $4,957,904 in contractor costs originally projected for 2024 provided in the table above.

Q. What are the total projected capital expenditures for the Gas SCADA Software Solution project in Case No. U-21981?

A. The Case No. U-21981 projected capital expenditures by year and cost category for the Gas SCADA Software Solution project are in the table provided below.

Gas SCADA Software Solution			
Case No. U-21981			
Cost Category	Total Company Capital	Gas Allocation Capital	U-21806/U-21981 Reference
2023 Actuals			
Software	$708,742	$708,742	U-21806, A-20 (SHB-5), line 67, column m
Material	$946,533	$946,533	U-21806, A-20 (SHB-5), line 67, column n
Labor	$53,782	$53,782	U-21806, A-20 (SHB-5), line 67, column o
Contractor Costs	$219,054	$219,054	U-21806, A-20 (SHB-5), line 67, column p
Non-Labor Overhead	$4,241	$4,241	U-21806, A-20 (SHB-5), line 67, column q
Non-Labor Other	$17,212	$17,212	U-21806, A-20 (SHB-5), line 67, column r
Total 2023 Actuals	**$1,949,564**	**$1,949,564**	U-21806, A-20 (SHB-5), line 67, column l
2024 Actuals			
Software	$433,785	$433,785	U-21981, A-20 (SHB-5), line 40, column m
Material	$851,275	$851,275	U-21981, A-20 (SHB-5), line 40, column n
Labor	$584,162	$584,162	U-21981, A-20 (SHB-5), line 40, column o
Contractor Costs	$1,299,385	$1,299,385	U-21981, A-20 (SHB-5), line 40, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 40, column q
Non-Labor Other	$235,536	$235,536	U-21981, A-20 (SHB-5), line 40, column r
Total 2024 Actuals	**$3,404,142**	**$3,404,142**	U-21981, A-20 (SHB-5), line 40, column l
2025 Projected			
Software	$1,978,263	$1,978,263	U-21981, A-20 (SHB-5), line 141, column m
Material	$58,487	$58,487	U-21981, A-20 (SHB-5), line 141, column n
Labor	$507,990	$507,990	U-21981, A-20 (SHB-5), line 141, column o
Contractor Costs	$3,429,500	$3,429,500	U-21981, A-20 (SHB-5), line 141, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line141, column q
Non-Labor Other	$657,803	$657,803	U-21981, A-20 (SHB-5), line 141, column r
Total 2025 Projected	**$6,632,043**	**$6,632,043**	U-21981, A-20 (SHB-5), line 141, column l
2026 Projected			
Software	$0	$0	U-21981, A-20 (SHB-5), line 226, column m
Material	$0	$0	U-21981, A-20 (SHB-5), line 226, column m

Labor	$307,977	$307,977	U-21981, A-20 (SHB-5), line 226, column m
Contractor Costs	$458,467	$458,467	U-21981, A-20 (SHB-5), line 226, column m
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 226, column m
Non-Labor Other	$542,500	$542,500	U-21981, A-20 (SHB-5), line 226, column m
Total 2026 Projected	**$1,308,944**	**$1,308,944**	U-21981, A-20 (SHB-5), line 226, column m
Total Projected			
Software	$3,120,790	$3,120,790	
Material	$1,856,295	$1,856,295	
Labor	$1,453,911	$1,453,911	
Contractor Costs	$5,406,405	$5,406,405	
Non-Labor Overhead	$4,241	$4,241	
Non-Labor Other	$1,453,051	$1,453,051	
Total Projected	**$13,294,693**	**$13,294,693**	

Q. Has the Gas SCADA Software Solution project investment forecast evolved since Case No. U-21490?

A. Yes. The Gas SCADA Software Solution project investment forecast has evolved since Case No. U-21490, based on factors that have arose increasing capital expenditures from $11.49 million to $13.3 million for the reasons previously discussed in my testimony.

Q. Is this within the cost estimate bounds described in the Project Management Body of Knowledge ("PMBOK")?

A. Yes. In the PMBOK, ROM estimates can have cost estimate bounds of -25% to +75%; this means that a ROM estimated project could end up costing between 25% less to 75% more than the initial estimate. The Gas SCADA Software Solution project capital costs have increased 16%, which is well within the PMBOK bounds for a ROM estimate.

Q. Please explain the test year projects included in the Customer area.

A. Below are projects included within the Customer area. These digital investments support lower cost of customer service, increase customer engagement and enrollment in programs, and increase use of digital platforms. A synopsis of each project with its value is included in the direct testimony of Company witness Melissa N. Wiersema:

Project	Projected Test Year Capital	ROM Adjusted Test Year Capital	O&M	Exhibit References
Energy Assistance Enhancements and Maintenance Annual Updates	$0	$0	$124,022	A-12 (SHB-4), Schedule B-5.1, line 2 A-19 (SHB-3), line 1
Customer Order Service Tracker	$158,393	$126,715	$40,415	A-12 (SHB-4), Schedule B-5.1, line 2 A-19 (SHB-3), line 1
Kubra 4.0 Upgrade	$414	$331	$0	A-12 (SHB-4), Schedule B-5.1, line 2 A-19 (SHB-3), line 1

Additionally, the Application Currency-Customer-O&M and Capital and Product Family Enhancements-Customer-O&M and Capital will be discussed later in my testimony.

Q. What is the current status of the Company's Website Redesign project?

A. The Company has put the website redesign on hold due to extended support of the current on-premises Sitecore web content management system and the Company's SAP S/4HANA planned implementation. The previous timing for the website redesign was developed with the expectation that the Company would need to migrate to the cloud/SaaS version of the Sitecore system based on Sitecore's published product support lifecycle at that time. This would have been a major reason to initiate the website redesign. Since then, Sitecore has extended mainstream support for the on-premises version 10.4 to December 31, 2027, giving the Company more flexibility in its migration schedule. In addition, the Company's implementation of the SAP S/4HANA system will be a major undertaking, which will significantly impact the design of integration between the Company's website and SAP. The Company plans to complete the S/4HANA implementation before starting the website redesign. It is important to note that improvements to the Company's website design, content, navigation, accessibility, and features are not static or stopped until the website redesign project is undertaken. The Company is regularly prioritizing and executing

updates to web pages, content, and flows based on customer needs and challenges. An example of this is for the Low and Moderate Income ("LMI") Customer Support Enhancement. In fact, much of the investment in this enhancement is being achieved through updates to website design, content, features, and navigation, without the full re-architecture associated with the eventual website redesign project.

Q. Do you agree that the Company's website redesign would negate the need to make investments in Customer Self-Service Mobile Application and Web Chat AI?

A. No. The Website Redesign would not negate the need to make investments in the Customer Self-Service Mobile Application, Web Chat AI, or any other channels preferred by customers for specific needs, as discussed in Company witness Wiersema's testimony.

Q. Please explain the projects included in the Corporate area.

A. Below are projects included within the Corporate area. These digital solutions can optimize and even transform these foundational services. A synopsis of each project with its value is included in the direct testimony of Company witness Matthew J. Foster:

Project	Projected Test Year Capital	ROM Adjusted Test Year Capital	Test Year O&M	Exhibit References
2025 Union Contract Changes	$0	$0	$17,099	A-12 (SHB-4), Schedule B-5.1, line 1 A-19 (SHB-3), line 1
Enterprise Risk Management	$0	$0	$1,897	A-12 (SHB-4), Schedule B-5.1, line 1 A-19 (SHB-3), line 1
Incident Command System (ICS) Management Software	$0	$0	$5,803	A-12 (SHB-4), Schedule B-5.1, line 1 A-19 (SHB-3), line 1

Additionally, the Application Currency-Corporate-O&M and Capital and Product Family Enhancements-Corporate-O&M and Capital will be discussed later in my testimony.

Q. Are there any Corporate projects that you would like to discuss?

A. Yes. The following Corporate projects are addressed below.

- ICS Management Software (formerly Business Continuity – Program Management Tool)

Q. Please explain the reason for the name change of the Business Continuity – Program Management Tool project to the ICS Management Software project.

A. The Company has renamed the Business Continuity–Program Management Tool project to the ICS Management Software project to better align with its commitment to implementing an ICS management tool that aligns with Federal Emergency Management Agency ("FEMA") and National Incident Management System ("NIMS") guidelines. The Company's current tool, which was implemented in 2023 due to immediate technology obsolescence, is limited to supporting only Business Continuity ("BC") and Disaster Recovery ("DR") functions and does not provide the necessary capabilities for incident command management. Because there is no cost-effective solution that currently fulfills both BC/DR and FEMA/NIMS ICS requirements, the project's refined scope specifically addresses the need for an ICS management tool, and the new project name accurately reflects this focus.

IT/Digital Foundations and Capabilities

ARP

Q. Please explain the value of projects included in ARP, and how the Company determines the hardware refresh frequency.

A. The Company's ARP projects replace technology assets in line with industry and Company life-cycle expectations for the specific assets in each type of program. Replaced assets are recycled, donated, or sold if there is residual value. The Company's research shows that industry standards on refreshing hardware are generally three to five years, although the Company refreshes monitors every eight years based on Company data related to historical

failure rates. Refreshing hardware at the recommended cycle allows the Company to: (1) reduce security risks and help ensure devices are updated and patched to avoid vulnerabilities; (2) avoid costs due to increasing hardware failures; (3) avoid frustration for its customers and lost productivity for its employees due to downtime; (4) receive continued operating system support as older versions are retired by the manufacturer; and (5) ensure employees have the required hardware to support their work.

Below is a link to information on industry standards the Company has reviewed in determining its hardware refresh time periods:

- Michigan.gov, Information Technology Equipment Life Cycle[4]

Q. Please describe Exhibit A-24 (SHB-9).

A. Exhibit A-24 (SHB-9) shows the detailed projected and actual capital expenditures of each ARP. Specifically:

- Column (a) provides the unit description;
- Column (b) provides the average unit cost;
- Column (c) provides the total number of units for the specified year;
- Column (d) provides the total number of units for the specified year;
- Columns (e) through (f) provide total actual or projected capital expenditures for the specified year;
- Column (g) provides the total projected capital expenditures for the test year or the total actual gas allocation of capital expenditures for the specified year; and
- Column (h) provides gas allocation of capital expenditures for the specified year.

[4] https://www.michigan.gov/dtmb/-/media/Project/Websites/dtmb/Law-and-Policies/Legislative-Reports/FY2023/Sec-829-Report-of-PA-166---IT-Lifecycle-2023.pdf?rev=7b90fd55a9104194aa50e978d570bfec&hash=1A969DADCAF5A71CD5F0746D0DEE08A4

Q. Please explain the ARP and infrastructure projects, as reflected in Exhibit A-24 (SHB-9).

A. Each page of Exhibit A-24 (SHB-9) relates to a different ARP and infrastructure project, which I discuss further below.

- The **ARP-Collaboration** project requires $306,116 in capital and $62,724 in O&M in the test year.
  - **Description:** This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment.
  - **Problem Statement:** When collaboration assets used to support customer interactions and business operations are obsolete or out-of-date, they are more difficult to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.
  - **Objectives:** This project creates value by: (1) ensuring the stability and reliability of the Company's audio, visual, telephony, and other communications systems; and (2) migrating to new collaboration assets.
  - **Scope:** The project scope consists of: (1) replacing aging collaboration assets; and (2) installing new collaboration assets to meet evolving business requirements.
  - **Alternatives:** The alternatives considered include: (1) continuing to operate collaboration assets beyond a five-year refresh cycle; or (2) refreshing collaboration assets based on a five-year refresh cycle while evaluating the health of the asset and evolving business requirements. The alternative to operate the collaboration assets beyond a five-year refresh cycle was not selected due to the risk of asset failures would cause stability and reliability issues for employees supporting our customers, as vendors do not provide extended support after five years. The Company chose to refresh the collaboration assets based on a five-year refresh cycle and evaluate the health of the asset and evolving business requirements to reduce the risk of impacting the productivity of employees supporting our customers.

Q. Please explain the change made with the ARP-Cyber Security project.

A. Beginning in 2025, the ARP-Cyber Security project is being replaced with ARP-Cyber Security-Common, ARP-Cyber Security-Gas, and ARP-Cyber Security-Gas projects to

improve the tracking of these assets and better align the projects with the resources performing the work.

- The **ARP-Cyber-Common** project requires $712,603 in capital and $6,298 in O&M in the test year.
    - **Description:** This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions.
    - **Problem Statement:** When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates.
    - **Objectives:** This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations.
    - **Scope:** The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three- to five-year hardware lifecycle; and (2) performing application upgrades.
    - **Alternatives:** The alternatives considered include: (1) upgrade or replace only those assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warrant repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.
- The **ARP-Cyber-Gas** project requires $437,013 in capital and $13,996 in O&M in the test year.
    - **Description:** This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions.
    - **Problem Statement:** When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates.

- **Objectives:** This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations.

- **Scope:** The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three- to five-year hardware lifecycle; and (2) performing application upgrades.

- **Alternatives:** The alternatives considered include: (1) upgrade or replace only those assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warrant repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.

Q. Please explain the changes made with the ARP-Core Network, ARP-LAN, and ARP-Infoblox projects.

A. Beginning in 2025, the ARP-Core Network, ARP-LAN, and ARP-Infoblox projects have been replaced with ARP-Network-Common, ARP-Network-Gas, and ARP-Network-Gas projects due to the move of network resources to Security. In addition, a portion of the units from the ARP-OT Gas have been moved to these new projects. These changes were made to improve tracking of these assets and better align the projects with the resources performing the work.

- The **ARP-Network-Common** project requires $667,444 in capital and $8,600 in O&M in the test year.

  - **Description:** This project will refresh data center network equipment, LAN, wireless local area network ("WLAN"), and equipment to efficiently manage and control the Company's networks.

  - **Problem Statement:** When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to

support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.

- **Objectives:** This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks.

- **Scope:** The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices.

- **Alternatives:** The alternatives considered include: (1) continue to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; or (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.

- The **ARP-Network-Gas** project requires $291,077 in capital and $13,188 in O&M in the test year.

  - **Description:** This project will refresh data center network equipment, LAN, WLAN, and equipment to efficiently manage and control the Company's networks for Gas.

  - **Problem Statement:** When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.

  - **Objectives:** This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks.

- **Scope:** The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices.

- **Alternatives:** The alternatives considered include: (1) continue to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; or (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.

- The **ARP-OT Support Common** project requires $532,578 in capital and $54,885 in O&M in the test year.

  - **Description:** The ARP- OT Support Common project will replace dated and obsolete servers shared by Electric and Gas on a rotating five-year refresh schedule.

  - **Problem Statement:** When OT Assets that are used to ensure the safety and reliability of technology that supports critical electric operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates and run the risk of failure if the Company does not adhere to a regular refresh cycle.

  - **Objectives:** This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical electric infrastructure.

  - **Scope:** The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new computer capacity to account for expanding business requirements.

  - **Alternatives:** The alternatives considered included: (1) continue to operate hardware beyond a five-year refresh cycle; or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure.

- The **ARP-OT Support Gas** project requires $478,333 in capital and $44,247 in O&M in the test year.
    - **Description:** The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule.
    - **Problem Statement:** When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.
    - **Objectives:** This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical gas infrastructure.
    - **Scope:** The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements.
    - **Alternatives:** The alternatives considered include: (1) continue to operate hardware beyond a five to seven-year refresh cycle or (2) refresh hardware based on a five to seven-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five to seven-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety for customers, as vendors do not provide extended support after seven years. The Company chose the alternative to refresh this hardware based on a five to seven-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.

Q. Please explain the ARP-Physical Security project.

A. The **ARP-Physical Security** project requires $713,710 in capital and $4,672 in O&M in the test year.

- **Description:** The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns.

- **Problem Statement:** The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current considerations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. If the Company does not maintain these assets, it could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage.

- **Objectives:** The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reducing gaps in functionality; and (3) optimize overall system performance.

- **Scope:** Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems.

- **Alternatives:** Alternatives considered include: (1) not refreshing physical security assets; and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet FERC requirements. The alternative selected maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.

Q. What were the total Company and gas allocation projected capital expenditures for the ARP-Physical Security project for 2024 in Case No. U-21806?

A. The Case No. U-21806 total Company and gas allocation projected capital expenditures for 2024 by cost category for the ARP-Physical Security project are in the table provided below.

ARP-Physical Security			
Case No. U-21806			
Cost Category	Total Company Capital	Gas Allocation Capital	U-21806 Reference
2024 Projected			
Software	$0	$0	A-20 (SHB-5), line 218, column m
Material	$657,028	$199,408	A-20 (SHB-5), line 218, column n
Labor	$5,822	$1,767	A-20 (SHB-5), line 218, column o
Contractor	$886,807	$269,146	A-20 (SHB-5), line 218, column p
Non-Labor Overhead	$53	$16	A-20 (SHB-5), line 218, column q
Non-Labor Other	$1,994	$605	A-20 (SHB-5), line 218, column r
Total 2024 Projected	$1,551,703	$470,942	A-20 (SHB-5), line 218, column l

Q. How do the projected total Company and gas allocation capital expenditures for the ARP-Physical Security project for 2024 in Case No. U-21806 differ from the 2024 actual total Company and gas allocation capital expenditure in this Case No. U-21981?

A. The Case No. U-21981 actual total Company and gas allocation capital expenditures for 2024 by cost category for the ARP-Physical Security project are in the table provided below.

ARP-Physical Security			
Case No. U-21981			
Cost Category	Total Company Capital	Gas Allocation Capital	U-21981 Reference
2024 Actuals			
Software	$0	$0	A-20 (SHB-5), line 88, column m
Material	$1,859,541	$564,371	A-20 (SHB-5), line 88, column n
Labor	$6,091	$1,849	A-20 (SHB-5), line 88, column o
Contractor	$655,925	$199,073	A-20 (SHB-5), line 88, column p
Non-Labor Overhead	$0	$0	A-20 (SHB-5), line 88, column q
Non-Labor Other	($239,573)	($72,710)	A-20 (SHB-5), line 88, column r
Total 2024 Actuals	**$2,281,985**	**$692,582**	A-20 (SHB-5), line 88, column l

Q. Why have the 2024 actual total Company and gas allocation costs of the ARP-Physical Security project changed from previous projected costs in Case No. U-21806?

A. The 2024 actual gas allocation increase over the previous case is $0.22 million. The increase in ARP-Physical Security project costs from the projections presented in Case No. U-21806 are due to an increase in material costs ($0.36 million) offset by decreases in contractor costs ($0.07 million) and Non-Labor Other ($0.07 million) costs. Material costs increased due to the need to replace cameras at two locations that had reached end-of-life to reduce operational risk. Contractor costs decreased due to some installation work that had been planned for 2024 that was deferred to 2025. Non-Labor Other costs are negative due to reimbursements of the DTE portion of Ludington Pumped Storage costs.

Q. What were the total Company and gas allocation projected capital expenditures for the ARP-Physical Security project for 2025 in Case No. U-21806?

A. The Case No. U-21806 projected total Company and gas allocation capital expenditures for 2025 by cost category for the ARP-Physical Security project are in the table provided below.

ARP-Physical Security			
Case No. U-21806			
Cost Category	**Total Company**	**Gas Allocation**	**U-21806 Reference**
	Capital	**Capital**	
2025 Projected			
Software	$0	$0	A-20 (SHB-5), line 296, column m
Material	$999,000	$313,986	A-20 (SHB-5), line 296, column n
Labor	$120,000	$37,716	A-20 (SHB-5), line 296, column o
Contractor	$450,000	$141,435	A-20 (SHB-5), line 296, column p
Non-Labor Overhead	$333,740	$104,894	A-20 (SHB-5), line 296, column q
Non-Labor Other	$0	$0	A-20 (SHB-5), line 296, column r
Total 2025 Projected	**$1,902,740**	**$598,031**	A-20 (SHB-5), line 296, column l

Q. How do the projected total Company and gas allocation capital expenditures for the ARP-Physical Security project for 2025 in Case No. U-21806 differ from the 2025 projected total Company and gas allocation capital expenditure in this Case No. U-21981?

A. The Case No. U-21981 projected total Company and gas allocation capital expenditures for 2025 by cost category for the ARP-Physical Security project are in the table provided below.

ARP-Physical Security			
Case No. U-21981			
Cost Category	Total Company Capital	Gas Allocation Capital	U-21981 Reference
2025 Projected			
Software	$0	$0	A-20 (SHB-5), line 188, column m
Material	$1,401,071	$440,357	A-20 (SHB-5), line 188, column n
Labor	$43,407	$13,643	A-20 (SHB-5), line 188, column o
Contractor	$995,331	$312,833	A-20 (SHB-5), line 188, column p
Non-Labor Overhead	$0	$0	A-20 (SHB-5), line 188, column q
Non-Labor Other	($34,913)	($10,973)	A-20 (SHB-5), line 188, column r
Total 2025 Projected	**$2,404,896**	**$755,859**	A-20 (SHB-5), line 188, column l

Q. Why have the 2025 projected costs of the ARP-Physical Security project changed from previous projections in Case No. U-21806?

A. The 2025 projected gas allocation increase of $0.16 million in ARP-Physical Security project costs from the projections presented in Case No. U-21806 are due to an increase in material costs ($0.13 million), an increase in contractor costs ($0.17 million), offset by decreases in labor ($0.02 million), Non-Labor Overhead ($0.10 million), and Non-Labor Other ($0.01 million). Material costs increased due to a journal entry to correct hardware costs from a prior year that had been charged to contractor costs. Non-Labor Other costs decreased due to a journal entry to correct hardware costs from a prior year that had been

charged to business expense. Contractor costs increased due to installation work that had been planned for 2024 that was deferred to 2025.

Q. Please explain the ARP-PAM project.

A. The ARP-PAM project has the following synopsis:

- The **ARP-PAM** project requires $200,424 in capital and $1,850 in O&M in the test year.
  - **Description:** This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one.
  - **Problem Statement:** When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.
  - **Objectives:** This project creates value for the Company by: (1) improving the dependability of these printer devices for employees; (2) averting increased costs due to hardware repairs; and (3) ensuring compatibility with enterprise print applications.
  - **Scope:** The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. This does not mean that all printers are replaced after five years – merely that printers are assessed on a five-year cycle for possible replacement.
  - **Alternatives:** The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years would require the printers to be assessed monthly to ensure they are not run to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.

Q. Please explain the ARP-FDAM project.

A. The ARP-FDAM project has the following synopsis:

- The **ARP-FDAM** project requires $2,039,849 in capital and $1,850 in O&M in the test year.
  - **Description:** This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility.
  - **Problem Statement:** When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with Security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle.
  - **Objectives:** This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing field devices before they fail; and (2) allowing field workers to complete their job tasks.
  - **Scope:** The project scope consists of replacing field device assets according to the four-year refresh cycle.
  - **Alternatives:** Alternatives considered include: (1) using outdated equipment. This alternative was not selected because there would be an increased risk of hardware failure and equipment outages that could impact meter readers' ability to complete job tasks. It would also complicate the Company's efforts to meet the MPSC's meter reading factor and consecutive estimated targets, and it could cause applications to run poorly or stop functioning; (2) The second alternative considered was to replace the hardware. The Company selected this option to alleviate the above concerns.

Q. Does the Company agree with the Commission and Staff, as stated in other cases, that using a more explicit or specific method for projecting new purchases for the ARP-FDAM and ARP-WAM projects would provide more certainty in the projected costs?

A. Yes. The Company agrees that using a four-year historical average for new field devices and workstations purchases and providing information about any adjustments would be a more explicit or specific method to calculate the total projected costs for new field device

purchases for the ARP-FDAM project. I have provided information in Exhibit A-25 (SHB-10), that will permit this approach for this case, and the Company commits to using this method in future cases as well.

Q. Please describe Exhibit A-25 (SHB-10).

A. Exhibit A-25 (SHB-10) is the four years of historical actuals data for the Years 2021, 2022, 2023, 2024, and total Company and gas allocation four-year historical average calculations for the costs associated with new purchases of field devices and workstations for the ARP-FDAM and ARP-WAM projects. Specifically:

- Column (a) provides each historical year used in the total Company and gas allocation four-year historical average calculations;
- Column (b) provides the actual data for each historical year and the total Company and gas allocation four-year historical average calculations; and
- Column (c) provides a reference to the exhibits from prior cases where historical actual data was provided.

Q. How are the annual projected costs created for the ARP-FDAM project?

A. The ARP-FDAM project has two categories, which are replacements and new purchases. Each of these categories include field devices. A further description of replacements and new purchases is as follows:

- **Replacements:**
  - Are determined by pulling the quantity of device types with a scheduled retirement year:
    - Field devices scheduled retirement year is four years from purchase;
  - The model of device determines the unit cost. The total of these devices with their current unit cost is established for a particular year's budget;
  - Accessories for field devices are projected based on the number of planned replacements and include desk docks, vehicle docks, and ac adapters; and
  - Carryover devices are added from the previous year to address aging devices first.

- **New Purchases:**
  - Are projected at $0.89 million annually for 2026 and 2027.
    - The Company calculated the four-year historical average for the ARP-FDAM new purchases based on the actual costs provided in Exhibit No. A-25 (SHB-10), page 1, line 5; and
  - The costs cover the field devices required for the employee/contractor and associated accessories.

The four-year cycle for field devices, along with the projected new purchases, are listed in the associated Exhibit A-24 (SHB-9).

Q. Please describe variances from year to year for the ARP-FDAM project.

A. Variances for the ARP-FDAM project are a result of changes to new purchases, scheduled replacements, and incremental unit costs. Starting in 2024, there has been a one-time change for new field device purchases. These devices are now a part of the ARP-FDAM project, rather than the ARP-WAM project. Moreover, there is a change in the replacement of some field devices, which were initially planned under the ARP-WAM project. These devices were included in ARP-FDAM starting in the year 2024 going forward. Exhibit A-24 (SHB-9), page 5, details the devices, number of units, and unit costs for each type of device. Below are summary charts with the variance reasons for each year separated between replacement and new purchase categories.

Replacements

Year	Field Device	Reason for variance
2024 Actual	662	• Field device replacements based on refresh schedule. • 84 field device replacements moved from ARP-WAM to ARP-FDAM.
2025 Plan	537	• Field device replacements based on refresh schedules.
2026 Plan	1,338	• Field device replacements based on refresh schedule. • 215 field device replacements moved from ARP-WAM to ARP-FDAM. • 425 field device replacements that were purchased as a part of other efforts in 2022.
2027 Plan	972	Field device replacements based on refresh schedule.

New Purchases

Year	Field Device	Reason for variance
2024 Actual	149	Field devices based on actual new employee/contractors.
2025 Plan	61	Field devices based on actual new employee/contractors.

Q. Do the Company's 2025 projected gas allocation capital expenditures for material costs for the ARP-FDAM project differ from the $1,061,230 projected in Case No. U-21806?

A. Yes. The 2025 projected gas allocation capital expenditures for material costs for the ARP-FDAM project of $765,548 (Exhibit A-20 (SHB-5), line 152, column (n)) is $295,682 less than the $1,061,230 projected in Case No. U-21806 (Exhibit A-20 (SHB-5), column (n), line 273).

The following describes the reason for the difference:

1. New purchases decreased by $0.23 million based on fewer refreshes than planned attributable to lower than average anticipated staffing levels compared to prior years.

2. Field device replacements decreased by $0.066 million, attributable to the following:

   - Increase of $0.014 million due to 79 more units being replaced with CF33 field device models than planned, partially offset by reduction in unit cost from $4,912 to $3,860;

   - Decrease of $0.101 million due to 80 fewer units being replaced with CF55 field device models than planned; and

   - Increase of $0.021 million due to accessories for field devices that were not previously projected.

Q. Please explain the ARP-Radio project.

A. The ARP-Radio project has the following synopsis:

- The **ARP-Radio** project requires $805,628 in capital and $34,732 in O&M in the test year.

- **Description:** This project will refresh hardware to include: 800Mhz Radios and infrastructure, cellular modems, plant radios and systems, cellular amplification devices, vehicle consoles in service trucks, other communications equipment, and associated test equipment. This equipment supports mission critical voice and data communications for plant and field service personnel and dispatch personnel. 800MHz radios are upgraded on a 10-year lifecycle basis. Plant radio systems are upgraded on a scheduled 10-year lifecycle basis. Cellular modems are refreshed on a five-year life cycle basis. Amplification systems are refreshed on a 10-year life cycle.

- **Problem Statement:** 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio and cellular systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing or becoming obsolete. The refresh of this equipment in a proactive manner is critical to providing service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety.

- **Objectives:** This project creates value for customers and the Company by: (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between Company dispatch locations and crews in the field; (4) ensuring the safety of personnel working in higher risk workspaces by replacing equipment with units that contain intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure.

- **Scope:** The project scope consists of: (1) scheduled replacement of radios, modems, and consoles; and (2) installing additional radios, modems, and console assets to satisfy growth requirements; and (3) scheduled replacement of out of date cellular and radio boosters.

- **Alternatives:** The alternatives considered include: (1) Replacing the existing units with new units from other radio and modem manufacturers; (2) Purchasing new radio subscriber units from existing manufacturers. Option 2 was not selected because the Company now uses a standards-based radio system allowing for multiple radio manufacturer options. Option 1 was selected to allow for a competitive bidding process that will provide the most cost-effective radio that will meet the needs of users.

Q. Please explain the ARP-Server and Storage project.

A. The ARP-Server and Storage project has the following synopsis:

- The **ARP-Server and Storage** project requires $398,276 in capital and $36,013 in O&M in the test year.
    - **Description:** This project will replace or augment server and storage infrastructure for the Company.
    - **Problem Statement:** When Server and Storage Hardware Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be more challenging to keep current with Security updates. The Company also runs the risk of failure of these assets impacting customer interactions and business operations if it does not adhere to a regular five- to seven-year refresh cycle.
    - **Objectives:** This project creates value for the Company through: (1) improved stability and availability of business-critical applications by proactively replacing server and storage hardware assets prior to the likelihood of increasing hardware failures; and (2) ensuring that adequate resources are available to support application demands after five to seven years of actual use.
    - **Scope:** The scope of this program encompasses: (1) replacement of server and storage hardware assets; and (2) installation of additional new computers and storage capacity to account for evolving business requirements.
    - **Alternatives:** The alternatives considered were to purchase extended maintenance, move some of these assets to the cloud with the Digital - Hybrid Cloud and Data Center Migration project, or to replace the assets on the current cycle. The option to purchase extended maintenance was not selected because full support would not be offered after seven years, and maintenance costs would increase. The preferred option is to move some of these assets to the cloud in the Digital Hybrid Cloud and Data Center Migration project while refreshing the remainder using the five- to seven-year cycle as it is the most cost-effective option.

Q. Please explain the ARP-WAM project.

A. The ARP-WAM project has the following synopsis:

- The **ARP-WAM** project requires $2,234,196 in capital and $21,686 in O&M in the test year.

- **Description:** This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates.

- **Problem Statement:** When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.

- **Objectives:** This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks.

- **Scope:** The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources.

- **Alternatives:** The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four-year refresh cycle; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.

Q. Would increasing the replacement cycle for the ARP-WAM refresh cycle from four years to five- to seven-years have a negative impact on the Company and its customers?

A. Yes. Increasing the replacement cycle for Personal Computer ("PC") Devices from four years to five to seven years would have a negative impact on the Company and its

customers. This is demonstrated through industry data, internal incident data, PC warranty duration, and lost productivity.

- These references reinforce replacing PCs at four years or less:
  - Michigan.gov, Information Technology Equipment Life Cycle. https://www.michigan.gov/documents/dtmb/Sec._829_IT_Lifecycle_Report_FY_2021_717757_7.pdf
  - https://i.crn.com/sites/default/files/ckfinderimages/userfiles/images/crn/custom/INTELBCCSITENEW/WhitePaper_EnterpriseRefresh.pdf
- The vendor's three-year warranty duration for Company PCs combined with the incident history reinforce four years is the optimum time for replacement.

The labor cost of addressing incidents and lost productivity, the warranty period, and external references confirm PC and field device replacement on a four-year cycle. Similarly, Company historical failure rates for monitors indicate an eight-year cycle as ideal, which is what the Company employs for monitors.

Q. How are the annual projected costs created for the ARP-WAM project?

A. The ARP-WAM project has two categories, which are replacements and new purchases. Each of these categories include PC devices and monitors. A further description of replacements and new purchases is as follows:

- **Replacements:**
  - Are determined by pulling the quantity of device types with a scheduled retirement year:
    - PC devices scheduled retirement year is four years from purchase, and
    - Monitors scheduled retirement year is eight years from purchase.
  - The model of device determines the unit cost. The total of these devices with their current unit cost is established for a particular year's budget;
  - Accessories for PC devices are projected based on the number of planned replacements and include keyboards, surge protectors, docks, backpacks, and cables; and

- Carryover devices are added from the previous year to address aging devices first.

- **New Purchases:**
  - Are projected at $1.0 million annually for 2026 and 2027.
    - The Company calculated the four-year historical average for the ARP-WAM new purchases of $1.8 million based on the actual costs provided in Exhibit No. A-25 (SHB-10), page 2, line 5; and
    - The Company then considered that the new purchases of $4,583,866 (Exhibit No. A-25 (SHB-10), page 1, line 1) in 2021 were significantly higher than the projected 2021 new workstations of $1,611,867 in Case No. U-20963, Exhibit No. A-110 (JDT-9), page 9, lines 9-14 and 17–22 (estimated workstation portion of additional accessories, shipping and handling, etc. to be 81% of lines 21 and 22 ($60,657) or $48,813 (no Gas Rate Case filed in 2020, therefore referencing Electric Rate Case No. U-20963) due to additional workstation and monitors purchased to adhere to the Centers for Disease Control and Prevention guidelines for in-person work due to the COVID-19 pandemic. The Company considered this unique occurrence when reducing the projected new workstations purchases for 2026 and 2027 to $1 million each year. (Please note due to a data entry error the Company inadvertently did not include $1 million for new purchases in 2026 in this case, which I discuss later in my testimony.)
  - The costs cover the PC devices required for the employee/contractor and associated accessories.

The four-year cycle for PC devices and the eight-year cycle for monitors, along with the projected new purchases, are listed in the associated Exhibit A-24 (SHB-9).

Q. Please describe variances from year-to-year for the ARP-WAM project.

A. Variances for the ARP-WAM project are a result of changes to new purchases, scheduled replacements per four-year PC device and eight-year monitor refresh cycles, previous year deferrals for equipment replacements primarily due to disallowances, and incremental unit costs. Starting in 2024, there has been a one-time change for new field device purchases. These devices will now be a part of the ARP-FDAM project, rather than the ARP-WAM

project. Moreover, there is a change in the replacement of some field devices, which were initially planned under the ARP-WAM project. Exhibit A-24 (SHB-9), page 16, details the devices, number of units, and unit costs for each type of device. Below are summary charts with the variance reasons for each year separated between replacement and new purchase categories.

Replacements

Year	PC Device	Monitor	Reason for variance
2024 Actual	1,839	0	• 30 fewer PC devices replaced due to reduction in resources and reduction of shared PC devices, such as kiosks and lab devices. • No monitor replacements planned since most monitors' eight-year replacement cycle was completed from 2018-2021. The next major monitor replacement is targeted to resume in 2027.
2025 Plan	2,783	205	• 50 fewer PC devices for J. C. Campbell location that were no longer going to be replaced. • 20 Rack Mount device replacements deferred to 2026. • 523 fewer PC devices that are not planned to be replaced due to reduction in resources. • Monitor replacements included in 2025 are for monitors that have reached their eight-year replacement.
2026 Plan	2,196	0	• 33 fewer PC devices that are not planned to be replaced due to reduction in resources. • 20 reduced to 14 Rack mount replacements deferred from 2025. • No monitor replacements planned since most monitors' eight-year replacement cycle was completed from 2018-2021. The next major monitor replacement is targeted to resume in 2027.
2027 Plan	2,159	4,318	• Monitor replacements based on an eight-year replacement cycle.

New Purchases

Year	PC Device	Monitor	Reason for variance
2024 Actual	323	331	Based on actual new employee/contractor volume.
2025 Plan	409	526	Based on actual new employee/contractor volume.

Q. Do the Company's 2025 projected gas allocation capital expenditures for material costs for the ARP-WAM project differ from the $2,683,128 projected in Case No. U-21806?

A. Yes. The 2025 projected gas allocation capital expenditures for material costs for the ARP-WAM project of $2,448,414 (Exhibit A-20 (SHB-5), column (n), line 157) are $234,714 less than the $2,683,128 projected in Case No. U-21806 (Exhibit A-20 (SHB-5), column (n), line 277).

The following describes the difference:

1. Laptop and tablet replacements decreased by $0.363 million attributed to the removal of replacements planned for the J.H. Campbell Plant and fewer devices being replaced due to reductions in resources;
2. Rack mount device replacements decreased by $0.053 million due to the deferral of devices to 2026;
3. Accessories for replacements increased by $0.117 million;
4. Monitor replacement increased by $0.018 million; and
5. New Purchases increased by $0.047 million based on actual new employee/ contractor volume.

Q. Do the Company's 2026 projected gas allocation capital expenditures for material costs for the ARP-WAM project differ from the $1,813,670 projected in Case No. U-21806?

A. Yes. The Company's 2026 projected gas allocation capital expenditure for material costs for the ARP-WAM project of $1,638,426 (Exhibit A-20 (SHB-5), column (n), line 240) are $175,244 less than the $1,813,670 projected in Case No. U-21806 (Exhibit A-20 (SHB-5), column (n), line 358).

The following describes the difference:

1. New purchases decreased by $0.314 million due to a data entry error;

2. Replacements increased by $0.092 million based on current gas allocation factors that are updated annually offset by net of reduction 33 PC devices planned to be replaced and deferral of 14 Rack Mount devices from 2025; and

3. Accessories for replacements increased by $0.047 million.

Upgrades, Replacements, and Application Currency Projects

Q. What are Upgrades, Replacements, and Application Currency projects?

A. Upgrades, Replacements, and Application Currency projects are projects that address the need to upgrade or replace software applications and underlying platforms to a more current version to maintain prudent levels of security, reliability, and interoperability with associated systems. The Company performs security risk and various types of technical analysis to determine which applications need upgrading or replacing and when. Upgrade and replacement projects are created for larger and more complex application and platform upgrades or replacements that require increased oversight and project management. Smaller upgrades are aggregated by IT product line and spend type in the Application Currency projects.

Q. Please explain the Upgrades and Replacements projects.

A. The following is an explanation of the Upgrades and Replacements projects:

- The **Asset Accounting Tax Upgrade** project requires $105,765 in O&M in the test year.
    - **Description:** The project will upgrade the Company's current on-premise accounting asset management tax software to the SaaS version as required by the vendor ensuring continued support of a critical financial application and providing new functionality.
    - **Problem Statement:** In 2025, standard vendor support ends for the current on-premise PowerTax software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the tax fixed asset sub-ledger, it is necessary to perform an

upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility.

- **Objectives:** This project creates value for the Company by ensuring compliance with regulated and financial accounting within the tax fixed asset sub-ledger. In addition, the project adds value by: (1) moving to a SaaS solution in order to stay supported; and (2) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support.

- **Scope:** The project scope includes: (1) evaluating current vendor/product solutions with market leaders; and (2) upgrading the vendor software from the current version to the newer SaaS version; or replacing it.

- **Alternatives:** Alternatives considered include: (1) evaluating SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features such as centralized tax error processing. (2) evaluating other software options. This option may not provide appropriate regulatory reporting and other needed improvements and introduces several complexities and costs: Integration Challenges as PowerPlan modules are designed to work seamlessly together and data synch, mapping, and real-time updates may not be as robust as with native modules; Loss of Automation and Efficiency as there may be manual data transfers, duplicate entries and reduced automation increasing labor costs and risk of mistakes; Higher IT and Support Costs as maintaining two asset accounting systems means higher IT overhead with upgrades, troubleshooting, and user training; Reduced Data Integrity and Security as splitting tax data between systems can create gaps in data integrity, audit trails, and security controls; and Limited Vendor Accountability as when issues arise, vendors may point to integration boundaries making troubleshooting and issue resolution slower and more complicated. (3) moving entire PowerPlan suite, which includes PowerTax, to their cloud option. This option would be expensive from a licensing and integration build perspective, has an unclear timeline, and would remove the opportunity for direct database control. (4) waiting until a future upgrade cycle. This option introduces technical risk and potential financial processing risk. (5) upgrading to a newer version of the current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

- The **Asset Accounting Upgrade 2025-2026** project requires $4,715 in O&M in the test year.

  - **Description:** The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application.

  - **Problem Statement:** Standard vendor support will be ending for the current on-premise software on an undisclosed timeline. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time.

  - **Objectives:** This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted.

  - **Scope:** The project scope includes: (1) evaluating current vendor/product solution with market leaders; (2) upgrading the vendor software from the current version to the newer version.

  - **Alternatives:** Alternatives considered include: (1) Evaluate SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluate other software options. This option will introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements. (3) Analyze and go to cloud possibilities. (4) Wait until a future upgrade cycle. (5) Upgrade to the newest version of current solution. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

- The **Asset Accounting Upgrade 2027-2028** project requires $185,088 in O&M in the test year.

- **Description:** The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application.

- **Problem Statement:** Standard vendor support will be ending for the current on-premise software on an undisclosed timeline. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time.

- **Objectives:** This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted.

- **Scope:** The project scope includes: (1) evaluating current vendor/product solution with market leaders; (2) upgrading the vendor software from the current version to a newer version.

- **Alternatives:** Alternatives considered include: (1) Evaluate SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluate other software options. This option will introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements; (3) Address cloud possibilities. This option is expensive and has an unclear timeline roadmap; (4) wait until a future upgrade cycle. This option introduces technical risk; (5) Upgrade to a newer version of current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

- The **AxWay Secure Transport 2027 Upgrade** project requires $123,392 in O&M in the test year.

  - **Description:** Axway SecureTransport is the official Consumers Energy multi-protocol Managed File Transfer ("MFT") gateway for securing,

managing, and tracking data file flow for business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability.

- **Problem Statement:** As Axway SecureTransport is the public-facing MTF gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions.

- **Objectives:** The value this project brings the Company, its customers and business partners by: (1) addressing known problems and limitations of the current software platforms. (2) ensuring continued secure, scalable, and critical data transmission services running through Axway. (3) creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) merging/streamlining the Company data file transfer services reduces cyber attack vectors and creates a better, more easily maintained and monitored security model.

- **Scope:** The scope of this project includes: (1) upgrading the application and database to the current released and supported versions; and (2) enabling and testing in scope file transfer processes.

- **Alternatives:** Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. (2) replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a SAAS or hybrid cloud solution. In addition to significant platform, application, implementation and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) Upgrading the platform. This provides the Company the best, most cost-effective alternative, balancing costs, known risks and even growing business capacity and productivity.

- The **Enterprise Service Bus ("ESB") 2026-2027 Upgrade** project requires $374,488 in capital ($299,591 ROM Adjusted Capital) and $315,508 in O&M in the test year.

  - **Description:** This project will upgrade the current ESB software versions in use at the company. This will also implement a container management system, which deploys, manages, and scales microservices or applications that send or receive data via the service bus, and migrate various services to containers.

  - **Problem Statement:** Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. The lack of a container management solution prohibits the adoption of a more cloud native approach leading to retaining legacy solutions.

  - **Objectives:** The value this project provides the Company includes: (1) implement a container management solution; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies.

  - **Scope:** The project scope includes: (1) implementing the current version of all applications that are part of the ESB application, database version, and required database drivers; and (2) implementing a Kubernetes solution for container management and migrate targeted services that are identified as microservices to containers.

  - **Alternatives:** Alternatives considered included: (1) Accept the current version levels and continue to pay for extended support costs and accept technical obsolescence risk. (2) Only upgrade the existing applications. (3) Upgrade all of the applications as well as evolve the cloud-based instance to a more cloud native architecture by converting containers and implementing a Kubernetes solution to manage the containers. This option was selected because it best meets the Company needs for the near future by maintaining vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.

- The **Gas SCADA Platform Upgrade 2027-2028** project requires $432,257 in capital ($345,805 ROM Adjusted Capital) and $47,121 in O&M in the test year.

  - **Description:** The Gas SCADA Platform Upgrade project will upgrade the software every two years. This will include the upgrade of the underlying operating systems and database platforms that the software resides on as needed to maintain vendor support. This system is used to monitor and control natural gas transmission and distribution field equipment. This

project will add additional features and enhancements to Gas Monarch, the Company's Gas SCADA platform that improves efficiency and reliability.

- **Problem Statement:** Running on an older version of the Gas SCADA Software could have potential impacts on the reliability and resiliency of the natural gas transmission and distribution system, as reliability metrics depend upon system availability. Maintaining an older version of the software creates risks associated with vendor responsiveness in addressing problems, as they arise. It will also take more effort to support any upgrades in the future because of difficulties resulting from longer durations between upgrade efforts. If upgrades are delayed, additional full-time resources will be required for the year upgrades occur to address upgrade complexities.

- **Objectives:** Upgrading the Gas SCADA software adds value to the Company by ensuring that problems are promptly addressed when they occur. Additionally, the upgrade includes enhancements and fixes to the core product that support the resiliency of gas delivery, ensuring that customers are receiving the energy they need when they need it. Also, the transmission and distribution system depends on availability of the gas system, staying current with the solution provider upgrades is critical to the resiliency of both systems.

- **Scope:** The scope of this project is an upgrade to the Gas SCADA software, which encompasses the following: (1) upgrading the application software; (2) upgrading the underlying operating systems and database platforms; (3) implementing new functionality for improved value to the Company; (4) making necessary configuration changes; and (5) updating documentation related to the integration changes.

- **Alternatives:** Alternative considered include: (1) Defer the biennial upgrade of the SCADA application. The Company targets SCADA biennial application upgrades to stay within two versions of the current application state to maintain application stability and cyber security, given the critical nature of the SCADA system. This alternative was not chosen due to increased security risk and need for vendor support of the application. (2) Alternative Vendor solution. This option was not chosen because the move from our current vendor would be time-consuming and costly. It could also introduce instability as any alternative solutions have not been proven operationally. (3) Do nothing. This option was not chosen due to the critical nature of these systems and the potential operational risks associated with operating on an unsupported solution. (4) Implement a cloud solution. This option was not chosen as the Company's internal security requirements do not allow the Company to host SCADA systems in the cloud. (5) The option chosen is to complete the upgrade project with associated software necessary to complete the project that will deliver new functionality for improved value.

- The **HR Support Pack and Business Software Inc ("BSI") Upgrade 2026 and 2027** projects require the following O&M in the test year.

Project Year	Test Year O&M
2026	$41,016
2027	$205,082

  - **Description:** The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

  - **Problem Statement:** SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

  - **Objectives:** This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

  - **Scope:** The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

  - **Alternatives:** Alternatives considered include: (1) not upgrading to the current support packs, which results in noncompliance with financial rules and regulations and inaccurate payroll. (2) There is no economical cloud solution, so this option was not entertained. (3) The Company decided the best alternative is to apply the appropriate support pack upgrades. This option is preferred because it enables the Company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.

- The **ISIS Papyrus 2026 Upgrade** project requires $13,397 in O&M in the test year.

  - **Description:** This project will upgrade the Papyrus Objects suite of applications to the most recent version available per vendor recommendation. The ISIS Papyrus application is critical to creating electronic and paper correspondence for customers, including bills and dunnings.

  - **Problem Statement:** The application will be at least one major upgrade revision behind by 2026. In addition, the infrastructure will need replacement in 2026 (both hardware and OS). It's imperative our customers retain unfettered access to their paper bills, dunning notices, and other communications produced by ISIS. ISIS also makes customer bills available for online viewing through the website and mobile apps. Without

the upgrade, our vendors make no guarantee that any substantial patches or hot fixes impacting application reliability, capacity, and security will be forthcoming. The upgrade will address these problems and challenges, as well as ensure all other platform components comply with Company operational and security standards.

- **Objectives:** The value of this project includes: (1) providing a more stable operational model by upgrading to the most recent version available; (2) maintaining the necessary vendor support; and (3) resolving tuning and stability issues with the vendors.

- **Scope:** The scope of the project is to upgrade the various licensed products that comprise the Papyrus Objects suite of applications.

- **Alternatives:** As this is an upgrade of an existing system, the alternative considered was to delay the upgrade and continue operating with the current version. This alternative was not chosen due to the risk of application stability and the inability to maintain cyber security patching.

- The **Itron Enterprise Edition ("IEE") 2027 Upgrade** project requires $81,959 in O&M in the test year.

  - **Description:** This project will upgrade IEE, which collects the reads from meters to ensure non-estimated bill accuracy.

  - **Problem Statement:** IEE is the Company's keystone application of the Advanced Metering Infrastructure ("AMI"), that provides billing data that includes time of use data. If this application does not stay current, the Company increases the risk business operations could be interrupted or compromised. IEE is a key component in keeping the Company current, with billing capacity, stability, and accuracy obligations.

  - **Objectives:** This project creates value for the Company by: (1) ensuring the features and functionality needed to meet and exceed customer satisfaction and billing accuracy are available to business partners and IT; (2) meeting Information Security.

  - **Scope:** The scope of this project includes: (1) upgrading the IEE applications to the next appropriate versions; (2) migrating the database to the next version required by the application; and (3) replacing hardware required by the next version to maintain operating system currency.

  - **Alternatives:** Alternatives considered included: (1) Defer the upgrade. This alternative was not selected because it would decouple Itron IEE (Consumers Energy's Meter Data Management ("MDM")) from the Itron security infrastructure introducing application instability, security and dependency risks to the utility, possibly negatively impacting critical customer electric and gas billing operations. It would also likely affect other

business critical Itron applications use, creating more expense to support and no ability to leverage updated tool capability. (2) Replace the platform. Replacing IEE/MDM would require the application business owners to undertake a new initiative mirroring the expense and effort that went into the multi-million dollar project responsible for setting up and leveraging this utility. (3) Perform the upgrade. This option is superior for both customers and the Company because it maintains vendor support for hot fixes and patches, and aligns with all upgrade projects related to other Itron products.

- The **Rate Change Maintenance** project requires $127,791 in O&M in the test year.

  - **Description:** The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements.

  - **Problem Statement:** For the Company to continue to meet and comply with the MPSC rate change requirements, there is a need to make periodic updates/modifications to the existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers.

  - **Objectives:** The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs.

  - **Scope:** The scope of this project encompasses: (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes.

  - **Alternatives:** An alternative considered for this effort was a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the timing it would take for testing of this model. Cloud is not an applicable option in this case as the Company is not replacing any software. The option to use onshore resources to plan, coordinate, and execute the rate changes was selected as it supports the Company's operation model for rate changes.

- The **SAP Support Pack Upgrade 2026** project requires $28,020 in O&M in the test year.

  - **Description:** The SAP Support Pack Upgrade project is to maintain the currency levels of all SAP applications. This will ensure the applications are at version levels that are supported by SAP, have the latest patches and bug fixes, and provide cross-application compatibility for business partners.

  - **Problem Statement:** To continue to maintain SAP application version currency, across all applications, the support packs released by SAP must be routinely applied. Without maintaining application currency, the core business applications running on the SAP platform are at risk of losing vendor support, resulting in the inability to apply bug fixes and patches, including security patches, and maintain application interoperability and stability.

  - **Objectives:** The project will add value by: (1) maintaining supportability of SAP applications; (2) mitigating system security, stability and reliability risks by ensuring the applications are up-to-date with the most current patches and bug fixes released by SAP; and (3) ensuring ongoing cross-application compatibility.

  - **Scope:** The scope of this project includes routine support pack upgrades to all SAP applications, which include: Enterprise Core Component ("ECC"), Customer Relationship Manager ("CRM"), Enterprise Portal, Process Orchestration ("PO"), Business Warehouse ("BW"), Business Objects ("BOBJ"), Data Services ("DS"), Governance, Risk and Compliance ("GRC"), Solution Manager, Data Quality Manager ("DQM"), Graphical User Interface ("GUI"), Single Sign On ("SSO"), System Landscape Directory ("SLD") and other related SAP applications.

  - **Alternatives:** Alternatives considered include: (1) Divide the scope into individual projects by SAP application. This alternative was not selected because the efforts are interrelated and completing them separately could lead to duplication of work, especially testing efforts, and therefore potentially higher costs. (2) Migrate to SAP S/4HANA. This option was not selected at this time because it is part of the long-term digital plan and requires substantial planning and investment. (3) Balance the project scope through regular support pack upgrades. This alternative was selected because it provides the best balance of minimizing cost and maintaining support by combining multiple application upgrades through a single support pack upgrade effort.

- The **SiteCore Secondary Upgrade 2027** project requires $32,611 in O&M in the test year.

- **Description:** The project will refresh all components of the website hosting, delivery, search, and analytics applications to add new features and improve search capabilities. Sitecore is the content management application for the consumersenergy.com website, a channel many customers use for accessing account information and bill payment.

- **Problem Statement:** Sitecore requires regular upgrades to adhere to the vendors support lifecycle to ensure system reliability, take advantage of new application features, maintain current security updates, and improve the customer's website experience.

- **Objectives:** The project will add value for the Company by: (1) avoiding costs for extended maintenance agreements required at the end of mainstream support; (2) ensuring that the website retains the most up-to-date security posture; and (3) supporting the Company's Customer Experience Index ("CXI") goals by improving reliability and performance.

- **Scope:** The project scope includes: (1) upgrading the Sitecore content management software to the latest available version.

- **Alternatives:** Alternatives considered include: (1) Delay the upgrade. This alternative was not chosen due to the need to prevent the application from falling outside of the mainstream support window, requiring an additional 10% in maintenance fees. Along with rapidly changing feature sets that are continually being developed by the vendor, the Company would be in a worse position to handle constantly changing cyber threats; (2) Migrate to a cloud solution. This alternative was not chosen due to the cost/benefit analysis of re-architecting our current Sitecore implementation to facilitate cloud migration is not viable at this time; and (3) Upgrade Sitecore on a two-year cycle. This alternative was chosen as it provides up-to-date functionality, stability, and mitigates cyber security risks while minimizing cost and impact.

Q. Please describe Confidential Exhibit A-26 (SHB-11).

A. Confidential Exhibit A-26 (SHB-11) is a confidential exhibit that provides Application Currency Program projected capital and O&M spend and scope for each of the Application Currency projects. Specifically:

- Column (a) provides the application name;
- Column (b) provides a disaster recovery tier, where applicable;
- Column (c) provides total projected 2026 capital expenditures;

- Column (d) provides total projected 2026 O&M expense;
- Column (e) provides total projected 2027 capital expenditures;
- Column (f) provides total projected 2027 O&M expense;
- Column (g) provides total test year capital expenditures;
- Column (h) provides total test year O&M expense;
- Column (i) provides the gas allocation for test year capital expenditures; and
- Column (j) provides the gas allocation for test year O&M expense.

Application Currency information can be used to exploit known security vulnerabilities; therefore, the exhibit is confidential.

Q. How does the Company decide which applications to include in the Application Currency Program for the test year?

A. The Application Currency Program focuses on upgrades that maintain security and reliability of the application and underlying platforms, as well as maintaining vendor supported software versions. Not every application requires an upgrade each year, so the application data provided in Confidential Exhibit A-26 (SHB-11) is not inclusive of all applications that are in upgrade cycles beyond the test year. The Company considers the following when determining the next upgrade version:

- Compatibility with the current environment and underlying platforms;
- Compatibility with associated or integrated applications;
- Future planned changes that could sub-optimize the application;
- Cyber security drivers and requirements;
- Additional functionality offered with the new version; and
- Availability of the appropriate version.

The applications meeting the criteria for upgrade are then added to the application currency list, cross-checked against other current or future projects that may impact the upgrade, and then scheduled.

Q. Please explain the Application Currency projects.

A. The following describes the Application Currency projects:

- The **Application Currency - Capital** and **Application Currency - O&M:**
  - **Description:** These initiatives will utilize capital and O&M funding to keep applications current for security and reliability. O&M is included with capital projects to complete expense activities associated with capital upgrades.
  - **Problem Statement:** The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.
  - **Objectives:** Maintaining the appropriate versions of applications through application currency upgrades adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost.
  - **Scope:** The scope of upgrading these applications encompasses: (1) upgrading the application software; (2) assessing any new functionality for value to the Company; (3) making necessary configuration changes; (4) testing the upgraded software; and (5) updating documentation related to the integration changes.

- **Alternatives:** Applications are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure; (2) an increased number of incidents; (3) paying increased support costs; and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

Specific spending requirements for each Application Currency project are indicated in the table below and supported with additional detail in Confidential Exhibit A-26 (SHB-11).

Project	Projected Test Year Capital	ROM Adjusted Test Year Capital	Projected Test Year O&M
Application Currency-Corporate-O&M	$0	$0	$109,890
Application Currency-Customer-O&M	$0	$0	$3,525
Application Currency-Electric & Gas Shared-Capital	$3,669	$2,935	$19,081
Application Currency-Electric & Gas Shared-O&M	$0	$0	$207,976
Application Currency-Gas-O&M	$0	$0	$73,559
Application Currency-IT/Digital Foundation-Application Platforms-O&M	$0	$0	$110,044
Application Currency-IT/Digital Foundation-Infrastructure Platforms-O&M	$0	$0	$18,654
Application Currency-OT-O&M	$0	$0	$75,487
Application Currency-Security-Capital	$43,100	$34,480	$3,299
Application Currency-Security-O&M	$0	$0	$149,157

Enhancement Projects

Q. What is the purpose of Enhancements investments?

A. Enhancements are smaller, short-cycle technology efforts to implement new or improved functionality and provide the flexibility needed to respond to rapidly changing business and customer conditions. Enhancement requests typically emerge from new or changing business conditions, compliance requirements, customer feedback, automation efforts, waste elimination efforts, and other improvement ideas. Enhancements benefit customers and the Company through cost savings, cost avoidance, productivity improvements, safety improvements, efficiencies, mandated regulatory changes, and improved customer experience.

Q. How does the Company track and manage enhancements?

A. The Company actively maintains a backlog of enhancements in Azure DevOps (ADO). Each enhancement is tracked in detail from idea to completion including steps for value justification, estimation, prioritization, final funding approval, execution, and closure. Once approved for funding in cross-functional business team reviews, the enhancement is scheduled.

Q. Please describe Exhibit A-27 (SHB-12).

A. Exhibit A-27 (SHB-12) is the Projected Test Year Versus Actual Enhancement Capital Expenditures and O&M Expense Summary and Analysis and provides a summary of gas allocation enhancement projected test year and actual spend for the years 2022 through 2024. Specifically:

- Column (a) provides the enhancement project;
- Column (b) provides the gas allocation 2022 actual capital expenditure amounts;

- Column (c) provides the gas allocation 2023 actual capital expenditure amounts;
- Column (d) provides the gas allocation 2024 actual capital expenditure amounts;
- Column (e) provides the gas allocation three-year historical actual capital expenditures based on 2022, 2023, and 2024;
- Column (f) provides the gas allocation 2026 projected capital expenditure amounts;
- Column (g) provides the gas allocation 2027 projected capital expenditure amounts;
- Column (h) provides the gas allocation projected Test Year capital expenditure amounts;
- Column (i) provides the gas allocation 2022 actual O&M expense amounts;
- Column (j) provides the gas allocation 2023 actual O&M expense amounts;
- Column (k) provides the gas allocation 2024 actual O&M expense amounts;
- Column (l) provides the gas allocation three-year historical actual O&M expense based on 2022, 2023, and 2024;
- Column (m) provides the gas allocation 2026 projected O&M expense amounts;
- Column (n) provides the gas allocation 2027 projected O&M expense amounts; and
- Column (o) provides the gas allocation projected Test Year O&M expense amounts.

Q. Is the Company still using the total cumulative demand method to validate enhancement demand expenditures and expenses in the test year that it has used in prior cases?

A. No. The Company has discontinued the use of the total cumulative demand method for validating enhancement expenditures and expenses in the test year. By streamlining

validation processes, the Company eliminates redundant work and focuses on methods that provide the most meaningful assurance of cost reasonableness.

Specifically, the Company has not observed a decline in demand for enhancements, as technology adoption continues to grow. This consistent or growing demand indicates that the risk of underestimating enhancement needs is low. Maintaining multiple validation methods, such as the total cumulative demand approach alongside the three-year historical average, would not yield additional value but would instead introduce unnecessary complexity and administrative burden.

By relying on the three-year historical average, the Company ensures that projections are grounded in actual spending patterns, which have proven to be stable and reflective of ongoing business needs.

Q. What method is the Company using to ensure projected enhancement capital expenditures and O&M expenses in the test year are reasonable and prudent?

A. The Company is using a three-year historical average method to validate enhancement demand capital expenditures and O&M expenses in the test year are reasonable and prudent: The Company calculated the actual capital and O&M gas allocation three-year historical average for 2022-2024 of $3,101,751 capital and $1,643,918 (Exhibit A-27 (SHB-12), line 54, columns (e) and (l)) and compared it to the projected Test Year enhancement capital expenditures and expenses of $2,774,794 capital and $1,483,739 O&M (Exhibit A-27 (SHB-12), line 54, column (h) and (o)). The Company has not projected any known incremental work in this case. This validates Test Year projections are in line with historical spending.

Q. Please explain the Enhancements projects.

A. The following are the Enhancements projects:

- The **Enhancements - Capital** and **Enhancements - O&M** requires the capital and O&M in the test year as described in the table below.
    - **Description:** These projects will utilize capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included with capital projects to complete expense activities associated with capital enhancements.
    - **Problem Statement:** As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.
    - **Objectives:** The value of software enhancements lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for the respective business areas.
    - **Scope:** The scope of application enhancements encompasses: (1) making necessary system changes; and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide new functionality for business areas represented by each program.
    - **Alternatives:** Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the

alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

Specific spending requirements for each Enhancement project are indicated in the table below.

Project	Projected Test Year Capital	ROM Adjusted Test Year Capital	Test Year O&M
Product Family Enhancements-Corporate-Capital	$376,424	$0	$92,121
Product Family Enhancements-Corporate-O&M	$0	$0	$95,531
Product Family Enhancements-Customer-Capital	$793,883	$0	$45,888
Product Family Enhancements-Customer-O&M	$0	$0	$111,105
Product Family Enhancements-Electric & Gas Shared-Capital	$349,978	$0	$57,459
Product Family Enhancements-Electric & Gas Shared-O&M	$0	$0	$79,872
Product Family Enhancements-Gas-Capital	$462,580	$0	$95,993
Product Family Enhancements-Gas-O&M	$0	$0	$442,447
Product Family Enhancements-Application Platform Services-Capital	$317,503	$0	$69,560
Product Family Enhancements- Application Platform Services -O&M	$0	$0	$62,818
Product Family Enhancements-Infrastructure Platform Services-Capital	$198,886	$0	$74,393
Product Family Enhancements-Infrastructure Platform Services-O&M	$0	$0	$17,266
Enhancements-Security-Capital	$275,541	$0	$56,490
Enhancements-Security-O&M	$0	$0	$182,796

Digital Foundations and Capabilities Projects

Q. Please explain the Digital Foundations and Capabilities projects.

A. Below are the Digital Foundations and Capabilities projects:

- The **Business Capability Mapping ("BCM") SaaS Tool** project requires $30,848 in capital ($24,679 ROM Adjusted Capital) and $9,867 in O&M in the test year.

  - **Description:** The BCM SaaS Tool is a cloud-based software solution which will visualize the Company's capabilities related to our metrics, data maturity, supporting technologies, financial allocations, and other view points. The tool will automate analysis and report generation to quickly provide information while supporting other efforts directly supporting technology investment planning and management.

  - **Problem Statement:** The current lack of a centralized tool for tracking enterprise-wide data, which is manually managed via Excel, poses significant challenges. This manual process limits data sharing and the distribution of business capability roadmaps, complicating investment planning and alignment. The absence of a centralized tool also hinders effective communication regarding prioritization and application stack updates, preventing a comprehensive view of impacted areas. Consequently, the enterprise architecture practice struggles to accurately plan and forecast investment opportunities, leading to misallocation of funds, labor, and potential delays in enabling strategic opportunities. The solution will include implementing a centralized tool to streamline data sharing, enhance communication, and support accurate planning and forecasting.

  - **Objectives:** The Company will see value through: (1) Implementing processes and supporting technical components to enable automated scoring of capabilities, including scores, measures, metrics, Key Performance Indicators ("KPIs"), and Objectives and Key Results ("OKRs") for consistent and accurate analysis; (2) Developing a consolidated view of critical capabilities, applications, and infrastructure, ranked based on their efficiency and effectiveness in meeting Company objectives; (3) Integrating key technology features supporting Application Rationalization, ERP system and major platform upgrades, Business Capability Modeling, Application Stack Ownership, Enterprise Architecture Artifact Tool Repository, centralized repository and role based access; (4) Generate a consistent framework to support the prioritization of investments based on their impact on key capabilities across the enterprise; (5) Implement a shared platform to integrate architecture activities versus siloed practices;

and (6) Consolidate empirical data used for investments and technical health to ensure accuracy and consistency in evaluations.

- **Scope:** The project scope includes: (1) Implement a role-based access SaaS product and integrate with ServiceNow and other internal systems; (2) Configure the SaaS product with identified tools for data gathering on capabilities and their performance; (3) Develop processes and automation to gather data on capabilities, including applications, technical infrastructure, and metrics; (4) Establish a framework for prioritizing investments; (5) Create role-based dashboards and reports to visualize the output of data analysis; (6) Develop automated communications for key business decisions, investment plans, data collection, and reports; (7) Enable self-reporting on data within the tool; (8) Connect supporting documentation to the capabilities; and (9) Provide training on how to use the tool including end-user training.

- **Alternatives:** Alternatives considered for this include: (1) Continue with current practices for initiative planning and Enterprise Architecture practices. This was not selected as it does not address gaps in enterprise-wide practices and consolidated roadmap capabilities addressing key Company objectives. (2) Develop in-house applications using multiple platforms including Excel, PowerBI, and custom development. This was not selected due to complexity of the solution and cost of delivery. Additionally, the dependency on the automated processes would create additional hurdles for efficient delivery. (3) Acquire external tools to support BCM, Enterprise Architecture, and investment planning. This solution was selected as it provides quick and efficient access to automated tools within acceptable cost ranges.

- The **Data & Analytics Platform Rationalization** project requires $1,154,997 in capital ($923,998 ROM Adjusted Capital) and $225,531 in O&M in the test year.

  - **Description:** This project will optimize the Data & Analytics system landscape by creating connections, migrating data into the Data Lake in the cloud, and building visualizations from the data in the Data Lake.

  - **Problem Statement:** The IT Data & Analytics legacy systems (Single Store DataLake ("SSDL"), SAP Business Warehouse ("BW"), SAP BusinessObjects ("BOBJ"), Native HANA, the BW Portal, and BusinessObjects Data Services ("BODS")) are outdated, inefficient, and becoming duplicative in nature with the introduction of DL 2.0. If these legacy systems are not retired, they will continue to cost the Company money as major investments are needed to maintain and support them.

  - **Objectives:** This platform rationalization project creates value for the Company and its customers by reducing the total cost of ownership

associated with maintaining and supporting legacy systems including licensing fees, maintenance costs, infrastructure, and support resources.

- **Scope:** The project scope includes: (1) the assessment of the existing Data & Analytics platforms including SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS; (2) inventory of data and reports still being used by stakeholders; (3) determination of migration strategy; (4) data migration to the Azure Data Lake; (5) report migration to Power BI; (6) organization change management; and (7) the retirement/ decommissioning of the legacy platforms and applications.

- **Alternatives:** Alternatives considered: (1) upgrade legacy systems in place (on-premise). This alternative was not selected because this is costly and misaligned with the Company's cloud strategy. (2) Lift and shift these on-premise systems to the cloud through the Hybrid Cloud Transformation Program. This alternative was not selected because it would duplicate the work being done as part of the DL 2.0 project and would not provide the same efficiencies that DL 2.0 introduces. (3) Migrate all data sources to DL 2.0 and retire legacy systems. This alternative was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.

- **MS Self-hosted Gateway Solution and Migration** project requires $19,390 in O&M in the test year.

  - **Description:** This project is looking to retire the Application Programming Interfaces (API) Exchange Gateway used primarily by the Enterprise Service Bus (ESB) and replace it with a new solution called Microsoft Self-Hosted Gateway in security Zone B. The API Exchange Gateway is used by The Information Bus Company ("TIBCO") ESB to integrate corporate applications. New development will need to be done to integrate this solution.

  - **Problem Statement:** The TIBCO API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform. The end of life date was June 30, 2025.

  - **Objectives:** This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the TIBCO API Exchange Gateway Exchange module); and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable.

  - **Scope:** The project scope includes: (1) Implement the Self Hosted Gateway into Zone B as a replacement solution. (2) Migrate all current work items

to the new platform or existing equivalent based on use case. (3) Conduct appropriate testing to ensure all Service Level Agreements are met.

- **Alternatives:** Alternatives considered include: (1) Evaluating the replacement of the current product with a new product that is not already in the Company environment. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor for the current platform has stopped all development for this product and the end of life has passed. (3) Leveraging an existing solution already in the Company environment. This alternative was not selected as an existing product in the corporate Zone B layer does not exist. (4) Implement the Microsoft Self-Hosted Gateway and migrate current data into new platform. This alternative was selected as the most cost-effective solution that has ongoing support from the publisher.

Q. Please explain the Digital-Hybrid Cloud and Data Center Migration project.

A. The Digital-Hybrid Cloud and Data Center Migration project has the following synopsis:

- The **Digital-Hybrid Cloud and Data Center Migration** project requires $34,480 in capital and $9,898 in O&M in the test year.
  - **Description:** This project will optimize data center assets and asset replacement project purchases by migrating or retiring applications out of existing Company and co-location data centers into cloud services, reducing operational costs for running IT services and leveraging increased cloud capabilities to improve the efficiency, quality, and speed-to-market of customer-facing and internal IT services.
  - **Problem Statement:** The technology currently deployed in the Company's data centers meets many customers' needs today. However, the pace of digital transformation is increasing rapidly, and requirements for applications are evolving faster than the technology in the Company's data centers can respond in a cost-effective manner. These data center constraints lead to longer implementation times, missing capabilities, or reduced functionality in the applications that the Company can deploy.
  - **Objectives:** This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective combination of data centers and public cloud services. Specifically, by migrating applications to cloud services, the project will: (1) reduce capacity, hardware maintenance, and security device costs at the co-location data center; (2) reduce hardware maintenance and security device costs at the production data center; (3) enable the ability to scale

infrastructure quickly up or down without costly up-front hardware purchases; (4) reduce application risk through cost-effective, scalable infrastructure redundancy and availability; (5) reduce ongoing server and storage asset replacement costs; (6) reduce ongoing networking equipment replacement costs; (7) reduce operational support costs; and (8) enable the use of a vast array of cloud services to support Company applications.

- **Scope:** The project scope includes: (1) promoting the robust main co-location data center to become the primary data center for on-premise IT services; (2) demoting the Company's production data center to the disaster recovery data center for on-premise IT services; (3) analyzing applications for migration to cloud or retirement; (4) migrating applications from on-premise to cloud; (5) transforming applications to use cost-effective cloud services; (6) altering network architecture and deploying base infrastructure to allow each location (on-premise or in cloud) to function independently; (7) deploying cloud and on-premise cost management tooling and processes; (8) simplifying and optimizing backup and disaster recovery resources and processes using cloud services; (9) implementing additional automation for application deployment and management; (10) changing the operations model for support of cloud-based applications; (11) educating and increasing the skills of IT and other employees in leveraging public cloud services; and (12) transforming IT to become the broker of cloud services for the Company.

- **Alternatives:** Alternatives considered included: (1) migrating to public cloud services faster. This alternative was not chosen because the Company's ability to absorb new technologies coupled with the investments the Company has already made in data center equipment would prevent a faster move from being efficient and effective, introducing additional financial risk; (2) migrating to public cloud services slower or not at all. This alternative was not selected because delaying public cloud services and capabilities coupled with requiring an extension of the life of existing data center equipment creates increased financial and operational risk; and (3) contracting with an outside vendor to provide cloud services to run applications for the Company. This alternative was not selected because industry information shows the option as not yet cost effective or not providing a maturity level that the Company would be able to easily consume with limited in-house experience and expertise in public cloud. The alternative to migrate to a hybrid cloud and data center model was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.

Q. What were the total projected capital expenditures for the Digital-Hybrid Cloud and Data Center Migration in Case No. U-21806?

A. The Case No. U-21806 projected capital expenditures by year and cost category for the Digital-Hybrid Cloud and Data Center Migration project are in the table provided below.

Digital-Hybrid Cloud and Data Center Migration			
Case No. U-21806			
Cost Category	**Total Company Capital**	**Gas Allocation Capital**	**U-21806 Reference**
2023 Actuals			
Software	$1,338,619	$429,429	A-20 (SHB-5), line 84, column m
Material	$378,526	$121,431	A-20 (SHB-5), line 84, column n
Labor	$228,285	$73,234	A-20 (SHB-5), line 84, column o
Contractor	$707,059	$226,824	A-20 (SHB-5), line 84, column p
Non-Labor Overhead	$61,201	$19,633	A-20 (SHB-5), line 84, column q
Non-Labor Other	$65,324	$20,956	A-20 (SHB-5), line 84, column r
Total 2023 Actuals	**$2,779,013**	**$891,507**	A-20 (SHB-5), line 84, column l
2024 Projected			
Software	$108,522	$32,937	A-20 (SHB-5), line 188, column m
Material	($136,087)	($41,302)	A-20 (SHB-5), line 188, column n
Labor	$779,380	$236,542	A-20 (SHB-5), line 188, column o
Contractor	$1,352,881	$410,599	A-20 (SHB-5), line 188, column p
Non-Labor Overhead	$75,828	$23,014	A-20 (SHB-5), line 188, column q
Non-Labor Other	$140,433	$42,621	A-20 (SHB-5), line 188, column r
Total 2024 Projected	**$2,320,957**	**$704,410**	A-20 (SHB-5), line 188, column l
2025 Projected			
Software	$180,000	$56,574.00	A-20 (SHB-5), line 278, column m
Material	$0	$0	A-20 (SHB-5), line 278, column n
Labor	$1,034,640	$325,187.35	A-20 (SHB-5), line 278, column o
Contractor	$0	$0	A-20 (SHB-5), line 278, column p
Non-Labor Overhead	$147,714	$46,426.47	A-20 (SHB-5), line 278, column q
Non-Labor Other	$413,856	$130,074.94	A-20 (SHB-5), line 278, column r
Total 2025 Projected	**$1,776,210**	**$558,263**	A-20 (SHB-5), line 278, column l
Total Projected			
Software	$1,627,141	$518,940	
Material	$242,439	$80,129	
Labor	$2,042,305	$634,963	
Contractor	$2,059,940	$637,423	
Non-Labor Overhead	$284,743	$89,073	
Non-Labor Other	$619,613	$193,652	
Total Projected	**$6,876,181**	**$2,154,181**	

Q. What are the current projected total project costs broken down by year for the Digital-Hybrid Cloud and Data Center Migration project?

A. The total project costs broken down by year for the Digital-Hybrid Cloud and Data Center Migration project are in the table provided below.

Digital-Hybrid Cloud and Data Center Migration			
Case No. U-21981			
Cost Category	**Total Company**	**Gas Allocation**	**U-21806 /U-21981 Reference**
	Capital	**Capital**	
2023 Actuals			
Software	$1,338,619	$429,429	U-21806, A-20 (SHB-5), line 84, column m
Material	$378,526	$121,431	U-21806, A-20 (SHB-5), line 84, column n
Labor	$228,285	$73,234	U-21806, A-20 (SHB-5), line 84, column o
Contractor	$707,059	$226,824	U-21806, A-20 (SHB-5), line 84, column p
Non-Labor Overhead	$61,201	$19,633	U-21806, A-20 (SHB-5), line 84, column q
Non-Labor Other	$65,324	$20,956	U-21806, A-20 (SHB-5), line 84, column r
Total 2023 Actuals	**$2,779,013**	**$891,507**	U-21806, A-20 (SHB-5), line 84, column l
2024 Actuals			
Software	$108,522	$32,937	U-21981, A-20 (SHB-5), line 56, column m
Material	$5,728	$1,738	U-21981, A-20 (SHB-5), line 56, column n
Labor	$791,688	$240,277	U-21981, A-20 (SHB-5), line 56, column o
Contractor	$1,297,150	$393,685	U-21981, A-20 (SHB-5), line 56, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 56, column q
Non-Labor Other	$221,576	$67,248	U-21981, A-20 (SHB-5), line 56, column r
Total 2024 Actuals	**$2,424,664**	**$735,885**	U-21981, A-20 (SHB-5), line 56, column l
2025 Projected			
Software	$0	$0	U-21981, A-20 (SHB-5), line 158, column m
Material	$0	$0	U-21981, A-20 (SHB-5), line 158, column n
Labor	$736,108	$231,359	U-21981, A-20 (SHB-5), line 158, column o
Contractor	$2,755,716	$866,122	U-21981, A-20 (SHB-5), line 158, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 158, column q
Non-Labor Other	$173,976	$54,681	U-21981, A-20 (SHB-5), line 158, column r
Total 2025 Projected	**$3,665,800**	**$1,152,161**	U-21981, A-20 (SHB-5), line 158, column l
2026 Projected			
Software	$0	$0	U-21981, A-20 (SHB-5), line 241, column m
Material	$0	$0	U-21981, A-20 (SHB-5), line 241, column n
Labor	$428,000	$144,493	U-21981, A-20 (SHB-5), line 241, column o
Contractor	$0	$0	U-21981, A-20 (SHB-5), line 241, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 241, column q
Non-Labor Other	$184,800	$62,388	U-21981, A-20 (SHB-5), line 241, column r
Total 2026 Projected	**$612,800**	**$206,881**	U-21981, A-20 (SHB-5), line 241, column l
Total Actuals/Projected			
Software	$1,447,141	$462,366	
Material	$384,254	$123,169	
Labor	$2,184,081	$689,363	
Contractor	$4,759,925	$1,486,631	
Non-Labor Overhead	$61,201	$19,633	

Non-Labor Other	$645,676	$205,273	
Total Actuals/Projected	**$9,482,278**	**$2,986,435**	

Q. Why have the projected costs of the Digital-Hybrid Cloud and Data Center Migration project changed from previous projections in Case No. U-21806?

A. The reasons for the $0.83 million gas allocation increase in the Digital-Hybrid Cloud and Data Center Migration project costs from the projections presented in Case No. U-21806 are due to increases in contractor cost ($0.85 million), material ($0.04 million), labor ($0.05 million), and non-labor other ($0.01 million) offset by decreases in software ($0.06 million) and non-labor overhead ($0.07 million). The primary reason for the $0.83 million gas allocation increase is due to an increase in contractor costs. The contractor costs increased due to an increase in the number and complexity of applications requiring migration to the cloud. This required the Company to add additional resources to support these additional and complex end-to-end migrations that included design, build, implementation, integrations, and testing.

Q. Please explain the OT Datacenter Migration project.

A. The OT Datacenter Migration project has the following synopsis:

- The **OT Datacenter Migration** project requires $1,191,862 in capital ($953,489 ROM Adjusted Capital) and $349,382 in O&M in the test year.
    - **Description:** The OT environment consists of systems supporting the control and monitoring of electric grid, electric generation, gas compression, and natural gas pipeline. These systems are critical for safe and reliable natural gas and electric delivery. The OT Datacenter Migration project enhances the Company's capabilities by co-locating to an enhanced datacenter at a vendor facility.
    - **Problem Statement:** The Company's current datacenter for the OT environment needs modernization and relocation from the Parnall Data Center. The current location is not the preferred location to house servers and systems critical to the control of the Electric Grid or Gas Pipeline due to the close proximity to a railway system. The climate conditioners in the current OT datacenter are aging and have had faults resulting in unplanned

shutdowns. The location of the datacenter in the basement of the Parnall building is nearby to the main water piping for the building. There have been instances of water infiltration in the past.

- **Objectives:** This project creates value for the Company by significantly strengthening capabilities through: (1) mitigating legacy physical and location risks at the current Parnall site; (2) migrating the OT infrastructure to a modern, highly secured environment with redundancy in climate conditions; and (3) better datacenter facilities support with a guarantee of redundant power.

- **Scope:** The scope of the project includes: (1) migration of the OT environment from the Parnall Data Center to a co-located vendor data center; (2) re-validation of the OT Production and Disaster Recovery procedures once migration is completed; (3) migration of IT systems required for supporting the OT environment; and (4) decommission the existing OT environment from the Parnall location.

- **Alternatives:** The Company performed an analysis of alternatives to expand capabilities as well as address constraints and risks: (1) Remain at the current Parnall Data Center; (2) migrate OT environments to the Cloud; and (3) relocate to a third-party co-location facility. Current industry best practices do not recommend migration of OT environments to the cloud. The co-location vendor provides the building, cooling, power, and physical security the Company lacks for its servers, storage, and other computing and networking equipment at the current Parnall location. Based on the analysis, the Company decided to implement the third alternative.

Q. In the Commission's September 30, 2025 Order in Case No. U-21806, pages 126-130, did the Commission disallow the OT Datacenter Migration project?

A. Yes. The Commission disallowed the OT Datacenter Migration project indicating that insufficient justification for why relocating the datacenter to co-location vendor facility is cost-effective and reasonable option in comparison to fixing the aging climate control equipment and continuing water filtration issues with the existing building. The Commission also agreed that this project could be shown to be reasonable and prudent with additional supporting evidence in a future case.

Q. Does the Company have any additional supporting evidence for why relocating the OT datacenter to a co-location vendor facility is cost-effective and reasonable option in comparison to fixing the aging climate control equipment and continuing water filtration issues with the existing building?

A. Yes. The Company has estimated the costs of addressing the aging climate control equipment and continuing water filtration issues of the current location to be $5,082,728. The projected costs to replace the aging climate control equipment including labor is $4,965,728. To remediate the water infiltration issue it would require removal of architectural concrete and replacing the waterproof membrane, which is estimated to be $117,000. This does not address the risk of the datacenter location being in the basement of the Parnall building near the main water pipe for the building. By moving the data center to a new co-located facility, this cost would be avoided and mitigate the risk of the location of the datacenter being near the main water pipe for the building.

Q. If the OT Datacenter Migration project were approved, would the Company be able to avoid costs in the ARP-OT Support Common and ARP-OT Support Electric projects in future years?

A. Yes. If the OT Datacenter Migration project were approved, the Company would be able to avoid ARP-OT Support Common and ARP-OT Support Electric project costs in future years.

	Total Company	
Project	**Capital**	**O&M**
ARP-OT Support Common	$809,200	$83,440
ARP-OT Support Electric	$828,600	$87,120

Q. Please explain the SAP S/4HANA Implementation project.

A. The SAP S/4HANA Implementation project has the following synopsis:

- The **SAP S/4HANA Implementation** project requires $18,427,509 in capital ($14,742,007 ROM Adjusted Capital) in the test year.

  - **Description:** This project will modernize the Company's current SAP ERP solution. Upon completion, the solution will provide enhanced functionality across several business areas while providing a supported and secure platform capable of business transformation.

  - **Problem Statement:** The current SAP ERP system will reach the end of mainstream vendor maintenance on December 31, 2027. Operating the system beyond the end of the support date creates significant risks to comply with regulatory mandates, perform core customer supporting business operations, and apply the latest security patches that are critical for cyber protection against customer and employee data breaches. In addition, an unsupported platform limits improvement of operational efficiency and maintaining the stability, reliability, and security of the system.

  - **Objectives:** The S/4HANA program will position the Company for business transformation by enabling it to: (1) provide and maintain capabilities for protection of sensitive customer and employee data; (2) provide enhanced system stability and reliability needed in a 24x7 business by significantly reducing system maintenance outages; (3) mitigate the regulatory and operational risks of running critical business processes on an unsupported platform; (4) implement simplified workflows and standardized processes by reducing customizations; and (5) use in-memory computing with embedded real-time analytics to make smarter, faster decisions.

  - **Scope:** The project scope includes (1) Migrating the current SAP ERP solution to the latest S/4HANA solution. This includes (a) moving to the latest version of the software, (b) migrating existing data to the new S/4HANA data model, (c) connecting interfaces from other systems into S/4HANA, (d) using newer user interfaces available in S/4HANA where feasible, (e) setting up users and user access in the new system, (f) migrating existing reports and analytics or replacing them with new in-built reports and analytics in S/4HANA, and (g) implementing the solution in the cloud using SAP's RISE subscription model. (2) Enabling an architecture that minimizes downtime for system maintenance activities. (3) Implementing solutions where existing SAP ERP functionality is not available in S/4HANA. (4) Implementing a foundational "clean core framework." This requires minimizing or remediating custom code and utilizing SAP customization best practices in the new version. These best practices will decouple the core SAP software from Company-specific customizations, hence making it "clean." This clean core framework is expected to reduce the effort and cost of upgrading SAP in subsequent releases.

- **Alternatives:** An analysis was completed that included key industry input, feedback from business areas across the Company, technology leaders, and subject matter experts. This presented the organization with several alternatives, including the following: (1) Postpone the decision and stay on the current version. This would require purchasing the extended maintenance until 2030 due to the current mainstream maintenance expiring in December 2027. A skill shortage is anticipated as SAP customers scramble to meet the 2030 deadline. Delaying the Company's decision to migrate to S/4HANA would put the Company at a higher risk of securing those high-demand skilled resources. Staying on the current version beyond 2030 with third-party support would limit the Company's ability to continuously improve operational efficiency and maintain the stability, reliability, and security of the system. This alternative was not selected because of the additional cost and risk, and the inability for the Company and its customers to enjoy any added benefits or new application features. (2) Eliminate SAP and use multiple best of breed solutions in the various business areas. (3) Eliminate SAP and implement a new ERP solution. SAP is currently used across the Corporate, Work and Asset Management, and Customer areas. There are very limited options for a single ERP system that provides all three areas of functionality. The current SAP system has over 100 satellite systems and around a thousand interfaces. Non-SAP alternatives may not work with current satellite systems, requiring the replacement or significant remediation of those satellite systems. These non-SAP alternatives would require a much larger change management initiative, significant reskilling of technical resources, and retraining of people across the Company who have become familiar with SAP over the last 16 years. Alternatives (2) and (3) are more expensive, complex to implement and support long-term, therefore were not chosen. (4) Migrate to the latest S/4HANA solution before the end of 2030. This option was chosen because it mitigates risks and provides a supported and secure platform capable of business transformation.

Q. Describe the deployment approach the Company will utilize for the SAP S/4HANA Implementation project.

A. The Company will deploy the migration to the new S/4HANA solution in phases to reduce the risk of operational impact to customers and co-workers. The Company will adopt SAP's standard Activate methodology for the deployment approach.[5] The Activate methodology includes six phases: Discover, Prepare, Explore, Realize, Deploy, and

[5] Available at SAP Activate | Deployment and Implementation of SAP S/4HANA Cloud

Run/Adopt. The Discover, Prepare, and Explore phases result in the design, which is then built, tested, and deployed in the Realize, Deploy, and Run/Adopt phases. The approach is to design the system holistically, meaning the Discover, Prepare, and Explore phases will cover all modules of SAP, including Finance, Supply Chain, HR, Work Management, and Customer. This ensures the system is designed optimally from end to end. Once the design is complete, the Company will conduct multiple iterations of the Realize, Deploy, and Run phases to deploy functional modules in a staggered capability deployment approach. The functional modules will be bundled into releases that minimize risk, complexity, and effort. The release bundles and schedule will be determined in partnership with the selected system integrator.

Q. Please explain the different S/4HANA migration alternatives considered.

A. The Company considered three migration alternatives: (1) Build a new SAP system without using any existing customizations, configurations, processes, or data (Greenfield); (2) Upgrade the existing SAP system, retaining existing customizations, processes, and data, then remediate errors that arise in the upgrade process in a series of iterations (Brownfield); and (3) Adopt a hybrid strategy, building a new SAP system, while selectively migrating critical data and process from the existing system (Bluefield).

Q. Which S/4HANA migration approach has the Company selected?

A. The Company has selected the hybrid or Bluefield approach for the S/4HANA Implementation project.

Q. Why did the Company select the Hybrid, or Bluefield, migration approach for the S/4HANA Implementation project and not the others?

A. The Company chose the Hybrid, or Bluefield, approach because it offers the best balance of lower risk and cost.[6] While the Greenfield option provides lower total-cost-of-ownership and faster time-to-value for implementations that want to shed a lot of legacy customizations and start afresh, this is not fully the case for the Company because the current system has many essential customizations in the customer billing and employee payroll areas that will need to be rewritten in the new system with this approach. Rebuilding customizations introduces significant risk and cost. Similarly, the Brownfield approach could provide a shorter project timeline by migrating all the current customizations and processes. However, this approach is not preferred in the Finance, Supply Chain, and Work Management areas where the current system has a lot of custom processes, workflows, enhancements, and interfaces that are suboptimal compared to the standard best practice processes that come in S/4HANA. The Brownfield approach is also not preferred because the processes and data model in Finance and Supply Chain have changed significantly. Upgrading current customizations to the new system would not be easy and rewriting them would be expensive and increase risk. This would result in a new system that does not conform to SAP's clean core approach and would be expensive to upgrade in the future. Therefore, the ideal approach is a combination of the two where the new system adopts a Greenfield approach for Finance, Supply Chain and Work Management, and a Brownfield-like approach for Customer and Payroll.

[6] Available at https://www.leanix.net/en/wiki/tech-transformation/s4hana-greenfield-vs-brownfield-approach

Q. Why is the Company undertaking the expense and effort of migrating to the SAP S/4HANA version at this time?

A. Migrating to the SAP S/4HANA version is crucial for the Company because the mainstream support for our current SAP version ends in December 2027. After evaluating the project, the Company determined it will take approximately three years to complete. The Company began the project in 2025 and the timeline will extend into 2028, requiring the Company to purchase extended SAP support for 2028. It is important to note that extended support for the Company's current SAP licensed version is only available until 2030. Recently, SAP announced that customers can purchase extended support through 2033, but only if they commit to migrating to S/4HANA using a RISE with SAP cloud subscription. The extended support options are intended to give companies more time to transition, not to provide a reason to delay the migration.

Q. Will the Company's SAP systems face an increased risk of cyber-attacks if the S/4HANA project is not executed?

A. Yes. The Company's SAP systems will face increased risk of cyber-attacks if the S/4HANA project is not executed, because SAP has stated that after maintenance ends, standard patches will no longer be available for SAP customer-specific maintenance, leaving the Company's SAP systems vulnerable to emerging threats from bad actors exploiting known vulnerabilities.[7]

[7] Available at https://support.sap.com/en/my-support/knowledge-base/security-notes-news.html?anchorId=section_370125364.

Q. Please explain whether the Company's SAP systems will continue to operate if the S/4HANA project is not executed?

A. The Company's SAP systems will continue to operate with significant risk for an indeterminate period of time if the S/4HANA project is not executed. SAP will not support the Company's current SAP version after December 2027, when the mainstream maintenance ends. After this period, the risk of operational disruptions will increase significantly due to the lack of a Service Level Agreement with SAP, and there will be no guarantee that SAP resolve any new issues that arise.

Q. Please explain which SAP S/4HANA licensing options the Company considered.

A. The Company considered the two licensing options offered by SAP: Bring Your Own License ("BYOL") and RISE with SAP. The first licensing option considered was BYOL, which would provide the Company perpetual licenses to use the S/4HANA software in a hosted cloud or Company owned data center. The second licensing option considered was RISE with SAP, which would provide the Company a cloud subscription to S/4HANA software that is hosted and managed by SAP.

Both licensing options have comparable total costs of ownership over a period of 15 years (until 2040 based on SAP's stated roadmap of support for S/4HANA).

Q, Please explain which SAP S/4HANA licensing option the Company has selected.

A. The Company has selected the RISE with SAP licensing option. SAP is focusing future innovations, specifically AI capabilities, on RISE with SAP. By positioning itself as a cloud company, SAP is strongly encouraging customers to choose the RISE model to take advantage of their investment in AI innovations. SAP reports that 15 utilities have already migrated to the RISE with SAP option, and another 27 utilities are currently migrating.

Q. In the Commission's September 30, 2025 Order in Case No. U-21806, pages 103-107 and 225-227, did the Commission approve special rate-making treatment to amortize the cloud implementation costs for the SaaS solutions and defer the Investments O&M expense associated with the SAP S/4HANA Implementation project over a 15-year asset life?

A. Yes. The Commission approved the Company's proposal to amortize the cloud implementation costs for the SaaS solutions and defer the Investments O&M expense associated with the SAP S/4HANA Implementation project over a 15-year asset life, in order to minimize the impact on rates.

Q. Please describe Confidential Exhibit A-28 (SHB-13).

A. Confidential Exhibit A-28 (SHB-13) is the Projected 13-Month Average of IT S/4HANA Regulatory Asset for the projected years 2026 – 13-month balance ending April 30, 2027. It provides a summary of the gas allocation of projected deferred IT Investments O&M expense associated with the SAP S/4HANA Implementation project. Specifically:

- Column (a) provides the S/4HANA category;
- Columns (b) through (n) provide each month's ending IT S/4HANA Regulatory Asset balance; and
- Column (o) provides the 13-month average of columns (b) through (n).

Q. Please describe the purpose of Confidential Exhibit A-28 (SHB-13).

A. To support the deferral of IT Investments O&M associated with the SAP S/4HANA Implementation project. Investments costs are projected based on current cost estimates for the project. The Company is adjusting working capital to reflect these projections, which is shown in Company witness Rayl's Exhibit A-12 (HLR-34), Schedule B-4.

Q. What is the Company proposing for the amortization of the special rate-making for the SAP S/4HANA Implementation project?

A. The Company is proposing that the 15-year amortization for the cloud implementation costs for the SaaS solutions and deferred Investments O&M expense associated with the SAP S/4HANA Implementation begin after the Company completes all releases for the project and after Staff and Intervenors review the total deferred expenses for reasonableness and prudence. This proposal will be discussed further in the direct testimony of Company witness Rayl.

Q. Do Generally Accepted Accounting Principles ("GAAP") and FERC have separate accounting guidance to account for cloud subscription and cloud implementation costs that do not meet capitalization requirements to take possession without significant penalty?

A. GAAP and FERC have the same accounting guidance for cloud subscriptions when the contract does not provide the ability to take possession of the software without significant penalty (meet capitalization requirements).

GAAP and FERC do have separate accounting guidance to account for cloud implementation costs when the contract does not provide the ability to take possession of the software without significant penalty (meet capitalization requirements).

Under GAAP, for cloud implementation costs associated with a contract that does not meet capitalization requirements to take possession without significant penalty, are capitalized to other assets, not Property, Plant and Equipment ("PPE"), then amortized over the remaining life of the contract.

Under FERC, for cloud implementation costs associated with a contract that does not meet capitalization requirement to take possession without significant penalty, are capitalized to PPE, then amortized over the remaining life of the contract.

Q. Did the Company, in previous Case No. U-21806, present cloud implementation costs for SaaS solutions associated with the SAP S/4HANA Implementation project based on GAAP rather than FERC reporting?

A. Yes. The Company, in previous Case No. U-21806 presented cloud implementation costs for SaaS solution associated with the SAP S/4HANA Implementation project based on GAAP rather than FERC reporting. The Company specifically provided in Case No. U-21806, Exhibit A-26 (SHB-11), which was the IT S/4HANA Cloud Implementation Costs balance for Gas and Common investments for the projected 13 months ending October 31, 2026.

Q. Is the Company correcting its presentation of the cloud implementation costs for SaaS solutions associated with the SAP S/4HANA Implementation project based on FERC reporting in this case?

A. Yes. The Company is correcting its presentation of the cloud implementation costs for SaaS solutions associated with the SAP S/4HANA Implementation project as capital expenditures in accordance with FERC reporting. The projected gas allocation costs for this Case No. U-21981 have been provided in Confidential Exhibit A-21 (SHB-6) and the Total Company Expected Project Costs are provided in Confidential Exhibit A-21 (SHB-14).

Q. Please describe Confidential Exhibit A-29 (SHB-14).

A. **Confidential** Exhibit A-29 (SHB-14) is the total expected project costs for the SAP S/4HANA costs for Gas and Common investments for all years by cost category. It provides a reconciliation of the total Company and gas allocation projected total project costs from the previous Case No. U-21806 and this case. Specifically:

- Column (a) provides the cost category;
- Column (b) provides the Total Company Expected Project capital costs at the time of Case No. U-21806;
- Column (c) provides the Total Company Expected Project Cloud Implementation costs at the time of Case No. U-21806;
- Column (d) provides the Total Company IT Investments O&M at the time of Case No. U-21806;
- Column (e) is the sum of columns (b), (c), and (d) and provides the Total Company Expected Project costs at the time of Case No. U-21806;
- Column (f) provides the Total Company Expected Project capital costs at the time of this Case No. U-21981;
- Column (g) provides the Total Company Expected Project deferred IT Investments O&M costs at the time of this Case No. U-21981;
- Columns (h) and (m) provide the Total Company Expected Project O&M costs projected to not be recovered through rates at the time of this Case No. U-21981. This will be discussed further later in my direct testimony;
- Column (i) is the sum of columns (f), (g), (h) and provides the Total Company Expected Project costs at the time of this Case No. U-21981; and
- Column (j) provides the variance of the Total Company Expected Projects Costs between Case No. U-21806 and this Case No. U-21981.

Q. How did the Company develop the initial cost estimate for the SAP S/4HANA Implementation project?

A. The Company developed the initial cost estimate for the SAP S/4HANA Implementation project with the support of an independent third party that specializes in preparing for

S/4HANA upgrades. The cost estimate consists of labor, contractor, software, and non-labor costs.

The labor and contractor cost estimates were derived as follows:

- First, the phases of the project were laid out in a timeline based on the phased deployment approach and Hybrid migration approach, both previously described in my testimony.
- Second, the high-level scope was identified, including the processes, pain points, customizations, integrations, roles, and data volumes that need to be migrated to S/4HANA.
- Third, the effort for the design and subsequent phases were translated into the number of hours and resources required for each phase. The resources are further broken down into roles and number of each role.
- Lastly, the resource estimates were assumed to be a mix of 30% internal employees and 70% external contractors. The Company then applied an average resource rate based on internal and external resources to calculate the cost estimate. For certain activities, the resource estimate was derived using a percentage of the overall effort based on best practices, e.g. program management and quality management.
    - The software cost estimate was based on indicative Bill of Material ("BOM") from SAP for BYOL.
    - The non-labor cost estimates are based on business expense, and labor overheads based on projected internal labor and external contractor costs to support the project.

Finally, the Company conducted a comparison of peer utility overall cost estimates and duration for their S/4HANA implementation projects to validate the Company's overall cost and duration estimate was reasonable.

Q. Has the Company revised the cost estimate for the SAP S/4HANA Implementation project in this case?

A. Yes. The Company has revised the costs estimate based on the selection of the RISE with SAP cloud subscription licensing and updated estimates for external and internal labor based on Request for Proposal ("RFP") from the System Integrator ("SI").

First, the cost estimate was revised to reflect selecting the RISE with SAP cloud subscription licensing option, which is based on an initial BOM from SAP adjusted for expected negotiated savings. This reduced total project software costs by $20 million (Confidential Exhibit A-29 (SHB-14), column j, line 29) and a portion of the total project Non-Labor Other costs by $11 million (Confidential Exhibit A-29 (SHB-14), column j, line 34) that was planned for cloud hosting services.

Second, based on the RFP from the SI, the estimates for internal labor and external contractor costs were refined. Based on discussions with SI, the deployment and release plan have changed from the initial estimate and requires more effort than originally planned. The Company is in the final stages of contracting with the SI. This resulted in a total project internal labor costs increase of $9 million (Confidential Exhibit A-29 (SHB-14), column j, line 31). The Company also worked with selected SI to identify other external services and products required to remediate non-SAP applications that integrate with SAP, provide functional subject matter expertise, design validation, data cleansing, and governance support. The additional effort to support the deployment and release plan and additional external services resulted in a total project contractor costs increase of $32 million (Confidential Exhibit A-29 (SHB-14), column j, line 32) and a portion of the total project Non-Labor Other costs by $5 million (Confidential Exhibit A-29 (SHB-14), column j, line 34) due to lower travel expenses.

Q. Is there a portion of the SAP S/4HANA Implementation project costs that the Company is projecting will not be recovered through customer rates?

A. Yes. Due to the need to accelerate the start of the SAP A/4HANA Implementation project, the Company is projecting that approximately $29 million (Confidential Exhibit A-29

(SHB-14), column j, line 32) of costs will not be recovered through customer rates. These expenses were incurred or are expected to be incurred prior to the approval of special ratemaking treatment that permits deferral of such costs to a regulatory asset. Specifically, approximately $10 million relates to project expenses incurred before November 1, 2025, the effective date of the deferral mechanism approved in the Company's most recent gas rate case (Case No. U-21806). The remaining $19 million is projected to be incurred before May 1, 2026, the proposed effective date of the deferral mechanism currently pending in the Company's electric rate case (Case No. U-21870). As these expenses fall outside the scope of the approved or anticipated deferral treatment, they are not expected to be recovered through customer rates and therefore, have no impact on the revenue requirement calculation in the instant case.

Q. Why is this SAP upgrade more costly than the Company's previous upgrades?

A. This SAP upgrade is more costly than the Company's previous upgrades for several reasons. First, the latest SAP S/4HANA version improves business processes, requiring the Company to thoroughly evaluate these best practices against existing processes. This evaluation is crucial in determining adoption and adds to the overall project cost.

Second, migrating data to the new system involves mapping, transforming, and testing data elements required by S/4HANA's new data model. Third, the Company must re-evaluate and update user access because the system controlling access permissions has changed in S/4HANA. Fourth, the existing solution has customizations that cannot be moved to the new system as-is due to the differences in business processes, data model, and permissions. Finally, SAP recommends customers adopt a "clean core" approach when customizations are necessary. This approach moves the customizations outside the

core product, which makes future upgrades easier. This requires the Company to perform a detailed evaluation and remediation of existing customizations.

Q. Would it be more cost-effective for the Company to replace its SAP systems?

A. No. It would not be more cost-effective for the Company to replace its SAP systems. This would require re-engineering the entire SAP system to a new solution, assuming that the current system could be replaced with a single replacement. It would require significant effort to re-skill the Company's co-workers, re-engineer business processes, re-implement the system, and integrate the new system with all the systems currently interfacing with SAP. The Company currently has more than 1,000 interfaces to SAP. Replacing SAP with multiple systems would be more costly and introduce additional risk due to the complexity of managing multiple disparate solutions. The Company would need to develop integrations between systems like Finance, Supply Chain, Work Management, and Customer. These integrations are inherent in an integrated solution such as SAP.

Q. In the Commission's September 30, 2025 Order in Case No. U-21806, pages 106-107, did the Commission advise the Company to refrain from submitting information confidentially that will directly affect the calculation of the revenue deficiency?

A. Yes. The Commission did advise the Company to refrain from submitting information confidentially that will directly affect the calculation of the revenue deficiency or, if the Company believes it is necessary to do so, to at least provide a detailed explanation of the reason for confidential treatment on the record.

Q. Why did the Company classify the capital expenditures and O&M expense amounts related to the SAP S/4HANA Implementation project as confidential?

A. The Company classified the capital expenditures and O&M expense amount related to the SAP S/4HANA Implementation project as confidential due to the impact of publicly disclosing the total projected costs of the project. Publicly disclosing the total projected project costs would impact the Company's ability to competitively bid contractor and software costs, impacting the cost-effectiveness of the project for customers.

Q. Does the Company intend to maintain the confidentiality of its test year capital expenditures, O&M expense, and cloud implementation costs in this case?

A. No. Given the Commissions advisement, the Company does not intend to maintain the confidentiality of its test year capital expenditures, O&M expense and cloud implementation costs in this case.

Q. Does the Company intend to maintain the confidentiality of total projected capital expenditures, deferred Investments O&M expense and other costs in this case?

A. Yes. The Company does intend to maintain the confidentiality of its total projected capital expenditures, deferred Investments O&M expense and other costs in this case for the reasons I described above.

Q. In the Commission's September 30, 2025 Order in Case No. U-21806, page 307, did the Commission impose any additional requirements regarding the SAP S/4HANA Implementation project?

A. Yes. The Commission directed the Company to meet quarterly with MPSC Staff to report on the SAP S/4HANA Implementation project's progress. These updates must include information on project implementation milestones, budget adherence, scope changes, and

other relevant developments. Additionally, the Commission ordered the Company to "record any over recovery or under recovery of each projected expense associated with the project as compared to the 80% base that the Company expects to include in any future natural gas rate case until the project is complete."

Q. How has the Company addressed the Commissions requirements related to the SAP S/4HANA Implementation project from Case No. U 21806?

A. The Company values the opportunity to provide regular updates to MPSC Staff and held its first quarterly meeting in December 2025. These meetings will continue on a quarterly basis in accordance with the Commission's directive.

Regarding the tracking of "over or under recovery", the Company notes that in Case No. U 21806, none of the SAP project's capital expenditures were projected to be placed into service during the test year. As a result, current rates do not include any related depreciation expense, and the return on construction work in progress is offset by AFUDC. In short, there is no SAP S/4HANA Implementation project revenue requirement embedded in current rates for which an over or under recovery can be recorded.

Q. Are there any Digital Foundations and Capabilities projects that you would like to discuss?

A. Yes. The following Digital Foundations and Capabilities projects are addressed below.

- SAP HANA Database Migration

Q. Please explain the SAP HANA Database Migration project.

A. The SAP HANA Database Migration project has the following synopsis:

  - **Description:** In preparation for SAP's planned end of support for its Business Suite product in 2027, the Company will migrate its existing SAP databases from Oracle to SAP HANA in advance of the required move to S/4HANA.

- **Problem Statement:** The Company's SAP applications currently utilize Oracle's relational database management system as their underlying database storage technology. SAP has informed its customers that standard support for its legacy Business Suite (aka ECC) product will end in 2027[8], along with support for all non-SAP database platforms. SAP has also informed customers that the future direction for their enterprise solution is S/4HANA, a solution built explicitly for their HANA database platform. To prepare for these upcoming events, the Company will migrate all of its SAP databases off of Oracle and onto SAP HANA.

- **Objectives:** This project lays the groundwork for the Company's eventual shift to SAP's HANA-based solutions by: (1) proactively migrating SAP databases to a database technology that is fully supported by SAP beyond 2027; and (2) mitigating the risk of a complete loss of support for the current Oracle database technology in 2027.

- **Scope:** Project scope includes: (1) procurement of HANA software licensing to cover all migrated SAP applications; (2) data migration for all SAP applications from the Oracle database to SAP HANA; and (3) implementation of new application support policies, procedures, and tools required to manage the newly migrated SAP HANA applications.

- **Alternatives:** Given SAP's announcement regarding the end of support for its ECC product in 2027, all customers running SAP on database software other than HANA will also lose support for their associated database software in 2027. SAP is offering no other options for databases other than HANA beyond 2027. While there is no alternative to the HANA database for SAP going forward, the Company has considered multiple options: (1) Perform a direct migration from SAP Business Suite on Oracle to S/4HANA. A direct migration to S/4HANA brings greater operational risk to the Company as both the underlying database technology and the SAP application's functionality would change simultaneously, so this alternative was not selected; (2) Remain on the current SAP Business Suite product but competitively bid support services to a third-party provider instead of SAP. This alternative was not selected because moving to a third-party support model forces the Company to remain on outdated SAP software and eliminates any possibility of benefitting from new business functionality provided by S/4HANA. It will also require the Company to accept significant risk due to the fact that SAP security patches, application patches and upgrades will not be available upon termination of the SAP maintenance agreement; (3) Migrate to SAP's SaaS implementation of S/4HANA. This alternative was not selected because an S/4HANA SaaS migration is a much more disruptive option as the Company's business processes must be adjusted to accommodate functionality differences between

[8] Refer to my testimony, page 121, lines 3 through 12, for more information on SAP support being extended in limited circumstances.

ECC and S/4HANA. The risk of negative business impact is significantly greater than simply changing the underlying database technology. The selected alternative to migrate the SAP databases to HANA prior to implementing S/4HANA gives the Company several years to solidify its HANA database infrastructure before introducing the substantial business process changes required with S/4HANA.

Q. What were the total projected capital expenditures for the SAP HANA Database Migration in Case No. U-21806?

A. The Case No. U-21806 projected capital expenditures by year and cost category for the SAP HANA Database Migration project are in the table provided below.

SAP HANA Database Migration			
Case No. U-21806			
Cost Category	**Total Company Capital**	**Gas Allocation Capital**	**U-21806 Reference**
2023 Actuals			
Software	$2,222,855	$713,092	A-20 (SHB-5), line 86, column m
Material	$0	$0	A-20 (SHB-5), line 86, column n
Labor	$39,445	$12,654	A-20 (SHB-5), line 86, column o
Contractor	$103,037	$33,054	A-20 (SHB-5), line 86, column p
Non-Labor Overhead	$9,623	$3,087	A-20 (SHB-5), line 86, column q
Non-Labor Other	$16,615	$5,330	A-20 (SHB-5), line 86, column r
Total 2023 Actuals	**$2,391,575**	**$767,217**	A-20 (SHB-5), line 86, column l
2024 Projected			
Software	$381,891	$115,904	A-20 (SHB-5), line 189, column m
Material	$0	$0	A-20 (SHB-5), line 189, column n
Labor	$255,343	$77,497	A-20 (SHB-5), line 189, column o
Contractor	$1,523,150	$462,276	A-20 (SHB-5), line 189, column p
Non-Labor Overhead	$63,287	$19,207	A-20 (SHB-5), line 189, column q
Non-Labor Other	$189,408	$57,485	A-20 (SHB-5), line 189, column r
Total 2024 Projected	**$2,413,078**	**$732,369**	A-20 (SHB-5), line 189, column l
2025 Projected			
Software	$0	$0	A-20 (SHB-5), line 279, column m
Material	$0	$0	A-20 (SHB-5), line 279, column n
Labor	$184,284	$57,920	A-20 (SHB-5), line 279, column o
Contractor	$1,261,831	$396,593	A-20 (SHB-5), line 279, column p
Non-Labor Overhead	$88,328	$27,762	A-20 (SHB-5), line 279, column q
Non-Labor Other	$151,948	$47,757	A-20 (SHB-5), line 279, column r
Total 2025 Projected	**$1,686,391**	**$530,032**	A-20 (SHB-5), line 279, column l

Total Actuals/Projected			
Software	$2,604,746	$828,996	
Material	$0	$0	
Labor	$479,072	$148,071	
Contractor	$2,888,018	$891,923	
Non-Labor Overhead	$161,238	$50,056	
Non-Labor Other	$357,971	$110,572	
Total Actuals/Projected	**$6,491,045**	**$2,029,618**	

Q. What are the current projected total project costs broken down by year for the SAP HANA Database Migration project?

A. The total project costs broken down by year for the SAP HANA Database Migration project are in the table provided below.

SAP HANA Database Migration Case No. U-21981			
Cost Category	**Total Company Capital**	**Gas Allocation Capital**	**U-21806/U-21981 Reference**
2023 Actuals			
Software	$2,222,855	$713,092	U-21806, A-20 (SHB-5), line 86, column m
Material	$0	$0	U-21806, A-20 (SHB-5), line 86, column n
Labor	$39,445	$12,654	U-21806, A-20 (SHB-5), line 86, column o
Contractor	$103,037	$33,054	U-21806, A-20 (SHB-5), line 86, column p
Non-Labor Overhead	$9,623	$3,087	U-21806, A-20 (SHB-5), line 86, column q
Non-Labor Other	$16,615	$5,330	U-21806, A-20 (SHB-5), line 86, column r
Total 2023 Actuals	**$2,391,575**	**$767,217**	U-21806, A-20 (SHB-5), line 86, column l
2024 Actuals			
Software	$306,891	$93,141	U-21981, A-20 (SHB-5), line 57, column m
Material	$0	$0	U-21981, A-20 (SHB-5), line 57, column n
Labor	$441,821	$134,093	U-21981, A-20 (SHB-5), line 57, column o
Contractor	$1,807,684	$548,632	U-21981, A-20 (SHB-5), line 57, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 57, column q
Non-Labor Other	$284,527	$86,354	U-21981, A-20 (SHB-5), line 57, column r
Total 2024 Actuals	**$2,840,923**	**$862,220**	U-21981, A-20 (SHB-5), line 57, column l
2025 Projected			
Software	$0	$0	U-21981, A-20 (SHB-5), line 159, column m
Material	$0	$0	U-21981, A-20 (SHB-5), line 159, column n
Labor	$685,624	$215,492	U-21981, A-20 (SHB-5), line 159, column o
Contractor	$2,210,162	$694,654	U-21981, A-20 (SHB-5), line 159, column p
Non-Labor Overhead	$0	$0	U-21981, A-20 (SHB-5), line 159, column q
Non-Labor Other	$203,194	$63,864	U-21981, A-20 (SHB-5), line 159, column r
Total 205 Projected	**$3,098,980**	**$974,009**	U-21981, A-20 (SHB-5), line 279, column l

Total Actuals/Projected			
Software	$2,529,746	$806,233	
Material	$0	$0	
Labor	$1,166,890	$362,239	
Contractor	$4,120,883	$1,276,340	
Non-Labor Overhead	$9,623	$3,087	
Non-Labor Other	$504,336	$155,548	
Total Actuals/Projected	**$8,331,478**	**$2,603,447**	

Q. Why have the projected costs of the SAP HANA Database Migration project changed from previous projections in Case No. U-21806?

A. The primary reasons for the $0.57 million gas allocation increase in the SAP HANA Database Migration project costs from the projections presented in Case No. U-21806 are due to increases in labor ($0.21 million), contractor cost ($.38 million), and Non-Labor Other ($0.04 million), offset by decreases in software ($0.02 million), and Non-Labor Overhead ($0.05 million) costs. The projected gas allocation capital expenditures increased primarily in labor and contractor costs for these reasons: (1) the Company made the decision to stagger the migration across 2024 and 2025 to mitigate risk. By migrating ancillary systems to HANA in 2024, to gain valuable insight before migrating the ECC, it provided time to conduct mock migrations for ECC, which helped to minimize downtimes. (2) The project changed the migration approach and identified necessary infrastructure and execution activities that were not previously budgeted. The phased, staggered migration requires additional validation cycles and labor. SAP HANA conversion and the Azure transition requires specialized cloud architecture, virtual machines and licensing; and the project engaged on-site vendor technical assurance to reduce cutover failure risk. These additions shorten and reduce the likelihood of production downtime at cutover, materially

shorten time-to-restore for critical incidents, and deliver a supported, scalable, high-performance cloud platform that lowers future remediation and operating expense.

Security Projects

Q. Please explain the Security projects.

A. Below are the Security projects:

- The **Forward Web Proxy Services** project requires $1,259,820 in capital ($1,007,856 ROM Adjusted Capital) and $149,133 in O&M in the test year.
  - **Description:** This project will replace the Company's existing web proxy service platform with a new, modern, and more resilient platform designed to support both secure internet access and advanced data loss prevention capabilities. A web proxy service acts as a secure intermediary between users and the internet, evaluating, filtering, and forwarding traffic while enforcing Company security policies. It acts as an intermediary that evaluates, modifies, and forwards the client's requests to the destination web server. This service offers many benefits for the Company such as advanced filtering. Advanced filtering in a forward web proxy service can filter out unwanted or harmful content from the internet, such as malware and phishing. This can protect the client's device and network from cyberattacks and improve their browsing experience. Without advanced filtering, the Company's cyber assets are at risk of attacks such as ransomware.
  - **Problem Statement:** The current web proxy platform, implemented in 2021, has caused ongoing operational issues related to web filtering, inconsistent policy enforcement, and intermittent connectivity. These challenges have occasionally limited employee and contractor access to critical internet and cloud-based resources, impacting productivity and increasing security risk. As the Company accelerates its transition to cloud and SaaS platforms, maintaining consistent, secure, and reliable internet access is critical. The new platform will provide high availability, improved performance, and enhanced visibility into outbound traffic to ensure that business operations continue seamlessly, even during peak or failover conditions. The platform will also be designed to support flexible deployment models for remote, hybrid, and field-based workers—ensuring that security policies apply consistently regardless of location. In addition to improving reliability, this project introduces data loss prevention ("DLP") capabilities as a core function of the web proxy service. These DLP capabilities will help the Company prevent unauthorized transmission of sensitive or regulated information—such as customer data, intellectual property, or operational system details—to unapproved external destinations. Through content inspection, contextual analysis, and

integrated policy enforcement, the new solution will identify and block risky behaviors before data leaves the organization. DLP policies will also align with existing information governance frameworks and compliance obligations to provide both proactive protection and auditable oversight of data handling practices.

- **Objectives:** This project creates value for the Company by: (1) increasing service reliability for employees and contractors to internet and cloud-based resources; (2) utilize technology to enable the Company to handle all types of different workloads from varying geographic locations and is highly available; (3) using a mature and scalable web proxy service provider; (4) providing Zero Trust by continuously verifying every connection request; and (5) implementing data loss prevention capabilities on our core web proxy services.

- **Scope:** The project scope includes: (1) replacing the current web proxy services solution and implementing a new system; (2) replacing physical web proxy hardware; (3) potentially changing SAAS cloud vendors; and (4) implementing data loss prevention for web proxy services. The Security team did extensive research on alternative web proxy services solutions.

- **Alternatives:** Alternatives considered include: (1) continue to use and maintain the current web proxy services platform as it currently is implemented. This alternative was not chosen due to the previous operational issues with the platform that make it unreliable. The result of an unreliable system means that employees and contractors are unable to access business critical services such as email, Teams, ServiceNow, SharePoint Online; (2) Route all internet traffic through the Company's corporate data center. This alternative wasn't chosen because the capabilities of firewalls aren't as effective in stopping sophisticated cyber-attacks as using a web proxy service; and (3) Perform an evaluation between existing product with expanded feature sets, such as data loss prevention and alternative vendors that could replace current system with modern vendor platform for web proxy services. This option was chosen because it offers additional analysis with the potential to enhance existing, in place, products with features such as enhanced data loss prevention mechanisms, browser isolation (the ability to contain web pages so that the web page can't affect the client workstation) and sandboxing (a way to safely execute malicious applications without impacting the Company's network). As part of the evaluation the Company reassessed based on outside advisors and industry trend analysis, focusing on the ability to execute and the vendor's company strategy.

- The **Privileged Access Management Cloud Migration** project requires $677,926 in capital ($542,340 ROM Adjusted Capital) and $108,148 in O&M in the test year.

- **Description:** This project will perform the implementation of a Privileged Access Management ("PAM") solution to enhance security by securely storing, rotating, and isolating privileged credentials for both human and non-human users. It provides robust monitoring and control of privileged access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure.

- **Problem Statement:** The Company faces significant security risks related to the management of privileged access, including potential data breaches, unauthorized access, and compliance issues. The Company's current methods of managing privileged accounts are often manual, error-prone, and insufficient to address the complexities of modern IT environments. There is a critical need for a robust solution that can automate and secure the management of privileged credentials, provide comprehensive monitoring and control, and ensure compliance with security policies across on-premises, cloud, and hybrid environments.

- **Objectives:** This project creates value for the Company through: (1) securely storing and managing privileged credentials; (2) automating credential rotation; (3) isolating access to prevent unauthorized use; (4) improving compliance with regulatory requirements through comprehensive audit trails, and reporting; (5) increasing efficiency by automating password management; and (6) reducing manual tasks that can be prone to human error.

- **Scope:** The project scope includes migrating the Company's current system, PAM system, to a cloud vendor, implementing new features not available in the current on-prem solution.

- **Alternatives:** Alternatives considered included: (1) manual password rotation. This alternative was not chosen because it requires significant time and effort to manage and update passwords manually. It also increases the risk of human error including mistakes, such as forgetting to update passwords or using predictable patterns; (2) Access Control Lists ("ACLs"). This alternative was not chosen because of scalability issues. ACLs are difficult to manage as the number of users and resources grows. This option also requires regular updates and reviews to ensure accuracy and security; (3) manual audit logs. This alternative was not chosen because it is very labor intensive. It requires significant effort to maintain and review logs manually. The use of manual audit logs increases the risk of inaccuracy by having a higher chance of errors and incomplete records; (4) periodic security reviews. This alternative was not chosen because it is very resource intensive and requires time and expertise to conduct thorough reviews. Periodic security reviews may also miss issues that arise between review periods; and (5) implementation of a cloud-based PAM solution was the chosen option. It provides robust monitoring and control of privileged

access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure.

- The **Saviynt Enterprise Identity Governance and Access ("EIGA") Implementation** project requires $71,668 in capital ($57,334 ROM Adjusted Capital) and $3,721 in O&M in the test year.

  - **Description:** The project will implement Saviynt EIGA module, consolidate Identity Access Management ("IAM") functionality into Saviynt, and retire the Identity Manager application. By implementing the new solution, the Company will optimize IAM functionality, eliminate complexity, and reduce support costs. In addition, the project will integrate the OT network with an IAM solution that will allow for automated management of users and entitlements in the OT Active Directory domains and applications.

  - **Problem Statement:** The current version of AccessNow reached end-of-life in December 2022, with support discontinued in January 2023. The application has numerous custom workflows and integrations, requiring professional services for ongoing use and changes. It lacks proper data analytics and reporting, posing risks such as inability to fix critical defects, software incompatibility, compliance issues, increased costs, and degraded performance. The Company uses multiple IAM tools, each performing critical functions, leading to numerous required interfaces and customizations. While beneficial for end users, these integrations increase the risk of system failures, higher support costs, multiple subscriptions, infrastructure and maintenance costs, and more expensive upgrades. The current solution utilizes SAP HR batch file processes that introduces failure points, delays, and data integrity issues. Failures in these processes can prevent new or transferred employees from accessing necessary systems, leading to operational disruptions and potential compliance risks due to inappropriate access retention.

  - **Objectives:** This project provides value by: (1) Consolidating multiple IAM platforms through the implementation of the Saviynt EIGA Module, reducing complexity and support costs; (2) Decreasing complexity and enhancing efficiency by reducing interfaces between multiple identity tools; (3) Improving the end-user experience and reducing human struggle with access requests through a new, intuitive portal design; (4) Minimizing custom code and focusing on configurations only by utilizing out-of-the-box functionality; and (5) Streamlining employee data processing with the implementation of an HR interface.

  - **Scope:** This project scope includes: (1) Implementing the Saviynt EIGA module to consolidate IAM platforms; (2) Standardizing processes by removing customized code and using out-of-the-box functionality;

(3) Replacing and improving access system; (4) Addressing issues with aging applications, multiple IAM platforms, integration challenges, and antiquated HR processing.

- **Alternatives:** Alternatives considered include: (1) Implementing hot fixes to AccessNow version 8.1.5 to ensure support through mid-2023; (2) Upgrading only the application to current supported version, excluding the new web portal but will include new application functionality; (3) Remaining on current version that will be unsupported as of January 2023, requiring vendor professional services for any break/fix. Patches and enhancements may potentially introduce additional risk of version instability; and (4) Implementing IAM functions in Saviynt platform to manage access requests, including Active Directory, SAP, SAP HR, disconnected systems, and existing API integrations. The alternative selected was implementing the new Saviynt system, eliminating AccessNow software.

- The **Security/OT Field Modernization** project requires $31,906 in capital and $18,038 in O&M in the test year.
  - **Description:** This project will implement new infrastructure for accomplishing improved security in the field for OT assets.
  - **Problem Statement:** Gas and Gas technicians are using corporate laptops, to manage critical OT infrastructure which does not follow cyber security best practices for managing critical infrastructure. Vendors and contractors have access to the Company's critical infrastructure using non-Company laptops. The best practice is to use dedicated laptops to connect to critical infrastructure.
  - **Objectives:** The value of this project is deploying dedicated Company OT laptops and associated OT infrastructure that can move between OT locations only and providing a secure environment.
  - **Scope:** This project will procure and configure approximately 130 devices that will be used to manage critical OT infrastructure.
  - **Alternatives:** The Company reviewed several options to mitigate cyber security risks inherent with the use of standard corporate laptops managing critical infrastructure. The alternatives considered are: (1) Continue utilizing existing workflow of using Corporate domain laptops with software installed; (2) Bring in an outside vendor to design and implement a proposed infrastructure; (3) Complete disallowance of all local access to critical systems; (4) Extending the OT network to remote Company locations; and (5) Deploy a dedicated Company OT laptop and OT communications circuits, which includes cellular connectivity. The dedicated OT laptop and communications circuits presented the best way to

secure the critical infrastructure by limiting internet and e-mail access. Vendors and contractors could also utilize these approved dedicated systems for managing infrastructure they help support at Company locations. Based on the analysis performed, the Company chose to deploy a dedicated OT laptop and communications circuits.

- The **Vulnerability and Exposure Management Program Enablement** project requires $399,212 in capital ($319,369 ROM Adjusted Capital) and $89,663 in O&M in the test year.

  - **Description:** This project will enhance the Company's Vulnerability Management program by implementing a cohesive suite of technologies focused on Vulnerability Management. These technologies will include minimally the following capabilities: vulnerability management, web application static and dynamic analysis, and attack surface management. Vulnerability Management is a critical process for identifying, assessing, and mitigating security weaknesses within an organization's IT infrastructure. This proactive approach involves continuous monitoring and evaluation of systems to detect vulnerabilities that could be exploited by cyber threats. By prioritizing vulnerabilities based on risk, cost, and potential impact, organizations can effectively allocate resources to address the most critical issues first. Implementing a robust Vulnerability Management program not only enhances the security posture of the organization but also ensures compliance with industry regulations and standards, thereby reducing the risk of data breaches, malware infections, ransomware, and other cyber threats. This Vulnerability Management program supports business continuity and protects sensitive information and systems, making it an essential component of any comprehensive cybersecurity strategy.

  - **Problem Statement:** The Company's current Vulnerability Management program relies on multiple disparate tools to perform core activities such as scanning, analysis, and remediation tracking. This multi-tool approach can create inefficiencies, increase the likelihood of data gaps, and require additional effort from users to correlate and interpret information across platforms. The use of several systems to manage vulnerabilities can lead to inconsistent workflows, duplicated efforts, and reduced coordination between teams. Streamlining the tool set or improving integration between existing solutions would enhance operational efficiency and support a more cohesive vulnerability management process.

  - **Objectives:** This project creates value for the Company by (1) enhancing the efficiency and effectiveness of the Vulnerability Management program through improved integration and reduced reliance on multiple standalone tools, and (2) supporting risk-based decision-making by enabling more consistent identification, prioritization, and remediation of vulnerabilities. These improvements will reduce operational overhead, minimize security

exposure, and help ensure continued alignment with industry regulations and cybersecurity frameworks.

- **Scope:** The project scope includes evaluating and implementing a new vulnerability solution. The scope also includes enablement of active scanning with the new solution, consolidating data sources, and improving cross-platform visibility.

- **Alternatives:** Alternatives considered include: (1) continuing with the current multi-tool Vulnerability Management program. This option was not selected as it perpetuates inefficiencies, inconsistent workflows, and limited visibility across platforms; (2) increasing manual efforts to correlate and manage data between existing tools. This alternative was not chosen due to the high resource demands and increased risk of human error, which may further delay remediation timelines; and (3) procurement of a new, cloud-based consolidated vulnerability management platform. This option was chosen as it allows the Company to enhance vulnerability data, threat intelligence, and process efficiencies within the current environment to deliver immediate value with high confidence in the vulnerability data that is being provided**.**

Q. Overall, are the expenses and expenditures you have identified reasonable and prudent?

A. Yes. The O&M expenses and capital expenditures requested in this case will help the Company achieve the outcomes of the NGDP, continually improve customers' interactions with the Company, and maintain a reliable and secure technology base that is exposed to ever-increasing and serious cyber security threats over time. Technology is the backbone of Company operations and two-way customer communications. The Company has demonstrated the prudency of project expenditures and operational O&M requirements.

I have also provided a detailed synopsis of each project, a supplementary exhibit of the total project cost, hard savings, and cost/benefit analysis for each project in the test year, and a deep dive into benefits for several high-priority projects. This project-specific information demonstrates how IT investments and operational expenses are helping the Company provide exceptional service to its customers. The Company is seeking full

recovery for these IT costs that keep its systems available, customers safe from growing cyber security threats, and the Company on a path to the bright future it envisioned in its NGDP – one powered by safe, reliable, affordable, clean, and equitable energy.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

REDACTED EXHIBITS

OF

STACY H. BAKER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected IT Operations O&M Expenses
For the Years 2024 and Test Year 12 Months Ending October 31,2027
($000)

Case No.: U-21981
Exhibit No.: A-17 (SHB-1)
Page: 1 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Actual 12-Mos Ended 12/31/2024	(c) Projected 12-Mos Ending 10/31/2027
1	**Information Technology**	**$ 25,963**	**$ 30,973**
	Labor	5,733	6,420
	Material	875	1,320
	Contractor	18,178	22,457
	Non-Labor Overheads	-	-
	Non-Labor Other	1,177	777
2	**Security**	**5,101**	**7,640**
	Labor	2,315	2,514
	Material	11	-
	Contractor	2,318	4,951
	Non-Labor Overheads	-	-
	Non-Labor Other	457	175
3	**Total IT Operations O&M Expenses**	**$ 31,064**	**$ 38,614**
	Labor	8,048	8,934
	Material	886	1,320
	Contractor	20,496	27,408
	Non-Labor Overheads	-	-
	Non-Labor Other	1,634	952

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
For the Years 2024 and Test Year 12 Months Ending October 31,2027
($000)

Case No.: U-21981
Exhibit No.: A-17 (SHB-1)
Page: 2 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Actual 12 Mos Ended 12/31/2024	(c) Inflation Impacts on Historical Costs Test Year (b) * Compounded Inflation Rate	(d) Scope/ Cost Increases Net of Productivity Gains	(e) Projected O&M 12 Mos Ending 10/31/2027 (b) + (c) + (d)
1	Information Technology	$ 25,963	$ 1,891	$ 3,119	$ 30,973
2	Security	5,101	372	$ 2,168	7,640
3	**Total IT Operations O&M Expenses**	**$ 31,064**	**$ 2,263**	**$ 5,287**	**$ 38,614**

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical 13 Month Average of IT Cloud Computing Prepaid Balance
For the years 2024 - 13 months balance ending June 30, 2025
Gas Allocation

Case No.: U-21981
Exhibit No.: A-18 (SHB-2)
Page: 1 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Bal. Ending 6/30/2024	(c) Bal. Ending 7/31/2024	(d) Bal. Ending 8/31/2024	(e) Bal. Ending 9/30/2024	(f) Bal. Ending 10/31/2024	(g) Bal. Ending 11/30/2024	(h) Bal. Ending 12/31/2024	(i) Bal. Ending 1/31/2025	(j) Bal. Ending 2/28/2025	(k) Bal. Ending 3/31/2025	(l) Bal. Ending 4/30/2025	(m) Bal. Ending 5/31/2025	(n) Bal. Ending 6/30/2025	(o) 13 mos. Average
1	**IT Cloud Computing Prepaid**	$ (5,481,939)	$ (4,783,158)	$ (4,275,232)	$ (3,942,289)	$ (3,229,110)	$ (2,541,670)	$ (2,297,949)	$ (6,363,439)	$ (5,955,306)	$ (6,442,815)	$ (5,563,431)	$ (5,086,706)	$ (4,426,846)	**$ (4,645,376)**
2	**Total**	**$ (5,481,939)**	**$ (4,783,158)**	**$ (4,275,232)**	**$ (3,942,289)**	**$ (3,229,110)**	**$ (2,541,670)**	**$ (2,297,949)**	**$ (6,363,439)**	**$ (5,955,306)**	**$ (6,442,815)**	**$ (5,563,431)**	**$ (5,086,706)**	**$ (4,426,846)**	**$ (4,645,376)**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Projected 13 Month Average of IT Cloud Computing Prepaid Balance
For the years 2026 - 13 months balance ending October 31, 2027
Gas Allocation

Case No.: U-21981
Exhibit No.: A-18 (SHB-2)
Page: 2 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Bal. Ending 10/31/2026	(c) Bal. Ending 11/30/2026	(d) Bal. Ending 12/31/2026	(e) Bal. Ending 1/31/2027	(f) Bal. Ending 2/28/2027	(g) Bal. Ending 3/31/2027	(h) Bal. Ending 4/30/2027	(i) Bal. Ending 5/31/2027	(j) Bal. Ending 6/30/2027	(k) Bal. Ending 7/31/2027	(l) Bal. Ending 8/31/2027	(m) Bal. Ending 9/30/2027	(n) Bal. Ending 10/31/2027	(o) 13 mos. Average
1	**IT Cloud Computing Prepaid**	$ 3,496,502	$ 2,712,100	$ 1,983,758	$ 7,255,802	$ 6,645,839	$ 6,067,998	$ 7,149,840	$ 6,508,683	$ 6,136,938	$ 5,395,685	$ 4,748,093	$ 4,213,421	$ 4,206,987	**$ 5,117,050**
2	**Total**	**$ 3,496,502**	**$ 2,712,100**	**$ 1,983,758**	**$ 7,255,802**	**$ 6,645,839**	**$ 6,067,998**	**$ 7,149,840**	**$ 6,508,683**	**$ 6,136,938**	**$ 5,395,685**	**$ 4,748,093**	**$ 4,213,421**	**$ 4,206,987**	**$ 5,117,050**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected IT Investments O&M Expenses
For the Years 2024 and Test Year 12 Months Ending October 31,2027
($000)

Case No.: U-21981
Exhibit No.: A-19 (SHB-3)
Page: 1 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Actual 12-Mos Ended 12/31/2024	(c) Projected 12-Mos Ending 10/31/2027
	Investments Planning		
1	**Information Technology**	**$ 675**	**$ 340**
	Labor	296	340
	Material	-	-
	Contractor	379	-
	Non-Labor Overheads	-	-
	Non-Labor Other	(0)	-
2	**Security**	**8**	**5**
	Labor	8	5
	Material	-	-
	Contractor	0	-
	Non-Labor Overheads	-	-
	Non-Labor Other	-	-
	Investments O&M		
3	**Information Technology**	**4,566**	**5,025**
	Labor	1,018	3,327
	Material	65	144
	Software	376	68
	Contractor	3,091	1,438
	Non-Labor Overheads	-	-
	Non-Labor Other	16	50
4	**Security**	**482**	**796**
	Labor	180	412
	Material	22	16
	Software	61	337
	Contractor	219	31
	Non-Labor Overheads	-	-
	Non-Labor Other	(0)	1
5	**Total IT Investments O&M Expenses**	**$ 5,731**	**$ 6,166**
	Labor	1,502	4,084
	Material	87	159
	Software	438	405
	Contractor	3,690	1,468
	Non-Labor Overheads	-	-
	Non-Labor Other	15	51

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
For the Years 2024 and Test Year 12 Months Ending October 31,2027
($000)

Case No.: U-21981
Exhibit No.: A-19 (SHB-3)
Page: 2 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Description	(b) Actual 12 Mos Ended 12/31/2024	(c) Inflation Impacts on Historical Costs Test Year (b) * Compounded Inflation Rate	(d) Scope/ Cost Increases Net of Productivity Gains	(e) Projected O&M 12 Mos Ending 10/31/2027 (b) + (c) + (d)
1	**Investments Planning**	**$ 683**	**$ 50**	**$ (387)**	**$ 346**
	Information Technology	$ 675	$ 49	$ (384)	$ 340
	Security	$ 8	$ 1	$ (3)	$ 5
2	**Investments O&M**	**$ 5,048**	**$ 368**	**$ 405**	**$ 5,821**
	Information Technology	$ 4,566	$ 333	$ 126	$ 5,025
	Security	$ 482	$ 35	$ 278	$ 796
3	**Total IT Investments O&M Expenses**	**$ 5,731**	**$ 417**	**$ 18**	**$ 6,166**

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

Schedule B-5.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected Gas and Common Capital Expenditures
Information Technology
($000)

Case No.: U-21981
Exhibit No.: A-12 (SHB-4)
Schedule: B-5.1
Page: 1 of 2
Witness: SHBaker
Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)
		Capital Expenditures				
		Historical	**Projected Bridge Year**			**Projected Test Year**
Line No.	**Description**	**12 Mos Ended 12/31/2024**	**12 Mos Ending 12/31/2025**	**10 Mos Ending 10/31/2026**	**22 Mos Ending 10/31/2026**	**12 mos. Ending 10/31/2027**
1	**Corporate**	**397**	**1,157**	**314**	**1,471**	**376**
	Labor	72	313	219	532	263
	Software	111	0	0	0	0
	Materials	1	0	0	0	0
	Contractor	190	804	0	804	0
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	23	41	95	135	114
	Contingency	0	0	0	0	0
2	**Customer**	**649**	**1,379**	**1,295**	**2,675**	**921**
	Labor	159	638	223	861	61
	Software	78	42	0	42	0
	Materials	0	0	3	3	3
	Contractor	361	665	870	1,535	808
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	52	34	200	234	49
	Contingency	0	0	0	0	0
3	**Electric & Gas Shared**	**1,504**	**1,230**	**403**	**1,633**	**372**
	Labor	275	789	99	888	76
	Software	231	(21)	0	(21)	0
	Materials	65	(4)	3	(1)	3
	Contractor	786	373	243	616	251
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	146	93	58	151	42
	Contingency	0	0	0	0	0
4	**Gas**	**5,648**	**7,166**	**8,500**	**15,666**	**8,246**
	Labor	899	690	2,450	3,140	2,224
	Software	1,062	1,978	1,915	3,894	569
	Materials	804	58	241	299	2,745
	Contractor	2,412	3,643	1,593	5,235	1,165
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	471	796	2,301	3,097	1,542
	Contingency	0	0	0	0	0
5	**IT/Digital Foundation**	**12,262**	**9,497**	**21,405**	**30,902**	**24,490**
	Labor	1,239	1,289	4,516	5,805	5,727
	Software	565	163	425	588	260
	Materials	6,052	5,453	6,427	11,880	6,990
	Contractor	3,895	2,198	8,295	10,494	9,341
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	511	393	1,741	2,135	2,172
	Contingency	0	0	0	0	0
6	**Security**	**6,156**	**4,932**	**2,420**	**7,352**	**5,315**
	Labor	550	910	264	1,174	334
	Software	913	217	113	330	1,954
	Materials	1,791	1,747	1,508	3,255	2,402
	Contractor	2,781	1,854	347	2,201	336
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	121	204	188	393	289
	Contingency	0	0	0	0	0
7	**Total Information Technology Capital**	**26,616**	**25,363**	**34,336**	**59,699**	**39,720**
	Labor	3,194	4,629	7,771	12,400	8,684
	Software	2,960	2,379	2,454	4,833	2,783
	Materials	8,713	7,256	8,181	15,436	12,144
	Contractor	10,425	9,537	11,348	20,885	11,901
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	1,325	1,562	4,583	6,144	4,209
	Contingency	0	0	0	0	0

Schedule B-5.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected Gas and Common Capital Expenditures
Information Technology
($000)

Case No.: U-21981
Exhibit No.: A-12 (SHB-4)
Schedule: B-5.1
Page: 2 of 2
Witness: SHBaker
Date: December 2025

	(a)	(b)	(c)	(d)	(e)
		Projected			
		10 mos. Ending 10/31/2025	12 mos. Ending 10/31/2026	12 mos. Ending 10/31/2027	34 mos. Ending 10/31/2027
8	**Corporate**	**940**	**531**	**376**	**1,848**
	Labor	111	421	263	795
	Software	0	0	0	0
	Materials	0	0	0	0
	Contractor	797	6	0	804
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	31	104	114	249
	Contingency	0	0	0	0
9	**Customer**	**694**	**1,981**	**921**	**3,595**
	Labor	48	813	61	922
	Software	42	0	0	42
	Materials	0	3	3	6
	Contractor	569	965	808	2,343
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	34	200	49	283
	Contingency	0	0	0	0
10	**Electric & Gas Shared**	**590**	**1,042**	**372**	**2,005**
	Labor	151	737	76	964
	Software	(21)	0	0	(21)
	Materials	(4)	3	3	2
	Contractor	375	241	251	867
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	89	62	42	193
	Contingency	0	0	0	0
11	**Gas**	**5,177**	**10,489**	**8,246**	**23,912**
	Labor	583	2,557	2,224	5,364
	Software	1,490	2,403	569	4,463
	Materials	11	288	2,745	3,045
	Contractor	2,601	2,635	1,165	6,401
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	492	2,605	1,542	4,639
	Contingency	0	0	0	0
12	**IT/Digital Foundation**	**7,899**	**23,003**	**24,490**	**55,392**
	Labor	890	4,916	5,727	11,532
	Software	163	425	260	849
	Materials	4,594	7,286	6,990	18,870
	Contractor	1,941	8,552	9,341	19,835
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	310	1,824	2,172	4,307
	Contingency	0	0	0	0
13	**Security**	**3,972**	**3,380**	**5,315**	**12,667**
	Labor	563	611	334	1,507
	Software	217	113	1,954	2,284
	Materials	1,678	1,577	2,402	5,657
	Contractor	1,338	863	336	2,537
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	176	217	289	682
	Contingency	0	0	0	0
14	**Total Capital**	**19,272**	**40,427**	**39,720**	**99,419**
	Labor	2,345	10,054	8,684	21,084
	Software	1,891	2,942	2,783	7,617
	Materials	6,281	9,156	12,144	27,580
	Contractor	7,622	13,263	11,901	32,786
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	1,132	5,012	4,209	10,353
	Contingency	0	0	0	0

Case No.: U-21981
Exhibit No.: A-20 (SHB-5)

Witness: SHBaker
Date: December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
1	2024	Application Currency-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Corporate Services adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Corporate Services are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	399,627		-	-	-	-	-	-	-	147,862	-	-	33,777	114,085	-	-
2	2024	Asset Accounting Upgrade	Software(Intangible)	Corporate	The project will upgrade our current accounting asset management software to the latest version as required by the vendor and implement additional new features, ensuring continued support of a critical financial application and providing new functionality. In 2022, standard vendor support ends for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility. The current monthly allocation process has limited visibility to Company financial performance, and the upgrade provides functionality that allows more frequent allocation processes. Additionally, implementing the vendor's regulatory module eliminates the time-consuming and labor-intensive process of manual data extracts for regulatory analysis used for Cost of Service modeling. This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) eliminating the labor intensive and time-consuming process of pulling data for regulatory analysis used for Cost of Service; (3) automating manual tasks; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) upgrading the vendor software from the current version to the newer version; (2) implementing new functionality that includes features for the regulatory Cost of Service analysis, additional reporting, job scheduling, and centralized error processing; and (3) populating the data lake with data from the asset accounting system for improved reporting. Alternatives considered include: (1) Upgrade to the newest, cloud version of PowerPlan. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing. (2) Evaluate SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would likely be more complex, cost more, and may not provide all the required features. (3) Evaluate other software options. This option will introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements.	2025-06-18	2026-07-31	-0.99	4,630,550	247,824		-	-	-	-	-	-	-	5,478	-	-	-	5,478	-	-
3	2024	Product Family Enhancements-Corporate-Capital	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	1,256,844	132,658		381,452	110,838	707	71,526	175,034	-	23,347	49,084	27,676	-	3,911	17,496	-	-
4	2024	Product Family Enhancements-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	403,718		-	-	-	-	-	-	-	149,376	-	-	36,986	112,390	-	-
5	2024	Talent Management Enablement	Software(Intangible)	Corporate	The project will deliver technology solutions to enable best-in-class Talent Management programs and processes that are critical to achieve the Company Significant technology improvements are required to transform Human Resources (HR) to develop the skills and capabilities necessary to achieve the Company This project will add value to the Company through technology that will enable: (1) fully functional integrated compensation module; (2) accelerated and targeted talent development of critical skills necessary to deliver on the Company Talent Management Enablement will deliver the best-practice technology to enable and enhance (1) Fully functional integrated talent compensation management; (2) Simplified and automated talent management process for employee lifecycle management from on-boarding through Off-boarding; (3) Succession Planning and Business Continuity; (4) Career Development and Employee Retention;. The scope will include: (1) implementation of each system/application; (2) integration with current systems, applications and processes as applicable; (3) retrofit current systems and applications to ensure a seamless end-to-end experience of HR processes; (4) delivery of mobile capabilities for in scope processes; (5) reporting and analytics dashboards and report insights for in scope processes. Three alternatives were considered for these Talent Management programs and processes: (1) Develop custom, internally built solutions that could meet most requirements. This alternative was not selected because a custom solution would result in higher overall costs, higher maintenance costs, fewer upgrades, and would not leverage industry best practices to ensure best-in-class delivery. (2) Select an on-premise software tool. This alternative was not selected because it requires internal maintenance, increases infrastructure costs, and would have less frequent upgrades which would hinder the Company's ability to ensure processes are evolving alongside industry trends and best practices. (3) Evaluate and select cloud/SaaS solution(s) which would have lower infrastructure costs, less internal maintenance than an on-premise solution, and would be built and evolved with upgrades based on industry best practices. Based on research, internal experience with successful best practice implementations, and vendor demonstrations, option three was selected.	2023-09-07	2026-12-31	-1.00	357,776	619,932		15,876	-	-	823	14,903	-	150	66,702	-	-	1,597	65,105	-	-
6	**SUBTOTAL**	**2024 Corporate**										**397,328**	**110,838**	**707**	**72,349**	**189,938**	**-**	**23,497**	**418,501**	**27,676**	**-**	**76,271**	**314,554**	**-**	**-**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)
	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
7	2024	Application Currency-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Customer digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Customer are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	63,362		-	-	-	-	-	-	-	23,444	-	-	2,746	20,698	-	-
8	2024	Bill Redesign	Software(Intangible)	Customer	Prior period adjustment							(2,674)	-	-	(2,152)	-	-	(522)	-	-	-	-	-	-	-
9	2024	Click to Chat	Software(Intangible)	Customer	Prior period adjustment							2,958	77,921	-	166	(76,950)	-	1,821	132	-	-	7	125	-	-
10	2024	Energy Assistance Enhancements and Maintenance Annual Updates	Software(Intangible)	Customer	The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as Consumers Affordable Resource for Energy (CARE) project, will implement software changes to offer energy assistance to low-income customers and streamline the process for the assistance agencies who use the assistance portal. This is accomplished through improved user interfaces and updates to SAP to process various requests. Upcoming modifications will be identified following an ongoing and annual review of requests, that includes criteria from the Department of Health and Human Services (DHHS) and Michigan Public Service Commission (MPSC) to prioritize the list of changes. Each grant year, DHHS and MPSC stipulate the criteria required for customers to enroll in the CARE program, how the Company and agencies will manage the enrollment process and track active CARE customers, and how they will administer the Michigan Energy Assistance Program (The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive LIHEAP funding, which can be used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, thereby making it easier to assist customers in need of LIHEAP funding; and (3) complete modifications to customer facing platforms. The project scope includes: (1) updating the enrollment and status process; (2) allowing for flat monthly bills; (3) improving reporting; (4) updating the arrears forgiveness plan; (5) satisfying additional regulatory requirements for the annual grant rule changes required by the Department of Health and Human Services and Michigan Public Service Commission; (6) updating CARE dunning process; and (7) updating CE PASS functionality to enhance Agency Self-Service. Alternatives considered included: (1) continue with current process, which would lead to loss of grant funding, thus decreasing or eliminating energy assistance dollars for customers; (2) transfer administration of Energy Assistance Programs to a third party organization, which would remove ownership and visibility into the health of the program while increasing administrative costs; and (3) make annual updates to the application, which will allow agencies to easily enroll customers on assistance programs and allow placement of holds to stop or prolong credit activity until assistance decisions are granted. Option 3 was selected since it provides long-term proactive energy assistance to customers and prevents loss of grant funds. Changes are required to internal systems (SAP, Agency Portal, etc.) , therefore a cloud or third party alternative is not viable. Additionally, retiring the existing Agency Portal for a new application would increase costs beyond that of the routine upgrades.	2024-01-01	2024-12-31	0.00	-	344,400		-	-	-	-	-	-	-	127,428	-	-	70,985	56,443	-	-
11	2024	Enhancements - Customer Experience and Operations- Cap	Software(Intangible)	Customer	The CX&O initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the CX&O Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for CX&O. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	563,792	41,582		171,111	-	-	64,859	86,603	-	19,648	15,385	-	-	4,533	10,852	-	-
12	2024	Enhancements-CX&O-O&M	Software(Intangible)	Customer	The CX&O initiative will utilize O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort technology changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing technology requires a short timeframe between inception and implementation. Failure to make these changes or to update aging technology can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of technology enhancements in the CX&O Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT technology investments for CE&O. The scope of technology enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	144,202		-	-	-	-	-	-	-	53,355	-	-	20,021	33,334	-	-
13	2024	Genesys Cloud Migration	Software(Intangible)	Customer	The project will migrate the Company In 2028, standard vendor support ends for the current on-premise contact center software and extended support is not available from the vendor. Without vendor support, the application no longer receives security patches, bug fixes, or functionality support from the vendor, which creates security, stability, and reliability risk. With the upcoming end of standard support, the vendor is no longer offering feature enhancements to the current on-premise solution limiting the Company This project will provide value to both the Company and its customers through: (1) reducing costs with cloud allocated hardware scalable to current usage needs; (2) reducing operating costs with vendor managed feature updates and maintenance provided without service disruption; (3) providing access to new and innovative capabilities to enhance customer service; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) deploying the new PAAS cloud-based solution in the vendor cloud environment; (2) installing a new internet circuit to directly connect the Company Alternatives considered include: (1) Defer to later years. This alternative was not selected due to requiring upgrades of existing on-premise hardware, impeding our ability to take advantage of new features offered by the cloud solution, and reducing cost savings opportunities presented by moving to the cloud. (2) Deploy Genesys on-premise solution to new on-premise hardware. This alternative was not selected due cost associated with purchasing new hardware and does not address the security, stability, and reliability risk resulting from the vendor end of support for the on-premise software. (3) Select and migrate to a new vendor software. This alternative was not selected due to the complexity of our existing internal integrations between the Genesys platform and the Company's other internal systems. As a result, selecting a new system with a new vendor would make the switch cost prohibitive. (4) Migrate to the Genesys Cloud platform. This alternative was selected due to it building on the Company strategy of moving to cloud, reducing operating and maintenance costs, and reduces risk by ensuring consistent, seamless vendor support.	2024-06-25	2025-11-21	-0.80	-	164,319		-	-	-	-	-	-	-	55,659	-	-	407	55,253	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
14	2024	Product Family Enhancements-Customer-Capital	Software(Intangible)	Customer	The Customer initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	1,573,482	861,943		477,552	-	-	95,984	350,887	-	30,680	318,919	-	-	34,015	284,904	-	-
15	2024	Product Family Enhancements-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	149,372		-	-	-	-	-	-	-	55,268	-	-	8,036	47,232	-	-
16	2024	Rate Change Maintenance	Software(Intangible)	Customer	The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements. For the Company to continue to meet and comply with the Michigan Public Service Commission (MPSC) rate change requirements, there is a need to make periodic updates/modifications to the existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers. The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs. The scope of this project encompasses (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes. Alternative considered include: (1) a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the timing it would take for testing of this model; and (2) leverage onshore resources to plan, coordinate, and execute the rate changes. This option was selected as it supports the Company's operation model for rate changes.	2024-01-01	2024-12-31	-1.00	-	268,569		-	-	-	-	-	-	-	99,370	-	-	5,204	94,167	-	-
17	2024	SiteCore Upgrade	Software(Intangible)	Customer	Prior period adjustment							-	-	-	-	-	-	-	7	-	-	7	-	-	-
18	**SUBTOTAL**	**2024 Customer**										**648,947**	**77,921**	**-**	**158,857**	**360,540**	**-**	**51,628**	**748,968**	**-**	**-**	**145,960**	**603,008**	**-**	**-**
19	2024	Application Currency-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	739,892	137,627		224,557	160,216	-	29,087	17,646	-	17,608	50,922	40,538	-	7,904	2,479	-	-
20	2024	Application Currency-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	63,329		-	-	-	-	-	-	-	23,432	-	-	5,717	17,715	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE
21	2024	Application Currency-Operational Technology-Capital	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	71,559	3,905	
22	2024	Application Currency-Operational Technology-O&M	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	96,068	
23	2024	Application Currency-TEOS-O&M	Software(Intangible)	Electric & Gas Shared	The TEOS initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the TEOS adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the TEOS are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	234,753	
24	2024	Enhancements-Operations-Capital	Software(Intangible)	Electric & Gas Shared	The Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the Operations Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	343	3,188	
25	2024	Enhancements-TEOS-Capital	Software(Intangible)	Electric & Gas Shared	The TEOS initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the TEOS Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for TEOS. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering, Customer Energy Management, Electric Grid Integration, and Fleet . Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	17,468	1,576	

Line No.	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
21	21,718	-	14,761	4,554	1,083	-	1,320	1,445	-	-	1,423	22	-	-
22	-	-	-	-	-	-	-	35,545	-	58	26,861	7,919	-	706
23	-	-	-	-	-	-	-	86,859	-	-	37,263	49,574	-	22
24	104	-	-	-	-	-	104	1,179	-	-	-	1,179	-	-
25	5,301	-	-	2,416	24	-	2,861	583	-	-	481	102	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
26	2024	Field Contractor Work Management Technology Enablement	Software(Intangible)	Electric & Gas Shared	The project provides the ability to electronically manage contractor work and increases accuracy and timeliness of information processing for field work deliverables. This project additionally creates new opportunities to measure and optimize field work processes supporting customer on-time delivery goals. Contractor field employees use manual, paper-based processes and generic communication technologies (phone, radio, email, collaboration sites) to perform work for the Company. Due to the non-electronic format, inaccuracy, and delay of information processing there are negative impacts to the availability and accuracy of work status. This limits the opportunity to measure and optimize field work processes that support customer on-time delivery and other goals. The project will add value by: (1) improving on-time delivery of customer work by providing electronic work order information to contractors; (2) improving customer satisfaction through efficiency in scheduling work and reporting on the progress electronically; (3) increasing safety by tracking work and contractor status providing visibility into the last known location of the contractor; (4) improving material management; (5) making it easier to move emergent work to contractors to balance workloads and meet customer commitments; and (6) enabling real time updates to work order information, increasing data accuracy and reducing invoice reconciliation time. The project scope includes: (1) identifying requirements for a Bring Your Own Device (BYOD) field contractor work management technology solution and process; (2) developing, configuring, and testing interfaces, hardware, and software for the solution; (3) implementing the solution and process for the following work groups: Electric High-Voltage Distribution (HVD), Electric Low-Voltage Distribution (LVD), Mutual Assistance, Forestry, Gas Distribution, Gas Code Compliance, and Substation Operations Construction/Metro; (4) updating the following vendor contract types to support BYOD field contractor work management: zone, specific bid, ancillary, electric storm, and mutual assistance; and (5) training field contractors on the new technology and processes. The alternatives considered included: (1) Continue with the current paper-based process. This alternative was not selected because this approach does not allow for the timely, data-driven work management metrics required to improve service to customers. (2) Use the current Company mobile application. This alternative was not selected because the solution is not expected to receive long term investments by the vendor and the mobile application would require more upfront investment than the proposed option. (3) Use off-platform options such as ServiceBench. This alternative was not selected because contractors would not be able to leverage the benefits and integrations with the existing platform and it would require additional new integrations. (4) Provide Company-funded field devices to contractors. This alternative was not selected because the investment in hardware, management of on-boarding and off-boarding of devices to contractors, and training and change management is cost-prohibitive and introduces a risk of the loss of control of information security and corporate assets. Leveraging the existing field work management solution was chosen because it uses existing well-developed functionality while leveraging cloud-based, BYOD capabilities to move short-term and long-term contractors from paper processes to the established, standard work management system.	2024-05-24	2025-04-28	-0.85	1,387,238	837,321		294,639	-	76,743	73,491	115,056	-	29,349	130,065	6,318	1,076	58,836	63,350	-	485
27	2024	Field Mapping and Graphics	Software(Intangible)	Electric & Gas Shared	This project will implement a solution for the mobile field mapping and data collection that can search and view facility map data, view work order designs, and create work order as-built construction drawings in the field. This software technology increases process efficiency by consolidating field graphics functionality, reducing IT complexity and testing, and increasing adoption in the field through ease of use. In addition, it allows the Company to move to a supported application platform and retire the unsupported ArcPad solution. The current mapping and graphics application was implemented in 2002 and is no longer sold or supported in any capacity, and the customizations developed for the application cannot be changed. Due to the improved accuracy of the CE landbase (streets, political boundaries, etc.), the outdated electric maps that are referencing that data causes the map to be unreadable which causes a safety issue. Additionally, field employees have considerable challenges when attempting to use the software due to slowness, an aged interface, and dated processes. The project will add value by: (1) providing more accurate geospatial data, including facility map data, pre-construction designs, and as-built construction drawings; (2) consolidating daily tasks into a more simplified process; (3) eliminating the process waste from duplicating asset data in two systems; (4) enabling the adoption of the Geographic Information System (GIS) standard; and (5) making mapping and graphics data available on field devices. The project scope includes: (1) installing a new mobile field mapping and graphics application; (2) creating the ability to search and view the facility map data in GIS format along with the ability to search by address; (3) viewing pre-construction work order designs in a new GIS format; and (4) creating as-built construction drawings in GIS format for assigned work orders. Four alternatives were evaluated and three were determined non-viable for the project: (1) Continue maintaining the current ArcPad application. This option was not selected because the Company is no longer able to make changes to the ArcPad application to mitigate issues if the application has critical defects. A total failure of the application could revert field crews back to paper-based facility maps, risking safety using static, outdated data; or require the creation of as-built construction drawings on paper documents. (2) Use the Adobe or Snagit applications for creating as-built construction drawings. This option was not selected because field users would have to use one solution for viewing facility maps and use rudimentary drawing tools like Adobe or Snagit for creating as-built construction drawings. This option was also not selected because it introduces additional costs due to the complexity and customization needed to integrate the applications. (3) Build a custom Mapping and Graphics solution. This option was not selected as existing industry solutions are available at a much lower cost with much less risk. (4) Implementing the new field mapping and graphics software was selected as this option will consolidate field graphics functionality into an efficient process and provide a current, supported solution.	2020-11-30	2025-10-27	-0.72	3,964,797	129,815		226,786	-	-	69,400	133,169	-	24,217	5,806	-	-	-	5,806	-	-
28	2024	Field Network Director	Software(Intangible)	Electric & Gas Shared	Prior period adjustment							8,190	-	(27,026)	-	27,026	-	8,190	-	-	-	-	-	-	-
29	2024	OSIsoft PI Historian Upgrade 2020	Software(Intangible)	Electric & Gas Shared	Prior period adjustment							393	393	-	-	-	-	-	-	-	-	-	-	-	-
30	2024	Product Family Enhancements-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in Electric and Gas operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	1,538,445	394,820		466,918	-	801	70,930	373,570	-	21,617	146,083	-	-	10,971	135,112	-	-
31	2024	Product Family Enhancements-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in Electric and Gas Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	78,377		-	-	-	-	-	-	-	28,999	-	-	3,883	25,117	-	-
32	2024	Spatial Asset Management	Software(Intangible)	Electric & Gas Shared	This initiative will implement SAP's Spatial Asset Management module. It will allow users to view assets, notifications, and orders geospatially using a map. The module will allow us to create and maintain asset maintenance plans for each segment of our gas and electric distribution networks (linear assets). We will create linear assets as technical objects (such as functional locations and equipment) and store linear data. We will enable creation of maintenance plans for these technical objects which result in notifications, maintenance orders, and measurement documents. We will enable monitoring the condition of our linear assets, identify where there is damage or a defect (using the start point and end point and offset), and manage all types of maintenance tasks (planned, unplanned, and preventative) Currently Consumer Energy lacks spatial visualization and spatial awareness of work and assets impacting requirements for first time quality and impacting the ability to plan, bundle and execute nearby work. The lack of a linear asset management capability affects the full work management value stream resulting in overproduction of asset maintenance activity such as assessments, surveys, and inspections. This project creates value for the company by 1) providing capability in SAP to view assets, notifications, and work orders on a map, 2) providing location awareness in SAP for assets and work, 3) establishing linear asset management capability in SAP for gas and electric delivery networks, 4) enabling end-to-end map-based workflows. The scope of this project encompasses implementation in SAP of the Spatial Asset Management module. Alternatives considered include: 1) A Cloud-based individualized asset integration between GIS and SAP. This alternative was not selected as it proves ineffective in addressing needs of the end-to-end work management value stream while increasing the technical footprint of customization. There are also performance concerns with cloud to on-prem integrations. 2) Work group centric approaches to viewing work on a map. This alternative was not selected as it does not support standard operation thru the entire work management value stream. 3) Do nothing. This alternative was not selected as this would enable increasing costs and inefficiencies in gas and electric work management. 4) The alternative to implement the Spatial Asset Management module in SAP was chosen as it expands use of a core technology investment, supports current investment in our work management value stream, and is compatible with our GIS technology.	2024-05-10	2026-06-26	-1.00	3,189,155	161,683		224,283	70,737	-	13,942	102,947	-	36,657	6,855	-	-	2,408	4,447	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE
33	2024	Work Management Scheduling Analytics and Reporting	Software(Intangible)	Electric & Gas Shared	The project will implement a solution to optimize the key components of the Distribution Planning and Scheduling functions including forecasting, work order intake, resource identification, work schedule creation, work execution preparation and associated work order analytics. The' Distribution Planning, Scheduling and Administrative Support & Financial Services (Work Plan Strategy) teams are utilizing manually intensive work methods,' systems and forecasting models. These inefficiencies impact the creation of' work plans, lack predictive capacity planning, and reduce productivity of' operational partners. The project will add value by providing: (1) streamlined' processes tied to workload review and preparatory' analysis,' leading to increased focus on workload priority, execution of work' and a reduction of human struggle;' (2)increased accuracy in crew work schedules, leading to improved customer satisfaction and on-time delivery of customer requested work, system integrity work, and gas compliance requirements; (3) reduced manual' scheduling steps, reporting and analysis of data associated with work management processes and' systems; thereby' minimizing the risk of human error hours spent' developing and updating crew' route sheets;' and (4) improved forecasting accuracy,' that results in greater transparency into the weekly schedule and associated' work' plan. The project scope includes:' (1) implement a solution to facilitate the review of work orders' from various engineering organizations, allowing for streamlined check-in of work orders; (2) implement a' scheduling tool that utilizes predictive modelling and advanced analytics and streamlines daily schedule modifications;' (3) enhance' integration with the Arcos application to bring in employee capacity and availability information;' (4)' integrate with SAP to retrieve work order data and manage record keeping requirements;' (5) enhance' integration with Field Service Suite (FSS) for quicker access to MISS DIG information and work order' assignments;' and (6) implement associated analytics and reporting. Three primary alternatives were considered for this project: (1) Automating manual data movement across excel and current systems through Robotic Process Automation. This option was not chosen because it will not meet base requirements and will not provide desired insights into whether the schedule supports operating priorities and metrics, financial scenarios, first time completion of work, and daily goals; (2) Integrating an off-the-shelf planning and scheduling system. This option is not preferred due to associated up-front and long-term costs; and (3) Implementing a hybrid of an off-the-shelf planning component with custom built scheduling functions. This is the preferred option to provide a more cost-effective and targeted fit for the organization.	2022-01-26	2025-08-25	-1.00	1,932,038	197,370	
34	**SUBTOTAL**	**2024 Electric & Gas Shared**									
35	2024	Application Currency-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	33,778	
36	2024	Corrosion Control Modernization	Software(Intangible)	Gas	This project will modernize the Corrosion Control measurement, documentation, and analysis process for Gas Transmission and Gas Distribution Corrosion Control. It will also automate the Corrosion Control process and eliminate manual data entry and paper from the process. The current gas pipeline corrosion control field data collection and monitoring process is antiquated and manually intensive. The existing process requires that technicians take readings from the corrosion control devices using a handheld DVM (Digital Voltmeter) and then record those readings on paper, followed by manual data entry into Inspection Manager. The results can then be further stored, processed and analyzed. This process is labor intensive and error prone, which could result in compliance issues, causes rework, and drives up labor costs. This project creates value for the Company and its customers by: (1) modernizing the entire gas pipeline corrosion control field data collection and monitoring process; (2) eliminating the manual paper process of taking and recording measurements on corrosion control devices attached to gas pipelines; (3) automating the entire process from measurement through documentation and analysis; (4) providing an integrated solution that takes the measurements and records the results in one step; (5) implementing geographical location (latitude, longitude) for each test point read; and (6) improving accuracy and timeliness of the data collected by passing the data directly to the system of record. The project scope includes: (1) purchasing hardware and software with related licenses needed to establish a modern electronic corrosion measurement and documentation system; (2) interfacing with the existing GIS system for test-point location data; (3) a data transfer to the new system from the existing system of record, Inspection Manager; and (4) training users in the use of the new system and deploy to all corrosion control technicians. Alternatives considered include: (1) continue with the current manual process. This option was not selected as it does not solve the issues associated with the paper-based manual process; (2) develop a Consumers Energy custom solution that would interface with a standard DVM and automate the current paper process using custom in house solution. This option was not selected as it would be far too costly and time consuming to develop in-house and a standard solution is available in the marketplace; and (3) purchase and implement a COTS (Common Off The Shelf) hardware and software solution to provide an electronic means of data measurement and collection then interface that system with the existing system of record. This option was selected as it meets the goal of automating the data collection and documentation process and eliminates the existing paper process.	2022-08-23	2024-05-27	0.00	1,309,838	34,613	
37	2024	Gas Compression Digital Work Management	Software(Intangible)	Gas	The project provides work management software and digital forms for Gas Compression facilities. The current work management process for Gas Compression locations is cumbersome and largely paper based outside of desktop kiosks. This manual system leads to process waste, re-work, and human error. This project provides value to the Company through: (1) increased productivity by reducing the need to return to the desktop kiosk for updates; (2) improved quality through increased accuracy of updates completed at the time and place of the work; and (3) improved safety through real-time information used at work sites rather than printed procedures. The scope of the project includes: (1) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (2) configuring changes in SAP and the mobile work management software to replace the paper-dependent work management process with the ability to access and update maintenance, operations, and safety information at Gas Compression locations. Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution is not preferred since it is a new solution and requires additional project and support cost. (2) Continue the manual paper-based process. Continuing the manual paper-base process was not chosen because of process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A custom eSOMS mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the eSOMS product was not intended to support. (4) Utilize the existing Service Suite solution currently deployed for Gas and Electric Distribution. The Service Suite solution is the preferred option because it is a proven solution at the Company and provides the mobility and digital benefits at a lower cost.	2023-04-19	2024-12-31	0.85	343,942	35,467	
38	2024	Gas Distribution ProjectWise	Software(Intangible)	Gas	The Gas Storage Probabilistic Risk Model project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas storage wells. The current Gas Storage model is a relative risk model that equates risk to dollars from input information using qualitative data and ordinal scales to produce a risk ranking. In simple terms, the relative risk model is not capable of creating a statistically significant result. The risk assessment used in the current model provides a ranking for likelihood, consequence, and risk that is relevant only in comparison to other rankings. While the outputs provide a sense of relative risk when comparing one well to another, the ranks do not provide anything qualitative that relates to the failure of wells. Also, the current transmission model does not meet the requirements of the MPSC, as indicated in a letter of noncompliance (dated January 15, 2019), and rule-making for storage systems has historically followed transmission rule-making. Lastly, the current model introduces risk in PHMSA findings as a non-probabilistic model. Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed well improvement projects and improved targeted plug and abandonment projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events, and (2) configure multiple data sources, to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed financial and strategic decisions based on improved quality inputs and mitigate the risk of PHMSA findings. The probabilistic model will rank the wells in risk-associated dollars making it easier to interpret risk results for the purpose of making business decisions. Furthermore, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has identified the probabilistic risk model as a potential best practice for storage operators over other risk models (PHMSA Pipeline Risk Modeling white paper, dated May 9, 2018), so the project adds value by aligning with industry best practices. The project scope encompasses the implementation of a probabilistic risk model for gas storage wells. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered include: (1) continue the use of the relative risk model, but invest in substantial effort to continually manually managing data inputs and quality checks (2) implement a custom, Excel-based probabilistic risk model through a consulting effort; (3) implement an on-premise probabilistic risk model, and (4) implement a cloud-based model. The first alternative was not selected because although the manual effort is possible, it is becoming increasingly difficult to complete as the model utilizes more data sources that need to be annually updated and validated. The second alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". The on-premise solutions analyzed are not mature and have not been widely tested with transmission operators, so alternative three was not selected. The fourth alternative of implementing the cloud-based probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven technology, and an ongoing vendor support and upgraded model.	2022-05-17	2025-10-27	-1.00	1,386,751	267,874	

Line No.	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
33	31,370	-	-	11,452	15,894	-	4,024	17,302	10,165	-	-	7,137	-	-
34	**1,504,260**	**231,346**	**65,279**	**275,272**	**786,415**	**-**	**145,947**	**535,076**	**57,022**	**1,135**	**155,746**	**319,960**	**-**	**1,213**
35	-	-	-	-	-	-	-	32,217	-	-	19,454	12,763	-	-
36	2,999	196,708	(47,303)	-	(148,400)	-	1,993	-	-	-	-	-	-	-
37	343,120	-	-	85,530	229,858	-	27,731	31,993	-	-	11,255	20,738	-	-
38	490,889	-	-	152,923	242,073	-	95,892	19,672	-	-	3,651	16,021	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
39	2024	Gas Leak Asset and Work Management	Software(Intangible)	Gas	The project will implement functionality to automate gas leak compliance tasks and track all gas leak activity in the Gas Geographic Information System (GIS), creating a single system of record for gas leak data, and providing a spatial display of leak data to improve leak management visibility. The gas leak process utilizes two systems to complete work and monitor gas leak compliance: SAP and Inspection Manager. Gas leak information is manually transferred between SAP and Inspection Manager and vice versa by compliance technicians. An internal audit identified 7818 leak orders, resulting in a 61% defect rate, with inconsistent information recorded between SAP and Inspection Manager. Lack of quality controls to help ensure accurate leak information across systems may inhibit managements ability to effectively monitor gas leaks and could result in leaks not being re-classified or repaired in a timely manner. This has regulatory compliance and safety impacts such as missed compliance dates which may result in fines and increased public safety risk resulting from untimely or missed leak repairs. The project provides value to both the Company and its customers, including: (1) improving productivity and leak location accuracy; (2) enabling near-real time reporting and automated metric reporting on open leak backlog; (3) creating one system of record for all leak assets in GIS; (4) implementing quality improvements for scheduling and routing of leak crews; (5) reducing risk of future audit findings or non-compliance resulting from duplicate open leak orders; (6) optimizing resource allocation for gas service posting team by eliminating manual posting of leak repairs in GIS; (7) optimizing resource allocation for the gas compliance team by eliminating the posting of leak repairs in Inspection Manager; and (8) streamlining the leak survey workflow to improve the human struggle caused by use of paper maps and manual processes for leak order tracking. The scope of this project includes: (1) design and implementation of an integration between the asset system and the work management system to create, update, and manage leak maintenance, repair, and emergent orders and inspection schedules through the Enterprise Service Bus (ESB) or similar; Five alternatives were considered for the project: (1) Implement a Quality Assurance/Quality Control (QAQC) process to ensure data is consistent between both SAP and Inspection Manager. This alternative was not selected because it requires an increase in labor costs for manual reporting and data checks. In addition, as demonstrated by the audit, manual processes, even manual QAQC processes, are subject to human error, and each error creates safety and noncompliance risk. (2) Implement a Robotic Process Automation (RPA) to sync data. This solution was explored but is not viable because the business processes are too complex. (3) Implement a new GIS-based compliance solution that can be integrated with SAP. This alternative is too costly, given recent investment in the current Inspection Manager solution. (4) Defer project implementation. The alternative selected is to implement this project now, rather than later, as a result of recent gas leak red audit findings. (5) Implement functionality to automate gas leak compliance tasks and track all gas leak activity in the GIS. This alternative was selected because it leverages existing solutions in a new way, optimizing resources and technology investment. The use of Cloud technology was not considered due to the enhanced functionality being added to systems and applications that are already on-premise.	2023-11-01	2024-12-18	-1.00	-	3,566		-	-	-	-	-	-	-	769	-	-	767	2	-	-
40	2024	Gas SCADA Software Solution	Software(Intangible)	Gas	The Gas Supervisory Control And Data Acquisition (SCADA) software solution project will replace the current Gas SCADA Software with a more standardized software package enabling the Company to more efficiently meet Federal and MPSC requirements. The current Gas SCADA software solution was originally implemented in 2000 and was based on the gas system requirements at that time. While the solution has been maintained since its implementation, the Company's gas system has outgrown the current capabilities. As the solution ages, there is increased effort required to address obsolete application and database software architecture, and enhancements to the system are limited. To address the capability gaps, custom interim fixes and integrations have been developed where each requires maintenance and support. This environment adds complexity and cost to solution upgrades and troubleshooting issues. The current Gas SCADA solution will limit the ability to invest in digital solutions for increased system health monitoring and preventative maintenance capabilities due to the complexity to integrate these future capabilities with it. The project will add value by: (1) reducing risk of non-compliance by improving the ability to document and follow State and Federal requirements, improving customer safety; (2) improving efficiency and reliability when performing routine software upgrades, because standard out-of-the-box software has less risk of breaking during upgrades, as opposed to more custom-coded software; (3) reducing maintenance costs due to fewer individual software programs and less custom code; (4) improving Gas Control management capabilities that support the Federal and MPSC requirements for gas pipeline and Gas Distribution companies; (5) improving reliability by using proven gas industry standardized software with configuration features, rather than a fully customized system that has the possibility of being impacted by the next version update; (6) purchasing standard, out-of-the-box software that meets a high percentage of requirements and avoids multiple custom applications and specially coded programs to achieve results; (7) improving Natural Gas Delivery Plan efficiencies; and (8) providing a basis for capturing data required for use in computer-based preventative maintenance programs and more predictive technologies. In addition, implementing industry-specific software helps the collective gas industry users to encourage the vendor development of future version enhancements, which adds more value to gas industry users. The comprehensive Gas SCADA system is used to monitor and control the operating conditions of the transmission and distribution gas systems. The Gas SCADA system includes remote terminal units (RTUs), field devices (i.e. valves, meters, odorizers), and computers running SCADA software. This scope covers the Gas SCADA software solution only. The project scope includes the following: (1) significant planning, including consulting assistance, to define the implementation strategy for the effort, given the magnitude of the technology effort; (2) selection and implementation of a new Gas SCADA software solution; (3) planning of a phased rollout of new hardware and software; and (4) retirement and decommissioning of the legacy gas SCADA solution and equipment once the new system is fully tested and operational. Alternatives considered include: (1) continue to maintain the current solution, at the risk of increasing reliability issues that result in controlling and monitoring the Company's gas system; (2) invest in enhancing the existing Gas SCADA software solution which would introduce additional custom development and more specialized functions that may not be supported in future vendor releases; and (3) replace the solution with a gas SCADA software solution that meets requirements to support the Natural Gas Delivery Plan. Alternative three has been selected to ensure sustainability for this critical solution. The current legacy system is operating at well beyond its original design specification, so the potential points of failure are not fully known or understood. If the SCADA project is not completed, the legacy system could become unstable and impact Gas Controls ability to operate and monitor real-time system conditions, maintain safe operations, and compliance with regulatory requirements. It could also impact the ability to commission new facilities which require remote monitoring or control or cause the need for 24/7 manual field monitoring of certain facilities.	2022-08-12	2026-04-26	-1.00	13,294,693	2,321,020		3,404,142	433,785	851,275	584,162	1,299,385	-	235,536	231,994	88,847	-	1,123	137,913	-	4,111
41	2024	Gas Storage Probabilistic Risk Model	Software(Intangible)	Gas	The Gas Storage Probabilistic Risk Model project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas storage wells. The current Gas Storage model is a relative risk model that equates risk to dollars from input information using qualitative data and ordinal scales to produce a risk ranking. In simple terms, the relative risk model is not capable of creating a statistically significant result. The risk assessment used in the current model provides a ranking for likelihood, consequence, and risk that is relevant only in comparison to other rankings. While the outputs provide a sense of relative risk when comparing one well to another, the ranks do not provide anything qualitative that relates to the failure of wells. Also, the current transmission model does not meet the requirements of the MPSC, as indicated in a letter of noncompliance (dated January 15, 2019), and rule-making for storage systems has historically followed transmission rule-making. Lastly, the current model introduces risk in PHMSA findings as a non-probabilistic model. Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed well improvement projects and improved targeted plug and abandonment projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events, and (2) configure multiple data sources, to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed financial and strategic decisions based on improved quality inputs and mitigate the risk of PHMSA findings. The probabilistic model will rank the wells in risk-associated dollars making it easier to interpret risk results for the purpose of making business decisions. Furthermore, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has identified the probabilistic risk model as a potential best practice for storage operators over other risk models (PHMSA Pipeline Risk Modeling white paper, dated May 9, 2018), so the project adds value by aligning with industry best practices. The project scope encompasses the implementation of a probabilistic risk model for gas storage wells. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered include: (1) continue the use of the relative risk model, but invest in substantial effort to continually manually managing data inputs and quality checks (2) implement a custom, Excel-based probabilistic risk model through a consulting effort; (3) implement an on-premise probabilistic risk model, and (4) implement a cloud-based model. The first alternative was not selected because although the manual effort is possible, it is becoming increasingly difficult to complete as the model utilizes more data sources that need to be annually updated and validated. The second alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". The on-premise solutions analyzed are not mature and have not been widely tested with transmission operators, so alternative three was not selected. The fourth alternative of implementing the cloud-based probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven technology, and an ongoing vendor support and upgraded model.	2023-04-10	2026-12-28	-1.00	1,525,310	116,984		617,408	-	-	1,976	554,494	-	60,939	408	-	-	15	235	-	158
42	2024	Gas T&D Historian	Software(Intangible)	Gas	The Gas Transmission and Distribution (T&D) Historian project will replace the current historian for Gas T&D, eDNA (a traditional Supervisory Control and Data Acquisition (SCADA) historian product), and migrate to the standard OSIsoft PI enterprise historian system. The PI system is a suite of software products that are used to collect, store, view, analyze, and share operational data with system users and subject matter experts. The historian for Gas Transmission and Distribution resides on a decades old platform and is not the Company's historian standard. Data access is cumbersome, requires multiple tools to access it, and does not provide for the storing, analysis or visualization of operational data in a timely manner with appropriate change management control. With the implementation of smart meters, the Company standardized on the more robust OSIsoft PI historian which is used for: (1) Renewable Generation; (2) Electric Transmission & Distribution; and, (3) Smart Energy. The Gas T&D historian has yet to be migrated to OSISoft PI, and the eDNA gas data has limited accessibility and usability in its current state and is no longer supported by the vendor. In addition, maintaining the older platform along with the new system requires duplicate resources and skills. This project will create a more accessible and centralized data source with better controls that can be leveraged as the system of record. The project will add value for both Gas Engineering and Gas Operations organizations within the Company by: (1) informing decision-making based on real-time data; (2) improving real-time situational awareness of Operations personnel for information that does not need to be monitored by Gas Control; (3) improving the ability to respond to abnormal situations that do not required immediate intervention through that direct communication to Operations personnel; (4) providing information for the development of proactive analytics to reduce potential catastrophic events; (5) streamlining data access through visualization and analytics; and (6) reducing the waste of using multiple interfaces to interpret data. From an IT perspective, consolidating to one standard historian platform will result in savings in hardware, software, maintenance, resources and training. This scope of this project includes: (1) replacing the eDNA Gas T&D historian, a traditional SCADA historian, and migrating to the enterprise historian, OSIsoft PI; (2) developing analytics, visualization and reporting capabilities to support tracking of metrics and making operational decisions; (3) replacing the decades-old Microsoft Access-based custom Daily Gas Reports solution; and (4) retiring the legacy Gas T&D eDNA system (hardware and software). An alternative considered for the project was to upgrade eDNA Gas Historian to the latest version. This option was not selected because it requires a significant investment, and does not meet analytics, reporting, usability and accessibility needs as well as the software owner has announced the sunset, for this software. Furthermore, the Company standard for historians is OSIsoft PI and maintaining two platforms results in redundant efforts in training, support personnel and technology. The option to replace eDNA with the Company standard OSIsoft PI historian was selected to eliminate duplicate training, support personnel, and technology, and to leverage the more robust data analytic capabilities in the OSIsoft PI tool set. Currently the plan is to implement the Gas T&D Historian with the Gas SCADA Software Solution to eliminate the need to have duplicative historians while the Gas SCADA Software Solution is being implemented. If this project is not completed, an interruption of our operational data reporting capabilities could occur and could result in a non-compliance and could potentially interrupt certain volumetric accounting and billing functions.	2024-02-09	2026-04-26	-0.86	867,356	139,008		455,607	446,250	-	2,467	717	-	6,173	99,192	74,375	-	24,664	153	-	-
43	2024	Product Family Enhancements-Gas-Capital	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	334,037	106,903		334,037	(14,247)	-	71,835	233,457	-	42,993	106,903	-	-	33,696	72,092	-	1,116

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)
	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSIS	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
44	2024	Product Family Enhancements-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company. The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding is required to perform the activities necessary to enhance software applications. The Company has established a governance process for prioritizing and funding IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	388,621		-	-	-	-	-	-	-	388,621	771	-	103,660	284,190	-	-
45	**SUBTOTAL**	**2024 Gas**										**5,648,201**	**1,062,495**	**803,972**	**698,892**	**2,411,594**	-	**471,257**	**911,769**	**163,993**	-	**196,284**	**544,107**	-	**5,385**
46	2024	800 MHZ Modernization	Network	IT/Digital Foundation	Prior period adjustment							[illegible]	-	-	-	[illegible]	-	-	187	-	-	-	187	-	-
47	2024	ARP-Local Area Network	Network	IT/Digital Foundation	This project will upgrade the Company's entire LAN and a significant portion of the Wireless Local Area Network (WLAN). At some Company locations, LAN equipment has been in service since 2011.[1] If the LAN/WLAN hardware and software is not routinely refreshed, the Company will lose the manufacturer support needed for equipment bug fixes, security vulnerability patches, and enhancements.[2] In addition, aging equipment cannot accommodate the increasing demand for wireless devices necessary to perform day-to-day operations that[3] rely on wireless-enabled devices, such as rugged field devices, cell phones, barcode scanners, tablets, and other mobile devices.[4] As equipment ages, it is at risk of higher failure rates, which increases the risk of unplanned outages.[5] In the event of unplanned outages, business areas would not be able to access services on the corporate network including email, SAP, Internet, and phones. The project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor supported, thereby ensuring support for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; (6) increasing user productivity through a higher performing wireless network, which increases the productivity and efficiency of office and field employees' serving customers; and (7) improving support for wireless Internet Protocol (IP) phones, Internet of Things (IoT) devices, and Voice over IP (VoIP) phones. The project scope consists of: (1) scheduled replacement of network equipment and software and support for the new equipment; (2) implementing the new equipment according to industry best practices; (4) replacing wireless network with upgraded infrastructure and verifying wireless coverage is as expected; and (5) collecting wireless survey data for all Company locations in order to design improved wireless network coverage. The alternative considered was to continue operating on the existing platform past the vendors end-of-support date. The vendor support period ended in May of 2021, and paying for extended support is not an option offered by the vendor. The risk inherent in not refreshing the platform is a lack of vendor support resulting in an absence of software bug fixes, security updates, and break fixes. The Company chose to replace the existing equipment with the latest hardware and software available, following a five year refresh cycle.	2024-01-01	2024-12-31	-1.00	3,048,329	58,589		1,413,192	213,555	804,944	213,621	123,468	-	57,604	21,678	-	12,779	5,334	3,564	-	-
48	2024	ARP-Radio	Network	IT/Digital Foundation	This project will refresh hardware to include; 800Mhz Radios, cellular modems, plant radios and systems, cellular amplification devices and vehicle consoles in service trucks. This equipment supports mission critical voice and data communications between field service personnel and dispatch personnel. 800MHz radios and Plant radio systems are upgraded on a scheduled 7-year lifecycle basis. Cellular modems are refreshed on a 5-year life cycle basis. Amplification systems are refreshed on a 10-year life cycle. Vehicle consoles are typically refresh with the vehicle but are salvaged for reuse in new vehicles when possible. 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing. The refresh of these subscriber units in a proactive manner is critical to providing best-in-class service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety. This project creates value for customers and the Company by (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between field and dispatch personnel; (4) ensuring that the Company's radio systems are reliable, and that the Company's communications equipment is intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure. The project scope consists of: (1) scheduled replacement of radios and modems and consoles; and (2) installing additional radios modems and console assets to satisfy growth requirements. The alternatives considered included: (1) Replace the existing units with new units from other radio and modem manufacturers; (2) purchase new radio subscriber units from existing manufacturers. Option 1 was not selected because it requires replacement of existing management systems which are vendor specific and would need to also be replaced if the Company were to move to different equipment. This would result in a significantly higher investment. Option 2 was selected as this has the least disruption to radio and mobile data system users and deliver the highest value and lowest cost solution to meet the objectives of this Business Case.	2024-01-01	2024-12-31	-1.00	1,164,618	94,010		540,266	-	468,848	(98,274)	161,485	-	8,208	34,784	-	20,428	2,262	12,085	-	9
49	2024	ARP-Collaboration	New Computers / Hardware	IT/Digital Foundation	This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment. When Collaboration Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by: (1) ensuring that the Company's audio, visual, telephony, and other communications systems are stable and reliable; and (2) retiring the legacy enterprise Avaya telephone systems that have reached end of mainstream manufacturer support. The project scope consists of: (1) annually replacing aging collaboration assets; and (2) installing new collaboration assets to account for evolving business requirements. The following alternatives were considered: (1) refresh visual assts and a portion of the audio assets; (2) refresh a portion of the audio assets only; and (3) refresh visual assets only. These alternatives were not chosen due to the risk inherent with a partial replacement of assets, which includes: (1) a reduced supply of equivalent replacement Avaya parts that are no longer being produced; and (2) an erosion of the knowledge technicians possess on discontinued systems.	2024-01-01	2024-12-31	-1.00	1,115,559	127,002		338,572	15,153	202,716	7,723	109,922	-	3,058	46,991	-	7,529	247	39,215	-	-
50	2024	ARP-Field Device Asset Management (FDAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility. When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be very difficult to keep current with Security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing field workers to complete their job tasks. The project scope consists of replacing field device assets according to the four-year refresh cycle. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for field devices; and (2) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the assets that need refreshing in future years based on the number of devices that were not replaced during the four year refresh cycle; and (4) it could cause an inability to apply security patches. Waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle to alleviate these concerns.	2024-01-01	2024-12-31	-1.00	3,952,991	2,752		1,199,733	-	1,166,041	13,467	16,617	-	3,608	1,018	-	1,018	-	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
51	2024	ARP-Operational Technology Support Gas	New Computers / Hardware	IT/Digital Foundation	The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule. When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Companyâ™s IT infrastructure and the core enterprise software that are utilized to support the operation of the Companyâ™s critical gas infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.	2024-01-01	2024-12-31	-1.00	1,125,545	31,553		1,125,545	47,957	984,804	52,293	23,612	-	16,879	31,553	19,800	-	-	11,753	-	-
52	2024	ARP-Printer Asset Management (PAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one. When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates. This project creates value for the Company by: (1) improving the dependability of these printer devices for employees; The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years is assessed monthly to ensure it is not run-to-failure, including running the asset to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.	2024-01-01	2024-12-31	-1.00	1,081,120	-		328,120	-	301,576	19,754	2,362	-	4,429	-	-	-	-	-	-	-
53	2024	ARP-Server and Storage	New Computers / Hardware	IT/Digital Foundation	This project will replace or augment server and storage infrastructure for the Company. When Server and Storage Hardware Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be more challenging to keep current with Security updates. This project creates value for the Company through: (1) improved stability and availability of business-critical applications by proactively replacing server and storage hardware assets prior to the likelihood of increasing hardware failures; and (2) ensuring that adequate resources are available to support application demands after five to seven years of actual use. The scope of this program encompasses: (1) replacement of server and storage hardware assets; and (2) installation of additional new computers and storage capacity to account for evolving business requirements. The alternatives considered were to purchase extended maintenance, move some of these assets to the cloud with the Digital -Hybrid Cloud and Data Center Migration project, or to replace the assets on the current cycle. The option to purchase extended maintenance was not selected because full support would not be offered after seven years, and maintenance costs would increase. The preferred option is to move some of these assets to the cloud in the Digital Hybrid Cloud and Data Center Migration project while refreshing the remainder using the five- to seven-year cycle as it is the most cost-effective option.	2024-01-01	2024-12-31	-1.00	700,693	92,788		212,660	1,248	195,140	6,660	7,936	-	1,676	34,331	-	2,909	15,570	15,722	-	130
54	2024	ARP-Workstation Asset Management (WAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates. When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks. The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four year refresh cycle ; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.	2024-01-01	2024-12-31	-1.00	5,992,992	28,216		1,818,873	-	1,738,502	67,365	2,621	-	10,385	10,440	-	311	128	2,851	-	7,150
55	2024	Data Center 2.0	New Computers / Hardware	IT/Digital Foundation	Prior period adjustment							2	-	-	-	-	-	2	-	-	-	-	-	-	-
56	2024	Digital-Hybrid Cloud and Data Center Migration	New Computers / Hardware	IT/Digital Foundation	This project will optimize data center assets and asset replacement project purchases by migrating or retiring applications out of existing Company and co-location data centers into cloud services, reducing operational costs for running IT services and leveraging increased cloud capabilities to improve the efficiency, quality, and speed-to-market of customer-facing and internal IT services. The technology currently deployed in the Company's data centers meets many customers' needs today. However, the pace of digital transformation is increasing rapidly, and requirements for applications are evolving faster than the technology in the Company's data centers can respond in a cost-effective manner. These data center constraints lead to longer implementation times, missing capabilities, or reduced functionality in the applications that the Company can deploy. This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective combination of data centers and public cloud services. Specifically, by migrating applications to cloud services, the project will: (1) reduce capacity, hardware maintenance, and security device costs at the co-location data center; (2) reduce hardware maintenance and security device costs at the Parnall data center; (3) enable the ability to scale infrastructure quickly up or down without costly up-front hardware purchases; (4) reduce application risk through cost-effective, scalable infrastructure redundancy and availability; (5) reduce ongoing server and storage asset replacement costs; (6) reduce ongoing networking equipment replacement costs; (7) reduce managed service operational support costs; and (8) enable the use of a vast array of cloud services to support Company applications. The project scope includes: (1) promoting the robust Grand Rapids Main co-location data center to become the primary data center for on-premises IT services; (2) demoting the Company's Parnall data center to the disaster recovery data center for on-premises IT services; (3) analyzing applications for migration to cloud or retirement; (4) migrating applications from on-premises to cloud; (5) transforming applications to use cost-effective cloud services; (6) altering network architecture and deploying base infrastructure to allow each location (on-premises or in cloud) to function independently; (7) deploying cloud and on-premises cost management tooling and processes; (8) simplifying and optimizing backup and disaster recovery resources and processes using cloud services; (9) implementing additional automation for application deployment and management; (10) changing the operations model for support of cloud-based applications; (11) educating and increasing the skills of IT and other employees in leveraging public cloud services; and (12) transforming IT to become the broker of cloud services for the Company. Alternatives considered included: (1) migrating to public cloud services faster. This alternative was not chosen because the Company's ability to absorb new technologies coupled with the investments the Company has already made in data center equipment would prevent a faster move from being efficient and effective, introducing additional financial risk; (2) migrating to public cloud services slower. This alternative was not selected because delaying public cloud services and capabilities coupled with requiring an extension of the life of existing data center equipment creates increased financial and operational risk; and (3) contracting with an outside vendor to provide cloud services to run applications for the Company. This alternative was not selected because industry information shows the option as not yet cost effective or not providing a maturity level that the Company would be able to easily consume with limited in-house experience and expertise in public cloud. The alternative to migrate to a hybrid cloud and data center model was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2023-04-02	2026-12-31	0.18	9,482,277	2,253,546		735,885	32,937	1,738	240,277	393,685	-	67,248	289,623	69,456	-	78,543	141,624	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE
57	2024	SAP HANA Database Migration	New Computers / Hardware	IT/Digital Foundation	In preparation for SAP's planned end of support for its Business Suite product in 2027, the Company will migrate its existing SAP databases from Oracle to SAP HANA in advance of the required move to S/4 HANA. The Company's SAP applications currently utilize Oracle's relational database management system as their underlying database storage technology. SAP has informed its customers that standard support for its legacy Business Suite (aka ECC) product will end in 2027, along with support for all non-SAP database platforms. SAP has also informed customers that the future direction for their enterprise solution is S4/HANA, a solution built explicitly for their HANA database platform. To prepare for these upcoming events, the company will migrate all of its SAP databases off of Oracle and onto SAP HANA. This project lays the groundwork for the company's eventual shift to SAP's HANA-based solutions by: (1) proactively migrating SAP databases to a database technology that is fully supported by SAP beyond 2027; and (2) mitigating the risk of a complete loss of support for the current Oracle database technology in 2027. Project scope includes: (1) procurement of HANA software licensing to cover all migrated SAP applications; (2) data migration for all SAP applications from the Oracle database to SAP HANA; and (3) implementation of new application support policies, procedures and tools required to manage the newly migrated SAP HANA applications. Given SAP's announcement regarding the end of support for its ECC product in 2027, all customers running SAP on database software other than HANA will also lose support for their associated database software in 2027. SAP is offering no other options for databases other than HANA beyond 2027. While there is no alternative to the HANA database for SAP going forward, the Company has considered multiple options: (1) Perform a direct migration from SAP Business Suite on Oracle to S4/HANA. A direct migration to S4/HANA brings greater operational risk to the Company as both the underlying database technology and the SAP application's functionality would change simultaneously, so this alternative was not selected. (2) Remain on the current SAP Business Suite product but competitively bid support services to a third-party provider instead of SAP. This alternative was not selected because moving to a third-party support model forces the Company to remain on outdated SAP software and eliminates any possibility of benefitting from new business functionality provided by S4/HANA. It will also require the Company to accept significant risk due to the fact that SAP security patches, application patches and upgrades will not be available upon termination of the SAP maintenance agreement. (3) Migrate to SAP's Software as a Service (SaaS) implementation of S4/HANA. This alternative was not selected because an S4/HANA SaaS migration is a much more disruptive option as the Company's business processes must be adjusted to accommodate functionality differences between ECC and S4/HANA. The risk of negative business impact is significantly greater than simply changing the underlying database technology. The selected alternative to migrate the SAP databases to HANA prior to implementing S4/HANA gives the Company several years to solidify its HANA database infrastructure before introducing the substantial business process changes required with S4/HANA.	2023-07-27	2026-01-02	-0.83	8,331,478	1,411,018	
58	2024	2010 SharePoint Platform Replacement	Software(Intangible)	IT/Digital Foundation	Prior period adjustment						
59	2024	Application Currency-IT/Digital Foundation-Application Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Application Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Application Platforms area are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	245,902	
60	2024	Application Currency-IT/Digital Foundation-Infrastructure Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Infrastructure Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Infrastructure Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Infrastructure Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	24,459	
61	2024	AxWay Secure Transport 2024 Upgrade	Software(Intangible)	IT/Digital Foundation	Axway SecureTransport is the Companyâ„¢s multi-protocol Managed File Transfer (MFTÂ) gateway for securing, managing, and tracking data file flow for our business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability.As Axway Secure Transport is the public-facing managed file transfer gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions.The value this project brings Consumers Energy and customers includes: (1) Addressing known problems and limitations of the current software and hardware platforms. (2) Ensuring continued secure, scalable, and critical data transmission services running through Axway continue functioning. (3) Creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) Merging/streamlining the company data file transfer services reducing cyber-attack vectors and creates a more easily maintained and monitored security model.The scope of this project includes (1) Upgrading the application and database to the current released and supported versions. (2) Refreshing the underlying application infrastructure by upgrading to the latest operating system and hardware platforms. (3) Enable and test expanded Electronic Data Interchange (EDI) functionality.Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. Nor would the waste elimination benefits of using the upgraded Axway platform to start consolidating EDI for CE be realized. (2) Replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a cloud or hybrid cloud solution. In addition to significant platform, application, implementation and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) Upgrading the platform. This provides the Company the most cost-effective alternative, balancing costs, known risks, and even growing business capacity and productivity.	2024-02-27	2025-08-25	-1.00	-	111,661	
62	2024	Cloud Virtual Desktop	Software(Intangible)	IT/Digital Foundation	Prior period adjustment						
63	2024	Digital-Cloud Data and Analytics Platform	Software(Intangible)	IT/Digital Foundation	This project will provide Artificial Intelligence (AI) and analytics in the cloud across the business to uncover new paths to value, faster, allowing the organization to make better decisions and enable delivery outcomes for the NGDP, Electric Grid Integration, customer programs, and other business needs. The project will additionally establish data governance roles and responsibilities, processes, and implement tools to support best practices across the enterprise. Consumers Energy faces several challenges in the ongoing data modernization journey, which include: (1) legacy data platform operations; (2) long lead times for data exploration and identification of data assets; (3) lack of data ownership and quality, (4) limited data governance best practices across data ownership, access control & security; and (5) heavy dependence on IT for Business Intelligence reporting and analytics. The project will add value by providing data to support business needs by: (1) optimizing data platform operations costs with workflow-based platform infrastructure deployment using pre-built modules and templates; (2) reducing data operations build complexity and data engineering costs through automation; (3) improving data quality and governance that leads to reduced costs of data provisioning, data duplication, and improved data accuracy; (4) streamlining data access requests, management, and governance to reduce risks and support efficiency; and (5) increasing the speed to deliver new data and data capabilities, improving productivity, and improving access to data. This project is an enabler for business areas to use these capabilities to build analytic models for asset and labor optimization that is anticipated to more than offset the project costs. The project scope includes: (1) developing and modernizing the analytics platform in the cloud to allow Consumers Energy to implement new use cases leveraging simplified infrastructure configurations and automated deployment processes; (2) build and deploy data management capabilities, controls, catalog, assets, and data flow; (3) developing data ordering workflows and data access management controls; (4) prioritization and new datasets; (5) simplifying infrastructure configuration; (6) automating deployment processes; (7) enabling data governance tools and processes. Alternatives considered include: (1) Address current pain points in existing on-premise and cloud analytics platforms. This alternative was not selected because the existing platforms requires new investment in licensing and infrastructure, delivery for new capabilities cannot keep pace with demand, still requires investment to address legacy system technical obsolescence, and business areas would not realize asset and labor optimizations. (2) Continue to utilize existing on-premise and cloud analytics platforms. This alternative was not selected because it would not address the current pain points in the existing on-premise and cloud analytics platforms, limiting the Companyâ„¢s ability to have required data and analytics capabilities to improve processes and realize asset and labor optimizations. (3) Implement a new data and analytics platform in the cloud. This alternative was selected because it provides improved analytics capabilities, faster access to data that is critical to improve business process, and reduces technical obsolescence.	2023-04-17	2025-08-25	-1.00	12,190,520	1,306,857	

Line No.	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
57	862,220	93,141	-	134,093	548,632	-	86,354	310,899	-	-	55,712	255,187	-	-
58	-	-	-	-	-	-	-	34	-	-	-	-	-	34
59	-	-	-	-	-	-	-	90,984	-	-	13,540	77,444	-	-
60	-	-	-	-	-	-	-	9,050	-	-	8,956	93	-	-
61	-	-	-	-	-	-	-	28,067	25	-	15,620	12,421	-	-
62	-	-	-	-	-	-	-	626	-	-	619	7	-	-
63	2,739,543	109,148	-	336,317	2,171,586	-	122,493	393,097	(429)	-	70,091	321,694	-	1,741

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)
	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRIORITY AGE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
64	2024	Enhancements-IT-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the CompanyÂ¿s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor programs, they are important to maintaining IT agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the CompanyÂ¿s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	56,629	54		17,187	65	-	4,285	69	-	12,768	20	-	-	20	-	-	-
65	2024	Enhancements-IT-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the CompanyÂ¿s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor programs, they are important to maintaining IT agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the CompanyÂ¿s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	3,697		-	-	-	-	-	-	-	1,368	-	-	68	1,300	-	-
66	2024	Enterprise Print - Scan Suite	Software(Intangible)	IT/Digital Foundation	The projects intent is to upgrade the current Enterprise Print and Capture suite for improved data security and integration for the work from home business partner.The company currently maintains a print and capture suite that will have support ending in 2025. Only high-level security patches will be available after this date. The company maintains a fleet of servers that are scheduled to be upgraded. The current print and capture suite is not compatible with the targeted server operating systems. The lack of internal resources requires the company to continue to absorb increased costs to contract administrative personal.This project maintains cost savings achieved by eliminating wasteful print jobs and further enables a productive, and flexible workforce for business partners working remotely. This project also ensures that the latest data transmission security requirements of are met by the solution.The project scope includes: (1) upgrading the current suite to the latest version; (2) consolidating the amount of print servers in the environment; (3) training for company personal to administer the suite; (4) converting all workflows from the current system; (5) implementing remediation for security vulnerability risk; (6) decommissioning the current servers; (7) Print-scan products that were less costly. This alternative was not selected because it would require ongoing support costs for about services. This alternative was not chosen at this time due to maturity levels found with subscription services. (2) other print-scan products. This alternative was not selected as it would required new print and scanning specific to another print-scan product. (3) Print-scan products that were less costs. This alternative was not selected, due to fewer capabilities offered than the current product, which would introduction inefficiencies in the current processes. (4) upgrade current product. This alternative was chosen due to lower overall cost of not requiring new hardware, maturity of current product, and providing same level of capabilities required to support current processes.	2024-03-27	2024-12-31	-1.00	658,588	84,906		190,238	-	-	9,511	178,415	-	2,312	31,415	-	-	5,719	25,696	-	-
67	2024	Enterprise Service Bus Application 2020-2021 Upgrade	Software(Intangible)	IT/Digital Foundation	Prior period adjustment							(24)	-	-	(57)	-	-	(8)		-	-	-	-	-	-
68	2024	Enterprise Service Bus Application 2024-2025 Upgrade	Software(Intangible)	IT/Digital Foundation	This project will upgrade and migrate the Business Works developer application to the next version. Newer ESB software versions offer improved integration with RestAPI services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. In addition, the messaging and event modules within the ESB are currently outside of their standard support windows. While it is possible to continue to get extended support by paying an estimated premium of approximately $80,000 annually, this is just temporary coverage and serves only to delay the need for an upgrade. The value this project provides the Company includes: (1) cost avoidance to avoid extensive payments for extend support purposes; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies. The project scope includes implementing current version of all applications that are part of the ESB application, database version, and required database drivers. Alternatives considered included: (1) Accept the annual $80,000 extended maintenance cost. Given the critical nature of this application, it is not recommended to lose mainstream support for any of the applications involved. Any sustained ESB product deficiency would impact many areas of the Company, such as billing, gas control, and customer communications. This alternative was not selected due to the risk of not having vendor support for fixes and patches, and enables product scalability due to risk to Company operations, and the additional expense. (2) Replace the on-premise upgrade plan to implement a cloud-based solution. A cloud migration would also take longer to complete, which would put the Company at risk of falling outside of the current vendor support window for the products current version. (3) Upgrade the existing application. This option was selected because it best meets the Company needs for the near future by restoring vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.	2024-10-14	2025-12-26	-0.92	-	311,739		-	-	-	-	-	-	-	4,876	-	-	4,007	869	-	-
69	2024	HR Support Pack and Business Software Inc Upgrade 2023	Software(Intangible)	IT/Digital Foundation	The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.	2022-12-26	2023-12-22	-1.00	-	1,495,962		-	-	-	-	-	-	-	6,530	-	-	1,162	5,369	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)
	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
70	2024	HR Support Pack and Business Software Inc Upgrade 2024	Software(Intangible)	IT/Digital Foundation	The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.	2024-03-07	2025-01-31	-1.00	-	529,488		-	-	-	-	-	-	-	195,294	-	-	30,838	164,455	-	-
71	2024	IT Operations Management - Service Operations	Software(Intangible)	IT/Digital Foundation	This project will implement an application service mapping tool to effectively manage business-critical services through identification of infrastructure components and application interactions. This tool automates the mapping process to create a complete, up-to-date, and accurate record of the mapped application service in the Database. Application service mapping works hand-in-hand with asset discovery, building on discovered infrastructure data to identify all the assets that support a service, and along with their service-specific relationships.As the IT systems steadily increases in complexity and evolve faster than the IT organization can respond to system issues in an optimized and cost-effective manner, the current configuration of the system does not provide the clarity needed in order to understand how the infrastructure interacts with the applications within the IT System it supports and in order to respond to emergent IT incidents in the most rapid and costs effective manner. These constraints can lead to lengthy response and implementation times; negligible or ineffective resolutions; reduced functionality; and elongated outage times in the infrastructure and applications in the system.This project will create value for the Company by mapping critical application services through discovery of the underlying infrastructure associated with application services and its relationship to parent business applications. Specifically, by creating application service maps, this project will: (1) increase visibility and understanding between Information Technology (IT) infrastructure and Configuration Items; (2) improve accuracy through real-time, automatically updated infrastructure and component changes; (3) reduce IT Subject Matter Experts time on emergent IT issues; (4) Utilize of IT Service Management processes; and (5) Reduce downtime by identifying dependences and impact analysis.The project scope includes: (1) implementation of On-Premise application service maps which have significant business impact; (2) establishment of process roles needed to support service maps built.Alternatives considered included: (1) Choose an alternate IT Operations Management System with Cloud capabilities. This alternative was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. This alternative was not chosen as there would be a correlation gap between application services and the underlying infrastructure and would not address the ever-increasing resolution costs. (4) Develop and implement an on-premises service mapping and process solution. This alternative was chosen due to the value in Information Technology (IT) Operations Management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can utilize the Configuration Management Database (CMDB) and work hand-in-hand with asset discovery.	2024-03-13	2024-06-05	-1.00	3,012,243	699,524		60,745	-	-	1,703	42,101	-	16,941	24,369	-	-	563	23,805	-	-
72	2024	Nimbus Phase 5	Software(Intangible)	IT/Digital Foundation	Prior period adjustment							(1,016)	(1,016)	-	-	-	-	-	-	-	-	-	-	-	-
73	2024	Operational Technology - Service Management Upgrade	Software(Intangible)	IT/Digital Foundation	This project will implement Operational Technology (OTÂ)service management capabilities. Service management provides automated asset tracking, maintenance, and incident management for the assets.The Companyâ„¢ Internal Audit team conducted an audit of the Operational Technology (OT) asset environment and identified significant gaps in the patch management program. The patch management operating model is decentralized, has limited and inconsistent standards, doesnâ„¢t have a company-wide governance structure to monitor all business areas of the Company and lacks a complete and accurate asset inventory. Due to the lack of a complete asset inventory, as well as a significant number of gaps identified in the patch management governance, operating model, processes, and controls to manage all assets within the Companyâ„¢s environment, an unknown magnitude of risk exists that critical patches were not installed timely, which could create the potential for increased security vulnerabilities.The project provides value to the Company in three ways 1.) Establishes a complete and accurate asset inventory. 2.) Creates a Company-wide governance structure with documented standards and processes to manage the assets and 3.) Defines a comprehensive patch management operating model with clearly defined roles and responsibilities.The project scope includes: (1) the implementation of an asset management tool (2) the implementation of an incident management tool, (3) and the establishment of process roles needed to support the assets.Alternatives considered included: (1) Choose a Cloud-based alternate asset management system. This option was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. Continue to manually track or not track Operational Technology (OT) Digital assets at the Company, which will not address the need to effectively track OT Digital assets and plan for their support. (4) Develop and implement an asset management and incident management tool and processes. This alternative ultimately chosen has strengths in Information Technology (IT) service management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can help bridge the gap between IT and OT, enable the Company to manage both types of assets through a single interface.	2024-03-13	2024-08-02	-1.00	894,877	192,305		50,481	-	-	12,103	23,111	-	15,267	16,246	-	-	(681)	16,927	-	-
74	2024	Product Family Enhancements-Application Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	389,420	7,949		118,189	9,011	2,312	59,114	29,713	-	18,039	2,941	-	-	2,918	23	-	-
75	2024	Product Family Enhancements-Application Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software & hardware and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	314,871		-	-	-	-	-	-	-	116,502	13,500	-	61,821	41,181	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
76	2024	Product Family Enhancements-Infrastructure Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	547,715	79,958		166,231	119	37,439	67,648	44,672	-	16,354	29,585	3,337	-	12,766	13,482	-	-
77	2024	Product Family Enhancements-Infrastructure Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	146,350		-	-	-	-	-	-	-	54,150	-	18,638	2,727	32,785	-	-
78	2024	Public Key Infrastructure (PKI) Upgrade	Software(Intangible)	IT/Digital Foundation	Replace on-premise PKI to stay supported by the manufacturer. The existing PKI that issues certificates to IT systems for secure communications needs to be upgraded to stay supported by the manufacturer. If the PKI is not maintained, in the event of a system failure the Company would not have support in recovering. All IT systems requiring secure communications via certificates would go offline within three days. Replace existing PKI with new PKI that is supported by the manufacturer. The project will build and configure the servers necessary to provide Public Key Infrastructure services, put in place physical token management for maintaining security, migrate certificate issuing and management to the new system and decommission the old system. The Company has a limited use service for PKI on the Internet only. (1) The Company looked into expanding the service to include usage on the Company network but found the solution to not be economically viable. (2) The Company also looked at full cloud solutions, but it did not meet the security standards currently being used around physical token use. (3) The Company looked at continuing extended support, however the continuing extended support is not available by the vendor. (4) The Company selected a hybrid solution of part cloud and part on-premise to meet all operational and security compliance requirements. The opportunity is to retain ownership of the keys on-premise prior to evaluating ownership through the cloud.	2024-07-01	2025-08-25	-1.00	1,578,771	409,866		374,591	43,338	147,809	66,518	76,028	-	40,898	69,541	(12,352)	-	7,436	74,457	-	-
79	2024	SAP Support Pack Upgrade 2023-2024	Software(Intangible)	IT/Digital Foundation	The SAP Support Pack Upgrade project is to maintain the currency levels of all SAP applications. This will ensure the applications are at version levels that are supported by SAP, have the latest patches and bug fixes, and provide cross-application compatibility for our business partners.To continue to maintain SAP application version currency, across all applications, the support packs released by SAP must be routinely applied. Without maintaining application currency, the core business applications running on the SAP platform are at risk of losing vendor support, resulting in the inability to apply bug fixes and patches, including security patches, and maintain application interoperability and stability.The project will add value by: (1) maintaining supportability of SAP applications; (2) mitigating system security, stability and reliability risks by ensuring the applications are up-to-date with the most current patches and bug fixes released by SAP; and (3) ensuring ongoing cross-application compatibility.The scope of this project includes routine support pack upgrades to all SAP applications, which include: Enterprise Core Component (ECC), Customer Relationship Manager (CRM), Enterprise Portal, Process Orchestration (PO), Business Warehouse (BW), Business Objects (BOBJ), Data Services (DS), Governance, Risk and Compliance (GRC), Solution Manager, Data Quality Manager (DQM), Graphical User Interface (GUI), Single Sign On (SSO), System Landscape Directory (SLD) and other related SAP applications.Alternatives considered include: (1) Divide the scope into individual projects by SAP application. This alternative was not selected because the efforts are interrelated and completing them separately could lead to duplication of work, especially testing efforts, and therefore potentially higher costs. (2) Migrate to SAP S/4HANA. This option was not selected at this time because it is part of the long-term digital plan and requires substantial planning and investment, (3) Balance the project scope through regular support pack upgrades. This alternative was selected because it provides the best balance of minimizing cost and maintaining support by combining multiple application upgrades through a single support pack upgrade effort.	2024-03-13	2024-10-31	-1.00	-	173,026		-	-	-	-	-	-	-	59,842	-	-	7,688	52,154	-	-
80	2024	Software Asset - Service Management Upgrade	Software(Intangible)	IT/Digital Foundation	This project will optimize the software asset management process by systematically monitor, assess and oversee software licenses and compliance using Software Asset Management Professional.The on-premises software asset management technology currently used in the Company lacks compatibility to automate license reclamation, cost optimization, and license forecasting. These software asset management constraints lead to the inability to optimize software license purchasing and effective license demand management.This project will create value by ensuring the Companyâ„¢s technology requirements are met through a comprehensive and cost-effective software asset management processes and workflow. Specifically, by replacing the on-premise application, the project will: (1) streamline the software request workflow including license reclamation and software deployment; (2) help ensure compliance with software license agreements; (3) identify opportunities of license optimization leading to cost optimization; (4) mitigate risk related to software asset management; (5) optimize license forecasting and (6) increase asset visibility.The project scope includes: (1) the implementation of software asset management tool; (2) the establishment of process and process roles needed to support the assets; and (3) retirement of the on-premise software asset management tool.Alternatives considered included: (1) Choose an alternate Cloud based asset management system. This alternative was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. This alternative was not selected as the current Software Asset Management tool that lacks integration and automation and will not address optimizing and effective management of licenses and purchases. (4) Develop and implement an on-premises Software Asset Management solution. This alternative ultimately chosen has strengths in software asset management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can helps license compliance, optimization and automation.	2024-03-15	2024-04-15	-0.80	1,120,474	260,229		21,353	-	-	6,862	12,973	-	1,518	29,647	-	-	13,826	15,820	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)
	SERVICE YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
81	2024	Software Platform Refresh	Software(Intangible)	IT/Digital Foundation	The Software Platform Refresh project will upgrade server operating systems, hypervisors (virtual machine monitors), and databases to retain low-cost vendor support. For systems that go beyond their normal manufacturer support ending, there will be increased support and maintenance fees of 20% to 100% above current support and maintenance depending on vendor. Completing this project allows the organization to (1) avoid high support costs; (2) provide for system security; and (3) stay current to promote seamless interoperability among servers, applications, and databases. Aging servers are more susceptible to security vulnerabilities and performance issues that ultimately could affect the business and customers. The project will add value for the Company by (1) avoiding costs for special maintenance agreements required at the end of normal manufacturer support; (2) ensuring reliability and compliance with Information Security requirements; (3) improving data center environment stability; and (4) avoiding the need for high-risk upgrades that cross multiple versions. The project scope includes: (1) upgrading operating systems and databases on servers that are near end of support with a given vendor; (2) migrating applications running on servers that are near end of support to a supported platform; (3) decommissioning servers. The following alternatives identified were: (1) Complete the full scope of the solution for $1 million in order to eliminate the need for ongoing extended support; (2) Reduce the scale of the solution, which requires $1.6 million in ongoing extended support; (3) Reduce the scale of the solution even further, which requires $2.4 million in ongoing extended support; (4) Do not complete a software platform refresh, which requires $3.2 million in ongoing extended support. Alternative 1 was selected as the most cost-effective solution to ensure ongoing system stability, seamless integration, and mitigation of cyber-security risks without the significant cost of extended support necessary for end of life software systems.	2024-01-01	2024-12-31	-1.00	-	90,647		-	-	-	-	-	-	-	33,539	21,649	-	7,925	3,966	-	-
82	2024	SolarWinds Performance Monitoring Expansion Upgrade	Software(Intangible)	IT/Digital Foundation	Direct method of allocation							1,195	-	-	979	-	-	217	1,470	905	-	745	778	-	-
83	2024	Tibco API Exchange Gateway Replacement	Software(Intangible)	IT/Digital Foundation	This project is looking to retire the API Exchange Gateway within the Tibco ESB and replace it with a new solution called Microsoft Self-Hosted Gateway. The API Exchange Gateway is used by the TIBCO ESB to integrate to external vendors, all new development will need to be done to integrate this solution.The Tibco API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform.This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the Tibco Enterprise Service Bus API Exchange module), and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable.The project scope includes: (1) Conducting a RFP to procure a replacement product and work with architecture team to migrate the product; (2) Migrate all current work items to the new platform; (3) Conduct appropriate testing to ensure all Service Level Agreements are met; (4) Decommission the Tibco API Exchange Gateway.The following alternatives were identified: (1) Procure a product that is not already tied the Company's technology current. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor and the current platform have stopped all development for this product. (3) Leveraging an existing solution already in the Company environment. This alternative was selected as it avoids multiple solutions with redundant capabilities and avoids costs for supporting and maintaining a second solution.	2024-01-15	2024-12-20	-1.00	177,467	117,000		49,313	-	-	16,440	27,651	-	5,222	40,582	-	-	22,799	17,764	-	-
84	**SUBTOTAL**	**2024 IT/Digital Foundation**										**12,261,637**	**564,654**	**6,051,868**	**1,238,542**	**3,866,076**	**-**	**511,497**	**2,021,289**	**115,286**	**63,612**	**449,155**	**1,284,092**	**-**	**9,056**
85	2024	ARP-Cyber Security	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades. As part of the review process, the alternatives considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Option 2 was not chosen due to the security risk inherent with not replacing assets as per standard refresh cycles increased system vulnerabilities, and out-of-warranty repair costs.	2024-01-01	2024-12-31	-1.00	445,156	18,840		206,508	44,780	148,271	9,247	1,607	-	2,603	6,971	-	-	2,727	4,244	-	-
86	2024	Pipeline SCADA Security	Network	Security	The project provides work management software and digital forms for Gas Compression facilities. The current work management process for Gas Compression locations is cumbersome and largely paper based outside of desktop kiosks. This manual system leads to process waste, re-work, and human error. This project provides value to the Company through: (1) increased productivity by reducing the need to return to the desktop kiosk for updates; (2) improved quality through increased accuracy of updates completed at the time and place of the work; and (3) improved safety through real-time information used at work sites rather than printed procedures. The scope of the project includes: (1) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (2) configuring changes in SAP and the mobile work management software to replace the paper-dependent work management process with the ability to access and update maintenance, operations, and safety information at Gas Compression locations. Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution is not preferred since it is a new solution and requires additional project and support cost. (2) Continue the manual paper-based process. Continuing the manual paper-base process was not chosen because of process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A custom eSOMS mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the eSOMS product was not intended to support. (4) Utilize the existing Service Suite solution currently deployed for Gas and Electric Distribution. The Service Suite solution is the preferred option because it is a proven solution at the Company and provides the mobility and digital benefits at a lower cost.	2024-07-01	2025-01-27	-1.00	11,797,448	498,450		698,650	136,999	(91,255)	314,324	237,857	-	100,725	65,641	4,285	220	7,615	53,520	-	-
87	2024	TSA Critical Facility Stucture	Network	Security	This project will implement enhanced security measures outlined by the Transportation Security Administration (TSA) for critical facility assets in order to bring the locations up to the enhanced security measures. Implementing the TSA guidelines will enhance the safety and security of gas delivery to our customers while also meeting federal requirements.Pipeline facilities that are deemed critical are required to be compliant with the guidelines from the TSA by May 2026. Consumers Energy currently has identified 4 locations as critical. However, based on the April 2021 update to the TSA Pipeline Security Guidelines, Section 5 (Critical Facility Criteria), a significant number of our gas infrastructure that were not previously subject to evaluation will now fall into scope. As we continue to analyze the remainder of our gas assets, we believe an additional 1000 pipeline facilities (pipeline interconnections, metering and/or regulating stations, pump stations, compressor stations, operational control facilities, main line valve, tank farms and terminals, etc.) may be deemed critical. Consumers Energy will be taking a phased implementation approach and will begin the process by implementing the enhanced security measures at the reminder of our compressor stations. Failure to update our sites will put us out of compliance with the updated guidelines.The objective of the project is to implement enhanced security measures outlined by the TSA for the following four critical assets: (1) Freedom Compressor, (2) Muskegon River Compressor, (3) Overisel Compressor, and (4) Northville Compressor. In order to bring these locations up to Enhanced status and avoid non-compliances. This project will increase the security and reliability of gas delivery to our customers while also meeting federal requirements.Enhanced Security measures that will need to be implemented include, but are not limited to: (1) access controls; (2) access readers; (3) cameras; (4) video and audio programming; (5) fencing and barriers; (6) gates; (7) locks and key control; (8) fence intrusion (which may be accomplished with a new camera system); (9) subcontractor work of trenching,poles, etc.; (10) facility lighting; (11) background investigations for personnel working at the site; (12) security equipment maintenance and testing; (13) security vulnerability assessments; (14) security communication plans; (15) personnel training; (16) security drills and exercises for the following locations. These activities will be performed at the following company locations: Overisel Freedom, Northville, Muskegon River.Alternatives are not available because this is a compliance mandate from the TSA.	2024-06-28	2025-12-28	-1.00	6,989,212	135,606		3,591,981	-	1,174,701	111,252	2,272,195	-	33,833	8,602	-	-	-	8,602	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
88	2024	ARP-Physical Security	New Computers / Hardware	Security	The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet FERC requirements. The alternative selected maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2024-01-01	2024-12-31	-1.00	2,281,985	14,060		692,582	-	564,371	1,849	199,073	-	(72,710)	5,202	-	-	5,184	18	-	-
89	2024	Badge Reader/Lock and Key Management System	New Computers / Hardware	Security	Prior period adjustment							-	-	-	-	-	-	-	3,283	-	-	3,266	17	-	-
90	2024	Radar Intrusion Detection	New Computers / Hardware	Security	Prior period adjustment							(6,796)	-	(7,295)	-	499	-	-	-	-	-	-	-	-	-
91	2024	Application Currency-Security-Capital	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	836		-	-	-	-	-	-	-	309	196	-	-	114	-	-
92	2024	Application Currency-Security-O&M	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-01-01	2024-12-31	-1.00	-	9,482		-	-	-	-	-	-	-	3,508	-	-	3,505	4	-	-
93	2024	Enhancements-Security-Capital	Software(Intangible)	Security	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	411,984	36,541		125,037	148,565	2,573	3,220	(31,665)	-	2,345	13,520	4,528	-	8,369	624	-	-
94	2024	Enhancements-Security-O&M	Software(Intangible)	Security	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-01-01	2024-12-31	-1.00	-	590,009		-	-	-	-	-	-	-	218,303	16,005	21,664	131,059	49,683	-	(106)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
95	2024	Saviynt Enterprise Identity Governance and Access (EIGA) Implementation	Software(Intangible)	Security	The project will implement Saviynt EIGA module, consolidate Identity Access Management (IAM) functionality into Saviynt, and retire the Identity Manager application. By implementing the new solution, the Company will optimize IAM functionality, eliminate complexity, and reduce support costs. In addition, the project will integrate the OT network with an IAM solution that will allow for automated management of users and entitlements in the OT Active Directory domains and applications. The current version of AccessNow reached end-of-life in December 2022, with support discontinued in January 2023. The application has numerous custom workflows and integrations, requiring professional services for ongoing use and changes. It lacks proper data analytics and reporting, posing risks such as inability to fix critical defects, software incompatibility, compliance issues, increased costs, and degraded performance. The Company uses multiple IAM tools, each performing critical functions, leading to numerous required interfaces and customizations. While beneficial for end users, these integrations increase the risk of system failures, higher support costs, multiple subscriptions, infrastructure and maintenance costs, and more expensive upgrades. The current solution utilizes SAP HR batch file processes that introduces failure points, delays, and data integrity issues. Failures in these processes can prevent new or transferred employees from accessing necessary systems, leading to operational disruptions and potential compliance risks due to inappropriate access retention. This project provides value by: (1) Consolidating multiple IAM platforms through the implementation of the Saviynt Enterprise IGA Module, reducing complexity and support costs; (2) Decreasing complexity and enhancing efficiency by reducing interfaces between multiple identity tools; (3) Improving the end-user experience and reducing human struggle with access requests through a new, intuitive portal design; (4) Minimizing custom code and focusing on configurations only by utilizing out-of-the-box functionality; and (5) Streamlining employee data processing with the implementation of an HR interface. This project scope includes: (1) Implementing the Saviynt EIGA module to consolidate IAM platforms; (2) Standardizing processes by removing customized code and using out-of-the-box functionality; (3) Replacing and improving access system; (4) Addressing issues with aging applications, multiple IAM platforms, integration challenges, and antiquated HR processing. Alternatives considered include: (1) Implementing hot fixes to AccessNow version 8.1.5 to ensure support through mid-2023; (2) Upgrading only the application to current supported version, excluding the new web portal but will include new application functionality; (3) Remaining on current version that will be unsupported as of January 2023, requiring vendor professional services for any break / fix. Patches and enhancements may potentially introduce additional risk of version instability; (4) Implementing IAM functions in Saviynt platform to manage access requests, including Active Directory, SAP, SAP HR, disconnected systems, and existing API integrations. The alternative selected was implementing the new Saviynt system, eliminating AccessNow software.	2024-07-01	2027-10-29	-1.00	6,015,138	749,274		848,149	582,476	-	109,763	101,624	-	54,286	87,360	48,706	-	10,624	27,945	-	86
96	2024	Security Analytics	Software(Intangible)	Security	Prior period adjustment							-	-	-	-	-	-	-	10	-	-	9	-	-	-
97	**SUBTOTAL**	**2024 Security**										**6,156,112**	**912,821**	**1,791,367**	**549,655**	**2,781,189**	**-**	**121,080**	**412,711**	**73,719**	**21,884**	**172,357**	**144,770**	**-**	**(21)**
98	**TOTAL**	**2024**										**26,616,485**	**2,960,076**	**8,713,192**	**3,193,568**	**10,424,742**	**-**	**1,324,907**	**5,048,233**	**437,697**	**86,630**	**1,197,773**	**3,310,490**	**-**	**15,642**
99	2025	2025 Union Contract Changes	Software(Intangible)	Corporate	The Human Resources - 2025 Union Changes project will implement SAP and other system changes required as a result of three collective bargaining agreements which will be renegotiated and ratified. Collective bargaining agreements expire every five years for Operating Maintenance and Construction (OM&CÂ); Virtual Contact Center (VCCÂ); and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025. The VCC agreement ends August 1, 2025. The Zeeland agreement ends October 1, 2025. Collective bargaining agreements expire every five years for OM&C (Operating Maintenance and Construction), CCC (Customer Contact Center) and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025 . CCC agreement ends in August 1, 2025. Zeeland agreement ends October 1, 2025. Technology changes are required to reflect these new agreements. Otherwise, employees in these union groups may not be paid appropriately or get correct benefits. Completion of this project will provide value to the Company and its customers through: (1) waste elimination by making changes in the software for any pay and benefit changes as required by the new agreements; (2) defect reduction by adding process automation to otherwise manual processes for tracking and recording work, premium, and absence time; and (3) improved employee engagement among the OM&C, CCC, and Zeeland union employees. The scope of this project encompasses making any system changes required to support the new working agreement for the OM&C, CCC, and Zeeland employees. Exact details will be finalized after the negotiation process is completed and contracts are approved. Three alternatives were considered for this project: (1) Make no system changes after the contracts are ratified. This option was not chosen because it exposes the Company to possible fines, disengaged employees, union grievances, significant manual processes leading to greater possibility of error, hiring additional staff to perform activities outlined in the agreements, and increased legal costs due to employee grievances. (2) Find other third-party software to support the changes required by the union agreements. This option was not chosen because it would require SAP integration along with additional software licensing and maintenance costs. (3) Make system changes to eliminate manual updating, comply with the working agreement language, support union employee engagement, and reduce grievances. Option (3) was chosen because it leverages current SAP technology, automates what would otherwise require manual processing, and is the least costly option.	2025-04-24	2026-01-01	-1.00	-	341,003		-	-	-	-	-	-	-	24,227	-	-	7,021	17,205	-	-
100	2025	Application Currency-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Corporate Services adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Corporate Services are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	268,645		-	-	-	-	-	-	-	102,138	-	-	34,459	67,679	-	-
101	2025	Asset Accounting Upgrade 2025-2026	Software(Intangible)	Corporate	The project will upgrade our current accounting asset management software to the latest version as required by the vendor and implement additional new features, ensuring continued support of a critical financial application, and providing new functionality. In 2027, standard vendor support ends for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility. This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; and (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) evaluating current vendor/product solution with market leaders; (2) upgrading the vendor software from the current version to the newer version. Alternatives considered include: (1) Evaluate SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluate other software options. This option will introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements. (3) Upgrade to the newest version of current solution. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.	2025-06-18	2026-07-31	-1.00	-	435,445	ROM	-	-	-	-	-	-	-	136,482	-	-	24,146	112,336	-	-
102	2025	Product Family Enhancements-Corporate-Capital	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	1,035,016	(7,870)		325,305	-	-	243,562	58,041	-	23,703	(2,992)	-	-	(253)	(2,739)	-	-
103	2025	Product Family Enhancements-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	302,114		-	-	-	-	-	-	-	114,862	-	-	48,621	66,242	-	-
104	2025	Talent Management Enablement	Software(Intangible)	Corporate	The project will deliver technology solutions to enable best-in-class Talent Management programs and processes that are critical to achieve the Company's overarching Talent Strategy Plan. The Talent Strategy Plan is a key enabler of the company's Integrated Resource Plan (IRP), Electric Distribution Infrastructure Investment Plan (EDIIP), and Natural Gas Delivery Plan (NGDP). Effective Talent Management programs and processes are critical to develop the skills, capabilities, productivity, and experience necessary to successfully execute these plans that deliver clean, reliable, affordable energy through an exceptional customer experience Significant technology improvements are required to transform Human Resources (HR) to develop the skills and capabilities necessary to achieve the Company's strategic destination. Currently, many Talent Management processes are manually managed with little or no technology enablement. Specifically, the talent compensation processes are mostly manually done outside the system which introduces waste, and a potential for errors. In addition there is a limited visibility of competency gaps within the workforce. The Company cannot effectively place talent in accelerated development programs aligned to competency gaps, nor can it recognize and motivate employees for quickly increasing competency and performance. Furthermore, the Company operates in an increasingly competitive job market where candidates and employees expect best-in-class processes, technologies and experiences relative to their employment and career development. The lack of full technical enablement across Talent Management programs poses a risk to employee attraction, retention and limits the ability to develop the right skills at the right time to deliver on Company strategies. This project will add value to the Company through technology that will enable: (1) fully functional integrated compensation module; (2) accelerated and targeted talent development of critical skills necessary to deliver on the Company's commitment to clean energy and exceptional customer experience; (2) transparency into talent and skill gaps in order to identify retention and service delivery risks within critical areas, as well as inform succession and hiring strategies; (3) improved knowledge transfer, business continuity, and customer service during a time when retirement eligibility is high and risk of knowledge loss has the potential to negatively impact customer service and satisfaction; and (4) increased efficiency and quality of talent management through simplified and automated processes that reduce costs associated with recruiting, onboarding, and developing employees. Talent Management Enablement will deliver the best-practice technology to enable and enhance (1) Fully functional integrated talent compensation management; (2) Simplified and automated talent management process for employee lifecycle management from on-boarding through Off-boarding; (3) Succession Planning and Business Continuity; (4) Career Development and Employee Retention;. The scope will include: (1) implementation of each system/application; (2) integration with current systems, applications and processes as applicable; (3) retrofit current systems and applications to ensure a seamless end-to-end experience of HR processes; (4) delivery of mobile capabilities for in scope processes; (5) reporting and analytics dashboards and report insights for in scope processes. Three alternatives were considered for these Talent Management programs and processes: (1) Develop custom, internally built solutions that could meet most requirements. This alternative was not selected because a custom solution would result in higher overall costs, higher maintenance costs, fewer upgrades, and would not leverage industry best practices to ensure best-in-class delivery. (2) Select an on-premise software tool. This alternative was not selected because it requires internal maintenance, increases infrastructure costs, and would have less frequent upgrades which would hinder the Company's ability to ensure processes are evolving alongside industry trends and best practices. (3) Evaluate and select cloud/SaaS solution(s) which would have lower infrastructure costs, less internal maintenance than an on-premise solution, and would be built and evolved with upgrades based on industry best practices. Based on research, internal experience with successful best practice implementations, and vendor demonstrations, option three was selected.	2023-09-07	2026-12-31	-1.00	357,776	619,932		23,878	-	-	2,246	20,474	-	1,158	89,749	-	-	12,753	76,996	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
105	2025	Total Information Management (TIM) Platform Upgrade	Software(Intangible)	Corporate	The project will replace the existing Total Information Management (TIM) on-premise solution with a cloud-based OpenText Software as a Service (SaaS) solution. It will provide the Company with the ability to reduce operational costs for performing upgrades and maintenance, take advantage of new enhancements offered by the vendor, and ensure continued support of the platform. The existing on-premise Total Information Management (TIM) solution hardware and software is at end of support. The state of the current infrastructure creates security, stability, and reliability risk for the platform. Without vendor support, the application no longer receives security patches, bug fixes, or functionality support from the vendor, which creates additional security, stability, and reliability risk. This project will provide value to the Company through: (1) reducing costs with cloud allocated hardware scalable to current usage needs; (2) reducing operating costs with vendor managed feature updates and maintenance provided without service disruption; (3) providing access to new and innovative capabilities; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) migrating, upgrading, and transforming the dataset to the latest version of OpenText Extended Enterprise Content Management (xECM) Cloud Edition and deploying in the vendor hosted cloud; (2) migrating on-premise documents to the vendor hosted OpenText Core Archive cloud; and (3) enabling new functionality including a new user interface, new workflow capabilities, new workgroup management features, and new integrations with Microsoft 365 applications. Alternatives considered include: (1) Defer to a future date. This alternative was not selected due to requiring upgrades of existing on-premise hardware, impeding our ability to take advantage of new features offered by the cloud solution, and reducing cost savings opportunities presented by moving to the cloud. (2) Deploy OpenText on-premise solution to new on-premise hardware. This alternative was not selected due to cost associated with purchasing new hardware, cost associated to maintain, and it does not free up internal resources to focus on other value-added initiatives. (3) Select and migrate to a new vendor software. This alternative was not selected due to the cost, effort, and complexity of replacing the platform with a whole new technology. (4) Migrate to the OpenText cloud platform. This alternative was selected due to it building on the Company strategy of moving to cloud, reducing operating and maintenance costs, and it reduces risk by ensuring consistent, seamless vendor support.	2025-03-10	2025-12-06	-1.00	2,571,724	560,535		808,293	-	-	67,086	725,298	-	15,909	213,113	156,295	-	56,817	-	-	-
106	**SUBTOTAL**	**2025 Corporate**										**1,157,477**	**-**	**-**	**312,894**	**803,813**	**-**	**40,770**	**677,579**	**156,295**	**-**	**183,565**	**337,719**	**-**	**-**
107	2025	Application Currency-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Customer digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Customer are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	8,837		-	-	-	-	-	-	-	3,360	-	-	3,360	-	-	-
108	2025	Application Currency-CX&O-Capital	Software(Intangible)	Customer	Prior period adjustment							(3,168)	-	-	(2,620)	-	-	(548)	-	-	-	-	-	-	-
109	2025	Application Currency-CX&O-O&M	Software(Intangible)	Customer	The CX&O initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the CX&O adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the CX&O are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the CompanyÃ¢â‚¬â„¢s ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	4,139		-	-	-	-	-	-	-	1,574	-	-	1,574	-	-	-
110	2025	Customer Order Service Tracker	Software(Intangible)	Customer	Short cycle orders including gas emergencies and meter services account for many of the incoming customer inquiries to the contact centers. This project will implement a service order status tracker to provide transparency to customers and oversight to internal teams supporting utility service orders across Company service areas. The tracker will provide timely and accurate service order updates, creating a more robust customer experience for tracking service order status and location-based updates. Customers have limited visibility to when Company assigned crews will be on premise and what work will be completed. This is due to features missing within the Company's digital channels for accurate updates from dispatch, scheduling, and field crews. The lack of awareness drives calls into the call center, resulting in approximately 346,000 annual contact center calls related to short cycle requests. Additionally, this lack of visibility increases truck rolls due to dispatchers being unaware of crew locations and routes which can cause crews to be assigned when a local crew could have completed the work. This leads to overall customer dissatisfaction because of a lack of visibility to scheduled and ongoing short cycle work. Enabling a digital channel for communication regarding utility service orders will improve customer experience and reduce the waste of repetitive crew dispatching. This project will add value to the Company and its customers by: (1) providing transparency for customers on the timing and location of the associated crew completing utility service orders, (2) reducing calls to contact centers by customers seeking clarification regarding arrival times through visibility to scheduling time-frames and providing notifications to customers when crews are enroute, (3) improving resource assignment by current location, which decreases wasted truck rolls through enabling location services for active crews, (4) increasing visibility into the service person(s) completing the order by enabling crews to connect with customers through digital channels, and (5) improving customer experience for short cycle service orders by implementing a channel of choice for Company interactions. The scope for the project includes: (1) modifying the customer self-service portal to include features that support utility service order tracking, including the location of crews enroute, (2) providing desktop and mobile capabilities, (3) enhancing the existing ServiceBench platform to allow real-time status updates that can be communicated to customers, (4) utilizing location-based services to update internal portal in real time, and (5) enabling text and email notifications to alert customers of service crews arrival times. Alternatives considered for this project include: (1) Deploy a mobile application to address utility service order tracking, (2) utilize a cloud hosted solution from a third-party, (3) modify the existing customer portal to enable customers and the Company to track utility service orders and crews. Options one and two were not selected as the cost associated with deployment would greatly outweigh the benefits with call reduction and improved customer experience. The third option was selected because it utilizes existing technologies, which reduces the implementation complexity and project cost and has faster value realization for the customer and the Company.	2025-09-08	2026-12-17	-1.00	3,727,950	917,125	ROM	286,924	-	-	286,924	-	-	-	99,516	-	-	99,516	-	-	-
111	2025	Energy Assistance Enhancements and Maintenance Annual Updates	Software(Intangible)	Customer	The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as Consumers Affordable Resource for Energy (CARE) project, will implement software changes to offer energy assistance to low-income customers and streamline the process for the assistance agencies who use the assistance portal. This is accomplished through improved user interfaces and updates to SAP to process various requests. Upcoming modifications will be identified following an ongoing and annual review of requests, that includes criteria from the Department of Health and Human Services (DHHS) and Michigan Public Service Commission (MPSC) to prioritize the list of changes. Each grant year, DHHS and MPSC stipulate the criteria required for customers to enroll in the CARE program, how the Company and agencies will manage the enrollment process and track active CARE customers, and how they will administer the Michigan Energy Assistance Program (MEAPÃ benefits through bill credits and arrears forgiveness. The criteria changes significantly each year; therefore, the Energy Assistance Enhancement and Maintenance Annual Updates application requires modifications to meet the new requirements. If the regulatory requirements are not fulfilled, the Company is at risk of losing state Low Income Home Energy Assistance Program (LIHEAPÃ funds to assist low-income customers with paying their energy bills, thereby increasing the customers risk of shutoff for non-payment. In addition, our energy assistance programs function within all software platforms in the company which consistently need enhancements and updates. The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive LIHEAP funding, which can be used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, thereby making it easier to assist customers in need of LIHEAP funding; and (3) complete modifications to customer facing platforms. The project scope includes: (1) updating the enrollment and status process; (2) allowing for flat monthly bills; (3) improving reporting; (4) updating the arrears forgiveness plan; (5) satisfying additional regulatory requirements for the annual grant rule changes required by the Department of Health and Human Services and Michigan Public Service Commission; (6) updating CARE dunning process; and (7) updating CE PASS functionality to enhance Agency Self-Service. Alternatives considered included: (1) continue with current process, which would lead to loss of grant funding, thus decreasing or eliminating energy assistance dollars for customers; (2) transfer administration of Energy Assistance Programs to a third party organization, which would remove ownership and visibility into the health of the program while increasing administrative costs; and (3) make annual updates to the application, which will allow agencies to easily enroll customers on assistance programs and allow placement of holds to stop or prolong credit activity until assistance decisions are granted. Option 3 was selected since it provides long-term proactive energy assistance to customers and prevents loss of grant funds. Changes are required to internal systems (SAP, Agency Portal, etc.) , therefore a cloud or third party alternative is not viable. Additionally, retiring the existing Agency Portal for a new application would increase costs beyond that of the routine upgrades.	2025-01-01	2025-12-31	0.00	-	274,001		-	-	-	-	-	-	-	104,174	-	-	82,411	21,763	-	-
112	2025	Enhancements - Customer Experience and Operations- Cap	Software(Intangible)	Customer	The CX&O initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the CX&O Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for CX&O. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	1,368,321	52,962		430,063	-	-	362,713	56,014	-	11,337	20,136	-	-	7,380	12,756	-	-
113	2025	Enhancements-CX&O-O&M	Software(Intangible)	Customer	The CX&O initiative will utilize O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort technology changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing technology requires a short timeframe between inception and implementation. Failure to make these changes or to update aging technology can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of technology enhancements in the CX&O Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT technology investments for CE&O. The scope of technology enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	163,275		-	-	-	-	-	-	-	62,076	-	-	19,670	42,406	-	-
114	2025	Genesys Cloud Migration	Software(Intangible)	Customer	The project will migrate the Company's existing on-premise customer contact solution and deploy it to the Genesys Platform As A Service (PAAS) cloud-based solution. It will provide the Company with the ability to reduce operational costs for performing upgrades and maintenance, take advantage of new enhancements offered by the vendor, and ensure continued support of a critical customer communication channel. In 2028, standard vendor support ends for the current on-premise contact center software and extended support is not available from the vendor. Without vendor support, the application no longer receives security patches, bug fixes, or functionality support from the vendor, which creates security, stability, and reliability risk. With the upcoming end of standard support, the vendor is no longer offering feature enhancements to the current on-premise solution limiting the Company's ability to invest in new ways to better serve its customers. This project will provide value to both the Company and its customers through: (1) reducing costs with cloud allocated hardware scalable to current usage needs; (2) reducing operating costs with vendor managed feature updates and maintenance provided without service disruption; (3) providing access to new and innovative capabilities to enhance customer service; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) deploying the new PAAS cloud-based solution in the vendor cloud environment; (2) installing a new internet circuit to directly connect the Company's systems to the vendors cloud environment; (3) updating existing customer interactive voice response (IVR system to accommodate the new cloud implementation; and (4) implement new features supporting analytics, quality, and reporting. Alternatives considered include: (1) Defer to later years. This alternative was not selected due to requiring upgrades of existing on-premise hardware, impeding our ability to take advantage of new features offered by the cloud solution, and reducing cost savings opportunities presented by moving to the cloud. (2) Deploy Genesys on-premise solution to new on-premise hardware. This alternative was not selected due cost associated with purchasing new hardware and does not address the security, stability, and reliability risk resulting from the vendor end of support for the on-premise software. (3) Select and migrate to a new vendor software. This alternative was not selected due to the complexity of our existing internal integrations between the Genesys platform and the Company's other internal systems. As a result, selecting a new system with a new vendor would make the switch cost prohibitive. (4) Migrate to the Genesys Cloud platform. This alternative was selected due to it building on the Company strategy of moving to cloud, reducing operating and maintenance costs, and reduces risk by ensuring consistent, seamless vendor support.	2024-06-25	2025-11-21	-0.80	-	164,319		-	-	-	-	-	-	-	5,280	-	-	3,193	2,087	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
115	2025	Product Family Enhancements-Customer-Capital	Software(Intangible)	Customer	The Customer initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ‚¢s ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ‚¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	2,300,160	387,945		722,940	42,489	-	48,278	608,589	-	23,584	147,495	-	-	74,685	72,809	-	-
116	2025	Product Family Enhancements-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ‚¢s ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ‚¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	51,147		-	-	-	-	-	-	-	19,446	-	-	615	18,831	-	-
117	2025	Rate Change Maintenance	Software(Intangible)	Customer	The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements. For the Company to continue to meet and comply with the Michigan Public Service Commission (MPSC) rate change requirements, there is a need to make periodic updates/modifications to the existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers. The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs. The scope of this project encompasses (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes. Alternative considered include: (1) a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the timing it would take for testing of this model; and (2) leverage onshore resources to plan, coordinate, and execute the rate changes. This option was selected as it supports the Company's operation model for rate changes.	2025-01-01	2025-12-31	-1.00	-	308,115		-	-	-	-	-	-	-	117,144	-	-	3,953	113,191	-	-
118	2025	SiteCore Primary Upgrade 2025	Software(Intangible)	Customer	The project will refresh all components of the website hosting, delivery, search, and analytics applications to add new features and improve search capabilities. Sitecore is the content management application for consumersenergy.com website, a channel many customers use for accessing account information and bill payment. Sitecore is currently operating on version 10.3, which is due to end mainstream support at the end of 2025. If this occurs, there will be an increase in support and maintenance fees of 10% above the annual subscription spend. The project will add value for the Company by: (1) avoiding costs for extended maintenance agreements required at the end of mainstream support; (2) ensuring that the website retains the most up-to-date security posture; and (3) supporting the Company's CXI goals by improving reliability and performance. The project scope includes: (1) upgrading the Sitecore content management software to include content hosting and delivery allowing the use of new features and functionality; (2) migrate the Sitecore platform to the most up-to-date hardware and software by refreshing the application and database servers to a newer version of Windows Server and SQL Server. Alternatives considered include: (1) Delay the upgrade. This alternative was not chosen due to the current version falling outside of the mainstream support window, requiring an additional 10% in maintenance fees. Along with rapidly changing feature sets that are continually being developed by the vendor, the Company would be in a worse position to handle constantly changing cyber threats; (2) Undergo a full website redesign. This solution was not chosen as a similar effort is already slated to begin in 2024; and (3) Upgrade Sitecore on a two-year cycle. This alternative was chosen as it provides up-to-date functionality, stability, and mitigates cyber security risks while minimizing cost and impact.	2025-05-30	2026-02-23	-1.00	-	438,022		-	-	-	-	-	-	-	166,534	-	-	166,126	407	-	-
119	2025	20% ROM Adjustment - Customer	Software(Intangible)	Customer	This is for the 20% ROM Adjustment for IT projects.							(57,385)	-	-	(57,385)	-	-	-	-	-	-	-	-	-	-
120	**SUBTOTAL**	**2025 Customer**										**1,379,375**	**42,489**	**-**	**637,910**	**664,603**	**-**	**34,373**	**746,734**	**-**	**-**	**462,483**	**284,251**	**-**	**-**
121	2025	Application Currency-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	465,372		-	-	-	-	-	-	-	176,932	-	-	161,312	15,620	-	-
122	2025	Application Currency-Operational Technology-Capital	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	11,448	-		3,598	-	-	3,061	7	-	530	-	-	-	-	-	-	-
123	2025	Application Currency-Operational Technology-O&M	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	66,150		-	-	-	-	-	-	-	25,150	-	-	20,952	4,198	-	-
124	2025	Application Currency-Operations-Capital	Software(Intangible)	Electric & Gas Shared	Prior period adjustment							958	-	-	2	-	-	956	-	-	-	-	-	-	-
125	2025	Application Currency-TEOS-O&M	Software(Intangible)	Electric & Gas Shared	The TEOS initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the TEOS adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the TEOS are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	220,403		-	-	-	-	-	-	-	83,796	-	-	60,865	22,931	-	-
126	2025	Enhancements-Operations-Capital	Software(Intangible)	Electric & Gas Shared	The Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ‚¢s ability to consistently meet objectives. The value of software enhancements in the Operations Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ‚¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	271,209	-		85,241	-	-	56,626	26,592	-	2,023	-	-	-	-	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
127	2025	Enhancements-TEOS-Capital	Software(Intangible)	Electric & Gas Shared	The TEOS initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in the TEOS Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for TEOS. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering, Customer Energy Management, Electric Grid Integration, and Fleet . Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	43,860	-		13,785	-	-	13,785	-	-	-	-	-	-	-	-	-	-
128	2025	Field Contractor Work Management Technology Enablement	Software(Intangible)	Electric & Gas Shared	The project provides the ability to electronically manage contractor work and increases accuracy and timeliness of information processing for field work deliverables. This project additionally creates new opportunities to measure and optimize field work processes supporting customer on-time delivery goals. Contractor field employees use manual, paper-based processes and generic communication technologies (phone, radio, email, collaboration sites) to perform work for the Company. Due to the non-electronic format, inaccuracy, and delay of information processing there are negative impacts to the availability and accuracy of work status. This limits the opportunity to measure and optimize field work processes that support customer on-time delivery and other goals. The project will add value by: (1) improving on-time delivery of customer work by providing electronic work order information to contractors; (2) improving customer satisfaction through efficiency in scheduling work and reporting on the progress electronically; (3) increasing safety by tracking work and contractor status providing visibility into the last known location of the contractor; (4) improving material management; (5) making it easier to move emergent work to contractors to balance workloads and meet customer commitments; and (6) enabling real time updates to work order information, increasing data accuracy and reducing invoice reconciliation time. The project scope includes: (1) identifying requirements for a Bring Your Own Device (BYOD) field contractor work management technology solution and process; (2) developing, configuring, and testing interfaces, hardware, and software for the solution; (3) implementing the solution and process for the following work groups: Electric High-Voltage Distribution (HVD), Electric Low-Voltage Distribution (LVD), Mutual Assistance, Forestry, Gas Distribution, Gas Code Compliance, and Substation Operations Construction/Metro; (4) updating the following vendor contract types to support BYOD field contractor work management: zone, specific bid, ancillary, electric storm, and mutual assistance; and (5) training field contractors on the new technology and processes. The alternatives considered included: (1) Continue with the current paper-based process. This alternative was not selected because this approach does not allow for the timely, data-driven work management metrics required to improve service to customers. (2) Use the current Company mobile application. This alternative was not selected because the solution is not expected to receive long term investments by the vendor and the mobile application would require more upfront investment than the proposed option. (3) Use off-platform options such as ServiceBench. This alternative was not selected because contractors would not be able to leverage the benefits and integrations with the existing platform and it would require additional new integrations. (4) Provide Company-funded field devices to contractors. This alternative was not selected because the investment in hardware, management of on-boarding and off-boarding of devices to contractors, and training and change management is cost-prohibitive and introduces a risk of the loss of control of information security and corporate assets. Leveraging the existing field work management solution was chosen because it uses existing well-developed functionality while leveraging cloud-based, BYOD capabilities to move short-term and long-term contractors from paper processes to the established, standard work management system.	2024-05-24	2025-04-28	-0.85	1,387,238	837,321		14,299	-	(1,227)	12,916	-	-	2,610	685	-	-	566	3	-	116
129	2025	Field Mapping and Graphics	Software(Intangible)	Electric & Gas Shared	This project will implement a solution for the mobile field mapping and data collection that can search and view facility map data, view work order designs, and create work order as-built construction drawings in the field. This software technology increases process efficiency by consolidating field graphics functionality, reducing IT complexity and testing, and increasing adoption in the field through ease of use. In addition, it allows the Company to move to a supported application platform and retire the unsupported ArcPad solution. The current mapping and graphics application was implemented in 2002 and is no longer sold or supported in any capacity, and the customizations developed for the application cannot be changed. Due to the improved accuracy of the CE landbase (streets, political boundaries, etc.), the outdated electric maps that are referencing that data causes the map to be unreadable which causes a safety issue. Additionally, field employees have considerable challenges when attempting to use the software due to slowness, an aged interface, and dated processes. The project will add value by: (1) providing more accurate geospatial data, including facility map data, pre-construction designs, and as-built construction drawings; (2) consolidating daily tasks into a more simplified process; (3) eliminating the process waste from duplicating asset data in two systems; (4) enabling the adoption of the Geographic Information System (GIS) standard; and (5) making mapping and graphics data available on field devices. The project scope includes: (1) installing a new mobile field mapping and graphics application; (2) creating the ability to search and view the facility map data in GIS format along with the ability to search by address; (3) viewing pre-construction work order designs in a new GIS format; and (4) creating as-built construction drawings in GIS format for assigned work orders. Four alternatives were evaluated and three were determined non-viable for the project: (1) Continue maintaining the current ArcPad application. This option was not selected because the Company is no longer able to make changes to the ArcPad application to mitigate issues if the application has critical defects. A total failure of the application could revert field crews back to paper-based facility maps, risking safety using static, outdated data; or require the creation of as-built construction drawings on paper documents. (2) Use the Adobe or Snagit applications for creating as-built construction drawings. This option was not selected because field users would have to use one solution for viewing facility maps and use rudimentary drawing tools like Adobe or Snagit for creating as-built construction drawings. This option was also not selected because it introduces additional costs due to the complexity and customization needed to integrate the applications. (3) Build a custom Mapping and Graphics solution. This option was not selected as existing industry solutions are available at a much lower cost with much less risk. (4) Implementing the new field mapping and graphics software was selected as this option will consolidate field graphics functionality into an efficient process and provide a current, supported solution.	2020-11-30	2025-10-27	-0.72	3,964,797	129,815		38,158	-	-	8,864	16,866	-	12,428	19,952	-	-	12,198	7,713	-	41
130	2025	OSIsoft PI Historian Upgrade 2020	Software(Intangible)	Electric & Gas Shared	Prior period adjustment							(33,985)	(20,899)	(5,767)	-	(7,320)	-	-	41,111	25,281	6,976	-	8,854	-	-
131	2025	Product Family Enhancements-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in Electric and Gas operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	2,947,310	161,304		926,339	-	3,361	594,386	285,972	-	42,620	61,327	-	-	51,542	9,785	-	-
132	2025	Product Family Enhancements-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements in Electric and Gas Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	1,867,309		-	-	-	-	-	-	-	709,942	-	-	421,399	288,483	-	60
133	2025	Spatial Asset Management	Software(Intangible)	Electric & Gas Shared	This initiative will implement SAP's Spatial Asset Management module. It will allow users to view assets, notifications, and orders geospatially using a map. The module will allow us to create and maintain asset maintenance plans for each segment of our gas and electric distribution networks (linear assets). We will create linear assets as technical objects (such as functional locations and equipment) and store linear data. We will enable creation of maintenance plans for these technical objects which result in notifications, maintenance orders, and measurement documents. We will enable monitoring the condition of our linear assets, identify where there is damage or a defect (using the start point and end point and offset), and manage all types of maintenance tasks (planned, unplanned, and preventative) Currently Consumer Energy lacks spatial visualization and spatial awareness of work and assets impacting requirements for first time quality and impacting the ability to plan, bundle and execute nearby work. The lack of a linear asset management capability affects the full work management value stream resulting in overproduction of asset maintenance activity such as assessments, surveys, and inspections. This project creates value for the company by 1) providing capability in SAP to view assets, notifications, and work orders on a map, 2) providing location awareness in SAP for assets and work, 3) establishing linear asset management capability in SAP for gas and electric delivery networks, 4) enabling end-to-end map-based workflows. The scope of this project encompasses implementation in SAP of the Spatial Asset Management module. Alternatives considered include: 1) A Cloud-based individualized asset integration between GIS and SAP. This alternative was not selected as it proves ineffective in addressing needs of the end-to-end work management value stream while increasing the technical footprint of customization. There are also performance concerns with cloud to on-prem integrations. 2) Work group centric approaches to viewing work on a map. This alternative was not selected as it does not support standard operation thru the entire work management value stream. 3) Do nothing. This alternative was not selected as this would enable increasing costs and inefficiencies in gas and electric work management. 4) The alternative to implement the Spatial Asset Management module in SAP was chosen as it expands use of a core technology investment, supports current investment in our work management value stream, and is compatible with our GIS technology.	2024-05-10	2026-06-26	-1.00	3,189,155	161,683	ROM	206,606	-	-	126,552	51,499	-	28,555	34,087	-	-	25,982	8,105	-	-
134	2025	Work Management Scheduling Analytics and Reporting	Software(Intangible)	Electric & Gas Shared	The project will implement a solution to optimize the key components of the Distribution Planning and Scheduling functions including forecasting, work order intake, resource identification, work schedule creation, work execution preparation and associated work order analytics. The' Distribution Planning, Scheduling and Administrative Support & Financial Services (Work Plan Strategy) teams are utilizing manually intensive work methods,' systems and forecasting models. These inefficiencies impact the creation of' work plans, lack predictive capacity planning, and reduce productivity of' operational partners. The project will add value by providing: (1) streamlined' processes tied to workload review and preparatory' analysis,' leading to increased focus on workload priority, execution of work' and a reduction of human struggle;' (2)increased accuracy in crew work schedules, leading to improved customer satisfaction and on-time delivery of customer requested work, system integrity work, and gas compliance requirements; (3) reduced manual' scheduling steps, reporting and analysis of data associated with work management processes and' systems; thereby' minimizing the risk of human error hours spent' developing and updating crew' route sheets;' and (4) improved forecasting accuracy,' that results in greater transparency into the weekly schedule and associated' work' plan. The project scope includes:' (1) implement a solution to facilitate the review of work orders' from various engineering organizations, allowing for streamlined check-in of work orders; (2) implement a' scheduling tool that utilizes predictive modelling and advanced analytics and streamlines daily schedule modifications;' (3) enhance' integration with the Arcos application to bring in employee capacity and availability information;' (4)' integrate with SAP to retrieve work order data and manage record keeping requirements;' (5) enhance' integration with Field Service Suite (FSS) for quicker access to MISS DIG information and work order' assignments;' and (6) implement associated analytics and reporting. Three primary alternatives were considered for this project: (1) Automating manual data movement across excel and current systems through Robotic Process Automation. This option was not chosen because it will not meet base requirements and will not provide desired insights into whether the schedule supports operating priorities and metrics, financial scenarios, first time completion of work, and daily goals; (2) Integrating an off-the-shelf planning and scheduling system. This option is not preferred due to associated up-front and long-term costs; and (3) Implementing a hybrid of an off-the-shelf planning component with custom built scheduling functions. This is the preferred option to provide a more cost-effective and targeted fit for the organization.	2022-01-26	2025-08-25	-1.00	1,932,038	197,370		16,300	-	(81)	3,349	10,117	-	2,916	12,704	-	98	-	12,605	-	-
135	2025	20% ROM Adjustment - Electric & Gas Shared	Software(Intangible)	Electric & Gas Shared	This is for the 20% ROM Adjustment for IT projects.							(41,321)	-	-	(31,021)	(10,300)	-	-	-	-	-	-	-	-	-
136	**SUBTOTAL**	**2025 Electric & Gas Shared**										**1,229,978**	**(20,899)**	**(3,713)**	**788,521**	**373,433**	**-**	**92,637**	**1,165,685**	**25,281**	**7,074**	**754,816**	**378,297**	**-**	**217**
137	2025	Application Currency-Gas-Capital	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	31,500	-		31,500	-	-	22,638	-	-	8,862	-	-	-	-	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
138	2025	Application Currency-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	49,912		-	-	-	-	-	-	-	49,912	-	-	25,112	24,800	-	-
139	2025	Gas Compression Digital Work Management	Software(Intangible)	Gas	Prior period adjustment							823	-	-	-	-	-	823	-	-	-	-	-	-	-
140	2025	Gas Distribution ProjectWise	Software(Intangible)	Gas	The Gas Storage Probabilistic Risk Model project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas storage wells. The current Gas Storage model is a relative risk model that equates risk to dollars from input information using qualitative data and ordinal scales to produce a risk ranking. In simple terms, the relative risk model is not capable of creating a statistically significant result. The risk assessment used in the current model provides a ranking for likelihood, consequence, and risk that is relevant only in comparison to other rankings. While the outputs provide a sense of relative risk when comparing one well to another, the ranks do not provide anything qualitative that relates to the failure of wells. Also, the current transmission model does not meet the requirements of the MPSC, as indicated in a letter of noncompliance (dated January 15, 2019), and rule-making for storage systems has historically followed transmission rule-making. Lastly, the current model introduces risk in PHMSA findings as a non-probabilistic model. Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed well improvement projects and improved targeted plug and abandonment projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events, and (2) configure multiple data sources, to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed financial and strategic decisions based on improved quality inputs and mitigate the risk of PHMSA findings. The probabilistic model will rank the wells in risk-associated dollars making it easier to interpret risk results for the purpose of making business decisions. Furthermore, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has identified the probabilistic risk model as a potential best practice for storage operators over other risk models (PHMSA Pipeline Risk Modeling white paper, dated May 9, 2018), so the project adds value by aligning with industry best practices. The project scope encompasses the implementation of a probabilistic risk model for gas storage wells. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered include: (1) continue the use of the relative risk model, but invest in substantial effort to continually manually managing data inputs and quality checks (2) implement a custom, Excel-based probabilistic risk model through a consulting effort; (3) implement an on-premise probabilistic risk model, and (4) implement a cloud-based model. The first alternative was not selected because although the manual effort is possible, it is becoming increasingly difficult to complete as the model utilizes more data sources that need to be annually updated and validated. The second alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". The on-premise solutions analyzed are not mature and have not been widely tested with transmission operators, so alternative three was not selected. The fourth alternative of implementing the cloud-based probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven technology, and an ongoing vendor support and upgraded model.	2022-05-17	2025-10-27	-1.00	1,386,751	267,874		196,666	-	-	44,242	95,069	-	57,356	11,000	-	-	11,000	-	-	-
141	2025	Gas SCADA Software Solution	Software(Intangible)	Gas	The Gas Supervisory Control And Data Acquisition (SCADA) software solution project will replace the current Gas SCADA Software with a more standardized software package enabling the Company to more efficiently meet Federal and MPSC requirements. The current Gas SCADA software solution was originally implemented in 2000 and was based on the gas system requirements at that time. While the solution has been maintained since its implementation, the Company's gas system has outgrown the current capabilities. As the solution ages, there is increased effort required to address obsolete application and database software architecture, and enhancements to the system are limited. To address the capability gaps, custom interim fixes and integrations have been developed where each requires maintenance and support. This environment adds complexity and cost to solution upgrades and troubleshooting issues. The current Gas SCADA solution will limit the ability to invest in digital solutions for increased system health monitoring and preventative maintenance capabilities due to the complexity to integrate these future capabilities with it. The project will add value by: (1) reducing risk of non-compliance by improving the ability to document and follow State and Federal requirements, improving customer safety; (2) improving efficiency and reliability when performing routine software upgrades, because standard out-of-the-box software has less risk of breaking during upgrades, as opposed to more custom-coded software; (3) reducing maintenance costs due to fewer individual software programs and less custom code; (4) improving Gas Control management capabilities that support the Federal and MPSC requirements for gas pipeline and Gas Distribution companies; (5) improving reliability by using proven gas industry standardized software with configuration features, rather than a fully customized system that has the possibility of being impacted by the next version update; (6) purchasing standard, out-of-the-box software that meets a high percentage of requirements and avoids multiple custom applications and specially coded programs to achieve results; (7) improving Natural Gas Delivery Plan efficiencies; and (8) providing a basis for capturing data required for use in computer-based preventative maintenance programs and more predictive technologies. In addition, implementing industry-specific software helps the collective gas industry users to encourage the vendor development of future version enhancements, which adds more value to gas industry users. The comprehensive Gas SCADA system is used to monitor and control the operating conditions of the transmission and distribution gas systems. The Gas SCADA system includes remote terminal units (RTUs), field devices (i.e. valves, meters, odorizers), and computers running SCADA software. This scope covers the Gas SCADA software solution only. The project scope includes the following: (1) significant planning, including consulting assistance, to define the implementation strategy for the effort, given the magnitude of the technology effort; (2) selection and implementation of a new Gas SCADA software solution; (3) planning of a phased rollout of new hardware and software; and (4) retirement and decommissioning of the legacy gas SCADA solution and equipment once the new system is fully tested and operational. Alternatives considered include: (1) continue to maintain the current solution, at the risk of increasing reliability issues that result in controlling and monitoring the Company's gas system; (2) invest in enhancing the existing Gas SCADA software solution which would introduce additional custom development and more specialized functions that may not be supported in future vendor releases; and (3) replace the solution with a gas SCADA software solution that meets requirements to support the Natural Gas Delivery Plan. Alternative three has been selected to ensure sustainability for this critical solution. The current legacy system is operating at well beyond its original design specification, so the potential points of failure are not fully known or understood. If the SCADA project is not completed, the legacy system could become unstable and impact Gas Control's ability to operate and monitor real-time system conditions, maintain safe operations, and compliance with regulatory requirements. It could also impact the ability to commission new facilities which require remote monitoring or control or cause the need for 24/7 manual field monitoring of certain facilities.	2022-08-12	2026-04-26	-1.00	13,294,693	2,321,020		6,632,043	1,978,263	58,487	507,990	3,429,500	-	657,803	625,170	382,856	-	92,379	130,324	-	19,611
142	2025	Gas Storage Probabilistic Risk Model	Software(Intangible)	Gas	The Gas Storage Probabilistic Risk Model project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas storage wells. The current Gas Storage model is a relative risk model that equates risk to dollars from input information using qualitative data and ordinal scales to produce a risk ranking. In simple terms, the relative risk model is not capable of creating a statistically significant result. The risk assessment used in the current model provides a ranking for likelihood, consequence, and risk that is relevant only in comparison to other rankings. While the outputs provide a sense of relative risk when comparing one well to another, the ranks do not provide anything qualitative that relates to the failure of wells. Also, the current transmission model does not meet the requirements of the MPSC, as indicated in a letter of noncompliance (dated January 15, 2019), and rule-making for storage systems has historically followed transmission rule-making. Lastly, the current model introduces risk in PHMSA findings as a non-probabilistic model. Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed well improvement projects and improved targeted plug and abandonment projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events, and (2) configure multiple data sources, to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed financial and strategic decisions based on improved quality inputs and mitigate the risk of PHMSA findings. The probabilistic model will rank the wells in risk-associated dollars making it easier to interpret risk results for the purpose of making business decisions. Furthermore, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has identified the probabilistic risk model as a potential best practice for storage operators over other risk models (PHMSA Pipeline Risk Modeling white paper, dated May 9, 2018), so the project adds value by aligning with industry best practices. The project scope encompasses the implementation of a probabilistic risk model for gas storage wells. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered include: (1) continue the use of the relative risk model, but invest in substantial effort to continually manually managing data inputs and quality checks (2) implement a custom, Excel-based probabilistic risk model through a consulting effort; (3) implement an on-premise probabilistic risk model, and (4) implement a cloud-based model. The first alternative was not selected because although the manual effort is possible, it is becoming increasingly difficult to complete as the model utilizes more data sources that need to be annually updated and validated. The second alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". The on-premise solutions analyzed are not mature and have not been widely tested with transmission operators, so alternative three was not selected. The fourth alternative of implementing the cloud-based probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven technology, and an ongoing vendor support and upgraded model.	2023-04-10	2026-12-28	-1.00	1,525,310	116,984		-	-	-	-	-	-	-	1,212	-	-	36	1,176	-	-
143	2025	Gas T&D Historian	Software(Intangible)	Gas	The Gas Transmission and Distribution (T&D) Historian project will replace the current historian for Gas T&D, eDNA (a traditional Supervisory Control and Data Acquisition (SCADA) historian product), and migrate to the standard OSIsoft PI enterprise historian system. The PI system is a suite of software products that are used to collect, store, view, analyze, and share operational data with system users and subject matter experts. The historian for Gas Transmission and Distribution resides on a decades old platform and is not the Company's historian standard. Data access is cumbersome, requires multiple tools to access it, and does not provide for the storing, analysis or visualization of operational data in a timely manner with appropriate change management control. With the implementation of smart meters, the Company standardized on the more robust OSIsoft PI historian which is used for: (1) Renewable Generation; (2) Electric Transmission & Distribution; and, (3) Smart Energy. The Gas T&D historian has yet to be migrated to OSISoft PI, and the eDNA gas data has limited accessibility and usability in its current state and is no longer supported by the vendor. In addition, maintaining the older platform along with the new system requires duplicate resources and skills. This project will create a more accessible and centralized data source with better controls that can be leveraged as the system of record. The project will add value for both Gas Engineering and Gas Operations organizations within the Company by: (1) informing decision-making based on real-time data; (2) improving real-time situational awareness of Operations personnel for information that does not need to be monitored by Gas Control; (3) improving the ability to respond to abnormal situations that do not required immediate intervention through that direct communication to Operations personnel; (4) providing information for the development of proactive analytics to reduce potential catastrophic events; (5) streamlining data access through visualization and analytics; and (6) reducing the waste of using multiple interfaces to interpret data. From an IT perspective, consolidating to one standard historian platform will result in savings in hardware, software, maintenance, resources and training. This scope of this project includes: (1) replacing the eDNA Gas T&D historian, a traditional SCADA historian, and migrating to the enterprise historian, OSIsoft PI; (2) developing analytics, visualization and reporting capabilities to support tracking of metrics and making operational decisions; (3) replacing the decades-old Microsoft Access-based custom Daily Gas Reports solution; and (4) retiring the legacy Gas T&D eDNA system (hardware and software). An alternative considered for the project was to upgrade eDNA Gas Historian to the latest version. This option was not selected because it requires a significant investment, and does not meet analytics, reporting, usability and accessibility needs as well as the software owner has announced the sunset, for this software. Furthermore, the Company standard for historians is OSIsoft PI and maintaining two platforms results in redundant efforts in training, support personnel and technology. The option to replace eDNA with the Company standard OSIsoft PI historian was selected to eliminate duplicate training, support personnel, and technology, and to leverage the more robust data analytic capabilities in the OSIsoft PI tool set. Currently the plan is to implement the Gas T&D Historian with the Gas SCADA Software Solution to eliminate the need to have duplicative historians while the Gas SCADA Software Solution is being implemented. If this project is not completed, an interruption of our operational data reporting capabilities could occur and could result in a non-compliance and could potentially interrupt certain volumetric accounting and billing functions.	2024-02-09	2026-04-26	-0.86	867,356	139,008		360,475	-	-	90,445	201,774	-	68,256	20,735	-	-	8,111	12,624	-	-
144	2025	Product Family Enhancements-Gas-Capital	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	(55,351)	140,464		(55,351)	-	-	24,864	(83,485)	-	3,271	140,464	-	-	26,674	113,790	-	-
145	2025	Product Family Enhancements-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	107,308		-	-	-	-	-	-	-	107,308	-	-	62,539	44,769	-	-
146	**SUBTOTAL**	**2025 Gas**										**7,166,156**	**1,978,263**	**58,487**	**690,179**	**3,642,857**	**-**	**796,370**	**955,802**	**382,856**	**-**	**225,851**	**327,483**	**-**	**19,611**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)
147	2025	ARP-Infoblox Refresh	Network	IT/Digital Foundation	This project will replace the three legacy core components, Domain Name System (DNSÂ), Dynamic Host Configuration Protocol (DHCPÂ), and Internet Protocol Address Management (IPAMÂ) also referred to as DDI (DNS, DHCP, IPAMÂ) environment with a modern, vendor supported system. Infoblox is the DDI solution that the Company uses to enable seamless network communications across critical systems. When Infoblox Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. Consumers Energy also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. The value of this program includes: (1) enabling the Company to efficiently manage and control their networks; and (2) providing Domain Name System (DNSÂ), Dynamic Host Configuration Protocol (DHCPÂ), and Internet Protocol Address Management (IPAMÂ). The scope of this project includes the replacement of DNS, DHCP and IPAM assets on a 5-7 years refresh cycle. The alternative considered was to continue operating on existing Infoblox equipment past the vendorâ„¢s end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes. The alternative to replace the existing Infoblox equipment with the latest hardware and software provided by the vendor was selected to avoid these risks and continue a regular refresh cycle.	2025-01-01	2025-12-31	-1.00	468,296	53,500		225,859	-	186,901	27,998	-	-	10,961	20,340	-	-	20,340	-	-	-
148	2025	ARP-Local Area Network	Network	IT/Digital Foundation	This project will upgrade the Company's entire LAN and a significant portion of the Wireless Local Area Network (WLAN). At some Company locations, LAN equipment has been in service since 2011.' If the LAN/WLAN hardware and software is not routinely refreshed, the Company will lose the manufacturer support needed for equipment bug fixes, security vulnerability patches, and enhancements.' In addition, aging equipment cannot accommodate the increasing demand for wireless devices necessary to perform day-to-day operations that' rely on wireless-enabled devices, such as rugged field devices, cell phones, barcode scanners, tablets, and other mobile devices.' As equipment ages, it is at risk of higher failure rates, which increases the risk of unplanned outages.' In the event of unplanned outages, business areas would not be able to access services on the corporate network including email, SAP, internet, and phones. The project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor supported, thereby ensuring support for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; (6) increasing user productivity through a higher performing wireless network, which increases the productivity and efficiency of office and field employees' serving customers; and (7) improving support for wireless Internet Protocol (IP) phones, Internet of Things(IoT) and field devices. The project scope includes: (1) refreshing the LAN equipment and software across all Company sites; (2) identifying the required features for the new equipment; (3) implementing the new equipment according to industry best practices; (4) replacing wireless network with upgraded infrastructure and verifying wireless coverage is as expected; and (5) collecting wireless survey data for all Company locations in order to design improved wireless network coverage. The alternative considered was to continue operating on the existing platform past the vendors end-of-support date. The vendor support period ended in May of 2021, and paying for extended support is not an option offered by the vendor. The risk inherent in not refreshing the platform is a lack of vendor support resulting in an absence of software bug fixes, security updates, and break fixes. The Company chose to replace the existing equipment with the latest hardware and software available, following a five year refresh cycle.	2025-01-01	2025-12-31	-1.00	597,460	64,276		288,155	31,327	(63,930)	161,535	110,296	-	48,926	24,437	-	11,196	11,849	1,233	-	160
149	2025	ARP-Radio	Network	IT/Digital Foundation	This project will refresh hardware to include; 800Mhz Radios and infrastructure, cellular modems, plant radios and systems, cellular amplification devices and vehicle consoles in service trucks.' This equipment supports mission critical voice and data communications for plant and field service personnel and dispatch personnel.' 800MHz radios are upgraded on a 10-year lifecycle basis. Plant radio systems are upgraded on a scheduled 7-year lifecycle basis.' Cellular modems are refreshed on a 5-year life cycle basis.' Amplification systems are refreshed on a 10-year life cycle. Vehicle consoles are typically retired with the vehicle but are salvaged for reuse in new vehicles when possible. 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing. The refresh of these subscriber units in a proactive manner is critical to providing service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety. This project creates value for customers and the Company by: (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between Company dispatch locations and crews in the field; (4) ensuring the safety of personnel working in higher risk workspaces by replacing equipment with units that contain intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure. The project scope consists of: (1) scheduled replacement of radios and modems and consoles; and (2) installing additional radios modems and console assets to satisfy growth requirements; and (3) scheduled replacement of out of date cellular and radio boosters. The alternatives considered included: (1) Replace the existing units with new units from other radio and modem manufacturers; (2) purchase new radio subscriber units from existing manufacturers.' Option 2 was not selected because the Company now uses a standards-based radio system allowing for multiple radio manufacturer options. Option 1 was selected to allow for a competitive bidding process that will provide the most cost-effective radio that will meet the needs of users.	2025-01-01	2025-12-31	-1.00	1,614,916	114,490		778,874	-	681,393	9,951	94,457	-	(6,927)	43,528	-	25,672	2,734	5,743	-	9,379
150	2025	Application Currency-IT/Digital Foundation-Application Platforms-Capital	New Computers / Hardware	IT/Digital Foundation	The Application Platforms initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Application Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	19,176	24,326		6,027	-	-	4,427	-	-	1,600	9,249	-	-	9,242	6	-	-
151	2025	ARP-Collaboration	New Computers / Hardware	IT/Digital Foundation	This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment. When Collaboration Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates.' The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by: (1) ensuring that the Company's audio, visual, telephony, and other communications systems are stable and reliable; and (2) retiring the legacy enterprise Avaya telephone systems that have reached end of mainstream manufacturer support. The project scope consists of: (1) annually replacing aging collaboration assets; and (2) installing new collaboration assets to account for evolving business requirements. The following alternatives were considered: (1) refresh visual assets and a portion of the audio assets; (2) refresh a portion of the audio assets only; and (3) refresh visual assets only.' These alternatives were not chosen due to the risk inherent with a partial replacement of assets, which includes: (1) a reduced supply of equivalent replacement Avaya parts that are no longer being produced; and (2) an erosion of the knowledge technicians possess on discontinued systems.	2025-01-01	2025-12-31	-1.00	1,184,527	523,670		372,297	-	327,374	7,409	35,203	-	2,311	199,097	-	146,052	5,471	47,574	-	-
152	2025	ARP-Field Device Asset Management (FDAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility. When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with Security updates as equipment becomes obsolete.' The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing field devices prior to increasing hardware failures; and (2) allowing field workers to complete their job tasks. The project scope consists of replacing field device assets according to the four-year refresh cycle. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for field devices; and (2) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the assets that need refreshing in future years based on the number of devices that were not replaced during the four year refresh cycle; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle to alleviate these concerns.	2025-01-01	2025-12-31	-1.00	2,457,036	5,000		772,246	-	765,548	448	6,070	-	180	1,901	-	1,930	-	(29)	-	-
153	2025	ARP-Operational Technology Support Common	New Computers / Hardware	IT/Digital Foundation	The Asset Refresh Program (ARP)-Operational Technology (OT) Support Common project will replace dated and obsolete servers shared by Electric and Gas on a rotating five-year refresh schedule. When Operational Technology Assets that are used to ensure the safety and reliability of technology that supports critical electric operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates and run the risk of failure if the Company does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical electric infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure.	2025-01-01	2025-12-31	-1.00	1,833,732	161,877		576,342	-	522,906	19,904	26,212	-	7,320	61,545	-	-	61,545	-	-	-
154	2025	ARP-Operational Technology Support Gas	New Computers / Hardware	IT/Digital Foundation	The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule. When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical gas infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.	2025-01-01	2025-12-31	-1.00	153,488	25,412		153,488	64,451	72,641	8,646	4,830	-	2,920	25,412	-	-	10,743	14,260	-	409
155	2025	ARP-Printer Asset Management (PAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one. When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving the dependability of these printer devices for employees;' (2) averting increased costs due to hardware repairs; and (3) ensuring compatibility with enterprise print applications. The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years is assessed monthly to ensure it is not run-to-failure, including running the asset to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.	2025-01-01	2025-12-31	-1.00	1,611,629	5,000		506,535	-	491,083	17,846	261	-	(2,656)	1,901	-	1,137	719	38	-	7
156	2025	ARP-Server and Storage	New Computers / Hardware	IT/Digital Foundation	This project will replace or augment server and storage infrastructure for the Company. When Server and Storage Hardware Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be more challenging to keep current with Security updates.' The Company also runs the risk of failure of these assets impacting customer interactions and business operations' if it does not adhere to a regular five to seven-year refresh cycle. This project creates value for the Company through: (1) improved stability and availability of business-critical applications by proactively replacing server and storage hardware assets prior to the likelihood of increasing hardware failures; and (2) ensuring that adequate resources are available to support application demands after five to seven years of actual use. The scope of this program encompasses: (1) replacement of server and storage hardware assets; and (2) installation of additional new computers and storage capacity to account for evolving business requirements. The alternatives considered were to purchase extended maintenance, move some of these assets to the cloud with the Digital - Hybrid Cloud and Data Center Migration project, or to replace the assets on the current cycle. The option to purchase extended maintenance was not selected because full support would not be offered after seven years, and maintenance costs would increase. The preferred option is to move some of these assets to the cloud in the Digital Hybrid Cloud and Data Center Migration project while refreshing the remainder using the five- to seven-year cycle as it is the most cost-effective option.	2025-01-01	2025-12-31	-1.00	373,780	22,132		117,479	71,665	38,770	2,183	3,333	-	1,528	8,415	-	-	8,407	8	-	-
157	2025	ARP-Workstation Asset Management (WAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates. When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks. The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four year refresh cycle ; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.	2025-01-01	2025-12-31	-1.00	7,882,461	89,935		2,477,458	-	2,448,414	20,357	3,719	-	4,967	34,193	-	28,106	142	38	-	5,907

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)
	SPEND YEAR	PROJECT NAME	FERC CATEGORY	BUSINESS CATEGORY/ PRODUCT LINE	PROJECT SYNOPSES	PROJECT START DATE	PROJECT END DATE	COST/ BENEFIT RATIO	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	TOTAL COMPANY EXPECTED PROJECT O&M COSTS	ESTIMATE TYPE	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS	GAS PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-GAS	MATERIAL COSTS-GAS	LABOR COSTS-GAS	CONTRACTOR COSTS-GAS	NON-LABOR OVERHEAD-GAS	NON-LABOR OTHER-GAS
158	2025	Digital-Hybrid Cloud and Data Center Migration	New Computers / Hardware	IT/Digital Foundation	This project will optimize data center assets and asset replacement project purchases by migrating or retiring applications out of existing Company and co-location data centers into cloud services, reducing operational costs for running IT services and leveraging increased cloud capabilities to improve the efficiency, quality, and speed-to-market of customer-facing and internal IT services. The technology currently deployed in the Company's data centers meets many customers' needs today. However, the pace of digital transformation is increasing rapidly, and requirements for applications are evolving faster than the technology in the Company's data centers can respond in a cost-effective manner. These data center constraints lead to longer implementation times, missing capabilities, or reduced functionality in the applications that the Company can deploy. This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective combination of data centers and public cloud services. Specifically, by migrating applications to cloud services, the project will: (1) reduce capacity, hardware maintenance, and security device costs at the co-location data center; (2) reduce hardware maintenance and security device costs at the production data center; (3) enable the ability to scale infrastructure quickly up or down without costly up-front hardware purchases; (4) reduce application risk through cost-effective, scalable infrastructure redundancy and availability; (5) reduce ongoing server and storage asset replacement costs; (6) reduce ongoing networking equipment replacement costs; (7) reduce operational support costs; and (8) enable the use of a vast array of cloud services to support Company applications. The project scope includes: (1) promoting the robust main co-location data center to become the primary data center for on-premise IT services; (2) demoting the Company's production data center to the disaster recovery data center for on-premise IT services; (3) analyzing applications for migration to cloud or retirement; (4) migrating applications from on-premise to cloud; (5) transforming applications to use cost-effective cloud services; (6) altering network architecture and deploying base infrastructure to allow each location (on-premise or in cloud) to function independently; (7) deploying cloud and on-premise cost management tooling and processes; (8) simplifying and optimizing backup and disaster recovery resources and processes using cloud services; (9) implementing additional automation for application deployment and management; (10) changing the operations model for support of cloud-based applications; (11) educating and increasing the skills of IT and other employees in leveraging public cloud services; and (12) transforming IT to become the broker of cloud services for the Company. Alternatives considered included: (1) migrating to public cloud services faster. This alternative was not chosen because the Company's ability to absorb new technologies coupled with the investments the Company has already made in data center equipment would prevent a faster move from being efficient and effective, introducing additional financial risk; (2) migrating to public cloud services slower or not at all. This alternative was not selected because delaying public cloud services and capabilities coupled with requiring an extension of the life of existing data center equipment creates increased financial and operational risk; and (3) contracting with an outside vendor to provide cloud services to run applications for the Company. This alternative was not selected because industry information shows the option as not yet cost effective or not providing a maturity level that the Company would be able to easily consume with limited in-house experience and expertise in public cloud. The alternative to migrate to a hybrid cloud and data center model was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2023-04-02	2026-12-31	0.18	9,482,277	2,253,546		1,152,161	-	-	231,359	866,122	-	54,681	297,103	8,523	-	90,670	197,910	-	-
159	2025	SAP HANA Database Migration	New Computers / Hardware	IT/Digital Foundation	In preparation for SAP's planned end of support for its Business Suite product in 2027, the Company will migrate its existing SAP databases from Oracle to SAP HANA in advance of the required move to S/4 HANA. The Company's SAP applications currently utilize Oracle's relational database management system as their underlying database storage technology. SAP has informed its customers that standard support for its legacy Business Suite (aka ECC) product will end in 2027, along with support for all non-SAP database platforms. SAP has also informed customers that the future direction for their enterprise solution is S4/HANA, a solution built explicitly for their HANA database platform. To prepare for these upcoming events, the company will migrate all of its SAP databases off of Oracle and onto SAP HANA. This project lays the groundwork for the company's eventual shift to SAP's HANA-based solutions by: (1) proactively migrating SAP databases to a database technology that is fully supported by SAP beyond 2027; and (2) mitigating the risk of a complete loss of support for the current Oracle database technology in 2027. Project scope includes: (1) procurement of HANA software licensing to cover all migrated SAP applications; (2) data migration for all SAP applications from the Oracle database to SAP HANA; and (3) implementation of new application support policies, procedures and tools required to manage the newly migrated SAP HANA applications. Given SAP's announcement regarding the end of support for its ECC product in 2027, all customers running SAP on database software other than HANA will also lose support for their associated database software in 2027. SAP is offering no other options for databases other than HANA beyond 2027. While there is no alternative to the HANA database for SAP going forward, the Company has considered multiple options: (1) Perform a direct migration from SAP Business Suite on Oracle to S4/HANA. A direct migration to S4/HANA brings greater operational risk to the Company as both the underlying database technology and the SAP application's functionality would change simultaneously, so this alternative was not selected. (2) Remain on the current SAP Business Suite product but competitively bid support services to a third-party provider instead of SAP. This alternative was not selected because moving to a third-party support model forces the Company to remain on outdated SAP software and eliminates any possibility of benefitting from new business functionality provided by S4/HANA. It will also require the Company to accept significant risk due to the fact that SAP security patches, application patches and upgrades will not be available upon termination of the SAP maintenance agreement. (3) Migrate to SAP's Software as a Service (SaaS) implementation of S4/HANA. This alternative was not selected because an S4/HANA SaaS migration is a much more disruptive option as the Company's business processes must be adjusted to accommodate functionality differences between ECC and S4/HANA. The risk of negative business impact is significantly greater than simply changing the underlying database technology. (4) Migrate the SAP databases to HANA prior to implementing S4/HANA. This alternative was selected as it gives the Company several years to solidify its HANA database infrastructure before introducing the substantial business process changes required with S4/HANA.	2023-07-27	2026-01-02	-0.83	8,331,478	1,411,018		974,009	-	-	215,492	694,654	-	63,864	148,243	-	-	18,820	129,423	-	-
160	2025	Application Currency-IT/Digital Foundation-Application Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Application Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Application Platforms area are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	134,755		-	-	-	-	-	-	-	51,233	-	-	25,268	25,965	-	-
161	2025	Application Currency-IT/Digital Foundation-Infrastructure Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Infrastructure Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Infrastructure Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Infrastructure Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	33,674		-	-	-	-	-	-	-	12,803	-	-	12,795	8	-	-
162	2025	AxWay Secure Transport 2024 Upgrade	Software(Intangible)	IT/Digital Foundation	Axway SecureTransport is the Companyâ„¢s multi-protocol Managed File Transfer (MFTÂ gateway for securing, managing, and tracking data file flow for our business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability.As Axway Secure Transport is the public-facing managed file transfer gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions.The value this project brings Consumers Energy and customers includes: (1) Addressing known problems and limitations of the current software and hardware platforms. (2) Ensuring continued secure, scalable, and critical data transmission services running through Axway continue functioning. (3) Creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) Merging/streamlining the company data file transfer services reducing cyber-attack vectors and creates a more easily maintained and monitored security model.The scope of this project includes (1) Upgrading the application and database to the current released and supported versions. (2) Refreshing the underlying application infrastructure by upgrading to the latest operating system and hardware platforms. (3) Enable and test expanded Electronic Data Interchange (EDI) functionality.Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. Nor would the waste elimination benefits of using the upgraded Axway platform to start consolidating EDI for CE be realized. (2) Replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a cloud or hybrid cloud solution. In addition to significant platform, application, implementation and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) Upgrading the platform. This provides the Company the most cost-effective alternative, balancing costs, known risks, and even growing business capacity and productivity.	2024-02-27	2025-08-25	-1.00	-	111,661		-	-	-	-	-	-	-	13,613	-	-	3,099	10,514	-	-
163	2025	BizTalk Services Migration and Retirement	Software(Intangible)	IT/Digital Foundation	The Microsoft BizTalk application transfers data from one location to another with internal and external software systems and assists with securely communicating sensitive financial data. The project will migrate the BizTalk application services to other existing applications resulting in the retirement of the Biztalk application. Microsoft announcing end of life for this application a replacement is needed to avoid business impact. The current version of Biztalk running at Consumers Energy is already out of mainstream support. if major issues occur within the application, it could disrupt critical business processes. This includes financial concerns such as payroll, account receivable, and other essential operations. Ensuring continuity is vital. This project creates and maintains value for the Company and its customers by migrating the Biztalk services to supported applications already present in the Consumers Energy environment that do have not end of life concerns and can provide the same functionality Biztalk was providing to meet business requirements. This project creates and maintains value for the Company and its customers by: (1) Migrating all current processes from the current application to replacement products. The secure file transport processes will be migrating to the existing Axway Secure Transport platform. The Electronic Data Interchange processes will be migrated to the existing SAP platform. (2) Ensuring current and future compliance with Information Security critical and sensitive data initiatives, such as patching, data encryption, and authentication requirements. (3) Guarantees 7x24x365 vendor support is available to the Company during significant outages by remaining on a version supported by the vendor. Alternatives considered included: (1) Using Azure native services to recreate all of the processes and services Biztalk provided. This was cost prohibitive due to time and effort this would take. (2) Purchasing a replacement product. Not seen as optimal as existing applications are already implemented within Consumers Energy that provide the same capability. (3) Leverage existing applications within the Consumers Energy application portfolio. This option was selected as lowest cost option and also to meet application rationalization goals to eliminate applications that are providing duplicate functionality.	2025-02-28	2026-06-28	0.00	-	261,866		-	-	-	-	-	-	-	99,560	-	-	40,979	58,581	-	-
164	2025	Data & Analytics Platform Rationalization	Software(Intangible)	IT/Digital Foundation	This project will optimize the Data & Analytics system landscape by creating connections, migrating data into the Data Lake in the cloud, and building visualizations from the data in the Data Lake. The IT Data & Analytics legacy systems (SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS) are outdated, inefficient, and becoming duplicative in nature with the introduction of DL 2.0. If these legacy systems are not retired, they will continue to cost the Company money as major investments are needed to maintain and support them. This platform rationalization project creates value for the Company and its customers by reducing the total cost of ownership associated with maintaining and supporting legacy systems including licensing fees, maintenance costs, infrastructure, and support resources. The project scope includes: (1) the assessment of the existing Data & Analytics platforms including SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS; (2) inventory of data and reports still being used by stakeholders; (3) determination of migration strategy; (4) data migration to the Azure Data Lake; (5) report migration to Power BI; (6) organization change management; and (7) the retirement/decommissioning of the legacy platforms and applications. Alternatives considered: (1) upgrade legacy systems in place (on-premise). This alternative was not selected because this is costly and misaligned with the Company's cloud strategy. (2) Lift and shift these on-premise systems to the cloud through the Hybrid Cloud Transformation Program. This alternative was not selected because it would duplicate the work being done as part of the DL 2.0 project and would not provide the same efficiencies that DL 2.0 introduces. (3) Migrate all data sources to DL 2.0 and retire legacy systems. This alternative was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2025-04-07	2026-12-31	0.22	10,423,047	1,336,943	ROM	976,487	-	-	447,456	342,646	-	186,384	12,715	-	-	4,512	8,203	-	-
165	2025	Digital-Cloud Data and Analytics Platform	Software(Intangible)	IT/Digital Foundation	This project will provide Artificial Intelligence (AI) and analytics in the cloud across the business to uncover new paths to value, faster, allowing the organization to make better decisions and enable delivery outcomes for the NGDP, Electric Grid Integration, customer programs, and other business needs. The project will additionally establish data governance roles and responsibilities, processes, and implement tools to support best practices across the enterprise. Consumers Energy faces several challenges in the ongoing data modernization journey, which include: (1) legacy data platform operations; (2) long lead times for data exploration and identification of data assets; (3) lack of data ownership and quality, (4) limited data governance best practices across data ownership, access control & security; and (5) heavy dependence on IT for Business Intelligence reporting and analytics. The project will add value by providing data to support business needs by: (1) optimizing data platform operations costs with workflow-based platform infrastructure deployment using pre-built modules and templates; (2) reducing data operations build complexity and data engineering costs through automation; (3) improving data quality and governance that leads to reduced costs of data provisioning, data duplication, and improved data accuracy; (4) streamlining data access requests, management, and governance to reduce risks and support efficiency; and (5) increasing the speed to deliver new data and data capabilities, improving productivity, and improving access to data. This project is an enabler for business areas to use these capabilities to build analytic models for asset and labor optimization that is anticipated to more than offset the project costs. The project scope includes: (1) developing and modernizing the analytics platform in the cloud to allow Consumers Energy to implement new use cases leveraging simplified infrastructure configurations and automated deployment processes; (2) build and deploy data management capabilities, controls, catalog, assets, and data flow; (3) developing data ordering workflows and data access management controls; (4) prioritization and new datasets; (5) simplifying infrastructure configuration; (6) automating deployment processes; (7) enabling data governance tools and processes. Alternatives considered include: (1) Address current pain points in existing on-premise and cloud analytics platforms. This alternative was not selected because the existing platforms requires new investment in licensing and infrastructure, delivery for new capabilities cannot keep pace with demand, still requires investment to address legacy system technical obsolescence, and business areas would not realize asset and labor optimizations. (2) Continue to utilize existing on-premise and cloud analytics platforms. This alternative was not selected because it would not address the current pain points in the existing on-premise and cloud analytics platforms, limiting the Companyâ„¢s ability to have required data and analytics capabilities to improve processes and realize asset and labor optimizations. (3) Implement a new data and analytics platform in the cloud. This alternative was selected because it provides improved analytics capabilities, faster access to data that is critical to improve business process, and reduces technical obsolescence.	2023-04-17	2025-08-25	-1.00	12,190,520	1,306,857		(55,948)	-	-	-	(55,953)	-	5	17,885	-	-	882	17,003	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE
166	2025	Enhancements-IT-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	-	
167	2025	Enterprise Print - Scan Suite	Software(Intangible)	IT/Digital Foundation	The projects intent is to upgrade the current Enterprise Print and Capture suite for improved data security and integration for the work from home business partner. The company currently maintains a print and capture suite that will have support ending in 2025. Only high-level security patches will be available after this date. The company maintains a fleet of servers that are scheduled to be upgraded. The current print and capture suite is not compatible with the targeted server operating systems. The lack of internal resources requires the company to continue to absorb increased costs to contract administrative personal. This project maintains cost savings achieved by eliminating wasteful print jobs and further enables a productive, and flexible workforce for business partners working remotely. This project also ensures that the latest data transmission security requirements of are met by the solution. The project scope includes: (1) upgrading the current suite to the latest version; (2) consolidating the amount of print servers in the environment; (3) training for company personal to administer the suite; (4) converting all workflows from the current system; (5) implementing remediation for security vulnerability risk;. (6) integrating device management with Enterprise Configuration Management Database (CMDB) for asset tracking and monitoring. Alternatives considered: (1) migrating to cloud services. This alternative was not chosen at this time due to maturity levels found with subscription services. (2) other print-scan products. This alternative was not selected as it would required new print and scanning specific to another print-scan product.. (3) Print-scan products that were less costs. This alternative was not selected, due to fewer capabilities offered than the current product, which would introduction inefficiencies in the current processes. (4) upgrade current product. This alternative was chosen due to lower overall cost of not requiring new hardware, maturity of current product, and providing same level of capabilities required to support current processes.	2024-03-27	2024-12-31	-1.00	658,588	84,906	
168	2025	Enterprise Service Bus Application 2024-2025 Upgrade	Software(Intangible)	IT/Digital Foundation	This project will upgrade and migrate the Business Works developer application to the next version. Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. In addition, the messaging and event modules within the ESB are currently outside of their standard support windows. While it is possible to continue to get extended support by paying an estimated premium of approximately $80,000 annually, this is just temporary coverage and serves only to delay the need for an upgrade. The value this project provides the Company includes: (1) cost avoidance to avoid extensive payments for extend support purposes; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies. The project scope includes implementing current version of all applications that are part of the ESB application, database version, and required database drivers. Alternatives considered included: (1) Accept the annual $80,000 extended maintenance cost. Given the critical nature of this application, it is not recommended to lose mainstream support for any of the applications involved. Any sustained ESB product deficiency would impact many areas of the Company, such as billing, revenue collection, and remote meter management. The current implementation of the ESB platform was built with 5 years of growth in mind. This alternative was not chosen due to risk to Company operations , and the additional expense. (2) Replace the on-premise upgrade plan to implement a cloud-based solution. A cloud migration would also take longer to complete, which would put the Company at risk of falling outside of the current vendor support window for the products current version. (3) Upgrade the existing application. This option was selected because it best meets the Company needs for the near future by restoring vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.	2024-10-14	2025-12-26	-0.92	-	311,739	
169	2025	HR Support Pack and Business Software Inc Upgrade 2024	Software(Intangible)	IT/Digital Foundation	The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.	2024-03-07	2025-01-31	-1.00	-	529,488	
170	2025	HR Support Pack and Business Software Inc Upgrade 2025	Software(Intangible)	IT/Digital Foundation	The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.	2025-02-05	2025-12-31	-1.00	-	385,097	
171	2025	Kubra 4.0 Upgrade	Software(Intangible)	IT/Digital Foundation	Consumers Energy (CE) has the overarching ambition of serving 1 in 3 Low-to-Moderate Income (LMI) customers (currently 1 in 6), while supporting the achievement of clean energy goals and reduction in Uncollectible Expense (UCX). 37% of CE customers are low to moderate income (LMI). Low Income (LI) accounts for 11% and means they are currently in crisis and unable to pay their bill. Moderate Income (MI) accounts for 26% and means they are one financial crisis away from being unable to pay their bill. As part of the LMI effort, we are prioritizing Behavior Based Direct Messaging: Meet the customer where they are, communicate about assistance options based on behavioral indicators, and increase the likelihood of enrollment into meaningful assistance programs ahead of a crisis, and Kubra 4.0 will aid in the success of those LMI goals. To help a customer avoid a crisis before it happens, we need the ability to proactively communicate to them when their behaviors signal the possibility of an issue, some examples being: (1) A customer misses a payment after record of making payments for several months, (2) The auto-pay system receives an insufficient funds alert from the customers' account, (3) Energy use is high, and a bill is projected to be 25-50% larger than usual, and (4) Localized / seasonal triggers such as heat waves, blizzards, and ice storms. Additionally, (5) it's imperative that we're able to test and modify message content that captures the customer's attention, so that we may drive awareness to programs that offer assistance ahead of a crisis. Kubra 4.0 platform is more flexible and configurable to help experimental design & marketing iterate on who/where/what to cut through digital noise. This project creates value for the Company through improving customer communications by providing Consumers Energy (CE) with access to (1) templates and wording changes that previously required expensive Statement of Work (SOW) engagement to deliver and (2) reduce lengthy wait times to implement these aforementioned Statements of Work (SOWs). Finally, (3) this engagement will also introduce 12 net new alert messages, (4) allow for new means of communication and messaging via the mobile app push notification feature, and (5) provide better outage notification reliability and control via Application Programming Interface (API) data transfer instead of Secure File Transfer Protocol (SFTP) data transfer. The project scope includes: (1) 12 net new alerts including 4 for the Shut-off Protection Plan (SPP), missed payment(s), summer event alerting, winter event alerting, and 5 additional alerts to be detailed out during the plan & design phase of the effort based on current low-to-moderate income (LMI) customer communication needs, (2) new template editor as part of the upgraded platform, (3) New Push Notification option available for mobile app which will enable a fast follow enhancement to push notifications through more than just email and text, (4) all other updates and improvements through Kubra 4.0 including use of APIs and other technical improvements, and (5) a new Application Programming Interface (API) built specifically for CE's outage messages for better reliability - instead of the existing file transfer outage information which is less reliable. The alternatives considered include: (1) continue the expensive Statements of Work (SOW) approach for updating each message template and for bringing on any new messages. This would total approximately ~50k per new alert, for a total of 600k for all 12 net new alerts for this effort if pursued individually. This total is not including costs to any existing message adjustments. This alternative was not considered due to the extra cost and overhead. (2) Purchase a new customer communications system. This option was not selected as it would be extremely expensive to purchase and wouldn't have all of the requirements needed and would be a tremendous amount of labor to reintegrate with our existing communication channels. (3) Utilizing Microsoft Dynamics or Riverstar. This option was not selected as it would be a tremendous amount of labor to reintegrate with our existing communication channels nor would either of the platforms fully support the bandwidth or channels needed to properly communicate out what we send via Kubra today. (4) Implement the upgrade to include the new alerts. This alternative was selected because it will improve customer communications, improve accuracy and speed of message updates, and offer more message options to achieve the Low-to-Moderate income (LMI) 1-in-3 goal as we're able to keep expanding our communication options with the upgrade's features.	2025-03-17	2026-03-27	-1.00	257,253	90,950	
172	2025	Product Family Enhancements-Application Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	503,395	218,557	
173	2025	Product Family Enhancements-Application Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	89,409	
174	2025	Product Family Enhancements-Infrastructure Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software & hardware and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	197,873	139,537	
175	2025	Product Family Enhancements-Infrastructure Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Companyâ„¢s ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companyâ„¢s ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	71,027	

Line No.	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
166	(2,355)	-	(9,256)	(390)	78	-	7,213	-	-	-	-	-	-	-
167	9,987	-	-	-	811	-	9,176	-	-	-	-	-	-	-
168	-	-	-	-	-	-	-	113,512	-	-	54,024	59,488	-	-
169	-	-	-	-	-	-	-	634	-	-	39	595	-	-
170	-	-	-	-	-	-	-	146,412	-	-	24,517	121,895	-	-
171	78,544	-	-	44,741	29,938	-	3,866	-	-	-	-	-	-	-
172	158,217	-	-	110,675	33,043	-	14,500	83,094	-	-	57,846	22,663	-	2,585
173	-	-	-	-	-	-	-	33,993	-	-	27,560	6,433	-	-
174	62,191	-	-	47,905	269	-	14,017	53,051	-	-	35,287	17,764	-	-
175	-	-	-	-	-	-	-	27,004	-	-	24,165	2,839	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	SPEND YEAR (a)	PROJECT NAME (b)	FERC CATEGORY (c)	BUSINESS CATEGORY/ PRODUCT LINE (d)	PROJECT SYNOPSES (e)	PROJECT START DATE (f)	PROJECT END DATE (g)	COST/ BENEFIT RATIO (h)	TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS (i)	TOTAL COMPANY EXPECTED PROJECT O&M COSTS (j)	ESTIMATE TYPE (k)	GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR (l)	SOFTWARE COSTS-GAS (m)	MATERIAL COSTS-GAS (n)	LABOR COSTS-GAS (o)	CONTRACTOR COSTS-GAS (p)	NON-LABOR OVERHEAD-GAS (q)	NON-LABOR OTHER-GAS (r)	GAS PORTION O&M SPEND FOR APPLICABLE YEAR (s)	SOFTWARE COSTS-GAS (t)	MATERIAL COSTS-GAS (u)	LABOR COSTS-GAS (v)	CONTRACTOR COSTS-GAS (w)	NON-LABOR OVERHEAD-GAS (x)	NON-LABOR OTHER-GAS (y)
176	2025	Public Key Infrastructure (PKI) Upgrade	Software(Intangible)	IT/Digital Foundation	Replace on-premise PKI to stay supported by the manufacturer. The existing PKI that issues certificates to IT systems for secure communications needs to be upgraded to stay supported by the manufacturer. If the PKI is not maintained, in the event of a system failure the Company would not have support in recovering. All IT systems requiring secure communications via certificates would go offline within three days. Replace existing PKI with new PKI that is supported by the manufacturer. The project will build and configure the servers necessary to provide Public Key Infrastructure services, put in place physical token management for maintaining security, migrate certificate issuing and management to the new system and decommission the old system. The Company has a limited use service for PKI on the Internet only. (1) The Company looked into expanding the service to include usage on the Company network but found the solution to not be economically viable. (2) The Company also looked at full cloud solutions, but it did not meet the security standards currently being used around physical token use. (3) The Company looked at continuing extended support, however the continuing extended support is not available by the vendor. (4) The Company selected a hybrid solution of part cloud and part on-premise to meet all operational and security compliance requirements. The opportunity is to retain ownership of the keys on-premise prior to evaluating ownership through the cloud.	2024-07-01	2025-08-25	-1.00	1,578,771	409,866		59,929	(4,424)	(8,367)	218	67,919	-	4,583	52,272	24,724	129	-	26,259	-	1,160
177	2025	Software Platform Refresh	Software(Intangible)	IT/Digital Foundation	The Software Platform Refresh project will upgrade server operating systems, hypervisors (virtual machine monitors), and databases to retain low-cost vendor support. For systems that go beyond their normal manufacturer support ending, there will be increased support and maintenance fees of 20% to 100% above current support and maintenance depending on vendor. Completing this project allows the organization to (1) avoid high support costs; (2) provide for system security; and (3) stay current to promote seamless interoperability among servers, applications, and databases. Aging servers are more susceptible to security vulnerabilities and performance issues that ultimately could affect the business and customers. The project will add value for the Company by: (1) avoiding costs for special maintenance agreements required at the end of normal manufacturer support; (2) ensuring reliability and compliance with Information Security requirements; (3) improving data center environment stability; and (4) avoiding the need for high risk upgrades that cross multiple versions. The project scope includes: (1) upgrading operating systems and databases on servers that are near end of support with a given vendor; and (2) maintaining hypervisors at the current version for stability and performance. A funding options matrix was completed to review the potential alternatives. The alternatives identified were: (1) Complete the full scope of the solution for $1 million in order to eliminate the need for ongoing extended support; (2) Reduce the scale of the solution, which requires $1.6 million in ongoing extended support; (3) Reduce the scale of the solution even further, which requires $2.4 million in ongoing extended support; (4) Do not complete a software platform refresh, which requires $3.3 million in ongoing extended support. Alternative 1 was selected as the most cost effective solution to ensure ongoing system stability; seamless integration; and mitigation of cyber-security risks without the significant cost of extended support necessary for end of life software systems.	2025-01-01	9999-12-31	-1.00	-	303		-	-	-	-	-	-	-	115	-	-	111	5	-	-
178	2025	Tibco API Exchange Gateway Replacement	Software(Intangible)	IT/Digital Foundation	This project is looking to retire the API Exchange Gateway within the Tibco ESB and replace it with a new solution called Microsoft Self-Hosted Gateway. The API Exchange Gateway is used by the TIBCO ESB to integrate to external vendors, all new development will need to be done to integrate this solution.The Tibco API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform.This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the Tibco Enterprise Service Bus API Exchange module), and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable.The project scope includes: (1) Conducting a RFP to procure a replacement product and work with architecture team to migrate the product. (2) Migrate all current work items to the new platform. (3) Conduct appropriate testing to ensure all Service Level Agreements are met.Alternatives considered include: (1) Evaluating the replacement of the current product with a new product that is not already in the Company environment. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor for the current platform has stopped all development for this product. (3) Leveraging an existing solution already in the Company environment. This alternative was selected as it avoids multiple solutions with redundant capabilities and avoids costs for supporting and maintaining a second solution.	2024-01-15	2024-12-20	-1.00	177,467	117,000		4,711	-	-	739	2,757	-	1,214	2,803	-	-	-	2,803	-	-
179	2025	20% ROM Adjustment - IT/Digital Foundation	Software(Intangible)	IT/Digital Foundation	This is for the 20% ROM Adjustment for IT projects.							(195,297)	-	-	(89,491)	(68,529)	-	(37,277)	-	-	-	-	-	-	-
180	**SUBTOTAL**	**2025 IT/Digital Foundation**										**9,497,397**	**163,019**	**5,453,479**	**1,289,407**	**2,198,136**	**-**	**393,356**	**1,596,063**	**33,247**	**214,222**	**551,765**	**777,221**	**-**	**19,608**
181	2025	ARP-Cyber Security	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades. As part of the review process, the alternatives considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Option 2 was not chosen due to the security risk inherent with not replacing assets as per standard refresh cycles increased system vulnerabilities, and out-of-warranty repair costs.	2025-01-01	2025-12-31	-1.00	175,039	200,567		84,421	-	(980)	55,791	10,669	-	18,942	76,255	16,064	-	8,224	51,966	-	-
182	2025	ARP-Cyber-Common	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions shared by Electric and Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.	2025-01-01	2025-12-31	-1.00	361,845	4,166		174,518	38,121	105,397	22,951	18	-	8,030	1,584	-	-	1,584	-	-	-
183	2025	ARP-Cyber-Gas	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions for Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.	2025-01-01	2025-12-31	-1.00	177,998	19,396		177,998	-	150,000	20,122	-	-	7,876	19,396	-	18,450	946	-	-	-
184	2025	ARP-Network-Common	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks shared by Electric and Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.	2025-01-01	2025-12-31	-1.00	213,599	6,981		103,019	-	-	74,038	-	-	28,980	2,654	-	-	2,654	-	-	-
185	2025	ARP-Network-Gas	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks for Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.	2025-01-01	2025-12-31	-1.00	419,148	48,306		419,148	-	360,875	41,880	-	-	16,393	48,306	-	44,388	3,918	-	-	-
186	2025	Pipeline SCADA Security	Network	Security	Prior period adjustment				-	-		(24,843)	(3,730)	(17,041)	-	(4,072)	-	-	24,395	24,395	-	-	-	-	-
187	2025	TSA Critical Facility Structure	Network	Security	This project will implement enhanced security measures outlined by the Transportation Security Administration (TSA) for critical facility assets in order to bring the locations up to enhanced status and avoid non-compliances. This project will increase the security and reliability of gas delivery to our customers while also meeting federal requirements.Pipeline facilities that are deemed critical are required to apply enhanced security measures. Today, Consumers Energy currently has designated 4 locations as critical. However, based on the April 2021 update to the TSA Pipeline Security Guidelines, Section 5 (Critical Facility Criteria), a significant number of our gas infrastructure that were not previously subject to evaluation will now fall into scope. As we continue to analyze the remainder of our gas assets, we believe an additional 1000 pipeline facilities (pipeline interconnections, metering and/or regulating stations, pump stations, compressor stations, operational control facilities, main line valve, tank farms and terminals, etc.) may be deemed critical. Consumers Energy will be taking a phased implementation approach and will begin the process by implementing the enhanced security measures at the reminder of our compressor stations. Failure to update our sites will put us out of compliance with the updated guidelines.The objective of the project is to implement enhanced security measures outlined by the TSA for the following four critical assets: (1) Freedom Compressor, (2) Muskegon River Compressor, (3) Overisel Compressor, and (4) Northville Compressor. In order to bring these locations up to Enhanced status and avoid non-compliances. This project will increase the security and reliability of gas delivery to our customers while also meeting federal requirements.Enhanced Security measures that will need to be implemented include, but are not limited to: (1) access controls; (2) access readers; (3) cameras; (4) video and audio programming; (5) fencing and barriers; (6) gates; (7) locks and key control; (8) fence intrusion (which may be accomplished with a new camera system); (9) subcontractor work of trenching poles, etc.; (10) facility lighting; (11) background Investigations for personnel working at the site; (12) security equipment maintenance and testing; (13) security vulnerability assessments; (14) security communication plans; (15) personnel training; (16) security drills and exercises for the following locations. These activities will be performed at the following company locations: Overisel Freedom, Northville, Muskegon River.Alternatives are not available because this is a compliance mandate from the TSA.	2024-06-28	2025-12-28	-1.00	6,989,212	135,606		1,753,268	-	692,058	93,459	957,820	-	9,931	93,595	-	75,595	18,000	-	-	-
188	2025	ARP-Physical Security	New Computers / Hardware	Security	The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet FERC requirements. The alternative selected maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2025-01-01	2025-12-31	-1.00	2,404,896	10,600		755,859	-	440,357	13,643	312,833	-	(10,973)	4,030	-	-	4,030	-	-	-
189	2025	Security/OT Field Modernization	New Computers / Hardware	Security	This project will implement new infrastructure for accomplishing improved security in the field for OT assets. Gas and Electric technicians are using corporate laptops, to manage critical OT infrastructure which does not follow cyber security best practices for managing critical infrastructure. Vendors and contractors have access to the Company's critical infrastructure using non-Company laptops. Best practice is to use dedicated laptops to connect to critical infrastructure. The value of this project is deploying dedicated Company OT laptops and associated OT infrastructure that can move between OT locations only and providing a secure environment. This project will procure and configure approximately 130 devices that will be used to manage critical OT infrastructure. The Company reviewed several options to mitigate cyber security risks inherent with the use of standard corporate laptops managing critical infrastructure. The alternatives considered are: (1) Continue utilizing existing workflow of using Corporate domain laptops with software installed; (2) Bring in an outside vendor to design and implement a proposed infrastructure; (3) Complete disallowance of all local access to critical systems; (4) Extending the OT network to remote Company locations; (5) Deploy a dedicated Company OT laptop and OT communications circuits, which includes cellular connectivity. The dedicated OT laptop and communications circuits presented the best way to secure the critical infrastructure by limiting internet and e-mail access. Vendors and contractors could also utilize these approved dedicated systems for managing infrastructure they help support at Company locations. Based on the analysis performed, the Company chose to deploy a dedicated OT laptop and communications circuits.	2025-02-20	2026-12-18	-1.00	1,727,678	614,749		364,788	5,040	40,724	51,301	250,355	-	17,367	122,518	83,844	-	37,737	937	-	-
190	2025	Application Control Enablement	Software(Intangible)	Security	This project will implement a technology called Application Control. Application control, also known as application allow listing, is a security strategy that permits only approved applications to run on a system. This approach helps prevent unauthorized software and malware from executing, thereby enhancing the overall security of the network.The rapid multiplication of unauthorized and potentially malicious applications in the current threat landscape poses a substantial risk to corporate data, network infrastructure, and overall business operations. The Company currently does not have an application control solution to mitigate this threat. Without a robust application control product, unauthorized applications can introduce vulnerabilities into the Company's network, leading to data breaches, malware infections, and other cyber threats. Failure to control application usage on the Company's network can result in non-compliance with industry regulations and standards, potentially leading to legal and financial repercussions. Unmanaged applications can cause system conflicts, performance degradation, and downtime, disrupting business continuity and productivity. Inadequate control over applications in the Company's environment increases the risk of data leakage and loss, compromising sensitive information and intellectual property. Uncontrolled application usage can; (1) lead to inefficient use of IT resources; (2) increase licensing costs for software that should not be installed or leveraged by a particular user or department; and (3) reduce efficiency due to deploying computers with more resources than are required because users are installing unneeded software. This project creates value for the Company by (1) Protecting the Company's IT environment by preventing unauthorized and potentially harmful applications from being installed or executed; (2) Maintaining adherence to industry regulations and standards by controlling application usage. This helps avoid legal and financial penalties associated with non-compliance and ensures the Company meets its regulatory obligations. The project scope includes: (1) implementing a Software as a Service (SAAS) application control solution on all corporate computers and (2) implementing stringent restrictions using high enforcement mode on critical assets to prevent running any unauthorized software. Alternatives considered include; (1) removal of local administrator permissions for all users. This option was not chosen as there are legitimate business uses for users to have the ability to make modifications to their workstations.; (2) leverage already existing in place antivirus or endpoint detection and response software. This alternative was not selected as this does not prevent unauthorized installation or running of unauthorized software.; (3) implementing a privilege management tool. A privilege management tool is a security solution designed to control and monitor access to critical resources within an organization. It helps protect against cyber threats by ensuring that only authorized users have access to sensitive information and systems. This alternative was not chosen as it does not prevent a bad actor that has established privilege into the Company network to install malicious software.; and (4) implement an application control solution. This option was chosen because it meets all of the required use cases which reduces risk to corporate data, network infrastructure, and overall business operations.	2025-01-06	2025-10-31	-1.00	693,847	88,024		218,076	179,644	-	33,190	82	-	5,160	33,466	30,416	-	3,049	2	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
191	2025	Application Currency-Security-Capital	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	146,200	4,622		45,951	-	-	45,951	-	-	-	1,757	-	-	1,757	-	-	-
192	2025	Application Currency-Security-O&M	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-01-01	2025-12-31	-1.00	-	177,993		-	-	-	-	-	-	-	67,672	692	-	57,780	9,200	-	-
193	2025	Enhancements-Security-Capital	Software(Intangible)	Security	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	878,382	67,256		276,075	-	-	248,530	10,767	-	16,779	25,570	-	-	25,041	529	-	-
194	2025	Enhancements-Security-O&M	Software(Intangible)	Security	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-01-01	2025-12-31	-1.00	-	385,076		-	-	-	-	-	-	-	146,404	20,189	834	91,072	34,308	-	-
195	2025	Mass Notification	Software(Intangible)	Security	Prior period adjustment.							(27,939)	-	(24,110)	(3,621)	(107)	-	(101)	-	-	-	-	-	-	-
196	2025	Saviynt Enterprise Identity Governance and Access (EIGA) Implementation	Software(Intangible)	Security	The project will implement Saviynt EIGA module, consolidate Identity Access Management (IAM) functionality into Saviynt, and retire the Identity Manager application. By implementing the new solution, the Company will optimize IAM functionality, eliminate complexity, and reduce support costs. In addition, the project will integrate the OT network with an IAM solution that will allow for automated management of users and entitlements in the OT Active Directory domains and applications. The current version of AccessNow reached end-of-life in December 2022, with support discontinued in January 2023. The application has numerous custom workflows and integrations, requiring professional services for ongoing use and changes. It lacks proper data analytics and reporting, posing risks such as inability to fix critical defects, software incompatibility, compliance issues, increased costs, and degraded performance. The Company uses multiple IAM tools, each performing critical functions, leading to numerous required interfaces and customizations. While beneficial for end users, these integrations increase the risk of system failures, higher support costs, multiple subscriptions, infrastructure and maintenance costs, and more expensive upgrades. The current solution utilizes SAP HR batch file processes that introduces failure points, delays, and data integrity issues. Failures in these processes can prevent new or transferred employees from accessing necessary systems, leading to operational disruptions and potential compliance risks due to inappropriate access retention. This project provides value by: (1) Consolidating multiple IAM platforms through the implementation of the Saviynt Enterprise IGA Module, reducing complexity and support costs; (2) Decreasing complexity and enhancing efficiency by reducing interfaces between multiple identity tools; (3) Improving the end-user experience and reducing human struggle with access requests through a new, intuitive portal design; (4) Minimizing custom code and focusing on configurations only by utilizing out-of-the-box functionality; and (5) Streamlining employee data processing with the implementation of an HR interface. This project scope includes: (1) Implementing the Saviynt EIGA module to consolidate IAM platforms; (2) Standardizing processes by removing customized code and using out-of-the-box functionality; (3) Replacing and improving access system; (4) Addressing issues with aging applications, multiple IAM platforms, integration challenges, and antiquated HR processing. Alternatives considered include: (1) Implementing hot fixes to AccessNow version 8.1.5 to ensure support through mid-2023; (2) Upgrading only the application to current supported version, excluding the new web portal but will include new application functionality; (3) Remaining on current version that will be unsupported as of January 2023, requiring vendor professional services for any break / fix. Patches and enhancements may potentially introduce additional risk of version instability; (4) Implementing IAM functions in Saviynt platform to manage access requests, including Active Directory, SAP, SAP HR, disconnected systems, and existing API integrations. The alternative selected was implementing the new Saviynt system, eliminating AccessNow software.	2024-07-01	2027-10-29	-1.00	6,015,138	749,274		611,899	(2,457)	-	212,627	315,945	-	85,784	170,920	2,972	-	13,775	153,982	-	190
197	**SUBTOTAL**	**2025 Security**										**4,932,238**	**216,619**	**1,747,280**	**909,862**	**1,854,309**	**-**	**204,168**	**838,522**	**178,571**	**139,267**	**269,569**	**250,924**	**-**	**190**
198	**TOTAL**	**2025**										**25,362,621**	**2,379,491**	**7,255,533**	**4,628,773**	**9,537,150**	**-**	**1,561,674**	**5,980,384**	**776,249**	**360,563**	**2,448,050**	**2,355,896**	**-**	**39,626**
199	2026	2025 Union Contract Changes	Software(Intangible)	Corporate	The Human Resources - 2025 Union Changes project will implement SAP and other system changes required as a result of three collective bargaining agreements which will be renegotiated and ratified. Collective bargaining agreements expire every five years for Operating Maintenance and Construction (âOM&Câ'), Virtual Contact Center (âVCCâ'), and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025. The VCC agreement ends August 1, 2025. The Zeeland agreement ends October 1, 2025. Collective bargaining agreements expire every five years for OM&C (Operating Maintenance and Construction), CCC (Customer Contact Center) and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025 . CCC agreement ends in August 1, 2025. Zeeland agreement ends October 1, 2025. Technology changes are required to reflect these new agreements. Otherwise, employees in these union groups may not be paid appropriately or get correct benefits. Completion of this project will provide value to the Company and its customers through: (1) waste elimination by making changes in the software for any pay and benefit changes as required by the new agreements; (2) defect reduction by adding process automation to otherwise manual processes for tracking and recording work, premium, and absence time; and (3) improved employee engagement among the OM&C, CCC, and Zeeland union employees. The scope of this project encompasses making any system changes required to support the new working agreement for the OM&C, CCC, and Zeeland employees. Exact details will be finalized after the negotiation process is completed and contracts are approved. Three alternatives were considered for this project: (1) Make no system changes after the contracts are ratified. This option was not chosen because it exposes the Company to possible fines, disengaged employees, union grievances, significant manual processes leading to greater possibility of error, hiring additional staff to perform activities outlined in the agreements, and increased legal costs due to employee grievances. (2) Find other third-party software to support the changes required by the union agreements. This option was not chosen because it would require SAP integration along with additional software licensing and maintenance costs. (3) Make system changes to eliminate manual updating, comply with the working agreement language, support union employee engagement, and reduce grievances. Option (3) was chosen because it leverages current SAP technology, automates what would otherwise require manual processing, and is the least costly option.	2025-04-24	2026-01-01	0.00	-	341,003		-	-	-	-	-	-	-	102,594	-	-	41,515	54,365	-	6,714
200	2026	Application Currency-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Corporate Services adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Corporate Services are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	408,480	ROM	-	-	-	-	-	-	-	151,138	-	-	151,138	-	-	-
201	2026	Asset Accounting Upgrade 2025-2026	Software(Intangible)	Corporate	The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application. Standard vendor support will be ending for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time. This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted. The project scope includes: (1) evaluating current vendor/product solution with market leaders; (2) upgrading the vendor software from the current version to the newer version. Alternatives considered include: (1) Evaluated SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluated other software options. This option would introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements. (3) Upgrade to the newest version of current solution. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.	2025-06-18	2026-07-31	-1.00	-	435,445	ROM	-	-	-	-	-	-	-	28,292	-	-	6,793	21,499	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
202	2026	Product Family Enhancements-Corporate-Capital	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	1,115,000	248,975		376,424	-	-	262,907	-	-	113,517	92,121	-	-	92,121	-	-	-
203	2026	Product Family Enhancements-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	258,193		-	-	-	-	-	-	-	95,531	-	-	95,531	-	-	-
204	**SUBTOTAL**	**2026 Corporate**										**376,424**	**-**	**-**	**262,907**	**-**	**-**	**113,517**	**469,676**	**-**	**-**	**387,098**	**75,864**	**-**	**6,714**
205	2026	Application Currency-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Customer digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Customer are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	57,170	ROM	-	-	-	-	-	-	-	21,153	-	-	21,153	-	-	-
206	2026	Customer Order Service Tracker	Software(Intangible)	Customer	Short cycle orders including gas emergencies and meter services account for many of the incoming customer inquiries to the contact centers. This project will implement a service order status tracker to provide transparency to customers and oversight to internal teams supporting utility service orders across Company service areas. The tracker will provide timely and accurate service order updates, creating a more robust customer experience for tracking service order status and location-based updates. Customers have limited visibility to when Company assigned crews will be on premise and what work will be completed. This is due to features missing within the Company's digital channels for accurate updates from dispatch, scheduling, and field crews. The lack of awareness drives calls into the call center, resulting in approximately 346,000 annual contact center calls related to short cycle requests. Additionally, this lack of visibility increases truck rolls due to dispatchers being unaware of crew locations and routes which can cause crews to be assigned when a local crew could have completed the work. This leads to overall customer dissatisfaction because of a lack of visibility to scheduled and ongoing short cycle work. Enabling a digital channel for communication regarding utility service orders will improve customer experience and reduce the waste of repetitive crew dispatching. This project will add value to the Company and its customers by: (1) providing transparency for customers on the timing and location of the associated crew completing utility short cycle service orders, (2) reducing calls to contact centers by customers seeking clarification regarding arrival times through visibility to scheduling time-frames and providing notifications to customers when crews are en-route, (3) improving resource assignment by current location, which decreases wasted truck rolls through enabling location services for active crews, (4) increasing visibility into the service person(s) completing the order by enabling crews to connect with customers through digital channels, and (5) improving customer experience for short cycle service orders by implementing a channel of choice for Company interactions. The scope for the project includes: (1) modifying the customer self-service portal to include features that support utility service order tracking, including the location of crews en-route, (2) providing desktop and mobile capabilities, (3) enhancing the existing ServiceBench platform to allow real-time status updates that can be communicated to customers, (4) utilizing location-based services to update internal portal in real time, and (5) enabling text and email notifications to alert customers of service crews arrival times. Alternatives considered for this project include: (1) Deploy a mobile application to address utility service order tracking, (2) utilize a cloud hosted solution from a third-party, (3) modify the existing customer portal to enable customers and the Company to track utility service orders and crews. Options one and two were not selected as the cost associated with deployment would greatly outweigh the benefits with call reduction and improved customer experience. The third option was selected because it utilizes existing technologies, which reduces the implementation complexity and project cost and has faster value realization for the customer and the Company.	2025-09-08	2026-12-17	-1.00	3,727,950	917,125	ROM	950,361	-	-	309,284	354,480	-	286,597	242,489	-	-	112,989	129,500	-	-
207	2026	Energy Assistance Enhancements and Maintenance Annual Updates	Software(Intangible)	Customer	The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as Consumers Affordable Resource for Energy (CARE) project, will implement software changes to offer energy assistance to low-income customers and streamline the process for the assistance agencies who use the assistance portal. This is accomplished through improved user interfaces and updates to SAP to process various requests. Upcoming modifications will be identified following an ongoing and annual review of requests, that includes criteria from the Department of Health and Human Services (DHHS) and Michigan Public Service Commission (MPSC) to prioritize the list of changes. Each grant year, DHHS and MPSC stipulate the criteria required for customers to enroll in the CARE program, how the Company and agencies will manage the enrollment process and track active CARE customers, and how they will administer the Michigan Energy Assistance Program (MEAP) benefits through bill credits and arrears forgiveness. The criteria changes significantly each year; therefore, the Energy Assistance Enhancement and Maintenance Annual Updates application requires modifications to meet the new requirements. If the regulatory requirements are not fulfilled, the Company is at risk of losing state Low Income Energy Assistance Fund (LIEAF) funds to assist low-income customers with paying their energy bills, thereby increasing the customers risk of shutoff for non-payment. In addition, our energy assistance programs function within all software platforms in the company which consistently need enhancements and updates. The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive LIEAF funding, which can be used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, thereby making it easier to assist customers in need of LIEAF funding; and (3) complete modifications to customer facing platforms. The project scope includes: (1) updating the enrollment and status process; (2) allowing for flat monthly bills; (3) improving reporting; (4) updating the arrears forgiveness plan; (5) satisfying additional regulatory requirements for the annual grant rule changes required by the Department of Health and Human Services and Michigan Public Service Commission; (6) updating CARE dunning process; and (7) updating the assistance portal (CE PASS) functionality to enhance Agency Self-Service. Alternatives considered include: (1) continue with current process. This alternative was not chosen because it would lead to loss of grant funding, thus decreasing or eliminating energy assistance dollars for customers; (2) transfer administration of Energy Assistance Programs to a third party organization. This alternative was not selected because it would remove ownership and visibility into the health of the program while increasing administrative costs; and (3) make annual updates to the application, which will allow agencies to easily enroll customers on assistance programs and allow placement of holds to stop or prolong credit activity until assistance decisions are granted. This option was selected since it provides long-term proactive energy assistance to customers and prevents loss of grant funds. Changes are required to internal systems such as SAP, a large internal system that supports broad areas of the business, and the Agency Portal, an internally developed web application, therefore a single cloud or third-party alternative is not viable. Additionally, retiring the existing Agency Portal for a new application would increase costs beyond that of the routine upgrades.	2026-01-01	2026-12-31	0.00	-	335,195		-	-	-	-	-	-	-	124,022	-	-	114,151	9,871	-	-
208	2026	Product Family Enhancements-Customer-Capital	Software(Intangible)	Customer	The Customer initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	2,351,548	124,020		793,883	-	3,034	19,818	760,644	-	10,387	45,888	-	-	27,446	18,441	-	-
209	2026	Product Family Enhancements-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	300,284		-	-	-	-	-	-	-	111,105	-	-	73,493	37,612	-	-
210	2026	Rate Change Maintenance	Software(Intangible)	Customer	The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements. For the Company to continue to meet and comply with certain MPSC requirements and to enable it to update its rates when rate changes are approved, there is a need to make periodic updates/modifications to existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers. The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs. The scope of this project encompasses (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes. Alternative considered include: (1) a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the time it would take for testing of this model; and (2) Instead, the Company chose to leverage onshore resources to plan, coordinate, and execute the rate changes. This option was selected as it supports the Company's operation model for rate changes.	2026-01-01	2026-12-31	0.00	-	345,380		-	-	-	-	-	-	-	127,791	-	-	127,791	-	-	-
211	2026	20% ROM Adjustment - Customer	Software(Intangible)	Customer	This is for the 20% ROM Adjustment for IT projects.							(190,072)	-	-	(61,857)	(70,896)	-	(57,319)	-	-	-	-	-	-	-
212	**SUBTOTAL**	**2026 Customer**										**1,554,171**	**-**	**3,034**	**267,245**	**1,044,228**	**-**	**239,665**	**672,447**	**-**	**-**	**477,022**	**195,425**	**-**	**-**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
213	2026	Application Currency-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	65,210	309,420	ROM	22,015	-	-	15,352	-	-	6,663	114,485	9,384	-	2,775	102,132	-	194
214	2026	Application Currency-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	663,259	ROM	-	-	-	-	-	-	-	245,406	-	-	221,683	23,723	-	-
215	2026	Application Currency-Operational Technology-O&M	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	253,895	ROM	-	-	-	-	-	-	-	93,941	-	-	93,941	-	-	-
216	2026	Customer Consecutive Estimate Reduction Enablement	Software(Intangible)	Electric & Gas Shared	The project will resolve gas and electric accounts with consecutive estimates due to the service being disconnected and customer's usage being estimated. Consumers Energy experienced two show cause orders from MPSC for consecutive estimates and fines of $500,000 in 2016 and $1M in 2023 including $3M that is to be refunded to the customers from the money that is recovered from the vendor. If the funding is not recovered from the vendor, the total fine would result in $4M as the Company is responsible for the difference between the dollars recovered from the vendor and the $3M total established by MPSC. The project objective is to reduce disconnected consecutive estimate accounts from 8% to less than 1% reducing non-compliance regulatory risk with MPSC rules. The project scope includes enhancing account and work management digital solutions to properly reflect disconnected account status. Process improvements were put into place after the 2016 show cause; however, increased electric meter failures, supply chain shortages, and a project focused on replacing meter technology due to the sunset of 3G communication led to issues that resulted in a second show cause order. Do nothing does not improve the customer experience. Our current solution of SAP CRM used by Call Center, SAP Work Management, ADMS for Storm and Service Suite for Field Work are all core platforms able to accomodate the change. Adding additional software or alternatives will complicate the technical solution and/or require additional training for Call Center & field personnel.	2025-04-01	2026-03-31	0.00	71,192	48,150	ROM	24,034	-	-	17,494	-	-	6,541	17,816	-	-	17,816	-	-	-
217	2026	Product Family Enhancements-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Electric and Gas operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	1,036,665	155,294		349,978	-	3,376	67,092	242,623	-	36,887	57,459	-	1,730	9,852	45,876	-	-
218	2026	Product Family Enhancements-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Electric and Gas Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	215,871		-	-	-	-	-	-	-	79,872	-	828	62,183	16,860	-	-
219	2026	Spatial Asset Management	Software(Intangible)	Electric & Gas Shared	This initiative will implement SAP's Spatial Asset Management module. It will allow users to view assets, notifications, and orders geospatially using a map. The module will allow the Company to create and maintain asset maintenance plans for each segment of our gas and electric distribution networks (linear assets). The Company will create linear assets as technical objects (such as functional locations and equipment) and store linear data. The Company will enable creation of maintenance plans for these technical objects which result in notifications, maintenance orders, and measurement documents. We will enable monitoring the condition of our linear assets, identify where there is damage or a defect (using the start point and end point and offset), and manage all types of maintenance tasks (planned, unplanned, and preventative). Currently, the Company lacks spatial visualization and spatial awareness of work and assets impacting requirements for first time quality and impacting the ability to plan, bundle and execute nearby work. The lack of a linear asset management capability affects the full work management value stream resulting in overproduction of asset maintenance activity such as assessments, surveys, and inspections. This project creates value for the Company by (1) providing capability in SAP to view assets, notifications, and work orders on a map; (2) providing location awareness in SAP for assets and work; (3) establishing linear asset management capability in SAP for gas and electric delivery networks; and (4) enabling end-to-end map-based workflows. The scope of this project encompasses implementation in SAP of the Spatial Asset Management module. Alternatives considered include: (1) Implement a cloud-based individualized asset integration between GIS and SAP. This alternative was not selected as it proves ineffective in addressing needs of the end-to-end work management value stream while increasing the technical footprint of customization. There are also performance concerns with cloud to on-prem integrations; (2) Implement work group centric approaches to viewing work on a map. This alternative was not selected as it does not support standard operation through the entire work management value stream; (3) Do nothing. This alternative was not selected as this would result in increasing costs and inefficiencies in gas and electric work management; and (4) The alternative to implement the Spatial Asset Management module in SAP was chosen as it expands use of a core technology investment, supports current investment in our work management value stream, and is compatible with our GIS technology.	2024-05-10	2026-06-26	-1.00	3,189,155	161,683	ROM	120,510	-	-	40,377	60,768	-	19,365	19,795	-	-	8,695	11,100	-	-
220	2026	20% ROM Adjustment - Electric & Gas Shared	Software(Intangible)	Electric & Gas Shared	This is for the 20% ROM Adjustment for IT projects.							(33,312)	-	-	(21,158)	(12,154)	-	-	-	-	-	-	-	-	-
221	**SUBTOTAL**	**2026 Electric & Gas Shared**										**483,225**	**-**	**3,376**	**119,156**	**291,237**	**-**	**69,455**	**628,773**	**9,384**	**2,559**	**416,945**	**199,692**	**-**	**194**
222	2026	Application Currency-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	215,531	ROM	-	-	-	-	-	-	-	215,531	-	-	215,531	-	-	-
223	2026	Compression Air Permit And Compliance Digitalization	Software(Intangible)	Gas	This project modernizes and expands the use of software and digitized forms in support of station air permits and code compliance at Gas Compression facilities. The current process around air permits and compliance for Gas Compression is cumbersome, largely paper based, and is made up of multiple disconnected systems. This leads to poor visibility, process inefficiency and waste, re-work, regulatory risk, and human error. his project provides value to the Company through: (1) increased productivity by direct data entry in the field; (2) improved quality through increased accuracy of updates completed at the time and place of the work; (3) elimination of the need to enter data into multiple disconnected systems, and (4) improved safety through access to real-time information used at work sites rather than printed procedures and forms. The scope of the project includes: (1) Merging the existing air permit and compliance tools into a single solution, (2) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (3) configuring changes in SAP and the mobile work management software to replace the paper-dependent process with the ability to access and update maintenance, operations, and safety information for Gas Compression. Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution was not selected since it is an unproven solution at the Company and would require additional project and support costs. (2) Continue with the manual paper-based processes and forms. Continuing with the manual paper-based processes and forms was not selected because it would not eliminate the identified process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A customized mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the product was not intended to support. (4) Adopt a cloud based SAAS solution. This option was not selected as it was a high-cost option. (5) Utilize the existing Service Suite solution currently deployed for Gas and Electric Distribution. The Service Suite solution was selected because it is both an industry standard and a proven solution at the Company and provides the required mobility and digital benefits at a lower cost than other options.	2026-01-06	2027-03-31	-1.00	744,138	109,926	ROM	462,255	-	1,500	321,000	-	-	139,755	45,726	-	-	45,726	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
224	2026	Gas Distribution Probabilistic Risk Model	Software(Intangible)	Gas	The project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas distribution pipeline assets. Relative risk models are unit-less measures of risk derived from input information using qualitative data and ordinal scales to produce "risk index" scoring; in simple terms, the relative risk model does not provide true statistical measures. The risk assessment used in the current model provides a score for likelihood, consequence, and risk that is relevant only in comparison to other scores. While the outputs provide a sense of relative risk when comparing one pipeline with another, the scores do not provide quantitative scores for probability, frequency, or expected loss of events. Although pipeline operators commonly use relative risk models, the quality of the relative risk ranking relies on subject matter expert inputs, human inferences, and opinions. Completion of this project will provide value to both the Company and its customers.Â Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed pipeline replacement or improvement projects.Â Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events; and (2) configure multiple data sources to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed decisions based on improved quality inputs in a measurable model; and (3) provide information for better decisions on Capital project improvements and integrity management.Â Unlike the current unit-less relative model a probabilistic model will be a unit based risk score, specifically in the unit of dollars, improving efficiency in interpreting risk results for business decisions. The project scope encompasses the implementation of a probabilistic risk model for gas distribution.Â The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered for the project include: (1) Implement a custom, Excel-based probabilistic risk model through a consulting effort. This alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". (2) Implement a custom built probabilistic risk model. This alternative was not selected because the custom built solutions analyzed are not mature and have not been widely tested with transmission operators.Â (3) Implement a SaaS based solution. The option of implementing the SaaS probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven and upgradable technology, and ongoing vendor support.	2026-01-09	2027-06-30	-1.00	5,377,265	38,201	ROM	4,479,388	1,800,000	-	434,430	856,128	-	1,388,830	28,651	-	-	11,424	17,227	-	-
225	2026	Gas Nominations Replacement Solution	Software(Intangible)	Gas	The Gas Nominations Replacement Solution project will replace the existing gas nominations application with a system that is capable of scheduling and tracking the receipt and redelivery of all the natural gas supply that flows onto and through the Company's gas transmission system to customers. The current gas nominations application has software and vendor support issues since its original implementation including major security risks, inadequate vendor support and issue response time, user inefficiencies and reporting issues, and various technical difficulties that make upgrades and contract administration challenging. Some of the problems have created waste by reverting to manual workarounds. The ongoing issues create a risk that can result in a disruption to the scheduling and tracking of natural gas supply, which in turn may create customer safety risks, result in breaches of confidential customer data, cause significant financial harm, or could cause damage to the Company's reputation. The Gas Nominations team is seeking a replacement application that will provide the full functionality required to maintain supply to our customers and address the issues identified with the current application. The project will add value by: (1) mitigating the security risk associated with the existing software; (2) improving response to abnormal situations; and (3) reducing end user inefficiencies. In addition, the project will create value by eliminating waste and manual steps to create accurate reporting for gas suppliers to change gas allocations for each gas supplier, to support the implementation of the Operational Flow Order provisions in our tariffs, and to update Gas Transportation contract values required by tariff. The scope of this project includes: (1) replacing the existing gas nominations application; (2) developing reporting capability based on standard in-house software; and (3) retiring the legacy system (hardware and software). Alternatives considered include: (1) upgrade the existing application to the latest version; Option 1 was not selected because it requires a significant investment, does not mitigate security risks, and does not meet analytics, reporting, usability and accessibility needs. (2) Develop a custom in-house solution; Option 2 was not selected due to the complexity of the needed solution and the resources that would have to be involved. (3) Replace the existing application with a standard software offering, which may be a cloud offering. Option 3 was selected to increase functionality and minimize security risks inherent in the existing software. If this project is not completed then the inefficiencies, administrative challenges, and major system security risks of not meeting our IT standards identified above would not be addressed.	2026-01-04	2027-04-05	-1.00	1,382,770	178,259	ROM	1,118,010	240,000	30,000	390,600	230,000	-	227,410	150,126	-	-	109,548	40,000	-	578
226	2026	Gas SCADA Software Solution	Software(Intangible)	Gas	The Gas Supervisory Control And Data Acquisition (SCADA) software solution project will replace the current Gas SCADA Software with a more standardized software package enabling the Company to more efficiently meet Federal and MPSC requirements. The current Gas SCADA software solution was originally implemented in 2000 and was based on the gas system requirements at that time. While the solution has been maintained since its implementation, the Company's gas system has outgrown the current capabilities. As the solution ages, there is increased effort required to address obsolete application and database software architecture, and enhancements to the system are limited. To address the capability gaps, custom interim fixes and integrations have been developed where each requires maintenance and support. This environment adds complexity and cost to solution upgrades and troubleshooting issues. The current Gas SCADA solution will limit the ability to invest in digital solutions for increased system health monitoring and preventative maintenance capabilities due to the complexity to integrate these future capabilities with it. The project will add value by: (1) reducing risk of non-compliance by improving the ability to document and follow State and Federal requirements, improving customer safety; (2) improving efficiency and reliability when performing routine software upgrades, because standard out-of-the-box software has less risk of breaking during upgrades, as opposed to more custom-coded software; (3) reducing maintenance costs due to fewer individual software programs and less custom code; (4) improving Gas Control management capabilities that support the Federal and MPSC requirements for gas pipeline and Gas Distribution companies; (5) improving reliability by using proven gas industry standardized software with configuration features, rather than a fully customized system that has the possibility of being impacted by the next version update; (6) purchasing standard, out-of-the-box software that meets a high percentage of requirements and avoids multiple custom applications and specially coded programs to achieve results; and (7) providing a basis for capturing data required for use in computer-based preventative maintenance programs and more predictive technologies. In addition, implementing industry-specific software helps the collective gas industry users to encourage the vendor development of future version enhancements, which adds more value to gas industry users. The comprehensive Gas SCADA system is used to monitor and control the operating conditions of the transmission and distribution gas systems. The Gas SCADA system includes remote terminal units (RTUs), field devices (i.e. valves, meters, odorizers), and computers running SCADA software. This scope covers the Gas SCADA software solution only. The project scope includes the following: (1) significant planning, including consulting assistance, to define the implementation strategy for the effort, given the magnitude of the technology effort; (2) selection and implementation of a new Gas SCADA software solution; (3) planning of a phased rollout of new hardware and software; and (4) retirement and decommissioning of the legacy gas SCADA solution and equipment once the new system is fully tested and operational. Alternatives considered include: (1) continue to maintain the current solution, at the risk of increasing reliability issues that result in controlling and monitoring the Company's gas system; (2) invest in enhancing the existing Gas SCADA software solution which would introduce additional custom development and more specialized functions that may not be supported in future vendor releases; and (3) replace the solution with a gas SCADA software solution that meets requirements to support the NGDP. Alternative three has been selected to ensure sustainability for this critical solution. The current legacy system is operating at well beyond its original design specification, so the potential points of failure are not fully known or understood. If the SCADA project is not completed, the legacy system could become unstable and impact Gas Control's ability to operate and monitor real-time system conditions, maintain safe operations, and comply with regulatory requirements. It could also impact the ability to commission new facilities which require remote monitoring or control or cause the need for 24/7 manual field monitoring of certain facilities.	2022-08-12	2026-04-26	-1.00	13,294,693	2,321,020		1,308,944	-	-	307,977	458,467	-	542,500	670,891	-	-	121,626	394,265	-	155,000
227	2026	Gas T&D Historian	Software(Intangible)	Gas	The Gas Transmission and Distribution (T&D) Historian project will replace the current historian for Gas T&D, eDNA (a traditional Supervisory Control and Data Acquisition (SCADA) historian product from Schneider Electric), and migrate to the standard OSIsoft PI enterprise historian system. The PI system is a suite of software products that are used to collect, store, view, analyze, and share operational data with system users and subject matter experts. The historian for Gas Transmission and Distribution resides on a decades old platform and is not the Company's historian standard. Data access is cumbersome, requires multiple tools to access it, and does not provide for the storing, analysis or visualization of operational data in a timely manner with appropriate change management control. With the implementation of smart meters, the Company standardized on the more robust OSIsoft PI historian which is used for: (1) Renewable Generation; (2) Electric T&D; and, (3) Smart Energy. The Gas T&D historian has yet to be migrated to OSISoft PI, and the eDNA gas data has limited accessibility and usability in its current state and is no longer supported by the vendor. In addition, maintaining the older platform along with the new system requires duplicate resources and skills. This project will create a more accessible and centralized data source with better controls that can be leveraged as the system of record. The project will add value for both Gas Engineering and Gas Operations organizations within the Company by: (1) informing decision-making based on real-time data; (2) improving real-time situational awareness of Operations personnel for information that does not need to be monitored by Gas Control; (3) improving the ability to respond to abnormal situations that do not require immediate intervention through that direct communication to Operations personnel; (4) providing information for the development of proactive analytics to reduce potential catastrophic events; (5) streamlining data access through visualization and analytics; and (6) reducing the waste of using multiple interfaces to interpret data. From an IT perspective, consolidating to one standard historian platform will result in savings in hardware, software, maintenance, resources and training. This scope of this project includes: (1) replacing the eDNA Gas T&D historian, a traditional SCADA historian, and migrating to the enterprise historian, OSIsoft PI; (2) developing analytics, visualization and reporting capabilities to support tracking of metrics and making operational decisions; (3) replacing the decades-old Microsoft Access-based custom Daily Gas Reports solution; and (4) retiring the legacy Gas T&D eDNA system (hardware and software). An alternative considered for the project was to (1) upgrade eDNA Gas Historian to the latest version. This option was not selected because it requires a significant investment, and does not meet analytics, reporting, usability and accessibility needs as well as the software owner has announced the âsunset,â for this software. Furthermore, the Company standard for historians is OSIsoft PI and maintaining two platforms results in redundant efforts in training, support personnel and technology. (2) The option to replace eDNA with the Company standard OSIsoft PI historian was selected to eliminate duplicate training, support personnel, and technology, and to leverage the more robust data analytic capabilities in the OSIsoft PI tool set. Currently the plan is to implement the Gas T&D Historian with the Gas SCADA Software Solution to eliminate the need to have duplicative historians while the Gas SCADA Software Solution is being implemented. If this project is not completed, an interruption of our operational data reporting capabilities could occur and could result in a non-compliance and could potentially interrupt certain volumetric accounting and billing functions.	2024-02-09	2026-04-26	-0.86	867,356	139,008		51,274	-	5,000	15,336	24,000	-	6,938	19,081	-	-	8,724	9,397	-	960
228	2026	Product Family Enhancements-Gas-Capital	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	462,580	95,993		462,580	23,667	25,872	104,922	254,260	-	53,860	95,993	-	3,331	37,410	55,252	-	-
229	2026	Product Family Enhancements-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	442,447		-	-	-	-	-	-	-	442,447	-	1,493	318,624	122,330	-	-
230	2026	Replacement for Gas Automated Meter Reading (AMR) Technology	Software(Intangible)	Gas	This project will replace Itron Field Collection Systems (FCS) and Itron Mobile with the newest Itron Software as a Service (SaaS) Temetra along with replacing Itron Mobile with Temetra Mobile for Gas AMR meters. This will allow the Company to leverage new cloud capabilities and align with the Company's Cloud strategy. The Company is using FCS and FCS mobile to gather gas meter reads. The vendor is replacing these systems with new Cloud software called Temetra and Temetra Mobile due to FCS and Itron Mobile being end of life December 2026. The software migration is necessary to maintain vendor support (latest security patches, bug fixes, latest functionality) while avoiding security, stability, and reliability risks for the Company. Moving to Itron Temetra will ensure no gas meter reading disruption and continued integration with existing gas communication modules and Itron Security Manager. The project adds value by: (1) continuing to collect accurate and timely gas meter reads; (2) removing the risk of being on unsupported versions; (3) utilizing the latest functionality such as retrieving historic read data, photos and reports directly from Temetra; (4) seamlessly getting up to date security patches; (5) and reducing ongoing networking equipment replacement and upgrade costs. Included in the implementation is: (1) configuring and deploying Temetra and Temetra Mobile; (2) migrating data; (3) integrating to Itron Enterprise Edition (IEE), Itron Security Manager (ISM), gas AMR PI Historian and Data Lake; (4) integrating to Mobile Collectors (MC3s); (5) testing the software, data migrations and integrations; (6) educating and increasing the skills of the employees to leverage the new cloud services; (7) and decommissioning FCS and Itron Mobile and the on-premise databases and servers. Alternatives considered included: (1) continuing to use the FCS application and Itron Mobile without vendor support. This alternative was not selected because it would add application stability, security, and dependency risks to gas meter reading data collection which would negatively impact critical customer billing operations. It would also de-couple from the Itron security infrastructure that the other business critical Itron applications use, creating more expense and complexity in the technology environment. (2) Replace the platform with a different mobile gas reading application, which would also require the Company to replace the 1.2 million gas communication modules on the meters. Replacing FCS would require the application business owners to undertake a large initiative requiring multiple years to implement and a multi-team effort from start to finish. It would also increase the amount of technology needed to be supported and add cost to support as it would be a standalone product. (3) Move to Itron's Cloud technology (Temetra and Temetra Mobile). This option best suits customers and the Company's needs for the future as it offers new functionality while maintaining the system integrated into the Itron Security infrastructure and with the other Itron software products in use at the Company.	2026-01-12	2026-10-15	-1.00	1,085,036	112,419	ROM	1,085,036	803,282	-	120,335	57,820	-	103,599	112,419	-	-	107,675	4,744	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
231	2026	Tracking & Traceability	Software(Intangible)	Gas	Tracking and Traceability is a project driven from proposed regulatory rules that will require utilities to map new and replacement installations with tracking and traceability data for plastic pipes, fittings, and fusions for the lifetime of the asset. The Company does not currently have a Tracking and Traceability program that will meet PHMSA proposed requirements (PHMSA-2014-0098), also known as the Plastic Pipe Rule. Tracking and traceability refers to the collection of information that provides manufacturing, material type, and location information for pipe and components. PHMSA defines the terms âtrackingâ'and âtraceabilityâ'as follows: (1) Tracking is information that provides for the identification and location of pipe and components, the date installed, and the person who made the joints in the pipeline system; and (2) Traceability is within American Society for Testing and Materials (ASTM) F2897-11a and includes a unique identifier for the location of manufacture, production, lot information, size, material, pressure rating, temperature rating and, as appropriate, type, grade and model of pipe and components. PHMSA will be requiring each pipeline operator to maintain tracking and traceability information for the life of installed pipeline segments. The lack of adequate traceability for plastic pipe and tracking of pipe location prevents gas pipeline operators from having enough information to identify systemic issues related to incidents involving plastic pipe. The lack of this information makes it difficult for operators and regulators to determine whether plastic pipe or component failures are related to a certain type or vintage of material, specific product defect or design, heat/lot of the product, or whether it was produced by a certain manufacturer at a certain time. The lack of information can result in excessive pipe excavations due to an inability to locate the affected sections of pipe or fittings when responding to plastic pipe or component manufacturer recalls. This project will develop a sustainable Tracking and Traceability program that will meet PHMSA requirements (PHMSA-2014-0098) which address the proposed tracking and traceability requirements. The project adds value by capturing traceability data via barcode readers and location tracking information via Global Positioning System (GPS) equipment to improve the quality of data and assist the Company in determining future scopes of work in the event of any component manufacture recalls. The scope of work will include: (1) changes in SAP Supply Chain processes to capture the required barcode information for all plastic components used in gas distribution and service lines; (2) changes in SAP Work Management processes to account for capturing barcode information as part of material components added to work orders, capturing fusion information from work order completion and capturing GPS coordinates from work order completion; (3) changes in GIS to capture GPS coordinates of plastic components and GPS coordinates of component fusions; (4) building of a repository for tracking and traceability reporting and analysis; (5) purchasing barcode reading equipment for storerooms and gas distribution trucks; and (6) purchasing of GPS locating equipment to capture coordinates. Alternatives considered: (1) The do nothing alternative, which was not selected because it would expose the company to significant legal and financial risk resulting from non-compliance. (2) Internally develope digital technology supporting the tracking & traceability standards included in the PHMSA-2014-0098 plastic pipe rule. The second alternative is being pursued by the Company.	2026-01-01	2028-06-30	0.00	14,864,950	1,018,640	ROM	3,326,430	-	291,250	1,873,780	324,000	-	837,400	510,390	-	-	428,390	82,000	-	-
232	2026	20% ROM Adjustment - Gas	Software(Intangible)	Gas	This is for the 20% ROM Adjustment for IT projects.							(2,094,224)	(568,656)	(64,550)	(628,029)	(293,590)	-	(539,399)	-	-	-	-	-	-	-
233	**SUBTOTAL**	**2026 Gas**										**10,199,693**	**2,298,293**	**289,072**	**2,940,351**	**1,911,085**	**-**	**2,760,892**	**2,291,255**	**-**	**4,824**	**1,404,678**	**725,215**	**-**	**156,538**
234	2026	ARP-Radio	Network	IT/Digital Foundation	This project will refresh hardware to include: 800Mhz Radios and infrastructure, cellular modems, plant radios and systems, cellular amplification devices, vehicle consoles in service trucks, other communications equipment, and associated test equipment.Â This equipment supports mission critical voice and data communications for plant and field service personnel and dispatch personnel.Â 800MHz radios are upgraded on a 10-year lifecycle basis. Plant radio systems are upgraded on a scheduled 10-year lifecycle basis.Â Cellular modems are refreshed on a five-year life cycle basis.Â Amplification systems are refreshed on a 10-year life cycle. 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio and cellular systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing or becoming obsolete. The refresh of this equipment in a proactive manner is critical to providing service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety. This project creates value for customers and the Company by: (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between Company dispatch locations and crews in the field; (4) ensuring the safety of personnel working in higher risk workspaces by replacing equipment with units that contain intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure. The project scope consists of: (1) scheduled replacement of radios, modems, consoles; and (2) installing additional radios, modems, and console assets to satisfy growth requirements; and (3) scheduled replacement of out of date cellular and radio boosters and systems. The alternatives considered include: (1) Replacing the existing units with new units from other radio and modem manufacturers; (2) Purchasing new radio subscriber units from existing manufacturers.Â Option 2 was not selected because the Company now uses a standards-based radio system allowing for multiple radio manufacturer options. Option 1 was selected to allow for a competitive bidding process that will provide the most cost-effective radio that will meet the needs of users.	2026-01-01	2026-12-31	-1.00	1,457,038	96,993		693,842	-	647,349	18,429	18,134	-	9,931	35,887	-	32,875	2,076	740	-	197
235	2026	ARP-Collaboration	New Computers / Hardware	IT/Digital Foundation	This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment. When collaboration assets used to support customer interactions and business operations are obsolete or out-of-date, they are more difficult to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project creates value by: (1) ensuring the stability and reliability of the Company's audio, visual, telephony, and other communications systems; and (2) migrating to new collaboration assets. The project scope consists of: (1) replacing aging collaboration assets; and (2) installing new collaboration assets to meet evolving business requirements. The alternatives considered include: (1) continuing to operate collaboration assets beyond a five-year refresh cycle, or (2) refreshing collaboration assets based on a five-year refresh cycle while evaluating the health of the asset and evolving business requirements. The alternative to operate the collaboration assets beyond a five-year refresh cycle was not selected due to the risk of asset failures would cause stability and reliability issues for employees supporting our customers, as vendors do not provide extended support after five years. The Company chose to refresh the collaboration assets based on a five-year refresh cycle and evaluate the health of the asset and evolving business requirements to reduce the risk of impacting the productivity of employees supporting our customers.	2026-01-01	2026-12-31	-1.00	1,597,166	180,565		539,203	-	500,506	11,684	23,254	-	3,760	66,809	-	12,746	15,212	38,850	-	-
236	2026	ARP-Field Device Asset Management (FDAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility. When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with Security updates as equipment becomes obsolete.Â The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing field devices before they fail; and (2) allowing field workers to complete their job tasks. The project scope consists of replacing field device assets according to the four-year refresh cycle. oAlternatives considered include: (1) using outdated equipment. This alternative was not selected because there would be an increased risk of hardware failure and equipment outages that could impact meter readers' ability to complete job tasks. It would also complicate the Company's efforts to meet the MPSC's meter reading factor and consecutive estimated targets, and it could cause applications to run poorly or stop functioning; (2) The second alternative considered was to replace the hardware. The Company selected this option to alleviate the above concerns.	2026-01-01	2026-12-31	-1.00	7,577,109	5,000		2,558,032	-	2,491,631	48,333	-	-	18,068	1,850	-	1,850	-	-	-	-
237	2026	ARP-Operational Technology Support Common	New Computers / Hardware	IT/Digital Foundation	The Asset Refresh Program (ARP)-Operational Technology (OT) Support Common project will replace dated and obsolete servers shared by Electric and Gas on a rotating five-year refresh schedule. When Operational Technology Assets that are used to ensure the safety and reliability of technology that supports critical electric operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates and run the risk of failure if the Company does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical electric infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure.	2026-01-01	2026-12-31	-1.00	1,655,506	152,731		558,899	-	506,400	14,738	-	-	37,761	56,510	-	53,280	3,230	-	-	-
238	2026	ARP-Operational Technology Support Gas	New Computers / Hardware	IT/Digital Foundation	The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule. When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical gas infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.	2026-01-01	2026-12-31	-1.00	1,165,195	117,850		1,165,195	-	1,003,000	69,850	-	-	92,345	117,850	-	98,750	19,100	-	-	-
239	2026	ARP-Printer Asset Management (PAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one. When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates.Â The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving the dependability of these printer devices for employees;Â (2) averting increased costs due to hardware repairs; and (3) ensuring compatibility with enterprise print applications. The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. This does not mean that all printers are replaced after five years â" merely that printers are assessed on a five-year cycle for possible replacement. The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years would require the printers to be assessed monthly to ensure they are not run to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.	2026-01-01	2026-12-31	-1.00	184,794	5,000		62,386	-	60,749	1,192	-	-	446	1,850	-	1,850	-	-	-	-
240	2026	ARP-Workstation Asset Management (WAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates. When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks. The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four-year refresh cycle ; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.	2026-01-01	2026-12-31	-1.00	5,132,431	51,618		1,732,709	-	1,638,426	42,316	37,119	-	14,848	19,099	-	17,956	1,142	-	-	-
241	2026	Digital-Hybrid Cloud and Data Center Migration	New Computers / Hardware	IT/Digital Foundation	This project will optimize data center assets and asset replacement project purchases by migrating or retiring applications out of existing Company and co-location data centers into cloud services, reducing operational costs for running IT services and leveraging increased cloud capabilities to improve the efficiency, quality, and speed-to-market of customer-facing and internal IT services. The technology currently deployed in the Company's data centers meets many customers' needs today. However, the pace of digital transformation is increasing rapidly, and requirements for applications are evolving faster than the technology in the Company's data centers can respond in a cost-effective manner. These data center constraints lead to longer implementation times, missing capabilities, or reduced functionality in the applications that the Company can deploy. This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective combination of data centers and public cloud services. Specifically, by migrating applications to cloud services, the project will: (1) reduce capacity, hardware maintenance, and security device costs at the co-location data center; (2) reduce hardware maintenance and security device costs at the production data center; (3) enable the ability to scale infrastructure quickly up or down without costly up-front hardware purchases; (4) reduce application risk through cost-effective, scalable infrastructure redundancy and availability; (5) reduce ongoing server and storage asset replacement costs; (6) reduce ongoing networking equipment replacement costs; (7) reduce operational support costs; and (8) enable the use of a vast array of cloud services to support Company applications. The project scope includes: (1) promoting the robust main co-location data center to become the primary data center for on-premise IT services; (2) demoting the Company's production data center to the disaster recovery data center for on-premise IT services; (3) analyzing applications for migration to cloud or retirement; (4) migrating applications from on-premise to cloud; (5) transforming applications to use cost-effective cloud services; (6) altering network architecture and deploying base infrastructure to allow each location (on-premise or in cloud) to function independently; (7) deploying cloud and on-premise cost management tooling and processes; (8) simplifying and optimizing backup and disaster recovery resources and processes using cloud services; (9) implementing additional automation for application deployment and management; (10) changing the operations model for support of cloud-based applications; (11) educating and increasing the skills of IT and other employees in leveraging public cloud services; and (12) transforming IT to become the broker of cloud services for the Company. Alternatives considered include: (1) migrating to public cloud services faster. This alternative was not chosen because the Company's ability to absorb new technologies coupled with the investments the Company has already made in data center equipment would prevent a faster move from being efficient and effective, introducing additional financial risk; (2) migrating to public cloud services slower or not at all. This alternative was not selected because delaying public cloud services and capabilities coupled with requiring an extension of the life of existing data center equipment creates increased financial and operational risk; and (3) contracting with an outside vendor to provide cloud services to run applications for the Company. This alternative was not selected because industry information shows the option as not yet cost effective or not providing a maturity level that the Company would be able to easily consume with limited in-house experience and expertise in public cloud. The alternative to migrate to a hybrid cloud and data center model was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2023-04-02	2026-12-31	0.17	9,482,277	2,253,546		206,881	-	-	144,493	-	-	62,388	59,385	-	-	59,385	-	-	-
242	2026	Operational Technology (OT) Datacenter Migration	New Computers / Hardware	IT/Digital Foundation	The OT environment consists of systems supporting the control and monitoring of electric grid, electric generation, gas compression, and natural gas pipeline. These systems are critical for safe and reliable natural gas and electric delivery. The OT Datacenter Migration project enhances the Company's capabilities by co-locating to an enhanced datacenter at a vendor facility. The Company's current datacenter for the OT environment needs modernization and relocation from the Parnall Data Center. The current location is not the preferred location to house servers and systems critical to the control of the Electric Grid or Gas Pipeline due to the close proximity to a railway system. The climate conditioners in the current OT datacenter are aging and have had faults resulting in unplanned shutdowns . The location of the datacenter in the basement of the Parnall building is nearby to the main water piping for the building. There have been instances of water infiltration in the past. This project creates value for the Company by significantly strengthening capabilities through: (1) mitigating legacy physical and location risks at the current Parnall site; (2) migrating the OT infrastructure to a modern, highly secured environment with redundancy in climate conditions; and (3) better datacenter facilities support with a guarantee of redundant power. The scope of the project includes: (1) migration of the OT environment from the Parnall Data Center to a co-located vendor data center; (2) re-validation of the OT Production and Disaster Recovery procedures once migration is completed; (3) migration of IT systems required for supporting the OT environment; and (4) decommission the existing OT environment from the Parnall location. The Company performed an analysis of alternatives to expand capabilities as well as address constraints and risks: (1) Remain at the current Parnall Data Center; (2) migrate OT environments to the Cloud; and (3) relocate to a third-party co-location facility. Current industry best practices do not recommend migration of OT environments to the cloud. The co-location vendor provides the building, cooling, power, and physical security the Company lacks for its servers, storage, and other computing and networking equipment at the current Parnall location. Based on the analysis, the Company decided to implement the third alternative.	2026-06-30	2027-12-11	-1.00	7,749,620	1,856,450	ROM	1,482,547	107,787	1,080,024	76,744	107,787	-	110,205	334,536	-	-	132,886	201,650	-	-
243	2026	20% ROM Adjustment - IT/Digital Foundation	New Computers / Hardware	IT/Digital Foundation	This is for the 20% ROM Adjustment for IT projects.							(296,510)	(21,557)	(216,005)	(15,349)	(21,557)	-	(22,041)	-	-	-	-	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
244	2026	Application Currency-IT/Digital Foundation-Application Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Application Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Application Platforms area are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	472,347	ROM	-	-	-	-	-	-	-	174,769	-	-	174,769	-	-	-
245	2026	Application Currency-IT/Digital Foundation-Infrastructure Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Infrastructure Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Infrastructure Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Infrastructure Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	109,556	ROM	-	-	-	-	-	-	-	40,536	-	-	19,778	20,758	-	-
246	2026	Business Capability Mapping SaaS Tool	Software(Intangible)	IT/Digital Foundation	The Business Capability Mapping (BCM) SaaS Tool is a cloud based software solution which will visualize the Company's capabilities related to our metrics, data maturity, supporting technologies, financial allocations, and other view points. The tool will automate analysis and report generation to quickly provide information while supporting other efforts directly supporting technology investment planning and management. The current lack of a centralized tool for tracking enterprise-wide data, which is manually managed via Excel, poses significant challenges. This manual process limits data sharing and the distribution of business capability roadmaps, complicating investment planning and alignment. The absence of a centralized tool also hinders effective communication regarding prioritization and application stack updates, preventing a comprehensive view of impacted areas. Consequently, the enterprise architecture practice struggles to accurately plan and forecast investment opportunities, leading to misallocation of funds, labor, and potential delays in enabling strategic opportunities. The solution will include implementing a centralized tool to streamline data sharing, enhance communication, and support accurate planning and forecasting. The company will see value through: (1) Implementing processes and supporting technical components to enable automated scoring of capabilities, including scores, measures, metrics, KPIs, and OKRs for consistent and accurate analysis; (2) Developing a consolidated view of critical capabilities, applications, and infrastructure, ranked based on their efficiency and effectiveness in meeting company objectives; (3) Integrating key technology features supporting Application Rationalization, Enterprise Resource Planning (ERP) system and major platform upgrades, Business Capability Modeling, Application Stack Ownership, Enterprise Architecture Artifact Tool Repository, centralized repository and role based access; (4) Generate a consistent framework to support the prioritization of investments based on their impact on key capabilities across the enterprise, (5) Implement a shared platform to integrate architecture activities versus siloed practices; and (6) Consolidate empirical data used for investments and technical health to ensure accuracy and consistency in evaluations. The project scope includes: (1) Implement a role-based access SaaS product and integrate with ServiceNow and other internal systems; (2) Configure the SaaS product with identified tools for data gathering on capabilities and their performance; (3) Develop processes and automation to gather data on capabilities, including applications, technical infrastructure, and metrics; (4) Establish a framework for prioritizing investments; (5) Create role-based dashboards and reports to visualize the output of data analysis; (6) Develop automated communications for key business decisions, investment plans, data collection, and reports; (7) Enable self-reporting on data within the tool; (8) Connect supporting documentation to the capabilities; and (9) Provide training on how to use the tool including end-user training. Alternatives considered for this include: (1) Continue with current practices for initiative planning and Enterprise Architecture practices. This was not selected as it does not address gaps in enterprise-wide practices and consolidated roadmap capabilities addressing key company objectives. (2) Develop in-house applications using multiple platforms including Excel, PowerBI, and custom development. This was not selected due to complexity of the solution and cost of delivery. Additionally, the dependency on the automated processes would create additional hurdles for efficient delivery. (3) Acquire external tools to support BCM, Enterprise Architecture, and investment planning. This solution was selected as it provides quick and efficient access to automated tools within acceptable cost ranges.	2025-04-15	2026-12-16	-0.52	548,250	160,000	ROM	185,089	-	-	126,600	-	-	58,489	63,344	-	-	50,394	12,950	-	-
247	2026	Data & Analytics Platform Rationalization	Software(Intangible)	IT/Digital Foundation	This project will optimize the Data & Analytics system landscape by creating connections, migrating data into the Data Lake in the cloud, and building visualizations from the data in the Data Lake. The IT Data & Analytics legacy systems (SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS) are outdated, inefficient, and becoming duplicative in nature with the introduction of DL 2.0. If these legacy systems are not retired, they will continue to cost the Company money as major investments are needed to maintain and support them. This platform rationalization project creates value for the Company and its customers by reducing the total cost of ownership associated with maintaining and supporting legacy systems including licensing fees, maintenance costs, infrastructure, and support resources. The project scope includes: (1) the assessment of the existing Data & Analytics platforms including SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS; (2) inventory of data and reports still being used by stakeholders; (3) determination of migration strategy; (4) data migration to the Azure Data Lake; (5) report migration to Power BI; (6) organization change management; and (7) the retirement/decommissioning of the legacy platforms and applications. Alternatives considered: (1) upgrade legacy systems in place (on-premise). This alternative was not selected because this is costly and misaligned with the Company's cloud strategy. (2) Lift and shift these on-premise systems to the cloud through the Hybrid Cloud Transformation Program. This alternative was not selected because it would duplicate the work being done as part of the DL 2.0 project and would not provide the same efficiencies that DL 2.0 introduces. (3) Migrate all data sources to DL 2.0 and retire legacy systems. This alternative was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2025-04-07	2026-12-31	0.24	10,423,047	1,336,943	ROM	1,354,934	149,306	-	435,213	555,590	-	214,825	264,572	-	-	43,436	221,136	-	-
248	2026	Enterprise Service Bus 2026-2027 Upgrade	Software(Intangible)	IT/Digital Foundation	This project will upgrade the current Enterprise Service Bus software versions in use at the company. This will also implement a container management system and migrate various services to containers. Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. The lack of a container management solution prohibits the adoption of a more cloud native approach leading to retaining legacy solutions. The value this project provides the Company includes: (1) implement a container management solution; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies. The project scope includes (1) implementing the current version of all applications that are part of the ESB application, database version, and required database drivers and (2) implementing a Kubernetes solution for container management and migrate targeted services that are identified as microservices to containers. Alternatives considered included: (1) Accept the current version levels and continue to pay for extended support costs and accept technical obsolescence risk. (2) Only upgrade the existing applications. (3) Upgrade all of the applications as well as evolve the cloud-based instance to a more cloud native architecture by converting containers and implementing a Kubernetes solution to manage the containers. This option was selected because it best meets the Company needs for the near future by maintaining vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.	2026-09-01	2027-11-22	-1.00	1,331,120	1,070,350	ROM	-	-	-	-	-	-	-	21,774	-	-	21,774	-	-	-
249	2026	HR Support Pack and Business Software Inc Upgrade 2026	Software(Intangible)	IT/Digital Foundation	The Human Resources (HR) Support Pack and Business Software Inc (BSI) upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. oAlternatives considered include: (1) not upgrading to the current support packs, which results in noncompliance with financial rules and regulations and inaccurate payroll. (2) there is no economical cloud solution, so this option was not entertained. (3) the Company decided the best alternative is to apply the appropriate support pack upgrades. This option is preferred because it enables the Company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.	2026-02-05	2026-12-31	0.00	-	665,132		-	-	-	-	-	-	-	246,099	-	-	37,427	208,672	-	-
250	2026	ISIS Papyrus 2026 Upgrade	Software(Intangible)	IT/Digital Foundation	This project will upgrade the Papyrus Objects suite of applications to the most recent version available per vendor recommendation. The ISIS Papyrus application is critical to creating electronic and paper correspondence for customers, including bills and dunnings. The application will be at least one major upgrade revision behind by 2026. It's imperative that customers retain unfettered access to their paper bills, dunning notices and other communications produced by ISIS. ISIS also makes customer bills available for online viewing through the website and mobile apps. Without the upgrade, vendors make no guarantee that any substantial patches or hot fixes impacting application reliability, capacity and security will be forthcoming. The upgrade will address these problems and challenges, as well as ensuring all other platform components comply with the Company's operational and security standards. The value of this project includes: (1) providing a more stable operational model by upgrading to the most recent version available; (2) maintaining the necessary vendor support; and (3) resolving tuning and stability issues with the vendors. The scope of the project is to upgrade the various licensed products that comprise the Papyrus Objects suite of applications. Alternatives considered include: (1) delaying the upgrade and continuing to operate with the current version. This alternative was not chosen due to the risk of application stability and the inability to maintain cyber security patching. (2) The Company instead decided to upgrade to the current version. This alternative was chosen as it eliminates the risk of application instability and the inability to maintain cyber security patching.	2026-02-01	2026-10-01	-1.00	-	217,246	ROM	-	-	-	-	-	-	-	80,381	-	-	80,381	-	-	-
251	2026	Kubra 4.0 Upgrade	Software(Intangible)	IT/Digital Foundation	Consumers Energy (CE) has the overarching ambition of serving 1 in 3 Low-to-Moderate Income (LMI) customers (currently 1 in 6), while supporting the achievement of clean energy goals and reduction in Uncollectible Expense (UCX). 37% of CE customers are low to moderate income (LMI). Low Income (LI) accounts for 11% and means they are currently in crisis and unable to pay their bill. Moderate Income (MI) accounts for 26% and means they are one financial crisis away from being unable to pay their bill. As part of the LMI effort, we are prioritizing Behavior Based Direct Messaging: Meet the customer where they are, communicate about assistance options based on behavioral indicators, and increase the likelihood of enrollment into meaningful assistance programs ahead of a crisis, and Kubra 4.0 will aid in the success of those LMI goals. To help a customer avoid a crisis before it happens, we need the ability to proactively communicate to them when their behaviors signal the possibility of an issue, some examples being: (1) A customer misses a payment after record of making payments for several months, (2) The auto-pay system receives an insufficient funds alert from the customers' account, (3) Energy use is high, and a bill is projected to be 25-50% larger than usual, and (4) Localized / seasonal triggers such as heat waves, blizzards, and ice storms. Additionally, (5) it's imperative that we're able to test and modify message content that captures the customer's attention, so that we may drive awareness to programs that offer assistance ahead of a crisis. Kubra 4.0 platform is more flexible and configurable to help experimental design & marketing iterate on who/where/what to cut through digital noise. This project creates value for the Company through improving customer communications by providing Consumers Energy (CE) with access to (1) templates and wording changes that previously required expensive Statement of Work (SOW) engagement to deliver and (2) reduce lengthy wait times to implement these aforementioned Statements of Work (SOWs). Finally, (3) this engagement will also introduce 12 net new alert messages, (4) allow for new means of communication and messaging via the mobile app push notification feature, and (5) provide better outage notification reliability and control via Application Programming Interface (API) data transfer instead of Secure File Transfer Protocol (SFTP) data transfer. The project scope includes: (1) 12 net new alerts including 4 for the Shut-off Protection Plan (SPP), missed payment(s), summer event alerting, winter event alerting, and 5 additional alerts to be detailed out during the plan & design phase of the effort based on current low-to-moderate income (LMI) customer communication needs, (2) new template editor as part of the upgraded platform, (3) New Push Notification option available for mobile app which will enable a fast follow enhancement to push notifications through more than just email and text, (4) all other updates and improvements through Kubra 4.0 including use of APIs and other technical improvements, and (5) a new Application Programming Interface (API) built specifically for CE's outage messages for better reliability - instead of the existing file transfer outage information which is less reliable. The alternatives considered include: (1) continue the expensive Statements of Work (SOW) approach for updating each message template and for bringing on any new messages. This would total approximately ~50k per new alert, for a total of 600k for all 12 net new alerts for this effort if pursued individually. This total is not including costs to any existing message adjustments. This alternative was not considered due to the extra cost and overhead. (2) Purchase a new customer communications system. This option was not selected as it would be extremely expensive to purchase and wouldn't have all of the requirements needed and would be a tremendous amount of labor to reintegrate with our existing communication channels. (3) Utilizing Microsoft Dynamics or Riverstar. This option was not selected as it would be a tremendous amount of labor to reintegrate with our existing communication channels nor would either of the platforms fully support the bandwidth or channels needed to properly communicate out what we send via Kubra today. (4) Implement the upgrade to include the new alerts. This alternative was selected because it will improve customer communications, improve accuracy and speed of message updates, and offer more message options to achieve the Low-to-Moderate income (LMI) 1-in-3 goal as we're able to keep expanding our communication options with the upgrade's features.	2025-03-17	2026-03-27	-1.00	257,253	90,950		2,481	-	-	1,688	-	-	793	-	-	-	-	-	-	-
252	2026	MS Self-hosted Gateway Solution and Migration	Software(Intangible)	IT/Digital Foundation	This project is looking to retire the API Exchange Gateway used primarily by the Enterprise Service Bus and replace it with a new solution called Microsoft Self-Hosted Gateway in security Zone B. The API Exchange Gateway is used by the TIBCO ESB to integrate corporate applications. New development will need to be done to integrate this solution. The Tibco API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform. The end of life date is 6/30/25 This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the Tibco API Exchange Gateway Exchange module), and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable. The project scope includes: (1) Implement the Self Hosted Gateway into Zone B as a replacement solution. (2) Migrate all current work items to the new platform or existing equivalent based on use case. (3) Conduct appropriate testing to ensure all Service Level Agreements are met. Alternatives considered include: (1) Evaluating the replacement of the current product with a new product that is not already in the Company environment. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor for the current platform has stopped all development for this product and the EOL has been set (3) Leveraging an existing solution already in the Company environment. This alternative was not selected as an existing product in the corporate Zone B layer does not exist. (4) Implement the Microsoft Self-Hosted Gateway and migrate current data into new platform. This alternative was selected as the most cost-effective solution that has ongoing support from the publisher.	2026-01-12	2026-11-20	-1.00	-	314,436	ROM	-	-	-	-	-	-	-	116,341	-	-	116,341	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
253	2026	Product Family Enhancements-Application Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	940,471	310,554		317,503	-	-	221,755	-	-	95,748	69,560	-	-	69,560	-	-	-
254	2026	Product Family Enhancements-Application Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	169,780		-	-	-	-	-	-	-	62,818	-	-	62,818	-	-	-
255	2026	Product Family Enhancements-Infrastructure Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software & hardware and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	589,117	201,062		198,886	-	-	138,909	-	-	59,977	74,393	-	-	74,393	-	-	-
256	2026	Product Family Enhancements-Infrastructure Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	46,664		-	-	-	-	-	-	-	17,266	-	-	17,266	-	-	-
257	2026	SAP Support Pack Upgrade 2026	Software(Intangible)	IT/Digital Foundation	The SAP Support Pack Upgrade project is to maintain the currency levels of all SAP applications. This will ensure the applications are at version levels that are supported by SAP, have the latest patches and bug fixes, and provide cross-application compatibility for business partners. To continue to maintain SAP application version currency, across all applications, the support packs released by SAP must be routinely applied. Without maintaining application currency, the core business applications running on the SAP platform are at risk of losing vendor support, resulting in the inability to apply bug fixes and patches, including security patches, and maintain application interoperability and stability. The project will add value by: (1) maintaining supportability of SAP applications; (2) mitigating system security, stability and reliability risks by ensuring the applications are up-to-date with the most current patches and bug fixes released by SAP; and (3) ensuring ongoing cross-application compatibility. The scope of this project includes routine support pack upgrades to all SAP applications, which include: Enterprise Core Component (ECC), Customer Relationship Manager (CRM), Enterprise Portal, Process Orchestration (PO), Business Warehouse (BW), Business Objects (BOBJ), Data Services (DS), Solution Manager, Data Quality Manager (DQM), Graphical User Interface (GUI), Single Sign On (SSO), System Landscape Directory (SLD) and other related SAP applications. Alternatives considered include: (1) dividing the scope into individual projects by SAP application. This alternative was not selected because the efforts are interrelated and completing them separately could lead to duplication of work, especially testing efforts, and therefore potentially higher costs. (2) migrating to SAP S/4HANA. This option was not selected because SAP S/4HANA is a multi-year project that is not expected to be completed by year-end 2026. So an alternative approach is needed to perform the application upgrades and maintain currency in the meantime. (3) Ultimately, the Company chose to balance the project scope through regular support pack upgrades. This alternative was selected because it provides the best balance of minimizing cost and maintaining support by combining multiple application upgrades through a single support pack upgrade effort.	2026-02-01	2026-10-31	-1.00	-	454,370		-	-	-	-	-	-	-	168,117	-	-	34,566	133,551	-	-
258	2026	20% ROM Adjustment - IT/Digital Foundation	Software(Intangible)	IT/Digital Foundation	This is for the 20% ROM Adjustment for IT projects.							(308,004)	(29,861)	-	(112,362)	(111,118)	-	(54,663)	-	-	-	-	-	-	-
259	**SUBTOTAL**	**2026 IT/Digital Foundation**										**10,454,074**	**205,674**	**7,712,079**	**1,224,231**	**609,209**	**-**	**702,881**	**2,093,746**	**-**	**219,307**	**1,035,935**	**838,306**	**-**	**197**
260	2026	ARP-Cyber-Common	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions shared by Electric and Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.	2026-01-01	2026-12-31	-1.00	1,719,036	18,809		818,605	-	760,015	38,335	2,091	-	18,164	6,959	-	1,850	4,775	-	-	334
261	2026	ARP-Cyber-Gas	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions for Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.	2026-01-01	2026-12-31	-1.00	142,262	4,889		142,262	200	127,000	10,583	537	-	3,942	4,889	-	500	4,389	-	-	-
262	2026	ARP-Network-Common	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks shared by Electric and Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.	2026-01-01	2026-12-31	-1.00	833,668	14,560		396,993	3,810	364,385	14,286	7,288	-	7,225	5,387	-	2,220	2,960	-	-	207
263	2026	ARP-Network-Gas	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks for Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.	2026-01-01	2026-12-31	-1.00	22,056	5,280		22,056	-	19,435	1,632	389	-	600	5,280	-	1,000	4,280	-	-	-
264	2026	ARP-Physical Security	New Computers / Hardware	Security	The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring alerts, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in an increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reduce gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) advanced analytics on security cameras for monitoring and real time alerting capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets not meeting the industry standard of 5 to 7 years for indoor cameras and 3 to 5 years for outdoor cameras. Alternatives 1 and 2 were not selected due to the risk of security concerns, utilizing equipment that is at end of life and no longer supported, and the risk of a lack of inability to meet regulatory requirements (FERC, NERC, TSA and NRC). The alternative selected maintains compliance, reduces redundancies and gaps in functionality, provides up to date support for the assets and current technological capabilities and optimizes overall performance of physical security systems.	2026-01-01	2026-12-31	-1.00	2,112,820	12,626		713,288	-	438,374	56,352	197,496	-	21,066	4,672	-	-	3,192	1,480	-	-
265	2026	Security/OT Field Modernization	New Computers / Hardware	Security	This project will implement new infrastructure for accomplishing improved security in the field for OT assets. Gas and Electric technicians are using corporate laptops, to manage critical OT infrastructure which does not follow cyber security best practices for managing critical infrastructure. Vendors and contractors have access to the Company's critical infrastructure using non-Company laptops. Best practice is to use dedicated laptops to connect to critical infrastructure. The value of this project is deploying dedicated Company OT laptops and associated OT infrastructure that can move between OT locations only and providing a secure environment. This project will procure and configure approximately 130 devices that will be used to manage critical OT infrastructure. The Company reviewed several options to mitigate cyber security risks inherent with the use of standard corporate laptops managing critical infrastructure. The alternatives considered are: (1) Continue utilizing existing workflow of using Corporate domain laptops with software installed; (2) Bring in an outside vendor to design and implement a proposed infrastructure; (3) Complete disallowance of all local access to critical systems; (4) Extending the OT network to remote Company locations; (5) Deploy a dedicated Company OT laptop and OT communications circuits, which includes cellular connectivity. The dedicated OT laptop and communications circuits presented the best way to secure the critical infrastructure by limiting internet and e-mail access. Vendors and contractors could also utilize these approved dedicated systems for managing infrastructure they help support at Company locations. Based on the analysis performed, the Company chooses to deploy a dedicated OT laptop and communications circuits which is not a cloud related solution, since it is hardware and not software.	2025-02-20	2026-12-18	-1.00	1,727,678	614,749		191,433	-	77,986	75,859	-	-	37,589	108,225	9,250	-	98,975	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
266	2026	Application Currency-Security-O&M	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2026-01-01	2026-12-31	-1.00	-	403,127	ROM	-	-	-	-	-	-	-	149,157	1,977	-	147,180	-	-	-
267	2026	Enhancements-Security-Capital	Software(Intangible)	Security	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	816,175	152,674		275,541	131,959	8,888	54,610	46,300	-	33,783	56,490	1,711	-	41,632	13,146	-	-
268	2026	Enhancements-Security-O&M	Software(Intangible)	Security	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2026-01-01	2026-12-31	-1.00	-	494,044		-	-	-	-	-	-	-	182,796	21,430	7,106	148,167	6,093	-	-
269	2026	Incident Command System (ICS) Management Software	Software(Intangible)	Security	The Incident Command System (ICS) Management Software will allow Company departments to manage emergency situations more efficiently, automate manual processes, and reduce response times. This tool will also assist the Company in enhancing and maturing its response capabilities and support digital automation in alignment with the Company's Destination 2035 Strategy. The current manual process for managing Emergency Incidents using the Incident Command System (ICS) across various departments (Storm Operations, Gas Operations, Generation, IT & Security, Applications & Analytics, etc.) is inefficient and error-prone. This hinders continuous improvement, program development, and response times. Departments seek automation to enhance emergency response capabilities. The Emergency Management Department struggles to administer processes and maintain compliance due to the absence of an ICS software and automation. This project will create value for the Company by: (1) managing and maintaining the documentation that supports emergency incident efforts, which if disrupted, would significantly impact the Company and customers; (2) providing a consistent, organized, and expedient response process when using ICS that is adaptable to any incident severity or scope; (3) offering a mechanism for identifying restoration gaps between critical business processes; (4) reducing or eliminating human error and waste; (5) decreasing the need for additional staffing to accommodate the creation of manual forms each operational period, as well as managing and tracking documents; and (6) enhancing and streamlining the user experience. The project scope includes: (1) implementing an emergency incident management application for all company departments that use ICS to manage activations effectively; (2) automating reporting for tracking status and measuring the effectiveness and maturity of the Emergency Management program; (3) facilitating training exercises and response efforts through incident management tools based on Federal Emergency Management Agency (FEMA) National Incident Management System (NIMS) concepts; (4) providing program management tools for monitoring required deliverables; (5) transitioning from Word-based documents/management and storage for incidents; (6) increasing response efficiency through automated tools like objective lists by department, and enhancing self-service opportunities for using ICS forms and adhering to required standards; (7) enabling efficient task assignment, tracking, and management throughout incidents; (8) automating the post-incident process including task assignments, management, and tracking. Alternatives considered include: (1) Purchasing licenses and implementing Incident and Crisis Management functionality from the Company's current Disaster Recovery and Business Continuity Application vendor. This alternative was not selected because it does not currently offer the capabilities needed to advance program maturity for a comprehensive response to business interruptions. It does not meet existing functional requirements to manage ICS activations and would require considerable customization for ICS form creation, resource management during an incident, and alignment with FEMA standards. (2) Continuing to use manual processes through Microsoft Excel, Word, and Teams. This alternative was not selected as the manual process is time-consuming for all company departments leveraging ICS, leading to duplicative work, deviations from the Emergency Management Standard, insufficient support for large-scale/multi-department activations, and reduced response efficiency and management. (3) Implementing a Cloud Software as a Service (SaaS) solution. This alternative was selected as there are better SaaS solutions that fit the outlined needs. The final application will be determined after issuing a Request for Proposal and selecting a vendor during the project plan phase.	2026-01-05	2026-11-02	-1.00	-	79,240	ROM	-	-	-	-	-	-	-	7,332	-	-	2,483	4,849	-	-
270	2026	Saviynt Enterprise Identity Governance and Access (EIGA) Implementation	Software(Intangible)	Security	The project will implement Saviynt EIGA module, consolidate Identity Access Management ("IAM") functionality into Saviynt, and retire the Identity Manager application. By implementing the new solution, the Company will optimize IAM functionality, eliminate complexity, and reduce support costs. In addition, the project will integrate the OT network with an IAM solution that will allow for automated management of users and entitlements in the OT Active Directory domains and applications. The current version of AccessNow reached end of life in December 2022, with support discontinued in January 2023. The application has numerous custom workflows and integrations, requiring professional services for ongoing use and changes. It lacks proper data analytics and reporting, posing risks such as inability to fix critical defects, software incompatibility, compliance issues, increased costs, and degraded performance. The Company uses multiple IAM tools, each performing critical functions, leading to numerous required interfaces and customizations. While beneficial for end users, these integrations increase the risk of system failures, higher support costs, multiple subscriptions, infrastructure and maintenance costs, and more expensive upgrades. The current solution utilizes SAP HR batch file processes that introduces failure points, delays, and data integrity issues. Failures in these processes can prevent new or transferred employees from accessing necessary systems, leading to operational disruptions and potential compliance risks due to inappropriate access retention. This project provides value by: (1) Consolidating multiple IAM platforms through the implementation of the Saviynt EIGA Module, reducing complexity and support costs; (2) Decreasing complexity and enhancing efficiency by reducing interfaces between multiple identity tools; (3) Improving the end-user experience and reducing human struggle with access requests through a new, intuitive portal design; (4) Minimizing custom code and focusing on configurations only by utilizing out of the box functionality; and (5) Streamlining employee data processing with the implementation of an HR interface. This project scope includes: (1) Implementing the Saviynt EIGA module to consolidate IAM platforms; (2) Standardizing processes by removing customized code and using out-of-the-box functionality; (3) Replacing and improving access system; (4) Addressing issues with aging applications, multiple IAM platforms, integration challenges, and antiquated HR processing. Alternatives considered include: (1) Implementing hot fixes to AccessNow version 8.1.5 to ensure support through mid-2023; (2) Upgrading only the application to current supported version, excluding the new web portal but will include new application functionality; (3) Remaining on current version that will be unsupported as of January 2023, requiring vendor professional services for any break/fix. Patches and enhancements may potentially introduce additional risk of version instability; (4) Implementing IAM functions in Saviynt platform to manage access requests, including Active Directory, SAP, SAP HR, disconnected systems, and existing API integrations. The alternative selected was implementing the new Saviynt system, eliminating AccessNow software.	2024-07-01	2027-10-29	-1.00	#N/A	#N/A	ROM	430,006	-	16,880	80,974	202,560	-	129,592	22,329	-	-	22,329	-	-	-
271	2026	20% ROM Adjustment - Security	Software(Intangible)	Security	This is for the 20% ROM Adjustment for Security projects.							(86,001)	-	(3,376)	(16,195)	(40,512)	-	(25,918)	-	-	-	-	-	-	-
272	**SUBTOTAL**	**2026 Security**										**2,904,183**	**135,968**	**1,809,587**	**316,436**	**416,149**	**-**	**226,043**	**553,517**	**34,368**	**12,676**	**480,363**	**25,568**	**-**	**541**
273	**TOTAL**	**2026**										**25,971,770**	**2,639,935**	**9,817,147**	**5,130,326**	**4,271,907**	**-**	**4,112,453**	**6,709,414**	**43,752**	**239,366**	**4,202,041**	**2,060,071**	**-**	**164,184**
274	2027	Application Currency-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Corporate Services adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Corporate Services are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	274,702		-	-	-	-	-	-	-	101,640	-	-	101,640	-	-	-
275	2027	Asset Accounting Tax Upgrade	Software(Intangible)	Corporate	The project will upgrade the Company's current on-premise accounting asset management tax software to the SaaS version as required by the vendor ensuring continued support of a critical financial application and providing new functionality. In 2025, standard vendor support ends for the current on-premise PowerTax software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the tax fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility. This project creates value for the Company by ensuring compliance with regulated and financial accounting within the tax fixed asset sub-ledger. In addition, the project adds value by: (1) moving to a SaaS solution in order stay supported; and (2) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support. The project scope includes: (1) evaluating current vendor/product solutions with market leaders; and (2) upgrading the vendor software from the current version to the newer SaaS version; or replacing it. Alternatives considered include: (1) evaluating SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features such as centralized tax error processing. (2) evaluating other software options. This option may not provide appropriate regulatory reporting and other needed improvements and introduces several complexities and costs: Integration Challenges as PowerPlan modules are designed to work seamlessly together and data synch, mapping, and real-time updates may not be as robust as with native modules; Loss of Automation and Efficiency as there may be manual data transfers, duplicate entries and reduced automation increasing labor costs and risk of mistakes; Higher IT and Support Costs as maintaining two asset accounting systems means higher IT overhead with upgrades, troubleshooting, and user training; Reduced Data Integrity and Security as splitting tax data between systems can create gaps in data integrity, audit trails, and security controls; and Limited Vendor Accountability as when issues arise, vendors may point to integration boundaries making troubleshooting and issue resolution slower and more complicated. (3) moving entire PowerPlan suite, which includes PowerTax, to their cloud option. This option would be expensive from a licensing and integration build perspective, has an unclear timeline, and would remove the opportunity for direct database control. (4) waiting until a future upgrade cycle. This option introduces technical risk and potential financial processing risk. (5) upgrading to a newer version of the current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.	2027-02-01	2028-02-28	-1.00	-	400,191	ROM	-	-	-	-	-	-	-	126,918	-	-	47,841	79,076	-	-
276	2027	Asset Accounting Upgrade 2027-2028	Software(Intangible)	Corporate	The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application. Standard vendor support will be ending for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time. This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted. The project scope includes: (1) evaluating current vendor/product solution with market leaders; and (2) upgrading the vendor software from the current version to a newer version. Alternatives considered include: (1) Evaluated SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluated other software options. This option would introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements; (3) Address cloud possibilities. This option is expensive and has an unclear timeline roadmap; (4) wait until a future upgrade cycle. This option introduces technical risk; (5) Upgrading to a newer version of current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.	2027-02-01	2028-02-28	-1.00	-	671,749	ROM	-	-	-	-	-	-	-	222,106	-	-	73,838	148,268	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
277	2027	Enterprise Risk Management	Software(Intangible)	Corporate	The project will implement software to streamline Enterprise Risk Management (ERM) processes, improve efficiency, provide risk identification and repository tools, and deliver real-time risk data. The Enterprise Risk Team (ERT) collaborates with Risk Owners (ROs) annually to identify new risks, update existing ones, quantify impacts and likelihoods, document mitigation plans, identify trends, and formulate risk tolerance metrics. This process involves iterative exchanges between ERT and ROs to align on content. This effort culminates in multiple risk maps presented annually to senior management and the Board of Directors (BoD). The manual Enterprise Risk Management (ERM) process is intensive and time-consuming, creating risks of human error that can inaccurately quantify risks, introduce data anomalies, and create version tracking issues. The current process results in inefficient use of time by risk analysts and risk owners, limits the breadth of analysis, and affects the Company's ability to promptly identify, analyze, and communicate risks to senior leaders, potentially causing delays in responding to emerging risks. Due to its lengthy nature, the manual process is conducted only once a year but needs to be performed more frequently for proactive enterprise risk management. Utility industry peers use software to more effectively manage enterprise risk management programs. This project creates value for the Company by: (1) providing real-time risk information to stakeholders including the risk team, risk owners, senior management, and the Board of Directors (BoD); (2) supporting proactive risk management; (3) establishing a centralized repository for risk identification, management, and mitigation plans; (4) reducing waste through simplified processes; and (5) enhancing efficiency for risk owners and analysts. The project scope includes: (1) creating risk analysis templates and tools for automated reporting; (2) establishing automated workflows to perform risk updates; (3) configuring dynamic templates that prompt the risk owners based on prior selections; (4) organizing risk assessments through an online and searchable data repository; (5) creating new reports and executive dashboards; (6) migrating data; and (7) setting record retention rules. Alternatives considered include: (1) Continuing to use the current manual processes. This alternative was not chosen due to inefficiencies, poor quality results, and limited frequency of risk reviews. (2) Building a custom internal enterprise risk solution. This alternative was not selected because it does not incorporate best practices available in risk management software provided by industry leaders. (3) Implementing a software solution from a leading enterprise risk solution vendor. Although this introduces new license and ongoing support costs, it is preferred since it incorporates industry best practices, ensures application reliability, security, stability through vendor support, and provides innovation and insights via risk information reporting through management dashboards. Additionally, it aligns the Company with utility industry peer practices for more effective enterprise risk management.	2027-07-01	2028-07-03	-1.00	-	81,385	ROM	-	-	-	-	-	-	-	2,276	-	-	793	1,483	-	-
278	2027	Product Family Enhancements-Corporate-Capital	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	1,115,000	248,975		376,424	-	-	262,907	-	-	113,517	92,121	-	-	92,121	-	-	-
279	2027	Product Family Enhancements-Corporate-O&M	Software(Intangible)	Corporate	The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	258,193		-	-	-	-	-	-	-	95,531	-	-	95,531	-	-	-
280	**SUBTOTAL**	**2027 Corporate**										**376,424**	**-**	**-**	**262,907**	**-**	**-**	**113,517**	**640,591**	**-**	**-**	**411,764**	**228,827**	**-**	**-**
281	2027	Energy Assistance Enhancements and Maintenance Annual Updates	Software(Intangible)	Customer	The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as Consumers Affordable Resource for Energy (CARE) project, will implement software changes to offer energy assistance to low-income customers and streamline the process for the assistance agencies who use the assistance portal. This is accomplished through improved user interfaces and updates to SAP to process various requests. Upcoming modifications will be identified following an ongoing and annual review of requests, that includes criteria from the Department of Health and Human Services (DHHS) and Michigan Public Service Commission (MPSC) to prioritize the list of changes. Each grant year, DHHS and MPSC stipulate the criteria required for customers to enroll in the CARE program, how the Company and agencies will manage the enrollment process and track active CARE customers, and how they will administer the Michigan Energy Assistance Program (MEAP) benefits through bill credits and arrears forgiveness. The criteria changes significantly each year; therefore, the Energy Assistance Enhancement and Maintenance Annual Updates application requires modifications to meet the new requirements. If the regulatory requirements are not fulfilled, the Company is at risk of losing state Low Income Energy Assistance Fund (LIEAF) funds to assist low-income customers with paying their energy bills, thereby increasing the customers risk of shutoff for non-payment. In addition, our energy assistance programs function within all software platforms in the company which consistently need enhancements and updates. The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive LIEAF funding, which can be used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, thereby making it easier to assist customers in need of LIEAF funding; and (3) complete modifications to customer facing platforms. The project scope includes: (1) updating the enrollment and status process; (2) allowing for flat monthly bills; (3) improving reporting; (4) updating the arrears forgiveness plan; (5) satisfying additional regulatory requirements for the annual grant rule changes required by the Department of Health and Human Services and Michigan Public Service Commission; (6) updating CARE dunning process; and (7) updating the assistance portal (CE PASS) functionality to enhance Agency Self-Service. Alternatives considered include: (1) continue with current process. This alternative was not chosen because it would lead to loss of grant funding, thus decreasing or eliminating energy assistance dollars for customers; (2) transfer administration of Energy Assistance Programs to a third party organization. This alternative was not selected because it would remove ownership and visibility into the health of the program while increasing administrative costs; and (3) make annual updates to the application, which will allow agencies to easily enroll customers on assistance programs and allow placement of holds to stop or prolong credit activity until assistance decisions are granted. This option was selected since it provides long-term proactive energy assistance to customers and prevents loss of grant funds. Changes are required to internal systems such as SAP, a large internal system that supports broad areas of the business, and the Agency Portal, an internally developed web application, therefore a single cloud or third-party alternative is not viable. Additionally, retiring the existing Agency Portal for a new application would increase costs beyond that of the routine upgrades.	2027-01-01	2027-12-31	0.00	-	335,195		-	-	-	-	-	-	-	124,022	-	-	114,151	9,871	-	-
282	2027	Product Family Enhancements-Customer-Capital	Software(Intangible)	Customer	The Customer initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	2,351,548	124,020		793,883	-	3,034	19,818	760,644	-	10,387	45,888	-	-	27,446	18,441	-	-
283	2027	Product Family Enhancements-Customer-O&M	Software(Intangible)	Customer	The Customer initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	300,284		-	-	-	-	-	-	-	111,105	-	-	73,493	37,612	-	-
284	2027	Rate Change Maintenance	Software(Intangible)	Customer	The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements. For the Company to continue to meet and comply with certain MPSC requirements and to enable it to update its rates when rate changes are approved, there is a need to make periodic updates/modifications to existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers. The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs. The scope of this project encompasses (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes. Alternative considered include: (1) a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the time it would take for testing of this model; and (2) Instead, the Company chose to leverage onshore resources to plan, coordinate, and execute the rate changes. This option was selected as it supports the Company's operation model for rate changes.	2027-01-01	2027-12-31	0.00	-	345,380		-	-	-	-	-	-	-	127,791	-	-	127,791	-	-	-
285	2027	SiteCore Secondary Upgrade 2027	Software(Intangible)	Customer	The project will refresh all components of the website hosting, delivery, search, and analytics applications to add new features and improve search capabilities. Sitecore is the content management application for the consumersenergy.com website, a channel many customers use for accessing account information and bill payment. Sitecore requires regular upgrades to adhere to the vendors support lifecycle to ensure system reliability, take advantage of new application features, maintain current security updates, and improve the customer's website experience. The project will add value for the Company by: (1) avoiding costs for extended maintenance agreements required at the end of mainstream support; (2) ensuring that the website retains the most up-to-date security posture; and (3) supporting the Company's CXI goals by improving reliability and performance. The project scope includes: (1) upgrading the Sitecore content management software to the latest available version. Alternatives considered include: (1) Delay the upgrade. This alternative was not chosen due to the need to prevent the application from falling outside of the mainstream support window, requiring an additional 10% in maintenance fees. Along with rapidly changing feature sets that are continually being developed by the vendor, the Company would be in a worse position to handle constantly changing cyber threats; (2) Migrating to a cloud solution was also considered. This alternative was not chosen due to the cost/benefit analysis of re-architecting the Company's current Sitecore implementation to facilitate cloud migration that is not viable at this time; and (3) Rejecting these alternatives, the Company chose to upgrade Sitecore on a two-year cycle because it provides up to-date functionality, stability, and mitigates cyber security risks while minimizing cost and impact.	2027-01-18	2027-10-15	-1.00	-	105,765	ROM	-	-	-	-	-	-	-	39,133	-	-	39,133	-	-	-
286	**SUBTOTAL**	**2027 Customer**										**793,883**	**-**	**3,034**	**19,818**	**760,644**	**-**	**10,387**	**447,939**	**-**	**-**	**382,014**	**65,925**	**-**	**-**
287	2027	Application Currency-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Electric and Gas Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	541,866	ROM	-	-	-	-	-	-	-	200,490	-	-	179,535	20,955	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
288	2027	Application Currency-Operational Technology-O&M	Software(Intangible)	Electric & Gas Shared	The Operational Technology initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	194,042	ROM	-	-	-	-	-	-	-	71,796	-	-	71,796	-	-	-
289	2027	Itron Enterprise Edition 2027 Upgrade	Software(Intangible)	Electric & Gas Shared	This project will upgrade Itron Enterprise Edition (IEE), which collects the reads from meters to ensure non-estimated bill accuracy. Itron Enterprise Edition (IEE) is the Company's keystone application of the Advanced Metering Infrastructure (AMI), that provides billing data that includes time of use data. If this application does not stay current, the Company increases the risk business operations could be interrupted or compromised. Itron Enterprise Edition (IEE) is a key component in keeping the Company current, with billing capacity, stability, and accuracy obligations. This project creates value for the Company by: (1) ensuring the features and functionality needed to meet and exceed customer satisfaction and billing accuracy are available to business partners and IT; (2) meeting Information Security's requirement to keep applications patched and protected from cyber attack. The scope of this project includes: (1) upgrading the Itron Enterprise Edition (IEE) applications to the next appropriate versions; (2) migrating the database to the next version required by the application; and (3) replacing hardware required by the next version to maintain operating system currency. Alternatives considered include: (1) defering the upgrade. This alternative was not selected because it would decouple Itron IEE (Consumers Energy's MDM) from the Itron security infrastructure introducing application instability, security and dependency risks to the utility, possibly negatively impacting critical customer electric and gas billing operations. It would also likely affect other business critical Itron applications, creating more expense to support and no ability to leverage updated tool capability. (2) replacing the platform. Replacing IEE/MDM would require the application business owners to undertake a new initiative mirroring the expense and effort that went into the initial multi-million dollar project.(3) performing the upgrade is the best alternative. This option is superior for both customers and the Company because it maintains vendor support for hot fixes and patches, and aligns with all upgrade projects related to other Itron products.	2027-01-14	2027-11-14	-1.00	-	265,814	ROM	-	-	-	-	-	-	-	98,351	-	-	98,351	-	-	-
290	2027	Product Family Enhancements-Electric & Gas Shared-Capital	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Electric and Gas operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	1,036,665	155,294		349,978	-	3,376	67,092	242,623	-	36,887	57,459	-	1,730	9,852	45,876	-	-
291	2027	Product Family Enhancements-Electric & Gas Shared-O&M	Software(Intangible)	Electric & Gas Shared	The Electric and Gas operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Electric and Gas Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	215,871		-	-	-	-	-	-	-	79,872	-	828	62,183	16,860	-	-
292	**SUBTOTAL**	**2027 Electric & Gas Shared**										**349,978**	**-**	**3,376**	**67,092**	**242,623**	**-**	**36,887**	**507,968**	**-**	**2,559**	**421,717**	**83,692**	**-**	**-**
293	2027	Application Currency-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	45,164	ROM	-	-	-	-	-	-	-	45,164	-	-	45,164	-	-	-
294	2027	Compression Air Permit And Compliance Digitalization	Software(Intangible)	Gas	This project modernizes and expands the use of software and digitized forms in support of station air permits and code compliance at Gas Compression facilities. The current process around air permits and compliance for Gas Compression is cumbersome, largely paper based, and is made up of multiple disconnected systems. This leads to poor visibility, process inefficiency and waste, re-work, regulatory risk, and human error. his project provides value to the Company through: (1) increased productivity by direct data entry in the field; (2) improved quality through increased accuracy of updates completed at the time and place of the work; (3) elimination of the need to enter data into multiple disconnected systems, and (4) improved safety through access to real-time information used at work sites rather than printed procedures and forms. The scope of the project includes: (1) Merging the existing air permit and compliance tools into a single solution, (2) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (3) configuring changes in SAP and the mobile work management software to replace the paper-dependent process with the ability to access and update maintenance, operations, and safety information for Gas Compression. Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution was not selected since it is an unproven solution at the Company and would require additional project and support costs. (2) Continue with the manual paper-based processes and forms. Continuing with the manual paper-based processes and forms was not selected because it would not eliminate the identified process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A customized mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the product was not intended to support. (4) Adopt a cloud based SAAS solution. This option was not selected as it was a high-cost option. (5) Utilize the existing Service Suite solution currently deployed for Gas and Electric Distribution. The Service Suite solution was selected because it is both an industry standard and a proven solution at the Company and provides the required mobility and digital benefits at a lower cost than other options.	2026-01-06	2027-03-31	-1.00	744,138	109,926	ROM	281,883	-	1,500	195,022	-	-	85,361	64,200	-	-	64,200	-	-	-
295	2027	Gas Distribution Probabilistic Risk Model	Software(Intangible)	Gas	The project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas distribution pipeline assets. Relative risk models are unit-less measures of risk derived from input information using qualitative data and ordinal scales to produce "risk index" scoring; in simple terms, the relative risk model does not provide true statistical measures. The risk assessment used in the current model provides a score for likelihood, consequence, and risk that is relevant only in comparison to other scores. While the outputs provide a sense of relative risk when comparing one pipeline with another, the scores do not provide quantitative scores for probability, frequency, or expected loss of events. Although pipeline operators commonly use relative risk models, the quality of the relative risk ranking relies on subject matter expert inputs, human inferences, and opinions. Completion of this project will provide value to both the Company and its customers.Â Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed pipeline replacement or improvement projects.Â Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events; and (2) configure multiple data sources to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed decisions based on improved quality inputs in a measurable model; and (3) provide information for better decisions on Capital project improvements and integrity management.Â Unlike the current unit-less relative model a probabilistic model will be a unit based risk score, specifically in the unit of dollars, improving efficiency in interpreting risk results for business decisions. The project scope encompasses the implementation of a probabilistic risk model for gas distribution.Â The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards. Alternatives considered for the project include: (1) Implement a custom, Excel-based probabilistic risk model through a consulting effort. This alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". (2) Implement a custom built probabilistic risk model. This alternative was not selected because the custom built solutions analyzed are not mature and have not been widely tested with transmission operators.Â (3) Implement a SaaS based solution. The option of implementing the SaaS probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven and upgradable technology, and ongoing vendor support.	2026-01-09	2027-06-30	-1.00	5,377,265	38,201	ROM	897,877	-	-	166,025	461,082	-	270,770	9,550	-	-	9,550	-	-	-
296	2027	Gas Nominations Replacement Solution	Software(Intangible)	Gas	The Gas Nominations Replacement Solution project will replace the existing gas nominations application with a system that is capable of scheduling and tracking the receipt and redelivery of all the natural gas supply that flows onto and through the Company's gas transmission system to customers. The current gas nominations application has software and vendor support issues since its original implementation including major security risks, inadequate vendor support and issue response time, user inefficiencies and reporting issues, and various technical difficulties that make upgrades and contract administration challenging. Some of the problems have created waste by reverting to manual workarounds. The ongoing issues create a risk that can result in a disruption to the scheduling and tracking of natural gas supply, which in turn may create customer safety risks, result in breaches of confidential customer data, cause significant financial harm, or could cause damage to the Company's reputation. The Gas Nominations team is seeking a replacement application that will provide the full functionality required to maintain supply to our customers and address the issues identified with the current application. The project will add value by: (1) mitigating the security risk associated with the existing software; (2) improving response to abnormal situations; and (3) reducing end user inefficiencies. In addition, the project will create value by eliminating waste and manual steps to create accurate reporting for gas suppliers to change gas allocations for each gas supplier, to support the implementation of the Operational Flow Order provisions in our tariffs, and to update Gas Transportation contract values required by tariff. The scope of this project includes: (1) replacing the existing gas nominations application; (2) developing reporting capability based on standard in-house software; and (3) retiring the legacy system (hardware and software). Alternatives considered include: (1) upgrade the existing application to the latest version; Option 1 was not selected because it requires a significant investment, does not mitigate security risks, and does not meet analytics, reporting, usability and accessibility needs. (2) Develop a custom in-house solution; Option 2 was not selected due to the complexity of the needed solution and the resources that would have to be involved. (3) Replace the existing application with a standard software offering, which may be a cloud offering. Option 3 was selected to increase functionality and minimize security risks inherent in the existing software. If this project is not completed then the inefficiencies, administrative challenges, and major system security risks of not meeting our IT standards identified above would not be addressed.	2026-01-04	2027-04-05	-1.00	1,382,770	178,259	ROM	264,760	-	-	127,167	67,000	-	70,593	28,133	-	-	16,644	10,489	-	1,000
297	2027	Gas Supervisory Control and Data Acquisition (SCADA) Platform Upgrade 2027-2028	Software(Intangible)	Gas	The Gas Supervisory Control and Data Acquisition (SCADA) Platform Upgrade project will upgrade the software every 2 years. This will include the upgrade of the underlying operating systems and database platforms that the software resides on as needed to maintain vendor support. This system is used to monitor and control natural gas transmission and distribution field equipment. This project will add additional features and enhancements to Gas Monarch, the Company's Gas SCADA platform that improves efficiency and reliability Running on an older version of the Gas SCADA Software could have potential impacts on the reliability and resiliency of the natural gas transmission and distribution system, as reliability metrics depend upon system availability. Maintaining an older version of the software creates risks associated with vendor responsiveness in addressing problems, as they arise. It will also take more effort to support any upgrades in the future because of difficulties resulting from longer durations between upgrade efforts. If upgrades are delayed, additional full-time resources will be required for the year upgrades occur to address upgrade complexities. Upgrading the Gas SCADA software adds value to the Company by ensuring that problems are promptly addressed when they occur. Additionally, the upgrade includes enhancements and fixes to the core product that support the resiliency of gas delivery, ensuring that customers are receiving the energy they need when they need it. Also, the transmission and distribution system depends on availability of the gas system, staying current with the solution provider upgrades is critical to the resiliency of both systems. The scope of this project is an upgrade to the Gas SCADA software, which encompasses the following: (1) upgrading the application software; (2) upgrading the underlying operating systems and database platforms; (3) implementing new functionality for improved value to the Company; (4) making necessary configuration changes; and (5) updating documentation related to the integration changes. Alternative considered include: (1) Defer the biennial upgrade of the SCADA application. The Company targets SCADA biennial application upgrades to stay within two versions of the current application state to maintain application stability and cyber security, given the critical nature of the SCADA system. This alternative was not chosen due to increased security risk and need for vendor support of the application. (2) Alternative Vendor solution. This option was not chosen because the move from our current vendor would be time consuming and costly. It could also introduce instability as any alternative solutions have not been proven operationally. (3) Do nothing. This option was not chosen due to the critical nature of these systems and the potential operational risks associated with operating on an unsupported solution. (4) Implement a cloud solution. This option was not chosen as our internal security requirements do not allow us to host SCADA systems in the cloud. (5) The option chosen is to complete the upgrade project with associated software necessary to complete the project that will deliver new functionality for improved value.	2027-03-08	2028-03-24	-1.00	1,024,700	112,205	ROM	518,708	250,000	-	107,580	100,000	-	61,128	56,545	-	-	46,545	-	-	10,000

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
298	2027	Product Family Enhancements-Gas-Capital	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	462,580	95,993		462,580	23,667	25,872	104,922	254,260	-	53,860	95,993	-	3,331	37,410	55,252	-	-
299	2027	Product Family Enhancements-Gas-O&M	Software(Intangible)	Gas	The Gas Engineering and Operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	442,447		-	-	-	-	-	-	-	442,447	-	1,493	318,624	122,330	-	-
300	2027	Tracking & Traceability	Software(Intangible)	Gas	Tracking and Traceability is a project driven from proposed regulatory rules that will require utilities to map new and replacement installations with tracking and traceability data for plastic pipes, fittings, and fusions for the lifetime of the asset. The Company does not currently have a Tracking and Traceability program that will meet PHMSA proposed requirements (PHMSA-2014-0098), also known as the Plastic Pipe Rule. Tracking and traceability refers to the collection of information that provides manufacturing, material type, and location information for pipe and components. PHMSA defines the terms âtrackingâ' and âtraceabilityâ' as follows: (1) Tracking is information that provides for the identification and location of pipe and components, the date installed, and the person who made the joints in the pipeline system; and (2) Traceability is within American Society for Testing and Materials (ASTM) F2897-11a and includes a unique identifier for the location of manufacture, production, lot information, size, material, pressure rating, temperature rating and, as appropriate, type, grade and model of pipe and components. PHMSA will be requiring each pipeline operator to maintain tracking and traceability information for the life of installed pipeline segments. The lack of adequate traceability for plastic pipe and tracking of pipe location prevents gas pipeline operators from having enough information to identify systemic issues related to incidents involving plastic pipe. The lack of this information makes it difficult for operators and regulators to determine whether plastic pipe or component failures are related to a certain type or vintage of material, specific product defect or design, heat/lot of the product, or whether it was produced by a certain manufacturer at a certain time. The lack of information can result in excessive pipe excavations due to an inability to locate the affected sections of pipe or fittings when responding to plastic pipe or component manufacturer recalls. This project will develop a sustainable Tracking and Traceability program that will meet PHMSA requirements (PHMSA-2014-0098) which address the proposed tracking and traceability requirements. The project adds value by capturing traceability data via barcode readers and location tracking information via Global Positioning System (GPS) equipment to improve the quality of data and assist the Company in determining future scopes of work in the event of any component manufacture recalls. The scope of work will include: (1) changes in SAP Supply Chain processes to capture the required barcode information for all plastic components used in gas distribution and service lines; (2) changes in SAP Work Management processes to account for capturing barcode information as part of material components added to work orders, capturing fusion information from work order completion and capturing GPS coordinates from work order completion; (3) changes in GIS to capture GPS coordinates of plastic components and GPS coordinates of component fusions; (4) building of a repository for tracking and traceability reporting and analysis; (5) purchasing barcode reading equipment for storerooms and gas distribution trucks; and (6) purchasing of GPS locating equipment to capture coordinates. Alternatives considered: (1) The do nothing alternative, which was not selected because it would expose the company to significant legal and financial risk resulting from non-compliance. (2) Internally develope digital technology supporting the tracking & traceability standards included in the PHMSA-2014-0098 plastic pipe rule. The second alternative is being pursued by the Company.	2026-01-01	2028-06-30	0.00	14,864,950	1,018,640	ROM	7,277,830	-	4,011,950	1,873,780	324,000	-	1,068,100	508,250	-	-	428,250	80,000	-	-
301	2027	20% ROM Adjustment - Gas	Software(Intangible)	Gas	This is for the 20% ROM Adjustment for IT projects.							(1,848,211)	(50,000)	(802,690)	(493,915)	(190,416)	-	(311,190)	-	-	-	-	-	-	-
302	**SUBTOTAL**	**2027 Gas**										**7,855,427**	**223,667**	**3,236,632**	**2,080,581**	**1,015,926**	**-**	**1,298,622**	**1,250,282**	**-**	**4,824**	**966,387**	**268,071**	**-**	**11,000**
303	2027	ARP-Radio	Network	IT/Digital Foundation	This project will refresh hardware to include: 800Mhz Radios and infrastructure, cellular modems, plant radios and systems, cellular amplification devices, vehicle consoles in service trucks, other communications equipment, and associated test equipment.Â This equipment supports mission critical voice and data communications for plant and field service personnel and dispatch personnel.Â 800MHz radios are upgraded on a 10-year lifecycle basis. Plant radio systems are upgraded on a scheduled 10-year lifecycle basis.Â Cellular modems are refreshed on a five-year life cycle basis.Â Amplification systems are refreshed on a 10-year life cycle. 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio and cellular systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing or becoming obsolete. The refresh of this equipment in a proactive manner is critical to providing service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety. This project creates value for customers and the Company by: (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between Company dispatch locations and crews in the field; (4) ensuring the safety of personnel working in higher risk workspaces by replacing equipment with units that contain intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure. The project scope consists of: (1) scheduled replacement of radios, modems, consoles; and (2) installing additional radios, modems, and console assets to satisfy growth requirements; and (3) scheduled replacement of out of date cellular and radio boosters and systems. The alternatives considered include: (1) Replacing the existing units with new units from other radio and modem manufacturers; (2) Purchasing new radio subscriber units from existing manufacturers.Â Option 2 was not selected because the Company now uses a standards-based radio system allowing for multiple radio manufacturer options. Option 1 was selected to allow for a competitive bidding process that will provide the most cost-effective radio that will meet the needs of users.	2027-01-01	2027-12-31	-1.00	1,738,734	93,246		827,985	-	780,083	18,721	19,048	-	10,132	34,501	-	32,948	711	740	-	102
304	2027	ARP-Collaboration	New Computers / Hardware	IT/Digital Foundation	This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment. When collaboration assets used to support customer interactions and business operations are obsolete or out-of-date, they are more difficult to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project creates value by: (1) ensuring the stability and reliability of the Company's audio, visual, telephony, and other communications systems; and (2) migrating to new collaboration assets. The project scope consists of: (1) replacing aging collaboration assets; and (2) installing new collaboration assets to meet evolving business requirements. The alternatives considered include: (1) continuing to operate collaboration assets beyond a five-year refresh cycle, or (2) refreshing collaboration assets based on a five-year refresh cycle while evaluating the health of the asset and evolving business requirements. The alternative to operate the collaboration assets beyond a five-year refresh cycle was not selected due to the risk of asset failures would cause stability and reliability issues for employees supporting our customers, as vendors do not provide extended support after five years. The Company chose to refresh the collaboration assets based on a five-year refresh cycle and evaluate the health of the asset and evolving business requirements to reduce the risk of impacting the productivity of employees supporting our customers.	2027-01-01	2027-12-31	-1.00	768,656	167,315		259,498	-	157,324	24,927	69,755	-	7,493	61,906	-	7,844	15,212	38,850	-	-
305	2027	ARP-Field Device Asset Management (FDAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility. When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with Security updates as equipment becomes obsolete.Â The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing field devices before they fail; and (2) allowing field workers to complete their job tasks. The project scope consists of replacing field device assets according to the four-year refresh cycle. oAlternatives considered include: (1) using outdated equipment. This alternative was not selected because there would be an increased risk of hardware failure and equipment outages that could impact meter readers' ability to complete job tasks. It would also complicate the Company's efforts to meet the MPSC's meter reading factor and consecutive estimated targets, and it could cause applications to run poorly or stop functioning; (2) The second alternative considered was to replace the hardware. The Company selected this option to alleviate the above concerns.	2027-01-01	2027-12-31	-1.00	5,735,227	5,000		1,936,213	-	1,887,975	35,112	-	-	13,126	1,850	-	1,850	-	-	-	-
306	2027	ARP-Operational Technology Support Common	New Computers / Hardware	IT/Digital Foundation	The Asset Refresh Program (ARP)-Operational Technology (OT) Support Common project will replace dated and obsolete servers shared by Electric and Gas on a rotating five-year refresh schedule. When Operational Technology Assets that are used to ensure the safety and reliability of technology that supports critical electric operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates and run the risk of failure if the Company does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical electric infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure.	2027-01-01	2027-12-31	-1.00	1,561,948	147,459		527,314	-	475,003	15,966	-	-	36,344	54,560	-	51,060	3,500	-	-	-
307	2027	ARP-Operational Technology Support Gas	New Computers / Hardware	IT/Digital Foundation	The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule. When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical gas infrastructure. The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements. The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.	2027-01-01	2027-12-31	-1.00	340,961	29,526		340,961	-	221,000	74,215	-	-	45,746	29,526	-	3,150	26,376	-	-	-
308	2027	ARP-Printer Asset Management (PAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one. When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates.Â The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving the dependability of these printer devices for employees;Â (2) averting increased costs due to hardware repairs; and (3) ensuring compatibility with enterprise print applications. The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. This does not mean that all printers are replaced after five years â" merely that printers are assessed on a five-year cycle for possible replacement. The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years would require the printers to be assessed monthly to ensure they are not run to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.	2027-01-01	2027-12-31	-1.00	675,450	5,000		228,032	-	222,623	3,937	-	-	1,472	1,850	-	1,850	-	-	-	-
309	2027	ARP-Server and Storage	New Computers / Hardware	IT/Digital Foundation	This project will replace or augment server and storage infrastructure for the Company. When Server and Storage Hardware Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be more challenging to keep current with Security updates.Â The Company also runs the risk of failure of these assets impacting customer interactions and business operationsÂ if it does not adhere to a regular five to seven-year refresh cycle. This project creates value for the Company through: (1) improved stability and availability of business-critical applications by proactively replacing server and storage hardware assets prior to the likelihood of increasing hardware failures; and (2) ensuring that adequate resources are available to support application demands after five to seven years of actual use. The scope of this program encompasses: (1) replacement of server and storage hardware assets; and (2) installation of additional new computers and storage capacity to account for evolving business requirements. The alternatives considered were to (1) purchase extended maintenance; (2) move some of these assets to the cloud with the Digital -Hybrid Cloud and Data Center Migration project or: (3) replace the assets on the current cycle. The option to purchase extended maintenance was not selected because full support would not be offered after seven years, and maintenance costs would increase. The preferred option is to move some of these assets to the cloud in the Digital Hybrid Cloud and Data Center Migration project while refreshing the remainder using the five- to seven-year cycle as it is the most cost-effective option.	2027-01-01	2027-12-31	-1.00	1,415,674	116,800		477,932	-	370,305	72,246	-	-	35,380	43,216	-	-	6,216	37,000	-	-
310	2027	ARP-Workstation Asset Management (WAM)	New Computers / Hardware	IT/Digital Foundation	This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates. When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle. This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks. The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources. The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four-year refresh cycle ; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.	2027-01-01	2027-12-31	-1.00	6,914,967	60,010		2,334,493	-	2,241,925	41,546	36,444	-	14,578	22,204	-	20,871	1,333	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
311	2027	Operational Technology (OT) Datacenter Migration	New Computers / Hardware	IT/Digital Foundation	The OT environment consists of systems supporting the control and monitoring of electric grid, electric generation, gas compression, and natural gas pipeline. These systems are critical for safe and reliable natural gas and electric delivery. The OT Datacenter Migration project enhances the Company's capabilities by co-locating to an enhanced datacenter at a vendor facility. The Company's current datacenter for the OT environment needs modernization and relocation from the Parnall Data Center. The current location is not the preferred location to house servers and systems critical to the control of the Electric Grid or Gas Pipeline due to the close proximity to a railway system. The climate conditioners in the current OT datacenter are aging and have had faults resulting in unplanned shutdowns . The location of the datacenter in the basement of the Parnall building is nearby to the main water piping for the building. There have been instances of water infiltration in the past. This project creates value for the Company by significantly strengthening capabilities through: (1) mitigating legacy physical and location risks at the current Parnall site; (2) migrating the OT infrastructure to a modern, highly secured environment with redundancy in climate conditions; and (3) better datacenter facilities support with a guarantee of redundant power. The scope of the project includes: (1) migration of the OT environment from the Parnall Data Center to a co-located vendor data center; (2) re-validation of the OT Production and Disaster Recovery procedures once migration is completed; (3) migration of IT systems required for supporting the OT environment; and (4) decommission the existing OT environment from the Parnall location. The Company performed an analysis of alternatives to expand capabilities as well as address constraints and risks: (1) Remain at the current Parnall Data Center; (2) migrate OT environments to the Cloud; and (3) relocate to a third-party co-location facility. Current industry best practices do not recommend migration of OT environments to the cloud. The co-location vendor provides the building, cooling, power, and physical security the Company lacks for its servers, storage, and other computing and networking equipment at the current Parnall location. Based on the analysis, the Company decided to implement the third alternative.	2026-06-30	2027-12-11	-1.00	7,749,620	1,856,450	ROM	1,133,725	61,013	611,352	127,504	229,813	-	104,042	352,351	-	-	152,551	199,800	-	-
312	2027	20% ROM Adjustment - IT/Digital Foundation	New Computers / Hardware	IT/Digital Foundation	This is for the 20% ROM Adjustment for IT projects.							(226,745)	(12,203)	(122,271)	(25,501)	(45,963)	-	(20,808)	-	-	-	-	-	-	-
313	2027	Application Currency-IT/Digital Foundation-Application Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Application Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Application Platforms area are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	262,429	ROM	-	-	-	-	-	-	-	97,099	-	-	97,099	-	-	-
314	2027	Application Currency-IT/Digital Foundation-Infrastructure Platforms-O&M	Software(Intangible)	IT/Digital Foundation	The Infrastructure Platforms initiative will utilize O&M funding to keep applications current for security and reliability. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Infrastructure Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Infrastructure Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2027-01-01	2027-12-31	-1.00	-	38,590	ROM	-	-	-	-	-	-	-	14,278	-	-	14,278	-	-	-
315	2027	AxWay Secure Transport 2027 Upgrade	Software(Intangible)	IT/Digital Foundation	Axway SecureTransport is the official Consumers Energy multi-protocol Managed File Transfer (MFT) gateway for securing, managing, and tracking data file flow for business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability. As Axway Secure Transport is the public-facing MTF gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions. The value this project brings the Company, its customers and business partners by: (1) addressing known problems and limitations of the current software platforms. (2) ensuring continued secure, scalable, and critical data transmission services running through Axway. (3) creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) merging/streamlining the company data file transfer services reduces cyber attack vectors and creates a better, more easily maintained and monitored security model. The scope of this project includes (1) upgrading the application and database to the current released and supported versions. and (2) enabling and testing in scope file transfer processes. Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR, and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. (2) replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a SaaS or hybrid cloud solution. In addition to significant platform, application, implementation, and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) upgrading the platform. This provides the Company the best, most cost-effective alternative, balancing costs, known risks, and even growing business capacity and productivity.	2027-01-01	2027-09-01	-1.00	-	400,191	ROM	-	-	-	-	-	-	-	148,071	-	-	148,071	-	-	-
316	2027	Data & Analytics Platform Rationalization	Software(Intangible)	IT/Digital Foundation	This project will optimize the Data & Analytics system landscape by creating connections, migrating data into the Data Lake in the cloud, and building visualizations from the data in the Data Lake. The IT Data & Analytics legacy systems (SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS) are outdated, inefficient, and becoming duplicative in nature with the introduction of DL 2.0. If these legacy systems are not retired, they will continue to cost the Company money as major investments are needed to maintain and support them. This platform rationalization project creates value for the Company and its customers by reducing the total cost of ownership associated with maintaining and supporting legacy systems including licensing fees, maintenance costs, infrastructure, and support resources. The project scope includes: (1) the assessment of the existing Data & Analytics platforms including SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS; (2) inventory of data and reports still being used by stakeholders; (3) determination of migration strategy; (4) data migration to the Azure Data Lake; (5) report migration to Power BI; (6) organization change management; and (7) the retirement/decommissioning of the legacy platforms and applications. Alternatives considered: (1) upgrade legacy systems in place (on-premise). This alternative was not selected because this is costly and misaligned with the Company's cloud strategy. (2) Lift and shift these on-premise systems to the cloud through the Hybrid Cloud Transformation Program. This alternative was not selected because it would duplicate the work being done as part of the DL 2.0 project and would not provide the same efficiencies that DL 2.0 introduces. (3) Migrate all data sources to DL 2.0 and retire legacy systems. This alternative was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.	2025-04-07	2026-12-31	0.24	10,423,047	1,336,943	ROM	1,115,010	122,867	-	358,147	457,210	-	176,785	217,723	-	-	35,744	181,979	-	-
317	2027	Enterprise Service Bus 2026-2027 Upgrade	Software(Intangible)	IT/Digital Foundation	This project will upgrade the current Enterprise Service Bus software versions in use at the company. This will also implement a container management system and migrate various services to containers. Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. The lack of a container management solution prohibits the adoption of a more cloud native approach leading to retaining legacy solutions. The value this project provides the Company includes: (1) implement a container management solution; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies. The project scope includes (1) implementing the current version of all applications that are part of the ESB application, database version, and required database drivers and (2) implementing a Kubernetes solution for container management and migrate targeted services that are identified as microservices to containers. Alternatives considered included: (1) Accept the current version levels and continue to pay for extended support costs and accept technical obsolescence risk. (2) Only upgrade the existing applications. (3) Upgrade all of the applications as well as evolve the cloud-based instance to a more cloud native architecture by converting containers and implementing a Kubernetes solution to manage the containers. This option was selected because it best meets the Company needs for the near future by maintaining vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.	2026-09-01	2027-11-22	-1.00	1,331,120	1,070,350	ROM	449,386	155,296	-	198,678	-	-	95,413	374,255	77,330	-	296,925	-	-	-
318	2027	HR Support Pack and Business Software Inc Upgrade 2027	Software(Intangible)	IT/Digital Foundation	The Human Resources (HR) Support Pack and Business Software Inc (BSI) upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes. SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll. This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll. The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company. oAlternatives considered include: (1) not upgrading to the current support packs, which results in noncompliance with financial rules and regulations and inaccurate payroll. (2) there is no economical cloud solution, so this option was not entertained. (3) the Company decided the best alternative is to apply the appropriate support pack upgrades. This option is preferred because it enables the Company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.	2027-02-06	2027-12-29	0.00	-	665,132		-	-	-	-	-	-	-	246,099	-	-	21,327	208,672	-	16,100
319	2027	Product Family Enhancements-Application Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	940,471	310,554		317,503	-	-	221,755	-	-	95,748	69,560	-	-	69,560	-	-	-
320	2027	Product Family Enhancements-Application Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	169,780		-	-	-	-	-	-	-	62,818	-	-	62,818	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES
321	2027	Product Family Enhancements-Infrastructure Platforms Services-Capital	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software & hardware and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.
322	2027	Product Family Enhancements-Infrastructure Platforms Services-O&M	Software(Intangible)	IT/Digital Foundation	The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.
323	2027	20% ROM Adjustment - IT/Digital Foundation	Software(Intangible)	IT/Digital Foundation	This is for the 20% ROM Adjustment for IT projects.
324	**SUBTOTAL**	**2027 IT/Digital Foundation**			
325	2027	ARP-Cyber-Common	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions shared by Electric and Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.
326	2027	ARP-Cyber-Gas	Network	Security	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions for Gas. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades. The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.
327	2027	ARP-Network-Common	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks shared by Electric and Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.
328	2027	ARP-Network-Gas	Network	Security	This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks for Gas. When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle. This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks. The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices. The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.
329	2027	ARP-Physical Security	New Computers / Hardware	Security	The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring alerts, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in an increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reduce gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) advanced analytics on security cameras for monitoring and real time alerting capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets not meeting the industry standard of 5 to 7 years for indoor cameras and 3 to 5 years for outdoor cameras. Alternatives 1 and 2 were not selected due to the risk of security concerns, utilizing equipment that is at end of life and no longer supported, and the risk of a lack of inability to meet regulatory requirements (FERC, NERC, TSA and NRC). The alternative selected maintains compliance, reduces redundancies and gaps in functionality, provides up to date support for the assets and current technological capabilities and optimizes overall performance of physical security systems.
330	2027	Application Currency-Security-Capital	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.
331	2027	Application Currency-Security-O&M	Software(Intangible)	Security	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.
332	2027	Enhancements-Security-Capital	Software(Intangible)	Security	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

Line No.	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE
321	2027-01-01	2027-12-31	-1.00	589,117	201,062	
322	2027-01-01	2027-12-31	-1.00	-	46,664	
323						
324						
325	2027-01-01	2027-12-31	-1.00	1,451,918	16,664	
326	2027-01-01	2027-12-31	-1.00	495,964	15,817	
327	2027-01-01	2027-12-31	-1.00	1,515,192	24,980	
328	2027-01-01	2027-12-31	-1.00	344,881	14,770	
329	2027-01-01	2027-12-31	-1.00	2,114,320	12,626	
330	2027-01-01	2027-12-31	-1.00	153,200	10,700	ROM
331	2027-01-01	2027-12-31	-1.00	-	403,127	ROM
332	2027-01-01	2027-12-31	-1.00	816,175	152,674	

Line No.	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS
321	198,886	-	-	138,909	-	-	59,977
322	-	-	-	-	-	-	-
323	(312,880)	(55,633)	-	(111,365)	(91,442)	-	(54,440)
324	**9,607,312**	**271,341**	**6,845,320**	**1,194,797**	**674,865**	**-**	**620,989**
325	691,403	-	641,918	32,378	1,766	-	15,341
326	495,964	200	443,200	36,931	1,876	-	13,757
327	721,535	8,095	673,133	17,619	13,463	-	9,224
328	344,881	1,500	314,599	16,490	6,292	-	6,000
329	713,794	-	438,880	56,352	197,496	-	21,066
330	51,720	-	-	36,123	-	-	15,597
331	-	-	-	-	-	-	-
332	275,541	131,959	8,888	54,610	46,300	-	33,783

Line No.	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
321	74,393	-	-	74,393	-	-	-
322	17,266	-	-	17,266	-	-	-
323	-	-	-	-	-	-	-
324	**1,923,525**	**77,330**	**119,573**	**1,043,380**	**667,040**	**-**	**16,202**
325	6,166	-	1,850	4,033	-	-	282
326	15,817	-	500	15,317	-	-	-
327	9,243	-	3,700	5,180	-	-	363
328	14,770	-	3,000	11,770	-	-	-
329	4,672	-	-	3,192	1,480	-	-
330	3,959	-	-	3,959	-	-	-
331	149,157	1,977	-	147,180	-	-	-
332	56,490	1,711	-	41,632	13,146	-	-

Case No.: U-21981
Exhibit No.: A-20 (SHB-5)
Page: 38 of 38
Witness: SHBaker
Date: December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Gas & Common Capital Expenditures and O&M Expenses
For the years 2024, 2025, 2026, and 2027
Information Technology Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) FERC CATEGORY	(d) BUSINESS CATEGORY/ PRODUCT LINE	(e) PROJECT SYNOPSES	(f) PROJECT START DATE	(g) PROJECT END DATE	(h) COST/ BENEFIT RATIO	(i) TOTAL COMPANY EXPECTED PROJECT CAPITAL COSTS	(j) TOTAL COMPANY EXPECTED PROJECT O&M COSTS	(k) ESTIMATE TYPE	(l) GAS PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(m) SOFTWARE COSTS-GAS	(n) MATERIAL COSTS-GAS	(o) LABOR COSTS-GAS	(p) CONTRACTOR COSTS-GAS	(q) NON-LABOR OVERHEAD-GAS	(r) NON-LABOR OTHER-GAS	(s) GAS PORTION O&M SPEND FOR APPLICABLE YEAR	(t) SOFTWARE COSTS-GAS	(u) MATERIAL COSTS-GAS	(v) LABOR COSTS-GAS	(w) CONTRACTOR COSTS-GAS	(x) NON-LABOR OVERHEAD-GAS	(y) NON-LABOR OTHER-GAS
333	2027	Enhancements-Security-O&M	Software(Intangible)	Security	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives. The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2027-01-01	2027-12-31	-1.00	-	494,044		-	-	-	-	-	-	-	182,796	21,430	7,106	148,167	6,093	-	-
334	2027	Forward Web Proxy Services	Software(Intangible)	Security	This project will replace the Company's existing web proxy service platform with a new, modern, and more resilient platform designed to support both secure internet access and advanced data loss prevention capabilities. A web proxy service acts as a secure intermediary between users and the internet, evaluating, filtering, and forwarding traffic while enforcing company security policies. It acts as an intermediary that evaluates, modifies, and forwards the client's requests to the destination web server. This service offers many benefits for the Company such as advanced filtering. Advanced filtering in a forward web proxy service can filter out unwanted or harmful content from the internet, such as malware and phishing. This can protect the client's device and network from cyberattacks and improve their browsing experience. Without advanced filtering, the Company's cyber assets are at risk of attacks such as ransomware. The current web proxy platform, implemented in 2021, has caused ongoing operational issues related to web filtering, inconsistent policy enforcement, and intermittent connectivity. These challenges have occasionally limited employee and contractor access to critical internet and cloud-based resources, impacting productivity and increasing security risk. As the Company accelerates its transition to cloud and Software-as-a-Service (SaaS) platforms, maintaining consistent, secure, and reliable internet access is critical. The new platform will provide high availability, improved performance, and enhanced visibility into outbound traffic to ensure that business operations continue seamlessly, even during peak or failover conditions. The platform will also be designed to support flexible deployment models for remote, hybrid, and field-based workersâ€"ensuring that security policies apply consistently regardless of location. In addition to improving reliability, this project introduces data loss prevention (DLP) capabilities as a core function of the web proxy service. These DLP capabilities will help the Company prevent unauthorized transmission of sensitive or regulated informationâ€"such as customer data, intellectual property, or operational system detailsâ€"to unapproved external destinations. Through content inspection, contextual analysis, and integrated policy enforcement, the new solution will identify and block risky behaviors before data leaves the organization. DLP policies will also align with existing information governance frameworks and compliance obligations to provide both proactive protection and auditable oversight of data handling practices This project creates value for the Company by (1) increasing service reliability for employees and contractors to internet and cloud-based resources; (2) utilize technology to enable the Company to handle all types of different workloads from varying geographic locations and is highly available; (3) using a mature and scalable web proxy service provider; (4) providing Zero Trust by continuously verifying every connection request; and (5) implementing data loss prevention capabilities on our core web proxy services. The project scope includes: (1) replacing the current web proxy services solution and implementing a new system; (2) replacing physical web proxy hardware; (3) potentially changing SAAS cloud vendors; (4) and implementing data loss prevention for web proxy services. The Security team did extensive research on alternative web proxy services solutions. Alternatives considered include: (1) continue to use and maintain the current web proxy services platform as it currently is implemented. This alternative was not chosen due to the previous operational issues with the platform that make it unreliable. The result of an unreliable system means that employees and contractors are unable to access business critical services such as email, Teams, ServiceNow, SharePoint Online.; (2) Route all internet traffic through the Company's corporate data center. This alternative wasn't chosen because the capabilities of firewalls aren't as effective in stopping sophisticated cyber-attacks as using a web proxy service; (3) Perform an evaluation between existing product with expanded feature sets, such as data loss prevention and alternative vendors that could replace current system with modern vendor platform for web proxy services. This option was chosen because it offers additional analysis with the potential to enhance existing, in place, products with features such as enhanced data loss prevention mechanisms, browser isolation (the ability to contain web pages so that the web page can't affect the client workstation) and sandboxing (a way to safely execute malicious applications without impacting the Company's network). As part of the evaluation the Company reassessed based on outside advisors and industry trend analysis, focusing on the ability to execute and the vendor's company strategy.	2027-01-15	2028-01-30	-1.00	4,478,032	492,770	ROM	1,511,784	1,346,271	-	16,880	54,016	-	94,616	178,960	162,926	-	4,194	11,840	-	-
335	2027	Incident Command System (ICS) Management Software	Software(Intangible)	Security	The Incident Command System (ICS) Management Software will allow Company departments to manage emergency situations more efficiently, automate manual processes, and reduce response times. This tool will also assist the Company in enhancing and maturing its response capabilities and support digital automation in alignment with the Company's Destination 2035 Strategy. The current manual process for managing Emergency Incidents using the Incident Command System (ICS) across various departments (Storm Operations, Gas Operations, Generation, IT & Security, Applications & Analytics, etc.) is inefficient and error-prone. This hinders continuous improvement, program development, and response times. Departments seek automation to enhance emergency response capabilities. The Emergency Management Department struggles to administer processes and maintain compliance due to the absence of an ICS software and automation. This project will create value for the Company by: (1) managing and maintaining the documentation that supports emergency incident efforts, which if disrupted, would significantly impact the Company and customers; (2) providing a consistent, organized, and expedient response process when using ICS that is adaptable to any incident severity or scope; (3) offering a mechanism for identifying restoration gaps between critical business processes; (4) reducing or eliminating human error and waste; (5) decreasing the need for additional staffing to accommodate the creation of manual forms each operational period, as well as managing and tracking documents; and (6) enhancing and streamlining the user experience. The project scope includes: (1) implementing an emergency incident management application for all company departments that use ICS to manage activations effectively; (2) automating reporting for tracking status and measuring the effectiveness and maturity of the Emergency Management program; (3) facilitating training exercises and response efforts through incident management tools based on Federal Emergency Management Agency (FEMA) National Incident Management System (NIMS) concepts; (4) providing program management tools for monitoring required deliverables; (5) transitioning from Word-based documents/management and storage for incidents; (6) increasing response efficiency through automated tools like objective lists by department, and enhancing self-service opportunities for using ICS forms and adhering to required standards; (7) enabling efficient task assignment, tracking, and management throughout incidents; (8) automating the post-incident process including task assignments, management, and tracking. Alternatives considered include: (1) Purchasing licenses and implementing Incident and Crisis Management functionality from the Company's current Disaster Recovery and Business Continuity Application vendor. This alternative was not selected because it does not currently offer the capabilities needed to advance program maturity for a comprehensive response to business interruptions. It does not meet existing functional requirements to manage ICS activations and would require considerable customization for ICS form creation, resource management during an incident, and alignment with FEMA standards. (2) Continuing to use manual processes through Microsoft Excel, Word, and Teams. This alternative was not selected as the manual process is time-consuming for all company departments leveraging ICS, leading to duplicative work, deviations from the Emergency Management Standard, insufficient support for large-scale/multi-department activations, and reduced response efficiency and management. (3) Implementing a Cloud Software as a Service (SaaS) solution. This alternative was selected as there are better SaaS solutions that fit the outlined needs. The final application will be determined after issuing a Request for Proposal and selecting a vendor during the project plan phase.	2026-01-05	2026-11-02	-1.00	-	79,240	ROM	-	-	-	-	-	-	-	5,497	-	-	1,916	3,581	-	-
336	2027	Privileged Access Management Cloud Migration	Software(Intangible)	Security	This project will perform the implementation of a Privileged Access Management (PAM) solution to enhance security by securely storing, rotating, and isolating privileged credentials for both human and non-human users. It provides robust monitoring and control of privileged access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure. The Company faces significant security risks related to the management of privileged access, including potential data breaches, unauthorized access, and compliance issues. The Company's current methods of managing privileged accounts are often manual, error-prone, and insufficient to address the complexities of modern IT environments. There is a critical need for a robust solution that can automate and secure the management of privileged credentials, provide comprehensive monitoring and control, and ensure compliance with security policies across on-premises, cloud, and hybrid environments. This project creates value for the Company through: (1) securely storing and managing privileged credentials; (2) automating credential rotation; (3) isolating access to prevent unauthorized use; (4) improving compliance with regulatory requirements through comprehensive audit trails, and reporting; (5) increasing efficiency by automating password management; and (6) reducing manual tasks that can be prone to human error. The project scope includes migrating the Company's current system Privileged Access Management (PAM) system to a cloud vendor, implementing new features not available in the current on-prem solution. Alternatives considered included: (1) manual password rotation. This alternative was not chosen because it requires significant time and effort to manage and update passwords manually. It also increases the risk of human error including mistakes, such as forgetting to update passwords or using predictable patterns; (2) Access Control Lists (ACLs). This alternative was not chosen because of scalability issues. ACLs are difficult to manage as the number of users and resources grows. This option also requires regular updates and reviews to ensure accuracy and security; (3) manual audit logs. This alternative was not chosen because it is very labor intensive. It requires significant effort to maintain and review logs manually. The use of manual audit logs increases the risk of inaccuracy by having a higher chance of errors and incomplete records; (4) periodic security reviews. This alternative was not chosen because it is very resource intensive and requires time and expertise to conduct thorough reviews. Periodic security reviews may also miss issues that arise between review periods; and (5) implementation of a cloud based Privileged Access Management (PAM) solution was the chosen option. It provides robust monitoring and control of privileged access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure.	2027-01-16	2027-11-30	-1.00	2,409,688	350,750	ROM	813,511	710,986	-	40,819	-	-	61,706	129,777	119,880	-	9,897	-	-	-
337	2027	Vulnerability and Exposure Management Program Enablement	Software(Intangible)	Security	This project will enhance the Company's Vulnerability Management program by implementing a cohesive suite of technologies focused on Vulnerability Management. These technologies will include minimally the following capabilities: vulnerability management, web application static and dynamic analysis, and attack surface management. Vulnerability Management is a critical process for identifying, assessing, and mitigating security weaknesses within an organization's IT infrastructure. This proactive approach involves continuous monitoring and evaluation of systems to detect vulnerabilities that could be exploited by cyber threats. By prioritizing vulnerabilities based on risk, cost, and potential impact, organizations can effectively allocate resources to address the most critical issues first. Implementing a robust Vulnerability Management program not only enhances the security posture of the organization but also ensures compliance with industry regulations and standards, thereby reducing the risk of data breaches, malware infections, ransomware, and other cyber threats. This Vulnerability Management program supports business continuity and protects sensitive information and systems, making it an essential component of any comprehensive cybersecurity strategy. The Company's current Vulnerability Management program relies on multiple disparate tools to perform core activities such as scanning, analysis, and remediation tracking. This multi-tool approach can create inefficiencies, increase the likelihood of data gaps, and require additional effort from users to correlate and interpret information across platforms. The use of several systems to manage vulnerabilities can lead to inconsistent workflows, duplicated efforts, and reduced coordination between teams. Streamlining the tool set or improving integration between existing solutions would enhance operational efficiency and support a more cohesive vulnerability management process. This project creates value for the Company by (1) enhancing the efficiency and effectiveness of the Vulnerability Management program through improved integration and reduced reliance on multiple standalone tools; and (2) supporting risk-based decision-making by enabling more consistent identification, prioritization, and remediation of vulnerabilities. These improvements will reduce operational overhead, minimize security exposure, and help ensure continued alignment with industry regulations and cybersecurity frameworks. The project scope includes evaluating and implementing a new vulnerability solution. The scope also includes enablement of active scanning with the new solution, consolidating data sources, and improving cross-platform visibility. Alternatives considered include: (1) continuing with the current multi-tool Vulnerability Management program. This option was not selected as it perpetuates inefficiencies, inconsistent workflows, and limited visibility across platforms; (2) increasing manual efforts to correlate and manage data between existing tools. This alternative was not chosen due to the high resource demands and increased risk of human error, which may further delay remediation timelines; (3) procurement of a new, cloud-based consolidated vulnerability management platform. This option was chosen as it allows the Company to enhance vulnerability data, threat intelligence, and process efficiencies within the current environment to deliver immediate value with high confidence in the vulnerability data that is being provided.	2027-01-15	2027-11-30	-1.00	1,418,999	290,800	ROM	479,054	389,791	-	36,950	11,816	-	40,497	107,596	91,760	-	15,836	-	-	-
338	2027	Workstation Temporary Administrative Access	Software(Intangible)	Security	This project will implement controls that will allow local least administrative access to workstations on a time limited basis. Non-IT and Security resources will be able to request this access. Temporary administrative access to workstations is required to support some application installations, local system configuration, or to troubleshoot workstation issues. Currently, administrative access is only allowed on employee workstations for authorized users that is granted by a manual process. The current process allows the authorized user to have access to everything on the employee workstation which allows for human error. The process is resource intensive and requires manual removal of access. Cyber Security and Information Technology (IT) teams do not have controls in place to restrict the usage of local administrative accounts or monitoring capabilities to detect misuse without human intervention. The current state creates an environment for misuse where broad admin access could be leveraged for data breaches and ransomware. A successful attack would impact the Company's ability to serve our customers. This project creates value for the Company by: (1) reducing risk by eliminating over 1,000 local administrative accounts; (2) adding the ability to implement security controls and restrictions on local administrative functions; (3) increasing productivity by reducing the time and resources needed to provision, manage, and audit local accounts for security compliance; (4) adding the ability to provide administrative access for a specific and limited duration of time, thereby reducing cyber security risk of workstation compromise. This project will implement a platform that can enforce security controls and audit the security compliance of local administrative accounts for Company workstations. The features of this platform include: (1) the ability to give administrator access for a specific duration of time; (2) enable applications to automatically run in a privileged state; (3) the ability to remotely change the administrator password; and (4) generate a single-use administrator password. Alternatives considered include: (1) accepting the risk of using local accounts that are not managed centrally for end point administration. This alternative was not chosen because the usage of these accounts doesn't follow company standards for software provisioning and introduces unsupported software versions and vulnerabilities into the environment; (2) continuing the existing practice of manual oversight to grant local administrative access which does not eliminate the risk of misuse of administrator access. This alternative was not selected because it doesn't follow company standards for software provisioning and introduces unsupported software versions and vulnerabilities into the environment; (3) developing a platform for administrative account access internally. This alternative was not chosen due to the time frame it would take internal resources to develop and maintain the solution at the same level of quality and feature parity as a commercial product; and (4) implement a cloud platform specifically developed for managing local administrative accounts. This option was chosen because of the features designed for managing local administrative accounts will reduce the risk of misuse of administrative credentials within the Company.	2027-02-01	2027-07-31	-1.00	995,035	21,400	ROM	335,924	272,202	-	22,577	-	-	41,145	7,918	-	-	7,918	-	-	-
339	2027	20% ROM Adjustment - Security	Software(Intangible)	Security	This is for the 20% ROM Adjustment for Security projects							(638,399)	(543,850)	-	(30,670)	(13,166)	-	(50,712)	-	-	-	-	-	-	-
340	**SUBTOTAL**	**2027 Security**										**5,796,712**	**2,317,154**	**2,520,618**	**337,062**	**319,858**	**-**	**302,021**	**872,817**	**399,684**	**16,156**	**420,192**	**36,140**	**-**	**645**
341	**TOTAL**	**2027**										**24,779,736**	**2,812,162**	**12,608,980**	**3,962,256**	**3,013,915**	**-**	**2,382,423**	**5,643,122**	**477,014**	**143,112**	**3,645,454**	**1,349,695**	**-**	**27,846**

342 The Company fully plans to perform the projects included in the Information Technology cost projections, but the projections do not incorporate a specific confidence level. These costs were not projected using confidence levels. Rough Order Magnitude (ROM) estimates have been reduced by 20% as discussed in my testimony.

EXHIBIT A-21 (SHB-6)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

2025 Union Contract Changes

Report Pulled: 11/5/2025 **Item ID: 13951**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - One Time **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Human Resources - 2025 Union Changes project will implement SAP and other system changes required as a result of three collective bargaining agreements which will be renegotiated and ratified.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement Collective bargaining agreements expire every five years for Operating Maintenance and Construction ("OM&C"), Virtual Contact Center ("VCC"), and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025. The VCC agreement ends August 1, 2025. The Zeeland agreement ends October 1, 2025. Collective bargaining agreements expire every five years for OM&C (Operating Maintenance and Construction), CCC (Customer Contact Center) and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025 . CCC agreement ends in August 1, 2025. Zeeland agreement ends October 1, 2025. Technology changes are required to reflect these new agreements. Otherwise, employees in these union groups may not be paid appropriately or get correct benefits.

Objectives Completion of this project will provide value to the Company and its customers through: (1) waste elimination by making changes in the software for any pay and benefit changes as required by the new agreements; (2) defect reduction by adding process automation to otherwise manual processes for tracking and recording work, premium, and absence time; and (3) improved employee engagement among the OM&C, CCC, and Zeeland union employees.

Scope The scope of this project encompasses making any system changes required to support the new working agreement for the OM&C, CCC, and Zeeland employees. Exact details will be finalized after the negotiation process is completed and contracts are approved.

Alternatives Three alternatives were considered for this project: (1) Make no system changes after the contracts are ratified. This option was not chosen because it exposes the Company to possible fines, disengaged employees, union grievances, significant manual processes leading to greater possibility of error, hiring additional staff to perform activities outlined in the agreements, and increased legal costs due to employee grievances. (2) Find other third-party software to support the changes required by the union agreements. This option was not chosen because it would require SAP integration along with additional software licensing and maintenance costs. (3) Make system changes to eliminate manual updating, comply with the working agreement language, support union employee engagement, and reduce grievances. Option (3) was chosen because it leverages current SAP technology, automates what would otherwise require manual processing, and is the least costly option.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
4/1/2025	5/15/2025	6/28/2025	12/17/2025
	In-Service/Go-Live	**Closeout**	
	12/18/2025	5/1/2026	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.069	$0.277	$0.015	$0.015	$0.015	-	-	-	$0.391
Total Cost of Ownership	$0.069	$0.277	$0.015	$0.015	$0.015	-	-	-	**$0.391**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.017	$0.112	-	-	-	-	-	-	**$0.130**
Outside Services	$0.049	$0.147	-	-	-	-	-	-	**$0.196**
Business Expense/Overheads	$0.002	$0.018	-	-	-	-	-	-	**$0.021**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.069	$0.277	-	-	-	-	-	-	**$0.346**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.069	$0.277	$0.015	$0.015	$0.015	-	-	-	**$0.391**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.069	$0.277	$0.015	$0.015	$0.015	-	-	-	**$0.391**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Employee Engagement for the three union groups increases as measured annually in the areas of work/life balance and employee satisfaction.
Avoided Costs	If system changes are not made to automate the changes in the union agreements, additional employees/contractors will need to be hired to manually make the changes. The actual number of employees/contractors is not known at this time since union negotiations have not been finalized.
Intangibles	Union employees are engaged because they are being paid correctly per the union contract.
Avoided Costs	When union employees are paid correctly, the chance of grievances and issues with the NLRB (National Labor Relations Board) decreases. Grievances cost the company time and money, including legal costs.

Application Currency-Corporate-O&M

Report Pulled: 11/5/2025 **Item ID: 13357**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Corporate Services initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades in the Corporate Services adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Corporate Services are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.393	$0.289	$0.408	$0.275	$0.112	$0.275	$0.112	-	$1.864
Total Cost of Ownership	$0.393	$0.289	$0.408	$0.275	$0.112	$0.275	$0.112	-	**$1.864**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.090	$0.093	$0.382	$0.257	$0.104	$0.257	$0.104	-	**$1.287**
Outside Services	$0.303	$0.192	-	-	-	-	-	-	**$0.495**
Business Expense/Overheads	-	$0.005	$0.027	$0.018	$0.007	$0.018	$0.007	-	**$0.082**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.393	$0.289	$0.408	$0.275	$0.112	$0.275	$0.112	-	**$1.864**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.393	$0.289	$0.408	$0.275	$0.112	$0.275	$0.112	-	**$1.864**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.393	$0.289	$0.408	$0.275	$0.112	$0.275	$0.112	-	**$1.864**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-Customer-O&M

Report Pulled: 11/5/2025 **Item ID: 13359**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Customer initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Customer digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within Customer are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.062	$0.010	$0.057	-	$0.057	-	$0.057	-	$0.243
Total Cost of Ownership	$0.062	$0.010	$0.057	-	$0.057	-	$0.057	-	**$0.243**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.007	$0.010	$0.053	-	$0.053	-	$0.053	-	**$0.177**
Outside Services	$0.055	-	-	-	-	-	-	-	**$0.055**
Business Expense/Overheads	-	-	$0.004	-	$0.004	-	$0.004	-	**$0.011**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.062	$0.010	$0.057	-	$0.057	-	$0.057	-	**$0.243**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.062	$0.010	$0.057	-	$0.057	-	$0.057	-	**$0.243**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.062	$0.010	$0.057	-	$0.057	-	$0.057	-	**$0.243**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Customer Management
Risk Mitigation	The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-CX&O-O&M

Report Pulled: 11/5/2025 **Item ID: 8884**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The CX&O initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades in the CX&O adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the CX&O are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	-	$0.004	-	-	-	-	-	-	$0.004
Total Cost of Ownership	-	$0.004	-	-	-	-	-	-	**$0.004**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.004	-	-	-	-	-	-	**$0.004**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	-	$0.004	-	-	-	-	-	-	**$0.004**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.004	-	-	-	-	-	-	**$0.004**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.004	-	-	-	-	-	-	**$0.004**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Customer Management
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-Electric & Gas Shared-Capital

Report Pulled: 11/5/2025 **Item ID: 13360**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Electric and Gas operations initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives Applications within the Electric and Gas operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.740	-	$0.065	-	-	-	-	-	$0.805
O&M	$0.138	-	$0.309	-	-	-	-	-	$0.447
Total Cost of Ownership	$0.878	-	$0.375	-	-	-	-	-	**$1.252**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.117	-	$0.050	-	-	-	-	-	**$0.167**
Outside Services	$0.065	-	$0.276	-	-	-	-	-	**$0.341**
Business Expense/Overheads	$0.058	-	$0.023	-	-	-	-	-	**$0.081**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.637	-	$0.025	-	-	-	-	-	**$0.663**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.878	-	$0.375	-	-	-	-	-	**$1.252**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.138	-	$0.309	-	-	-	-	-	**$0.447**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.138	-	$0.309	-	-	-	-	-	**$0.447**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.740	-	$0.065	-	-	-	-	-	**$0.805**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.740	-	$0.065	-	-	-	-	-	**$0.805**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-Electric & Gas Shared-O&M

Report Pulled: 11/5/2025 **Item ID: 13361**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Electric and Gas Operations initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Electric and Gas Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Electric and Gas Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Companys ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.062	$0.501	$0.663	$0.542	$0.732	$0.571	$0.592	-	$3.664
Total Cost of Ownership	$0.062	$0.501	$0.663	$0.542	$0.732	$0.571	$0.592	-	**$3.664**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.015	$0.441	$0.560	$0.456	$0.624	$0.481	$0.518	-	**$3.095**
Outside Services	$0.047	$0.044	$0.064	$0.057	$0.064	$0.057	$0.038	-	**$0.371**
Business Expense/Overheads	-	$0.016	$0.039	$0.029	$0.044	$0.034	$0.036	-	**$0.198**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.062	$0.501	$0.663	$0.542	$0.732	$0.571	$0.592	-	**$3.664**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.062	$0.501	$0.663	$0.542	$0.732	$0.571	$0.592	-	**$3.664**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.062	$0.501	$0.663	$0.542	$0.732	$0.571	$0.592	-	**$3.664**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-Gas-Capital

Report Pulled: 11/5/2025 **Item ID: 13364**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades.

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	$0.032	-	-	-	-	-	-	$0.032
O&M	-	-	-	-	-	-	-	-	-
Total Cost of Ownership	-	$0.032	-	-	-	-	-	-	**$0.032**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.021	-	-	-	-	-	-	**$0.021**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.010	-	-	-	-	-	-	**$0.010**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	-	$0.032	-	-	-	-	-	-	**$0.032**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.032	-	-	-	-	-	-	**$0.032**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.032	-	-	-	-	-	-	**$0.032**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-Gas-O&M

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 13365**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Engineering and Operations initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Gas Engineering and Operations digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Gas Engineering and Operations are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.033	$0.054	$0.216	$0.045	$0.245	$0.051	$0.229	-	$0.873
Total Cost of Ownership	$0.033	$0.054	$0.216	$0.045	$0.245	$0.051	$0.229	-	**$0.873**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.019	$0.027	$0.201	$0.042	$0.229	$0.048	$0.214	-	**$0.781**
Outside Services	$0.014	$0.027	-	-	-	-	-	-	**$0.041**
Business Expense/Overheads	-	-	$0.014	$0.003	$0.016	$0.003	$0.015	-	**$0.051**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.033	$0.054	$0.216	$0.045	$0.245	$0.051	$0.229	-	**$0.873**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.033	$0.054	$0.216	$0.045	$0.245	$0.051	$0.229	-	**$0.873**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.033	$0.054	$0.216	$0.045	$0.245	$0.051	$0.229	-	**$0.873**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-IT/Digital Foundation-Application Platfort Report Pulled: 11/5/2025 Item ID: 13366

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Application Platforms initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades.

Portfolio IT Services > Infrastructure > End User Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives Maintaining the appropriate versions of applications through application currency upgrades in the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives Applications within the Application Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	$0.019	-	-	-	-	-	-	$0.019
O&M	-	$0.024	-	-	-	-	-	-	$0.024
Total Cost of Ownership	-	$0.044	-	-	-	-	-	-	**$0.044**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.036	-	-	-	-	-	-	**$0.036**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.007	-	-	-	-	-	-	**$0.007**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	-	$0.044	-	-	-	-	-	-	**$0.044**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.024	-	-	-	-	-	-	**$0.024**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.024	-	-	-	-	-	-	**$0.024**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.019	-	-	-	-	-	-	**$0.019**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.019	-	-	-	-	-	-	**$0.019**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-IT/Digital Foundation-Application Platfor Report Pulled: 11/5/2025 Item ID: 13367

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Application Platforms initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Application Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Application Platforms area are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.242	$0.145	$0.472	$0.262	$0.367	$0.322	$0.527	-	$2.338
Total Cost of Ownership	$0.242	$0.145	$0.472	$0.262	$0.367	$0.322	$0.527	-	**$2.338**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.242	$0.142	$0.427	$0.245	$0.344	$0.301	$0.492	-	**$2.194**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.003	$0.045	$0.017	$0.023	$0.021	$0.034	-	**$0.145**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.242	$0.145	$0.472	$0.262	$0.367	$0.322	$0.527	-	**$2.338**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.242	$0.145	$0.472	$0.262	$0.367	$0.322	$0.527	-	**$2.338**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.242	$0.145	$0.472	$0.262	$0.367	$0.322	$0.527	-	**$2.338**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-IT/Digital Foundation-Infrastructure Plat **Report Pulled: 11/5/2025** **Item ID: 13369**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Infrastructure Platforms initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Infrastructure > * > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades in the Infrastructure Platforms adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Infrastructure Platforms are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.024	$0.036	$0.110	$0.039	$0.039	$0.039	$0.039	-	$0.324
Total Cost of Ownership	$0.024	$0.036	$0.110	$0.039	$0.039	$0.039	$0.039	-	**$0.324**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.024	$0.036	$0.050	$0.036	$0.036	$0.036	$0.036	-	**$0.254**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.001	$0.003	$0.003	$0.003	$0.003	$0.003	-	**$0.014**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.056	-	-	-	-	-	**$0.056**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.024	$0.036	$0.110	$0.039	$0.039	$0.039	$0.039	-	**$0.324**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.024	$0.036	$0.110	$0.039	$0.039	$0.039	$0.039	-	**$0.324**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.024	$0.036	$0.110	$0.039	$0.039	$0.039	$0.039	-	**$0.324**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-Operational Technology-Capital

Report Pulled: 11/5/2025 **Item ID: 13370**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Operational Technology initiative will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost.

Scope The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.072	$0.011	-	-	-	-	-	-	$0.083
O&M	$0.004	-	-	-	-	-	-	-	$0.004
Total Cost of Ownership	$0.075	$0.011	-	-	-	-	-	-	**$0.087**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.019	$0.010	-	-	-	-	-	-	**$0.029**
Outside Services	$0.001	$0.000	-	-	-	-	-	-	**$0.001**
Business Expense/Overheads	$0.004	$0.002	-	-	-	-	-	-	**$0.006**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.052	-	-	-	-	-	-	-	**$0.052**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.075	$0.011	-	-	-	-	-	-	**$0.087**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.004	-	-	-	-	-	-	-	**$0.004**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.004	-	-	-	-	-	-	-	**$0.004**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.072	$0.011	-	-	-	-	-	-	**$0.083**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.072	$0.011	-	-	-	-	-	-	**$0.083**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Electric T&D, Gas T&D, Generation
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Application Currency-Operational Technology-O&M

Report Pulled: 11/5/2025 **Item ID: 13371**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Operational Technology initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades in the Operational Technology adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software and respective database, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the Operational Technology are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.095	$0.071	$0.254	$0.194	$0.221	$0.184	$0.260	-	$1.279
Total Cost of Ownership	$0.095	$0.071	$0.254	$0.194	$0.221	$0.184	$0.260	-	**$1.279**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.071	$0.059	$0.237	$0.181	$0.207	$0.172	$0.243	-	**$1.171**
Outside Services	$0.021	$0.012	-	-	-	-	-	-	**$0.033**
Business Expense/Overheads	$0.002	$0.001	$0.017	$0.013	$0.014	$0.012	$0.017	-	**$0.074**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	-	-	-	-	-	-	-	**$0.000**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.095	$0.071	$0.254	$0.194	$0.221	$0.184	$0.260	-	**$1.279**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.095	$0.071	$0.254	$0.194	$0.221	$0.184	$0.260	-	**$1.279**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.095	$0.071	$0.254	$0.194	$0.221	$0.184	$0.260	-	**$1.279**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description

Application Currency-Security-Capital

Report Pulled: 11/5/2025 **Item ID: 10483**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	$0.146	-	$0.153	-	$0.153	-	-	$0.453
O&M	$0.001	$0.005	-	$0.011	-	$0.011	-	-	$0.027
Total Cost of Ownership	$0.001	$0.151	-	$0.164	-	$0.164	-	-	**$0.479**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.151	-	$0.110	-	$0.110	-	-	**$0.371**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	-	-	$0.054	-	$0.054	-	-	**$0.108**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	-	-	-	-	-	-	-	**$0.000**
Licenses, Permits & Fees	$0.001	-	-	-	-	-	-	-	**$0.001**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.001	$0.151	-	$0.164	-	$0.164	-	-	**$0.479**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.001	$0.005	-	$0.011	-	$0.011	-	-	**$0.027**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.001	$0.005	-	$0.011	-	$0.011	-	-	**$0.027**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.146	-	$0.153	-	$0.153	-	-	**$0.453**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.146	-	$0.153	-	$0.153	-	-	**$0.453**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-Security-O&M

Report Pulled: 11/5/2025 **Item ID: 11337**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades to the Security digital assets adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within Security are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.009	$0.192	$0.403	$0.403	$0.403	$0.403	$0.403	-	$2.216
Total Cost of Ownership	$0.009	$0.192	$0.403	$0.403	$0.403	$0.403	$0.403	-	**$2.216**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.009	$0.159	$0.372	$0.372	$0.372	$0.372	$0.372	-	**$2.027**
Outside Services	$0.000	$0.026	-	-	-	-	-	-	**$0.026**
Business Expense/Overheads	-	$0.004	$0.026	$0.026	$0.026	$0.026	$0.026	-	**$0.134**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.002	$0.005	$0.005	$0.005	$0.005	$0.005	-	**$0.029**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.009	$0.192	$0.403	$0.403	$0.403	$0.403	$0.403	-	**$2.216**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.009	$0.192	$0.403	$0.403	$0.403	$0.403	$0.403	-	**$2.216**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.009	$0.192	$0.403	$0.403	$0.403	$0.403	$0.403	-	**$2.216**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing these upgrades is to improve resiliency and reliability of applications and platforms and reduce their technical debt.

Application Currency-TEOS-O&M

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 8775**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The TEOS initiative will utilize O&M funding to keep applications current for security and reliability.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-TRANS, OPS SUPPORT AND ENG

WORK OBJECTIVES

Problem Statement

The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyberthreats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities.

Objectives

Maintaining the appropriate versions of applications through application currency upgrades in the TEOS adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; and (4) addressing version interdependencies and compatibility between systems. This is essential to delivering safe, reliable, and affordable service to the Company's customers.

Scope

The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (5) testing the upgraded software, and (5) updating documentation related to the integration changes.

Alternatives

Applications within the TEOS are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.231	$0.237	-	-	-	-	-	-	$0.468
Total Cost of Ownership	$0.231	$0.237	-	-	-	-	-	-	**$0.468**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.099	$0.172	-	-	-	-	-	-	**$0.271**
Outside Services	$0.132	$0.065	-	-	-	-	-	-	**$0.197**
Business Expense/Overheads	$0.000	$0.001	-	-	-	-	-	-	**$0.001**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.231	$0.237	-	-	-	-	-	-	**$0.468**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.231	$0.237	-	-	-	-	-	-	**$0.468**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.231	$0.237	-	-	-	-	-	-	**$0.468**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Electric T&D, Gas T&D, Generation
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

ARP-Collaboration
EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 8213**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace the Company's obsolete or out-of date audio, visual, telephony and other communication collaborative tools and equipment.

Portfolio IT Services > Infrastructure > Network Services > Communication Network > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement When collaboration assets used to support customer interactions and business operations are obsolete or out-of-date, they are more difficult to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.

Objectives This project creates value by: (1) ensuring the stability and reliability of the Company's audio, visual, telephony, and other communications systems; and (2) migrating to new collaboration assets.

Scope The project scope consists of: (1) replacing aging collaboration assets; and (2) installing new collaboration assets to meet evolving business requirements.

Alternatives The alternatives considered include: (1) continuing to operate collaboration assets beyond a five-year refresh cycle, or (2) refreshing collaboration assets based on a five-year refresh cycle while evaluating the health of the asset and evolving business requirements. The alternative to operate the collaboration assets beyond a five-year refresh cycle was not selected due to the risk of asset failures would cause stability and reliability issues for employees supporting our customers, as vendors do not provide extended support after five years. The Company chose to refresh the collaboration assets based on a five-year refresh cycle and evaluate the health of the asset and evolving business requirements to reduce the risk of impacting the productivity of employees supporting our customers.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.116	$1.185	$1.597	$0.769	$2.639	$2.572	$0.850	-	$10.728
O&M	$0.127	$0.524	$0.181	$0.167	$0.207	$0.207	$0.207	-	$1.621
Total Cost of Ownership	$1.243	$1.708	$1.778	$0.936	$2.847	$2.779	$1.058	-	**$12.348**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.026	$0.037	$0.066	$0.094	$0.092	$0.084	$0.071	-	**$0.471**
Outside Services	$0.437	$0.237	$0.174	$0.312	$0.303	$0.386	$0.341	-	**$2.189**
Business Expense/Overheads	$0.010	$0.008	$0.021	$0.043	$0.043	$0.045	$0.036	-	**$0.206**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.720	$1.426	$1.517	$0.487	$2.408	$2.264	$0.610	-	**$9.433**
Licenses, Permits & Fees	$0.050	-	-	-	-	-	-	-	**$0.050**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.243	$1.708	$1.778	$0.936	$2.847	$2.779	$1.058	-	**$12.348**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.127	$0.524	$0.181	$0.167	$0.207	$0.207	$0.207	-	**$1.621**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.127	$0.524	$0.181	$0.167	$0.207	$0.207	$0.207	-	**$1.621**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.116	$1.185	$1.597	$0.769	$2.639	$2.572	$0.850	-	**$10.728**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.116	$1.185	$1.597	$0.769	$2.639	$2.572	$0.850	-	**$10.728**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustration and employee downtime; (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.

ARP-Cyber Security

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 8240**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates.

Objectives This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations.

Scope The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades.

Alternatives As part of the review process, the alternatives considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Option 2 was not chosen due to the security risk inherent with not replacing assets as per standard refresh cycles increased system vulnerabilities, and out-of-warranty repair costs.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.445	$0.175	-	-	-	-	-	-	$0.620
O&M	$0.019	$0.201	-	-	-	-	-	-	$0.219
Total Cost of Ownership	$0.464	$0.376	-	-	-	-	-	-	**$0.840**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.027	$0.136	-	-	-	-	-	-	**$0.164**
Outside Services	$0.004	$0.023	-	-	-	-	-	-	**$0.027**
Business Expense/Overheads	$0.006	$0.040	-	-	-	-	-	-	**$0.046**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.331	$0.133	-	-	-	-	-	-	**$0.464**
Licenses, Permits & Fees	$0.097	$0.042	-	-	-	-	-	-	**$0.139**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.464	$0.376	-	-	-	-	-	-	**$0.840**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.019	$0.201	-	-	-	-	-	-	**$0.219**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.019	$0.201	-	-	-	-	-	-	**$0.219**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.445	$0.175	-	-	-	-	-	-	**$0.620**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.445	$0.175	-	-	-	-	-	-	**$0.620**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
System Failure (SAP & Other)	Medium	Medium	The risks associated with not completing the program are impacts on business operations that are in service of the Company's customers. The probability of these risk occurring increases as the age of the asset increases. Unless linked to a specific corporate or IT risk, you would skip this section, and go to Other Impacts if risk mitigation

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Technology Capability	Compliance & Risk Management
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: 1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustration and employee downtime; 3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities; 4) continue operating system support as older versions are retired by the manufacturer; and 5) ensure employees have the required software to perform their work.

ARP-Cyber-Common

Report Pulled: 11/5/2025 **Item ID: 14027**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions shared by Electric and Gas.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates.

Objectives This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations.

Scope The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades.

Alternatives The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.362	$1.719	$1.452	$0.749	$0.159	$0.348	-	-	$4.790
O&M	$0.004	$0.019	$0.017	$0.012	$0.006	$0.009	-	-	$0.067
Total Cost of Ownership	$0.366	$1.738	$1.469	$0.761	$0.165	$0.357	-	-	**$4.856**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.049	$0.093	$0.079	$0.044	$0.016	$0.032	-	-	**$0.313**
Outside Services	$0.000	$0.004	$0.004	$0.002	$0.001	$0.002	-	-	**$0.013**
Business Expense/Overheads	$0.019	$0.039	$0.033	$0.017	$0.005	$0.012	-	-	**$0.125**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.219	$1.601	$1.353	$0.698	$0.144	$0.312	-	-	**$4.326**
Licenses, Permits & Fees	$0.079	-	-	-	-	-	-	-	**$0.079**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.366	$1.738	$1.469	$0.761	$0.165	$0.357	-	-	**$4.856**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.004	$0.019	$0.017	$0.012	$0.006	$0.009	-	-	**$0.067**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.004	$0.019	$0.017	$0.012	$0.006	$0.009	-	-	**$0.067**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.362	$1.719	$1.452	$0.749	$0.159	$0.348	-	-	**$4.790**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.362	$1.719	$1.452	$0.749	$0.159	$0.348	-	-	**$4.790**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
System Failure (SAP & Other)	Medium	Medium	The risks associated with not completing the program are impacts on business operations that are in service of the Company's customers. The probability of these risk occurring increases as the age of the asset increases.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The Company's research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: 1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustration and employee downtime; 3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities; 4) continue operating system support as older versions are retired by the manufacturer; and 5) ensure employees have the required software to perform their work.

ARP-Cyber-Gas

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 14028**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions for Gas.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates.

Objectives This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations.

Scope The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a three-to-five-year refresh cycle; and (2) performing application upgrades.

Alternatives The alternatives considered include: (1) upgrade or replace only the assets identified in the plan. This alternative was not chosen because maintaining a continued refresh cycle for cyber security assets is necessary to avoid security risks, system vulnerabilities, and out-of-warranty repair costs; (2) upgrade or replace a portion of the assets identified in the plan. This alternative was not chosen due to the inherent security risk of not replacing assets according to standard refresh cycles, which increases system vulnerabilities and out-of-warranty repair costs; and (3) upgrade or replace assets based on a three-to-five-year refresh cycle. This alternative was chosen as it avoids security risk, system vulnerabilities, and out-of-warranty repair costs.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.178	$0.142	$0.496	-	-	$0.161	-	-	$0.977
O&M	$0.019	$0.005	$0.016	-	-	$0.005	-	-	$0.046
Total Cost of Ownership	$0.197	$0.147	$0.512	-	-	$0.166	-	-	**$1.022**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.020	$0.014	$0.049	-	-	$0.016	-	-	**$0.098**
Outside Services	-	$0.001	$0.002	-	-	$0.001	-	-	**$0.003**
Business Expense/Overheads	$0.009	$0.005	$0.017	-	-	$0.006	-	-	**$0.037**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.168	$0.128	$0.444	-	-	$0.144	-	-	**$0.883**
Licenses, Permits & Fees	-	$0.000	$0.000	-	-	$0.000	-	-	**$0.001**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.197	$0.147	$0.512	-	-	$0.166	-	-	**$1.022**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.019	$0.005	$0.016	-	-	$0.005	-	-	**$0.046**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.019	$0.005	$0.016	-	-	$0.005	-	-	**$0.046**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.178	$0.142	$0.496	-	-	$0.161	-	-	**$0.977**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.178	$0.142	$0.496	-	-	$0.161	-	-	**$0.977**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
System Failure (SAP & Other)	Medium	Medium	The risks associated with not completing the program are impacts on business operations that are in service of the Company's customers. The probability of these risk occurring increases as the age of the asset increases.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: 1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustration and employee downtime; 3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities; 4) continue operating system support as older versions are retired by the manufacturer; and 5) ensure employees have the required software to perform their work.

ARP-Field Device Asset Management (FDAM)

Report Pulled: 11/5/2025 **Item ID: 8241**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace field devices according to a four-year refresh cycle that is based on industry standards, hardware failures, security patches, and software compatibility.

Portfolio IT Services > Infrastructure > End User Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement When Field Device Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with Security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular four-year refresh cycle.

Objectives This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing field devices before they fail; and (2) allowing field workers to complete their job tasks.

Scope The project scope consists of replacing field device assets according to the four-year refresh cycle.

Alternatives oAlternatives considered include: (1) using outdated equipment. This alternative was not selected because there would be an increased risk of hardware failure and equipment outages that could impact meter readers' ability to complete job tasks. It would also complicate the Company's efforts to meet the MPSC's meter reading factor and consecutive estimated targets, and it could cause applications to run poorly or stop functioning; (2) The second alternative considered was to replace the hardware. The Company selected this option to alleviate the above concerns.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$3.953	$2.457	$7.577	$5.735	$4.966	$3.383	$7.577	-	$35.648
O&M	$0.003	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	$0.033
Total Cost of Ownership	$3.956	$2.462	$7.582	$5.740	$4.971	$3.388	$7.582	-	**$35.681**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.044	$0.001	$0.134	$0.097	$0.083	$0.055	$0.134	-	**$0.548**
Outside Services	$0.055	$0.019	-	-	-	-	-	-	**$0.074**
Business Expense/Overheads	$0.012	$0.001	$0.063	$0.046	$0.039	$0.026	$0.063	-	**$0.249**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$3.845	$2.441	$7.385	$5.597	$4.849	$3.307	$7.385	-	**$34.810**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$3.956	$2.462	$7.582	$5.740	$4.971	$3.388	$7.582	-	**$35.681**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.003	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	**$0.033**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.003	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	**$0.033**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$3.953	$2.457	$7.577	$5.735	$4.966	$3.383	$7.577	-	**$35.648**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$3.953	$2.457	$7.577	$5.735	$4.966	$3.383	$7.577	-	**$35.648**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	6 - Asset Management
Intangibles	Field Devices supports/enables asset and operational metric data entry; Work Order Process and Close Out; Resource Management Process (On-Premise vs Traveling/Non-Prem); Supports being able to display Engineering Design Process (Redline/Green Line Drawings), and Storm Restoration in the field by have reliable technology.
Intangibles	Replacing field equipment on a four-year refresh cycle benefits external customers because employees will be able to complete work in a timely manner, which increases customer satisfaction.
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.

ARP-Infoblox Refresh

Report Pulled: 11/5/2025 **Item ID: 6529**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace the three legacy core components, Domain Name System ("DNS"), Dynamic Host Configuration Protocol ("DHCP"), and Internet Protocol Address Management ("IPAM") also referred to as DDI ("DNS, DHCP, IPAM") environment with a modern, vendor supported system. Infoblox is the DDI solution that the Company uses to enable seamless network communications across critical systems.

Portfolio IT Services > Infrastructure > End User Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement When Infoblox Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. Consumers Energy also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.

Objectives The value of this program includes: (1) enabling the Company to efficiently manage and control their networks; and (2) providing Domain Name System ("DNS"), Dynamic Host Configuration Protocol ("DHCP"), and Internet Protocol Address Management ("IPAM").

Scope The scope of this project includes the replacement of DNS, DHCP and IPAM assets on a 5-7 years refresh cycle.

Alternatives The alternative considered was to continue operating on existing Infoblox equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes. The alternative to replace the existing Infoblox equipment with the latest hardware and software provided by the vendor was selected to avoid these risks and continue a regular refresh cycle.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	$0.468	-	-	-	-	-	-	$0.468
O&M	-	$0.054	-	-	-	-	-	-	$0.054
Total Cost of Ownership	-	$0.522	-	-	-	-	-	-	**$0.522**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.092	-	-	-	-	-	-	**$0.092**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.020	-	-	-	-	-	-	**$0.020**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.410	-	-	-	-	-	-	**$0.410**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	-	$0.522	-	-	-	-	-	-	**$0.522**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.054	-	-	-	-	-	-	**$0.054**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.054	-	-	-	-	-	-	**$0.054**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.468	-	-	-	-	-	-	**$0.468**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.468	-	-	-	-	-	-	**$0.468**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Every business-critical application is positively impacted by this refresh. Everything that runs on the network relies on this system.
Risk Mitigation	The company' research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.

ARP-Local Area Network

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 6789**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will upgrade the Company's entire LAN and a significant portion of the Wireless Local Area Network (WLAN).

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement

At some Company locations, LAN equipment has been in service since 2011. If the LAN/WLAN hardware and software is not routinely refreshed, the Company will lose the manufacturer support needed for equipment bug fixes, security vulnerability patches, and enhancements. In addition, aging equipment cannot accommodate the increasing demand for wireless devices necessary to perform day-to-day operations that rely on wireless-enabled devices, such as rugged field devices, cell phones, barcode scanners, tablets, and other mobile devices. As equipment ages, it is at risk of higher failure rates, which increases the risk of unplanned outages. In the event of unplanned outages, business areas would not be able to access services on the corporate network including email, SAP, internet, and phones.

Objectives

The project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor supported, thereby ensuring support for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; (6) increasing user productivity through a higher performing wireless network, which increases the productivity and efficiency of office and field employees serving customers; and (7) improving support for wireless Internet Protocol (IP) phones, Internet of Things(IoT) and field devices.

Scope

The project scope includes: (1) refreshing the LAN equipment and software across all Company sites; (2) identifying the required features for the new equipment; (3) implementing the new equipment according to industry best practices; (4) replacing wireless network with upgraded infrastructure and verifying wireless coverage is as expected; and (5) collecting wireless survey data for all Company locations in order to design improved wireless network coverage.

Alternatives

The alternative considered was to continue operating on the existing platform past the vendors end-of-support date. The vendor support period ended in May of 2021, and paying for extended support is not an option offered by the vendor. The risk inherent in not refreshing the platform is a lack of vendor support resulting in an absence of software bug fixes, security updates, and break fixes. The Company chose to replace the existing equipment with the latest hardware and software available, following a five year refresh cycle.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$3.046	$0.597	-	-	-	-	-	-	$3.644
O&M	$0.059	$0.064	-	-	-	-	-	-	$0.123
Total Cost of Ownership	$3.105	$0.662	-	-	-	-	-	-	**$3.767**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.475	$0.355	-	-	-	-	-	-	**$0.830**
Outside Services	$0.276	$0.232	-	-	-	-	-	-	**$0.508**
Business Expense/Overheads	$0.124	$0.113	-	-	-	-	-	-	**$0.237**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$1.770	$(0.103)	-	-	-	-	-	-	**$1.667**
Licenses, Permits & Fees	$0.460	$0.065	-	-	-	-	-	-	**$0.525**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$3.105	$0.662	-	-	-	-	-	-	**$3.767**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.059	$0.064	-	-	-	-	-	-	**$0.123**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.059	$0.064	-	-	-	-	-	-	**$0.123**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$3.046	$0.597	-	-	-	-	-	-	**$3.644**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$3.046	$0.597	-	-	-	-	-	-	**$3.644**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally two to three years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustrations and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work. Manufacturer support will not be provided after May 2021. In the event of unplanned outages, the business would not be able to access the corporate network including email, SAP, internet, and phones.

ARP-Network-Common

Report Pulled: 11/5/2025 **Item ID: 14026**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks shared by Electric and Gas.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.

Objectives This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks.

Scope The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices.

Alternatives The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.214	$0.834	$1.515	$0.797	$1.595	$15.890	-	-	$20.845
O&M	$0.007	$0.015	$0.025	$0.014	$0.027	$0.040	-	-	$0.127
Total Cost of Ownership	$0.221	$0.848	$1.540	$0.811	$1.622	$15.929	-	-	**$20.971**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.150	$0.038	$0.051	$0.027	$0.055	$0.203	-	-	**$0.523**
Outside Services	-	$0.015	$0.028	$0.015	$0.030	$0.080	-	-	**$0.168**
Business Expense/Overheads	$0.071	$0.016	$0.020	$0.010	$0.022	$0.092	-	-	**$0.231**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.771	$1.424	$0.752	$1.498	$15.512	-	-	**$19.956**
Licenses, Permits & Fees	-	$0.008	$0.017	$0.008	$0.017	$0.043	-	-	**$0.093**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.221	$0.848	$1.540	$0.811	$1.622	$15.929	-	-	**$20.971**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.007	$0.015	$0.025	$0.014	$0.027	$0.040	-	-	**$0.127**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.007	$0.015	$0.025	$0.014	$0.027	$0.040	-	-	**$0.127**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.214	$0.834	$1.515	$0.797	$1.595	$15.890	-	-	**$20.845**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.214	$0.834	$1.515	$0.797	$1.595	$15.890	-	-	**$20.845**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally two to three years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustrations and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work In the event of unplanned outages, the business would not be able to access the corporate network including email, SAP, internet, and phones.

ARP-Network-Gas
EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 14025**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will refresh data center network equipment, local area network (LAN), wireless local area network (WLAN), and equipment to efficiently manage and control the Company's networks for Gas.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement When network assets supporting customer interactions and ensuring the stability of mission-critical business operations are obsolete or out-of-date, they become more expensive to support and harder to keep current with security updates. The Company also risks asset failure if it does not adhere to a regular refresh cycle.

Objectives This project will create value for the Company and its customers by: (1) increasing network reliability; (2) adding new functionality; (3) improving network performance; (4) ensuring equipment is vendor-supported for bug fixes, security vulnerability patching, and enhanced features; (5) providing consistent wireless coverage across Company locations; and (6) enabling the Company to efficiently manage and control its networks.

Scope The project scope includes: (1) refreshing network equipment and software assets on a five-year refresh cycle; (2) identifying the required features for the new equipment; and (3) implementing the new equipment according to industry best practices.

Alternatives The alternatives considered include: (1) continuing to operate on existing equipment past the vendor's end-of-support date. This alternative was not selected because it carries risks with not having vendor support, software bug fixes, security updates, and other software fixes; and (2) refresh network and software assets on a five-year refresh cycle. This alternative was selected to replace the existing equipment with the latest hardware and software to avoid hardware failure and losing vendor support, software bug fixes, security updates, and other software fixes.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.419	$0.022	$0.345	$0.606	$0.192	$3.579	-	-	$5.163
O&M	$0.048	$0.005	$0.015	$0.018	$0.015	$0.025	-	-	$0.127
Total Cost of Ownership	$0.467	$0.027	$0.360	$0.624	$0.207	$3.604	-	-	**$5.289**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.043	$0.006	$0.026	$0.040	$0.016	$0.189	-	-	**$0.319**
Outside Services	-	$0.000	$0.006	$0.011	$0.003	$0.052	-	-	**$0.073**
Business Expense/Overheads	$0.020	$0.001	$0.008	$0.014	$0.005	$0.085	-	-	**$0.133**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.405	$0.020	$0.318	$0.556	$0.182	$3.273	-	-	**$4.755**
Licenses, Permits & Fees	-	-	$0.002	$0.002	$0.001	$0.005	-	-	**$0.009**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.467	$0.027	$0.360	$0.624	$0.207	$3.604	-	-	**$5.289**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.048	$0.005	$0.015	$0.018	$0.015	$0.025	-	-	**$0.127**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.048	$0.005	$0.015	$0.018	$0.015	$0.025	-	-	**$0.127**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.419	$0.022	$0.345	$0.606	$0.192	$3.579	-	-	**$5.163**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.419	$0.022	$0.345	$0.606	$0.192	$3.579	-	-	**$5.163**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	The Company' research demonstrates that industry standards on refreshing hardware are generally two to three years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; 2) avert customer frustrations and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work In the event of unplanned outages, the business would not be able to access the corporate network including email, SAP, internet, and phones.

ARP-Operational Technology Support Common

Report Pulled: 11/5/2025 **Item ID: 14032**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Asset Refresh Program (ARP)-Operational Technology (OT) Support Common project will replace dated and obsolete servers shared by Electric and Gas on a rotating five-year refresh schedule.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement When Operational Technology Assets that are used to ensure the safety and reliability of technology that supports critical electric operations are obsolete or out-of-date, they can be more difficult to keep current with Security updates and run the risk of failure if the Company does not adhere to a regular refresh cycle.

Objectives This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical electric infrastructure.

Scope The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements.

Alternatives The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$1.834	$1.656	$1.562	$2.759	$4.352	$0.828	-	-	$12.990
O&M	$0.162	$0.153	$0.147	$0.255	$0.515	$0.076	-	-	$1.308
Total Cost of Ownership	$1.996	$1.808	$1.709	$3.014	$4.867	$0.904	-	-	**$14.298**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.220	$0.049	$0.053	$0.082	$0.082	$0.024	-	-	**$0.510**
Outside Services	$0.020	-	-	-	-	-	-	-	**$0.020**
Business Expense/Overheads	$0.028	$0.115	$0.111	$0.192	$0.285	$0.058	-	-	**$0.790**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$1.727	$1.644	$1.545	$2.740	$4.500	$0.822	-	-	**$12.978**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.996	$1.808	$1.709	$3.014	$4.867	$0.904	-	-	**$14.298**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.162	$0.153	$0.147	$0.255	$0.515	$0.076	-	-	**$1.308**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.162	$0.153	$0.147	$0.255	$0.515	$0.076	-	-	**$1.308**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.834	$1.656	$1.562	$2.759	$4.352	$0.828	-	-	**$12.990**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.834	$1.656	$1.562	$2.759	$4.352	$0.828	-	-	**$12.990**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	The risks associated with not completing the program are both disruptive and adverse performance impacts on business operations that Operational Technology supports, which includes the Merchant Operations Center, and System Control. The probability of these risks occurring increases as the age of the asset increases. Specifically: (1) There will be no security updates without the replacement, which increases our vulnerability. (2) Monitors to maintain the equipment will not be available. (3) Cyber security vulnerabilities will increase with aged systems, which make the systems more prone to attack and compromise. (4) This ensures compliance with the North American Electric Reliability Corporation Critical Infrastructure Protection Plan (NERC/CIP). NERC can fine Consumers Energy $1.2 million per incident per day for violating NERC.

OTHER VALUE

Type	Description
Technology Capability	Electric T&D, Generation
Risk Mitigation	The Company's research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.
Intangibles	This reduces the risk of potential cyber security incidents because upgraded systems have been built and calibrated for newer types of cyber-attacks. If the Operational Technology systems are not upgraded, it will affect the ability for Consumers Energy to meet the regulatory and compliance requirements needed for successful customer-facing operations.

ARP-Operational Technology Support Gas

Report Pulled: 11/5/2025 **Item ID: 6530**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The ARP- OT Support Gas project will replace dated and obsolete servers on a rotating five-year refresh schedule.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement When OT Assets that are used to support customer interactions and ensure the stability of technology for business operations are obsolete or out-of-date, they are more expensive to support and can be more difficult to keep current with Security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.

Objectives This project creates value by maintaining the currency of the Company's IT infrastructure and the core enterprise software that are utilized to support the operation of the Company's critical gas infrastructure.

Scope The program scope consists of: (1) replacement of computer hardware under the program; and (2) installing additional new compute capacity to account for expanding business requirements.

Alternatives The alternatives considered include: (1) continue to operate hardware beyond a five-year refresh cycle or (2) refresh hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs. The alternative to operate hardware beyond a five-year refresh cycle was not selected due to the risk that these hardware component failures would cause system reliability and safety issues for customers, as vendors do not provide extended support after five years. The Company chose the alternative to refresh this hardware based on a five-year refresh cycle along with evaluating the health of the asset and evolving business needs to reduce the risk of impacting critical infrastructure that supports systems such as Gas SCADA and Gas Compression control systems.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.126	$0.153	$1.165	$0.341	$0.742	-	$0.763	-	$4.291
O&M	$0.032	$0.025	$0.118	$0.030	$0.109	-	$0.072	-	$0.386
Total Cost of Ownership	$1.157	$0.179	$1.283	$0.370	$0.851	-	$0.836	-	**$4.676**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.052	$0.058	$0.083	$0.094	$0.129	-	$0.050	-	**$0.467**
Outside Services	$0.035	$0.001	-	-	-	-	-	-	**$0.036**
Business Expense/Overheads	$0.017	$0.014	$0.098	$0.052	$0.089	-	$0.063	-	**$0.334**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.985	$0.057	$1.102	$0.224	$0.633	-	$0.722	-	**$3.722**
Licenses, Permits & Fees	$0.068	$0.049	-	-	-	-	-	-	**$0.117**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.157	$0.179	$1.283	$0.370	$0.851	-	$0.836	-	**$4.676**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.032	$0.025	$0.118	$0.030	$0.109	-	$0.072	-	**$0.386**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.032	$0.025	$0.118	$0.030	$0.109	-	$0.072	-	**$0.386**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.126	$0.153	$1.165	$0.341	$0.742	-	$0.763	-	**$4.291**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.126	$0.153	$1.165	$0.341	$0.742	-	$0.763	-	**$4.291**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	The risks associated with not completing the program are both disruptive and adverse performance impacts on business operations that Operational Technology supports, which includes Gas Control and Gas Compressor Stations. The probability of these risks occurring increases as the age of the asset increases. Specifically: (1) There will be no security updates without the replacement, which increases our vulnerability. (2) Monitors to maintain the equipment will not be available. (3) Cyber security vulnerabilities will increase with aged systems, which make the systems more prone to attack and compromise. (4) This ensures compliance with TSA Security Directives and API standard 1164 required by the MPSC.

OTHER VALUE

Type	Description
Technology Capability	Gas T&D, Gas Compression
Risk Mitigation	The Company's research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.
Intangibles	This reduces the risk of potential cyber security incidents because upgraded systems have been built and calibrated for newer types of cyber-attacks. If the Operational Technology systems are not upgraded, it will affect the ability for Consumers Energy to meet the regulatory and compliance requirements needed for successful customer-facing operations.

ARP-Physical Security

Report Pulled: 11/5/2025 **Item ID: 8176**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The ARP-Physical Security, formerly known as Physical Security Asset Refresh, will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring alerts, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in an increase of potential security vulnerabilities, associated penalties, and reputational damage.

Objectives The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reduce gaps in functionality; and (3) optimize overall system performance.

Scope Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) advanced analytics on security cameras for monitoring and real time alerting capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems.

Alternatives Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets not meeting the industry standard of 5 to 7 years for indoor cameras and 3 to 5 years for outdoor cameras. Alternatives 1 and 2 were not selected due to the risk of security concerns, utilizing equipment that is at end of life and no longer supported, and the risk of a lack of inability to meet regulatory requirements (FERC, NERC, TSA and NRC). The alternative selected maintains compliance, reduces redundancies and gaps in functionality, provides up to date support for the assets and current technological capabilities and optimizes overall performance of physical security systems.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$2.282	$2.405	$2.113	$2.114	$2.114	$2.114	$1.300	-	$14.443
O&M	$0.014	$0.011	$0.013	$0.013	$0.013	$0.013	-	-	$0.075
Total Cost of Ownership	$2.296	$2.415	$2.125	$2.127	$2.127	$2.127	$1.300	-	**$14.518**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.020	$0.054	$0.164	$0.164	$0.164	$0.164	-	-	**$0.729**
Outside Services	$0.656	$0.995	$0.589	$0.589	$0.589	$0.589	-	-	**$4.007**
Business Expense/Overheads	$(0.240)	$(0.035)	$0.074	$0.074	$0.074	$0.074	-	$0.000	**$0.022**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$1.860	$1.401	$1.299	$1.300	$1.300	$1.300	$1.300	-	**$9.759**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$2.296	$2.415	$2.125	$2.127	$2.127	$2.127	$1.300	$0.000	**$14.518**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.014	$0.011	$0.013	$0.013	$0.013	$0.013	-	-	**$0.075**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.014	$0.011	$0.013	$0.013	$0.013	$0.013	-	-	**$0.075**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.282	$2.405	$2.113	$2.114	$2.114	$2.114	$1.300	-	**$14.443**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.282	$2.405	$2.113	$2.114	$2.114	$2.114	$1.300	-	**$14.443**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Theft/Accidental Disclosure	Low	Medium	Having cameras and other physical security assets can help uncover activities leading to potential thefts and or accidents.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	Lack of life cycle replacement wouldn't allow for integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster, more effective/consistent response to emergencies and incidents which could result in the increase of potential security vulnerabilities, associated penalties and reputation damage.
Intangibles	Security Visibility - Having updated camera/Door systems helps the security command center have been visibility into often un-monitored areas.

ARP-Printer Asset Management (PAM)

Report Pulled: 11/5/2025 **Item ID: 6671**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace and install select printers, plotters, and multi-function printing devices based on printer replacement assessments and a five-year refresh cycle. Printer service and usage history is evaluated and a determination is made if a printer can be repurposed instead of ordering a new one.

Portfolio IT Services > Infrastructure > End User Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & SI

WORK OBJECTIVES

Problem Statement When Printer Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with firmware and security updates. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.

Objectives This project creates value for the Company by: (1) improving the dependability of these printer devices for employees; (2) averting increased costs due to hardware repairs; and (3) ensuring compatibility with enterprise print applications.

Scope The project scope consists of the annual replacement of printer assets according to a five-year refresh cycle. This does not mean that all printers are replaced after five years – merely that printers are assessed on a five-year cycle for possible replacement.

Alternatives The alternatives considered for the project included looking at refresh cycles from three to seven years as well as running the assets to failure. The selection of a five-year cycle was deemed to be the best solution since anything less than five years would increase the likelihood of unneeded expense for replacement of assets that were still in good operating condition. Anything greater than five years would require the printers to be assessed monthly to ensure they are not run to failure, resulting in additional expenses for maintenance of the equipment and downtime, negatively affecting employee productivity. The Company assesses the printer fleet based on years of active service, service history, printer usage data, and the number of users within a facility. Based on these factors, the Company either decommissions, repurposes, leaves in place, or refreshes the printers.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.081	$1.612	$0.185	$0.675	$0.233	$1.063	$1.427	-	$6.277
O&M	-	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	$0.030
Total Cost of Ownership	$1.081	$1.617	$0.190	$0.680	$0.238	$1.068	$1.432	-	**$6.307**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.065	$0.059	$0.003	$0.011	$0.004	$0.022	$0.031	-	**$0.194**
Outside Services	$0.008	$0.001	-	-	-	-	-	-	**$0.009**
Business Expense/Overheads	$0.015	$(0.008)	$0.002	$0.005	$0.002	$0.010	$0.015	-	**$0.039**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.994	$1.565	$0.185	$0.664	$0.233	$1.036	$1.387	-	**$6.064**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.081	$1.617	$0.190	$0.680	$0.238	$1.068	$1.432	-	**$6.307**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	**$0.030**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.005	$0.005	$0.005	$0.005	$0.005	$0.005	-	**$0.030**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.081	$1.612	$0.185	$0.675	$0.233	$1.063	$1.427	-	**$6.277**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.081	$1.612	$0.185	$0.675	$0.233	$1.063	$1.427	-	**$6.277**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	If Consumers Energy does not stay current with printer hardware, then it would not be able to use the updated software and would lose print functionality.

OTHER VALUE

Type	Description
Technology Capability	Asset Management
Risk Mitigation	The company's research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.
Technology Capability	The PAM program supports Engineering Design Process (Redline/Green Line Drawings); Storm Restoration (Hard Print for Damage Assessment). The daily print operations for Business Partners to complete their work as it relates to storms restorations, projects, D & E renderings and application process work.

ARP-Radio

Report Pulled: 11/5/2025 **Item ID: 8234**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will refresh hardware to include: 800Mhz Radios and infrastructure, cellular modems, plant radios and systems, cellular amplification devices, vehicle consoles in service trucks, other communications equipment, and associated test equipment. This equipment supports mission critical voice and data communications for plant and field service personnel and dispatch personnel. 800MHz radios are upgraded on a 10-year lifecycle basis. Plant radio systems are upgraded on a scheduled 10-year lifecycle basis. Cellular modems are refreshed on a five-year life cycle basis. Amplification systems are refreshed on a 10-year life cycle.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement 800MHz, mobile, and portable radios, Plant radios systems, and Cellular modems support core business functions, life safety communications, and rapid response for restoration of customers service and critical infrastructure. Company radio and cellular systems must be refreshed on a scheduled basis or risk exceeding life expectancy and failing or becoming obsolete. The refresh of this equipment in a proactive manner is critical to providing service to customers. If these units are not refreshed, the increased risk of unit failure would result in interruptions to timely and concise communications to field personnel to resolve gas leaks, and downed electric lines, or service turn-on requests, which risks life safety.

Objectives This project creates value for customers and the Company by: (1) upholding public safety; (2) ensuring timely responses and repairs to emergent gas leaks, wire downs, and electric outages; (3) ensuring real-time communications between Company dispatch locations and crews in the field; (4) ensuring the safety of personnel working in higher risk workspaces by replacing equipment with units that contain intrinsically safe batteries; (5) supporting continuous improvement and training by replacing equipment that is capable of capturing audio recordings; and (6) remaining in compliance with MPSC regulatory requirements by maintaining critical radio infrastructure.

Scope The project scope consists of: (1) scheduled replacement of radios, modems, consoles; and (2) installing additional radios, modems, and console assets to satisfy growth requirements; and (3) scheduled replacement of out of date cellular and radio boosters and systems.

Alternatives The alternatives considered include: (1) Replacing the existing units with new units from other radio and modem manufacturers; (2) Purchasing new radio subscriber units from existing manufacturers. Option 2 was not selected because the Company now uses a standards-based radio system allowing for multiple radio manufacturer options. Option 1 was selected to allow for a competitive bidding process that will provide the most cost-effective radio that will meet the needs of users.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.165	$1.615	$1.457	$1.739	$1.735	$2.222	$2.283	-	$12.215
O&M	$0.094	$0.114	$0.097	$0.093	$0.084	$0.076	$0.007	-	$0.566
Total Cost of Ownership	$1.259	$1.729	$1.554	$1.832	$1.819	$2.298	$2.289	-	**$12.781**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$(0.206)	$0.023	$0.044	$0.041	$0.037	$0.045	$0.039	-	**$0.025**
Outside Services	$0.381	$0.211	$0.040	$0.042	$0.040	$0.043	$0.036	-	**$0.793**
Business Expense/Overheads	$0.018	$0.015	$0.021	$0.022	$0.020	$0.023	$0.021	-	**$0.139**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$1.066	$1.480	$1.448	$1.727	$1.722	$2.187	$2.194	-	**$11.824**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.259	$1.729	$1.554	$1.832	$1.819	$2.298	$2.289	-	**$12.781**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.094	$0.114	$0.097	$0.093	$0.084	$0.076	$0.007	-	**$0.566**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.094	$0.114	$0.097	$0.093	$0.084	$0.076	$0.007	-	**$0.566**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.165	$1.615	$1.457	$1.739	$1.735	$2.222	$2.283	-	**$12.215**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.165	$1.615	$1.457	$1.739	$1.735	$2.222	$2.283	-	**$12.215**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Avoided Costs	Cost avoidance of future Modem purchases. Transitioning cellular services from modems to devices avoids future yearly modem refresh costs of approximately $420,000.
Risk Mitigation	The company' research demonstrates that industry standards on refreshing radio hardware is generally seven to ten years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; (2) mitigate customer frustration and employee downtime; (3) maintain high standards for customer and employee safety; and (4) maintain technology currency for employees to perform their work.
Intangibles	The radio system funded through the ARP — Radio project supports core business functions such as storm restoration, emergency gas leak repair, and day-to-day customer support. By reinvesting in the system Consumers Energy extends the effectiveness of the system.
Risk Mitigation	The risk inherent in not replacing these items is the extended support cost, which amounts to $225,000 annually. Moreover, additional service hour, parts replacement, material, and setup costs would be incurred for outfitting of vehicles.

ARP-Server and Storage

Report Pulled: 11/5/2025 **Item ID: 8755**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace or augment server and storage infrastructure for the Company.

Portfolio IT Services > Infrastructure > Data Center - Storage > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement

When Server and Storage Hardware Assets used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and can be more challenging to keep current with Security updates. The Company also runs the risk of failure of these assets impacting customer interactions and business operations if it does not adhere to a regular five to seven-year refresh cycle.

Objectives

This project creates value for the Company through: (1) improved stability and availability of business-critical applications by proactively replacing server and storage hardware assets prior to the likelihood of increasing hardware failures; and (2) ensuring that adequate resources are available to support application demands after five to seven years of actual use.

Scope

The scope of this program encompasses: (1) replacement of server and storage hardware assets; and (2) installation of additional new computers and storage capacity to account for evolving business requirements.

Alternatives

The alternatives considered were to (1) purchase extended maintenance; (2) move some of these assets to the cloud with the Digital -Hybrid Cloud and Data Center Migration project or: (3) replace the assets on the current cycle. The option to purchase extended maintenance was not selected because full support would not be offered after seven years, and maintenance costs would increase. The preferred option is to move some of these assets to the cloud in the Digital Hybrid Cloud and Data Center Migration project while refreshing the remainder using the five- to seven-year cycle as it is the most cost-effective option.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.701	$0.374	-	$1.416	$2.135	$1.920	-	-	$6.544
O&M	$0.093	$0.022	-	$0.117	$0.014	-	-	-	$0.246
Total Cost of Ownership	$0.793	$0.396	-	$1.532	$2.149	$1.920	-	-	**$6.790**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.064	$0.027	-	$0.200	$0.135	-	-	-	**$0.427**
Outside Services	$0.067	$0.009	-	$0.100	-	-	-	-	**$0.176**
Business Expense/Overheads	$0.006	$0.005	-	$0.136	$0.094	-	-	-	**$0.240**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.653	$0.127	-	$1.097	$1.920	$1.920	-	-	**$5.716**
Licenses, Permits & Fees	$0.004	$0.228	-	-	-	-	-	-	**$0.232**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.793	$0.396	-	$1.532	$2.149	$1.920	-	-	**$6.790**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.093	$0.022	-	$0.117	$0.014	-	-	-	**$0.246**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.093	$0.022	-	$0.117	$0.014	-	-	-	**$0.246**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.701	$0.374	-	$1.416	$2.135	$1.920	-	-	**$6.544**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.701	$0.374	-	$1.416	$2.135	$1.920	-	-	**$6.544**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	Consumers Energy's vendor, Nutanix only offers full support for seven years after purchase of a solution. After the end of support no more security patches are available and if an issue is encountered the manufacturer will not assist in resolving.

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Avoided Costs	If all the existing hardware environment went beyond seven years, O&M would increase would by $202,000. Each 1/7th of the environment not upgraded would equate to an increase in O&M by $30,000.
Avoided Costs	Maintenance costs would increase by about 15% after seven years over current amounts in the ITPM.
Intangibles	Research firm IDC Economics reports that without proactive replacement server performance drops by 39%, annual support costs increase 148%, application management costs increase 40%, and unplanned downtime hours increase by 62%.
Risk Mitigation	The Company's research demonstrates that industry standards on refreshing hardware are generally five to seven years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; (2) avert customer frustration and employee downtime; (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities; (4) continue operating system support as older versions are retired by the manufacturer; and (5) ensure employees have the required software to perform their work.

ARP-Workstation Asset Management (WAM)

Report Pulled: 11/5/2025 **Item ID: 8242**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace and install new desktops, laptops, and tablets on a four-year refresh cycle based on industry standards, hardware failures, security patches, and software compatibility. Monitors will be replaced every eight years based on Company data related to historical failure rates.

Portfolio IT Services > Infrastructure > End User Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement When Workstation Assets that are used to support customer interactions and business operations are obsolete or out-of-date, they are more expensive to support and keep current with security updates as equipment becomes obsolete. The Company also runs the risk of failure of these assets if it does not adhere to a regular refresh cycle.

Objectives This project creates value for the Company by: (1) improving stability and availability of business-critical applications by proactively replacing workstations prior to increasing hardware failures; and (2) allowing business partners to complete their job tasks.

Scope The project scope consists of: (1) replacing workstation assets; and (2) installing new units for new resources.

Alternatives The alternatives considered were to: (1) extend the replacement cycle from four years to five years for all desktops and laptops; (2) extend the replacement cycle only on desktops from four years to five years; and (3) use outdated equipment. The Company did not select these options because: (1) there would be an increased risk of hardware failure and equipment outages that could impact the capacity of business partners to complete job tasks; (2) it could cause applications to run poorly or stop functioning; (3) it would increase the ARP in future years based on the number of devices that were not replaced during the four-year refresh cycle ; and (4) it could cause an inability to apply security patches. Based on industry data, waiting longer than the four-year cycle would increase hardware failures, security patch issues, and software compatibility concerns, resulting in additional downtime that could affect customer safety and storm restoration. The Company selected a four-year refresh cycle for desktops, laptops, and tablets; and an eight-year cycle for monitors to alleviate these concerns.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$5.993	$7.882	$5.132	$6.915	$11.002	$11.145	$6.132	-	$54.203
O&M	$0.028	$0.090	$0.052	$0.060	$0.100	$0.103	$0.049	-	$0.481
Total Cost of Ownership	$6.021	$7.972	$5.184	$6.975	$11.102	$11.248	$6.181	-	**$54.684**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.222	$0.064	$0.113	$0.111	$0.162	$0.174	$0.110	-	**$0.957**
Outside Services	$0.011	$0.000	$0.110	$0.108	$0.158	$0.169	$0.110	-	**$0.665**
Business Expense/Overheads	$0.054	$0.031	$0.060	$0.059	$0.085	$0.092	$0.059	-	**$0.439**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$5.735	$7.876	$4.902	$6.697	$10.697	$10.814	$5.902	-	**$52.623**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$6.021	$7.972	$5.184	$6.975	$11.102	$11.248	$6.181	-	**$54.684**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.028	$0.090	$0.052	$0.060	$0.100	$0.103	$0.049	-	**$0.481**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.028	$0.090	$0.052	$0.060	$0.100	$0.103	$0.049	-	**$0.481**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$5.993	$7.882	$5.132	$6.915	$11.002	$11.145	$6.132	-	**$54.203**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$5.993	$7.882	$5.132	$6.915	$11.002	$11.145	$6.132	-	**$54.203**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	There is a high risk of hardware failure, the inability to keep current with security updates, and software compatibility issues without the four-year refresh.

OTHER VALUE

Type	Description
Technology Capability	6 - Asset Management
Avoided Costs	Future year costs would increase if equipment is not refreshed in planned year.
Risk Mitigation	The company' research demonstrates that industry standards on refreshing hardware are generally eight years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures, (2) avert customer frustration and employee downtime, (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities, (4) continue operating system support as older versions are retired by the manufacturer, and (5) ensure employees have the required software to perform their work.
Technology Capability	The WAM program enables and supports all administrative, engineering, operational, and corporate process and activities.

Asset Accounting Tax Upgrade

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 13966**

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will upgrade the Company's current on-premise accounting asset management tax software to the SaaS version as required by the vendor ensuring continued support of a critical financial application and providing new functionality.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement In 2025, standard vendor support ends for the current on-premise PowerTax software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the tax fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility.

Objectives This project creates value for the Company by ensuring compliance with regulated and financial accounting within the tax fixed asset sub-ledger. In addition, the project adds value by: (1) moving to a SaaS solution in order stay supported; and (2) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support.

Scope The project scope includes: (1) evaluating current vendor/product solutions with market leaders; and (2) upgrading the vendor software from the current version to the newer SaaS version; or replacing it.

Alternatives Alternatives considered include: (1) evaluating SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features such as centralized tax error processing. (2) evaluating other software options. This option may not provide appropriate regulatory reporting and other needed improvements and introduces several complexities and costs: Integration Challenges as PowerPlan modules are designed to work seamlessly together and data synch, mapping, and real-time updates may not be as robust as with native modules; Loss of Automation and Efficiency as there may be manual data transfers, duplicate entries and reduced automation increasing labor costs and risk of mistakes; Higher IT and Support Costs as maintaining two asset accounting systems means higher IT overhead with upgrades, troubleshooting, and user training; Reduced Data Integrity and Security as splitting tax data between systems can create gaps in data integrity, audit trails, and security controls; and Limited Vendor Accountability as when issues arise, vendors may point to integration boundaries making troubleshooting and issue resolution slower and more complicated. (3) moving entire PowerPlan suite, which includes PowerTax, to their cloud option. This option would be expensive from a licensing and integration build perspective, has an unclear timeline, and would remove the opportunity for direct database control. (4) waiting until a future upgrade cycle. This option introduces technical risk and potential financial processing risk. (5) upgrading to a newer version of the current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
2/1/2027	3/31/2027	4/30/2027	9/2/2027
	In-Service/Go-Live	**Closeout**	
	10/15/2027	1/31/2028	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.396	$0.331	$0.274	$0.274	$0.274	-	-	-	$1.548
Total Cost of Ownership	$0.396	$0.331	$0.274	$0.274	$0.274	-	-	-	**$1.548**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.107	$0.027	-	-	-	-	-	-	**$0.134**
Outside Services	$0.214	$0.027	-	-	-	-	-	-	**$0.240**
Business Expense/Overheads	$0.022	$0.004	-	-	-	-	-	-	**$0.026**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.053	$0.274	$0.274	$0.274	$0.274	-	-	-	**$1.148**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.396	$0.331	$0.274	$0.274	$0.274	-	-	-	**$1.548**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.396	$0.331	$0.274	$0.274	$0.274	-	-	-	**$1.548**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.396	$0.331	$0.274	$0.274	$0.274	-	-	-	**$1.548**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	9 - A&G Support
Risk Mitigation	Performing this upgrade ensures continued vendor support of a critical application.
Intangibles	The Company improves its financial visibility and ability to react to changing information as a result of running the allocation process on a more frequent basis.
Risk Mitigation	Upgrading the software ensures continued compliance with regulated and financial accounting within the fixed asset sub-ledger.

Asset Accounting Upgrade

Report Pulled: 11/5/2025 **Item ID: 10473**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will upgrade our current accounting asset management software to the latest version as required by the vendor and implement additional new features, ensuring continued support of a critical financial application and providing new functionality.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-PLANNING & GOV

WORK OBJECTIVES

Problem Statement In 2022, standard vendor support ends for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. In addition, the upgrade provides additional functionality to increase the frequency of financial reporting and improve visibility. The current monthly allocation process has limited visibility to Company financial performance, and the upgrade provides functionality that allows more frequent allocation processes. Additionally, implementing the vendor's regulatory module eliminates the time-consuming and labor-intensive process of manual data extracts for regulatory analysis used for Cost of Service modeling.

Objectives This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) eliminating the labor intensive and time-consuming process of pulling data for regulatory analysis used for Cost of Service; (3) automating manual tasks; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support.

Scope The project scope includes: (1) upgrading the vendor software from the current version to the newer version; (2) implementing new functionality that includes features for the regulatory Cost of Service analysis, additional reporting, job scheduling, and centralized error processing; and (3) populating the data lake with data from the asset accounting system for improved reporting.

Alternatives Alternatives considered include: (1) Upgrade to the newest, cloud version of PowerPlan. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing. (2) Evaluate SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would likely be more complex, cost more, and may not provide all the required features. (3) Evaluate other software options. This option will introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
7/19/2021	2/17/2022	6/23/2022	10/12/2022
	In-Service/Go-Live	**Closeout**	
	10/13/2022	2/28/2023	

FUNDING SUMMARY

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Cap+COR	$0.926	$2.892	$0.812	-	-	-	-	-	$4.631
O&M	$0.032	$0.086	$0.115	$0.015	$0.050	$0.050	$0.050	-	$0.398
Total Cost of Ownership	$0.959	$2.978	$0.927	$0.015	$0.050	$0.050	$0.050	-	**$5.028**

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Labor	$0.031	$0.338	$0.213	-	-	-	-	-	**$0.582**
Outside Services	$0.924	$1.485	$0.569	$0.015	-	-	-	-	**$2.993**
Business Expense/Overheads	$0.004	$0.229	$0.145	-	-	-	-	-	**$0.378**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.925	-	-	-	-	-	-	**$0.925**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.959	$2.978	$0.927	$0.015	-	-	-	-	**$4.878**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2021	2022	2023	2024	2025	2026	2027	2028 +	Total
O&M	Reduction	-	-	$(0.010)	$(0.010)	$(0.010)	$(0.010)	$(0.010)	-	**$(0.050)**
	Initial	$0.032	$0.086	$0.115	$0.015	$0.050	$0.050	$0.050	-	**$0.398**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.032	$0.086	$0.105	$0.005	$0.040	$0.040	$0.040	-	**$0.348**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.926	$2.892	$0.812	-	-	-	-	-	**$4.631**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.926	$2.892	$0.812	-	-	-	-	-	**$4.631**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-0.993

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	9 - A&G Support
Risk Mitigation	Performing this upgrade ensures continued vendor support of a critical application.
Intangibles	The Company improves its financial visibility and ability to react to changing information as a result of running the allocation process on a more frequent basis.
Intangibles	The Property Accounting area will eliminate waste and increase productivity by eliminating the labor intensive and time-consuming process of pulling data for regulatory analysis used to determine Cost of Service.
Risk Mitigation	Upgrading the software ensures continued compliance with regulated and financial accounting within the fixed asset sub-ledger.

Asset Accounting Upgrade 2025-2026

Report Pulled: 11/5/2025 **Item ID: 13298**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement Standard vendor support will be ending for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time.

Objectives This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted.

Scope The project scope includes: (1) evaluating current vendor/product solution with market leaders; (2) upgrading the vendor software from the current version to the newer version.

Alternatives Alternatives considered include: (1) Evaluated SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluated other software options. This option would introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements. (3) Upgrade to the newest version of current solution. This is the preferred option as it will reduce hardware and server support costs, provide more frequent software upgrades, avoid database and server upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
2/1/2025	3/31/2025	4/30/2025	9/2/2025
	In-Service/Go-Live	**Closeout**	
	10/15/2025	1/31/2026	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.386	$0.076	-	-	-	-	-	-	$0.463
Total Cost of Ownership	$0.386	$0.076	-	-	-	-	-	-	**$0.463**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.064	$0.013	-	-	-	-	-	-	**$0.077**
Outside Services	$0.318	$0.058	-	-	-	-	-	-	**$0.376**
Business Expense/Overheads	$0.004	$0.005	-	-	-	-	-	-	**$0.009**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.386	$0.076	-	-	-	-	-	-	**$0.463**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.386	$0.076	-	-	-	-	-	-	**$0.463**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.386	$0.076	-	-	-	-	-	-	**$0.463**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	9 - A&G Support
Risk Mitigation	Performing this upgrade ensures continued vendor support of a critical application.
Intangibles	The Company improves its financial visibility and ability to react to changing information as a result of running the allocation process on a more frequent basis.
Risk Mitigation	Upgrading the software ensures continued compliance with regulated and financial accounting within the fixed asset sub-ledger.

Asset Accounting Upgrade 2027-2028

Report Pulled: 11/5/2025 **Item ID: 13967**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will upgrade the Company's current accounting asset management software to the latest version as required by the vendor, ensuring continued support of a critical financial application.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement Standard vendor support will be ending for the current on-premise software. Losing vendor support creates security and stability risk that can result in performance issues. When the application is out of the normal support with the vendor, the Company no longer receives security patches, support for defect resolution or bug fixes, and cannot enhance the application. To ensure compliance with regulated and financial accounting in the fixed asset sub-ledger, it is necessary to perform an upgrade and maintain vendor support. There are also larger costs to upgrade if the upgrades are further apart due to complex testing activities and too many version increases at any one time.

Objectives This project creates value for the Company by ensuring compliance with regulated and financial accounting within the fixed asset sub-ledger. In addition, the project adds value by: (1) performing the allocation process on a more frequent basis providing better financial visibility; (2) automating manual tasks; (3) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support; and (4) lowering costs with more frequent upgrades to reduce testing complexities and reduce the number of versions to be adopted.

Scope The project scope includes: (1) evaluating current vendor/product solution with market leaders; and (2) upgrading the vendor software from the current version to a newer version.

Alternatives Alternatives considered include: (1) Evaluated SAP options for leasing, asset, and tax management capabilities. While this option would eliminate the need for an interface between SAP and PowerPlan, it would be more complex, cost more, and not provide all the required features. (2) Evaluated other software options. This option would introduce new ongoing support costs and integrations and may not provide regulatory reporting and other needed improvements; (3) Address cloud possibilities. This option is expensive and has an unclear timeline roadmap; (4) wait until a future upgrade cycle. This option introduces technical risk; (5) Upgrading to a newer version of current solution. This is the preferred option as it will provide more frequent software upgrades, provide weekly allocation functionality, and provide new features in job scheduling, regulatory reporting for Cost of Service, reporting, and centralized error processing.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
2/1/2027	3/31/2027	4/30/2027	9/2/2027
	In-Service/Go-Live	**Closeout**	
	10/15/2027	1/31/2028	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.600	$0.071	-	-	-	-	-	-	$0.672
Total Cost of Ownership	$0.600	$0.071	-	-	-	-	-	-	**$0.672**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.160	$0.013	-	-	-	-	-	-	**$0.174**
Outside Services	$0.401	$0.053	-	-	-	-	-	-	**$0.454**
Business Expense/Overheads	$0.039	$0.005	-	-	-	-	-	-	**$0.044**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.600	$0.071	-	-	-	-	-	-	**$0.672**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.600	$0.071	-	-	-	-	-	-	**$0.672**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.600	$0.071	-	-	-	-	-	-	**$0.672**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	9 - A&G Support
Risk Mitigation	Performing this upgrade ensures continued vendor support of a critical application.
Intangibles	The Company improves its financial visibility and ability to react to changing information as a result of running the allocation process on a more frequent basis.
Risk Mitigation	Upgrading the software ensures continued compliance with regulated and financial accounting within the fixed asset sub-ledger.

AxWay Secure Transport 2024 Upgrade

Report Pulled: 11/5/2025 **Item ID: 11748**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Axway SecureTransport is the Company's multi-protocol Managed File Transfer ("MFT") gateway for securing, managing, and tracking data file flow for business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement As Axway Secure Transport is the public-facing managed file transfer gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions.

Objectives The value this project brings Consumers Energy and customers includes: (1) Addressing known problems and limitations of the current software and hardware platforms. (2) Ensuring continued secure, scalable, and critical data transmission services running through Axway continue functioning. (3) Creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) Merging/streamlining the company data file transfer services reducing cyber-attack vectors and creates a more easily maintained and monitored security model.

Scope The scope of this project includes (1) Upgrading the application and database to the current released and supported versions. (2) Refreshing the underlying application infrastructure by upgrading to the latest operating system and hardware platforms. (3) Enable and test expanded Electronic Data Interchange (EDI) functionality.

Alternatives Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. Nor would the waste elimination benefits of using the upgraded Axway platform to start consolidating EDI for CE be realized. (2) Replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a cloud or hybrid cloud solution. In addition to significant platform, application, implementation and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) Upgrading the platform. This provides the Company the most cost-effective alternative, balancing costs, known risks, and even growing business capacity and productivity.

DATES (phase end)

Initiation 1/1/2024
Project Plan & Scope Definition 1/15/2024
In-Service/Go-Live 9/14/2024
Final Engineering, Planning & Design 2/1/2024
Closeout 9/20/2024
Execution 2/15/2024

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.074	$0.038	-	-	-	-	-	-	$0.112
Total Cost of Ownership	$0.074	$0.038	-	-	-	-	-	-	**$0.112**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.041	$0.009	-	-	-	-	-	-	**$0.050**
Outside Services	$0.027	$0.016	-	-	-	-	-	-	**$0.043**
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.005	$0.013	-	-	-	-	-	-	**$0.019**
Licenses, Permits & Fees	$0.000	-	-	-	-	-	-	-	**$0.000**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.074	$0.038	-	-	-	-	-	-	**$0.112**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.074	$0.038	-	-	-	-	-	-	**$0.112**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.074	$0.038	-	-	-	-	-	-	**$0.112**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	An out-of-support version of Secure Transport that Axway no longer provides hotfixes for will put the company network at risk as this is a external (internet) facing application.

OTHER VALUE

Type	Description
Technology Capability	Customer Management
Intangibles	Newer versions of Secure Transport will assist in improving performance of the platform through bug fixes and performance tuning.
Risk Mitigation	The upgrade work will allow CE to harden the application and eliminate a significant single point of failure.

AxWay Secure Transport 2027 Upgrade

Report Pulled: 11/5/2025 **Item ID:** 11753

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Axway SecureTransport is the official Consumers Energy multi-protocol Managed File Transfer (MFT) gateway for securing, managing, and tracking data file flow for business partners and external vendors. Files impacting billing, HR, Supply Chain, Finance, Alternate Energy Programs, Front Office, Back Office, Device Management, Outage Management and Business Reporting functions utilize these services. This project will update the platform to the current software version, enabling cost saving operational enhancements while retaining data security and platform supportability.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement As Axway Secure Transport is the public-facing MTF gateway, maintaining platform version integrity is critical to ensuring it remains secure and supportable in the event of a cyber attack, outage or other critical incident. A prolonged outage or incident, for any reason, compromises the ability of the Company to perform mission-critical business transactions in finance, operations and direct customer support. Upgrading this application also gives the Company the opportunity to properly scale SecureTransport and take advantage of the growing demand for additional, cost-savings features of the tool, such as managing internal Electronic Data Interchange transactions.

Objectives The value this project brings the Company, its customers and business partners by: (1) addressing known problems and limitations of the current software platforms. (2) ensuring continued secure, scalable, and critical data transmission services running through Axway. (3) creating the capacity to methodically merge/streamline internal and external data file transfer services to eliminate waste. (4) merging/streamlining the company data file transfer services reduces cyber attack vectors and creates a better, more easily maintained and monitored security model.

Scope The scope of this project includes (1) upgrading the application and database to the current released and supported versions. and (2) enabling and testing in scope file transfer processes.

Alternatives Alternatives considered include: (1) deferring the upgrade. This alternative was not selected because the Axway SecureTransport platform handles critical Company financial, HR, and operational transactions--the risk associated with problems stemming from an outdated and unsupported version is too high. (2) replacing the platform. The estimated project costs and timetable for replacing the business functions currently performed by the existing Axway SecureTransport platform would be extensive, and operationally, it is not well suited for a SaaS or hybrid cloud solution. In addition to significant platform, application, implementation, and functional testing costs, replacing it would require extensive coordination and testing with all of the internal and external account holders, taking upwards of one calendar year. (3) upgrading the platform. This provides the Company the best, most cost-effective alternative, balancing costs, known risks, and even growing business capacity and productivity.

DATES (phase end)

Initiation 1/1/2027	**Project Plan & Scope Definition** 1/15/2027	**Final Engineering, Planning & Design** 2/1/2027	**Execution** 3/15/2027
	In-Service/Go-Live 7/15/2027	**Closeout** 8/1/2027	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.372	-	-	-	-	-	-	-	$0.372
Total Cost of Ownership	$0.372	-	-	-	-	-	-	-	**$0.372**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.348	-	-	-	-	-	-	-	**$0.348**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.024	-	-	-	-	-	-	-	**$0.024**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.372	-	-	-	-	-	-	-	**$0.372**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.372	-	-	-	-	-	-	-	**$0.372**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.372	-	-	-	-	-	-	-	**$0.372**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	An out-of-support version of Secure Transport that Axway no longer provides hotfixes for will put the company network at risk as this is a external (internet) facing application.

OTHER VALUE

Type	Description
Technology Capability	Customer Management
Intangibles	Newer versions of Secure Transport will assist in improving performance of the platform through bug fixes and performance tuning.

BizTalk Services Migration and Retirement

Report Pulled: 11/5/2025 **Item ID: 11762**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Microsoft BizTalk application transfers data from one location to another with internal and external software systems and assists with securely communicating sensitive financial data. The project will migrate the BizTalk application services to other existing applications resulting in the retirement of the Biztalk application

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement Microsoft announcing end of life for this application a replacement is needed to avoid business impact. The current version of Biztalk running at Consumers Energy is already out of mainstream support. if major issues occur within the application, it could disrupt critical business processes. This includes financial concerns such as payroll, account receivable, and other essential operations. Ensuring continuity is vital.

Objectives This project creates and maintains value for the Company and its customers by migrating the Biztalk services to supported applications already present in the Consumers Energy environment that do have not end of life concerns and can provide the same functionality Biztalk was providing to meet business requirements.

Scope This project creates and maintains value for the Company and its customers by: (1) Migrating all current processes from the current application to replacement products. The secure file transport processes will be migrating to the existing Axway Secure Transport platform. The Electronic Data Interchange processes will be migrated to the existing SAP platform, (2) Ensuring current and future compliance with Information Security critical and sensitive data initiatives, such as patching, data encryption, and authentication requirements. (3) Guarantees 7x24x365 vendor support is available to the Company during significant outages by remaining on a version supported by the vendor.

Alternatives Alternatives considered included: (1) Using Azure native services to recreate all of the processes and services Biztalk provided. This was cost prohibitive due to time and effort this would take. (2) Purchasing a replacement product. Not seen as optimal as existing applications are already implemented within Consumers Energy that provide the same capability. (3) Leverage existing applications within the Consumers Energy application portfolio. This option was selected as lowest cost option and also to meet application rationalization goals to eliminate applications that are providing duplicate functionality.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/6/2025	2/15/2025	3/30/2025	4/1/2025
	In-Service/Go-Live	**Closeout**	
	10/18/2025	11/21/2025	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.280	-	-	-	-	-	-	-	$0.280
Total Cost of Ownership	$0.280	-	-	-	-	-	-	-	**$0.280**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.111	-	-	-	-	-	-	-	**$0.111**
Outside Services	$0.165	-	-	-	-	-	-	-	**$0.165**
Business Expense/Overheads	$0.004	-	-	-	-	-	-	-	**$0.004**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.280	-	-	-	-	-	-	-	**$0.280**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.280	-	-	-	-	-	-	-	**$0.280**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.280	-	-	-	-	-	-	-	**$0.280**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	An out-of-support version of Biztalk that Microsoft no longer provides hotfixes for will put the company network at risk as this is a external (internet) facing application.
Technology Obsolescence	Medium	High	Will have impact from aging infrastructure and application if the work item is not complete

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support

Business Capability Mapping SaaS Tool

Report Pulled: 11/5/2025 **Item ID: 14014**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Business Capability Mapping (BCM) SaaS Tool is a cloud based software solution which will visualize the Company's capabilities related to our metrics, data maturity, supporting technologies, financial allocations, and other view points. The tool will automate analysis and report generation to quickly provide information while supporting other efforts directly supporting technology investment planning and management.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-STRATEGY & GOVERNANCE

WORK OBJECTIVES

Problem Statement The current lack of a centralized tool for tracking enterprise-wide data, which is manually managed via Excel, poses significant challenges. This manual process limits data sharing and the distribution of business capability roadmaps, complicating investment planning and alignment. The absence of a centralized tool also hinders effective communication regarding prioritization and application stack updates, preventing a comprehensive view of impacted areas. Consequently, the enterprise architecture practice struggles to accurately plan and forecast investment opportunities, leading to misallocation of funds, labor, and potential delays in enabling strategic opportunities. The solution will include implementing a centralized tool to streamline data sharing, enhance communication, and support accurate planning and forecasting.

Objectives The company will see value through: (1) Implementing processes and supporting technical components to enable automated scoring of capabilities, including scores, measures, metrics, KPIs, and OKRs for consistent and accurate analysis; (2) Developing a consolidated view of critical capabilities, applications, and infrastructure, ranked based on their efficiency and effectiveness in meeting company objectives; (3) Integrating key technology features supporting Application Rationalization, Enterprise Resource Planning (ERP) system and major platform upgrades, Business Capability Modeling, Application Stack Ownership, Enterprise Architecture Artifact Tool Repository, centralized repository and role based access; (4) Generate a consistent framework to support the prioritization of investments based on their impact on key capabilities across the enterprise, (5) Implement a shared platform to integrate architecture activities versus siloed practices; and (6) Consolidate empirical data used for investments and technical health to ensure accuracy and consistency in evaluations.

Scope The project scope includes: (1) Implement a role-based access SaaS product and integrate with ServiceNow and other internal systems; (2) Configure the SaaS product with identified tools for data gathering on capabilities and their performance; (3) Develop processes and automation to gather data on capabilities, including applications, technical infrastructure, and metrics; (4) Establish a framework for prioritizing investments; (5) Create role-based dashboards and reports to visualize the output of data analysis; (6) Develop automated communications for key business decisions, investment plans, data collection, and reports; (7) Enable self-reporting on data within the tool; (8) Connect supporting documentation to the capabilities; and (9) Provide training on how to use the tool including end-user training.

Alternatives Alternatives considered for this include: (1) Continue with current practices for initiative planning and Enterprise Architecture practices. This was not selected as it does not address gaps for enterprise-wide practices and consolidated roadmap capabilities addressing key company objectives. (2) Develop in-house application using multiple platforms including Excel, PowerBI, and custom development. This was not selected due to complexity of the solution and cost to deliver. Additionally, the dependency on the automated processes would create additional hurdles for efficient delivery. (3) Acquire external tool to support BCM, Enterprise Architecture, and investment planning. This solution was selected as it provides quick and efficient access to automated tools within acceptable cost ranges.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
4/15/2025	5/30/2026	6/23/2026	7/28/2026
	In-Service/Go-Live	**Closeout**	
	10/17/2026	11/21/2026	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	$0.575	-	-	-	-	-	-	$0.575
O&M	-	$0.421	$0.275	$0.275	-	-	-	-	$0.971
Total Cost of Ownership	-	$0.996	$0.275	$0.275	-	-	-	-	**$1.546**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	-	$0.500	-	-	-	-	-	-	**$0.500**
Outside Services	-	$0.035	-	-	-	-	-	-	**$0.035**
Business Expense/Overheads	-	$0.461	$0.275	$0.275	-	-	-	-	**$1.011**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$0.996	$0.275	$0.275	-	-	-	-	**$1.546**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	$(0.375)	$(0.250)	$(0.125)	-	-	-	-	-	**$(0.750)**
	Initial	-	$0.421	$0.275	$0.275	-	-	-	-	**$0.971**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$(0.375)	$0.171	$0.150	$0.275	-	-	-	-	**$0.221**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.575	-	-	-	-	-	-	**$0.575**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.575	-	-	-	-	-	-	**$0.575**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-0.515

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	Application Lifecycle Management - estimated $1.8m in avoided costs if we don't renew 12 apps per year and avoid pursuing 12 apps through more closely aligning application categories to business capabilities and functions.
Intangibles	Improving the planning process and cycles will enable architecture resources to allocate time away from lengthy project spin up activities. Conservative estimate suggests 2 weeks can be re-allocated per resource per project to other activities. Assuming 15 projects per year, this could lead to 30 weeks available for alternate activities.
Risk Mitigation	Reduction in technical debt stemming from applications not being upgraded to stay with current versioning standards. Applications on older versions have more risk of issues, failure points, and security breaches in addition to potential cost increases for maintenance on aging software.
Avoided Costs	Utilizing the software and improved planning process can lead to avoided costs for software maintenance associated with missed upgrades. Reasonable estimate places this at $90k/yr per application including extended maintenance, price increases, and technical debt.

Compression Air Permit And Compliance Digitalization

Report Pulled: 11/5/2025 **Item ID:** 12841

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project modernizes and expands the use of software and digitized forms in support of station air permits and code compliance at Gas Compression facilities.

Portfolio Gas Delivery Systems > Gas Operations > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

The current process around air permits and compliance for Gas Compression is cumbersome, largely paper based, and is made up of multiple disconnected systems. This leads to poor visibility, process inefficiency and waste, re-work, regulatory risk, and human error.

Objectives

his project provides value to the Company through: (1) increased productivity by direct data entry in the field; (2) improved quality through increased accuracy of updates completed at the time and place of the work; (3) elimination of the need to enter data into multiple disconnected systems, and (4) improved safety through access to real-time information used at work sites rather than printed procedures and forms.

Scope

The scope of the project includes: (1) Merging the existing air permit and compliance tools into a single solution, (2) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (3) configuring changes in SAP and the mobile work management software to replace the paper-dependent process with the ability to access and update maintenance, operations, and safety information for Gas Compression.

Alternatives

Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution was not selected since it is an unproven solution at the Company and would require additional project and support costs. (2) Continue with the manual paper-based processes and forms. Continuing with the manual paper-based processes and forms was not selected because it would not eliminate the identified process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A customized mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the product was not intended to support. (4) Adopt a cloud based SAAS solution. This option was not selected as it was a high-cost option. (5) Utilize the existing Service Suite solution currently deployed for Gas and Electric Distribution. The Service Suite solution was selected because it is both an industry standard and a proven solution at the Company and provides the required mobility and digital benefits at a lower cost than other options.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/6/2026	4/30/2026	6/30/2026	2/24/2027
	In-Service/Go-Live	**Closeout**	
	2/24/2027	3/31/2027	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	$0.462	$0.282	-	-	-	-	-	$0.744
O&M	-	$0.046	$0.064	$0.010	$0.010	$0.010	$0.010	-	$0.150
Total Cost of Ownership	-	$0.508	$0.346	$0.010	$0.010	$0.010	$0.010	-	**$0.894**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	-	$0.343	$0.242	-	-	-	-	-	**$0.585**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.164	$0.102	-	-	-	-	-	**$0.266**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.002	$0.002	-	-	-	-	-	**$0.003**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$0.508	$0.346	-	-	-	-	-	**$0.854**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.046	$0.064	$0.010	$0.010	$0.010	$0.010	-	**$0.150**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.046	$0.064	$0.010	$0.010	$0.010	$0.010	-	**$0.150**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.462	$0.282	-	-	-	-	-	**$0.744**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.462	$0.282	-	-	-	-	-	**$0.744**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	Employee Engagement improves as the more tech savvy candidate pool for these positions are looking for mobile tools to help them do their jobs.
Intangibles	Productivity increases by using electronic work packages and reducing the need to return to desktop kiosks for updates. With the electronic work packages, (1) employees have remote access to manuals such as the Gas Operations Manual for Gas Compression and local maintenance procedures to reference standard work, (2) it eliminates multiple physical hand-offs of work documents related to the work management process and (3) it frees up planners' time to focus on long-range and outage planning to adhere to goals such as the Periodic Factor metric and Gas Flow Deliverability goal for Gas Compression. Productivity can also be tracked and measured for further improvements. This level of tracking is not possible with the current process and information.
Intangibles	Quality is improved and rework decreases when updates are performed right at the time and place of the work instead of afterwards. For Gas Compression, it (1) eliminates the manual process to update work scope and ensures access to the most up-to-date work order package, (2) allows crews to input SAP Notifications while at the jobsite for improved accuracy of data collected (3) provides the ability to collect asset condition data accurately at the jobsite to feed the data lake for asset health, and allows for the development of electronic code forms with built-in validation to improve quality of compliance data being collected.
Intangibles	Safety is increased as the most current information is at the work site in the mobile device versus a printed procedure.
Avoided Costs	The labor savings on time charging on a toughpad versus re-entering time later in office is 10 mins/day/employee savings from the 15 mins/employee per day it currently takes to enter time. Employees currently take 15mins per day to enter time. 59 Gas Compression employees would save 10mins/day = .17Hour x 230 work days a year x 59 employees = 2,306.9 hours avoided per year * $61 Standard Labor Rate = $140,720.90 Avoided O&M Costs
Risk Mitigation	The project will mitigate the risk of work errors from using outdated procedures especially for performing Gas Compression code work inspections using electronic forms. Electronic forms will improve validation of required inspection data, thereby reducing the risk of MPSC audit findings and possible regulatory fines. It also reduces safety risk by having the ability to have jobsite access to Emergency Plans to meet corporate safety requirements.
Avoided Costs	With this project there are avoided costs in Gas Compression from eliminating paper work package assembly. The time for 6 exempt planners is 2 days per month; 8 planners x 2 days x 8 hours = 128 hours per month. The avoided cost for exempt planners is calculated at 128 hours/month x $48/hour x 12 months = $73,728 per year. Their capital/O&M split is 25/75 which breaks down to avoiding $18,432 in capital and $55,296 in O&M. Six non-exempt admins spend 8 hours/month; 6 admins x 8 hours = 48 hours per month. The avoided cost for non-exempt admins is calculated at 48 hours/month x $25/hour x 12 months = $14,400 per year. Their capital/O&M split is 15/85 which breaks down to avoiding $2,160 in capital and $12,240 in O&M.
Technology Capability	Work Management

Corrosion Control Modernization

Report Pulled: 11/5/2025 **Item ID: 12474**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will modernize the Corrosion Control measurement, documentation, and analysis process for Gas Transmission and Gas Distribution Corrosion Control. It will also automate the Corrosion Control process and eliminate manual data entry and paper from the process.

Portfolio Gas Delivery Systems > Gas Operations > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement The current gas pipeline corrosion control field data collection and monitoring process is antiquated and manually intensive. The existing process requires that technicians take readings from the corrosion control devices using a handheld DVM (Digital Voltmeter) and then record those readings on paper, followed by manual data entry into Inspection Manager. The results can then be further stored, processed and analyzed. This process is labor intensive and error prone, which could result in compliance issues, causes rework, and drives up labor costs.

Objectives This project creates value for the Company and its customers by: (1) modernizing the entire gas pipeline corrosion control field data collection and monitoring process; (2) eliminating the manual paper process of taking and recording measurements on corrosion control devices attached to gas pipelines; (3) automating the entire process from measurement through documentation and analysis; (4) providing an integrated solution that takes the measurements and records the results in one step; (5) implementing geographical location (latitude, longitude) mapping for each test point read to provide more efficient routing.

Scope The project scope includes: (1) purchasing hardware, connectivity, and software with related licenses needed to establish a modern electronic corrosion measurement and documentation system; (2) a data transfer to the new system from the existing system of record, Inspection Manager; and (3) training users in the use of the new system and deploy to all corrosion control technicians.

Alternatives Alternatives considered include: (1) continue with the current manual process. This option was not selected as it does not solve the issues associated with the paper-based manual process; (2) develop a Consumers Energy custom solution that would interface with a standard DVM and automate the current paper process using custom in house solution. This option was not selected as it would be far too costly and time consuming to develop in-house and a standard solution is available in the marketplace; and (3) purchase and implement a hybrid cloud-based COTS (Common Off The Shelf) hardware and software solution to provide an electronic means of data measurement and collection and then transfer that data to the existing GIS (Geographic Information System.) This option was selected as it meets the goal of automating the data collection and documentation process and eliminates the existing paper process.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/2/2022	9/30/2022	9/30/2022	12/2/2022
	In-Service/Go-Live	**Closeout**	
	5/1/2023	5/22/2023	

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	$0.818	$0.489	$0.003	-	-	-	-	-	$1.310
O&M	$0.017	$0.018	-	$0.044	$0.044	$0.044	$0.044	-	$0.212
Total Cost of Ownership	$0.835	$0.507	$0.003	$0.044	$0.044	$0.044	$0.044	-	**$1.522**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	$0.025	$0.101	-	-	-	-	-	-	**$0.126**
Outside Services	$0.351	$0.251	$(0.148)	-	-	-	-	-	**$0.454**
Business Expense/Overheads	$0.014	$0.092	$0.002	-	-	-	-	-	**$0.108**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.444	$0.057	$(0.047)	-	-	-	-	-	**$0.454**
Licenses, Permits & Fees	-	$0.006	$0.197	-	-	-	-	-	**$0.203**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.835	$0.507	$0.003	-	-	-	-	-	**$1.344**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	-	$(0.200)	$(0.250)	$(0.300)	$(0.350)	$(0.400)	-	**$(1.500)**
	Initial	$0.017	$0.018	-	$0.044	$0.044	$0.044	$0.044	-	**$0.212**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.017	$0.018	$(0.200)	$(0.206)	$(0.256)	$(0.306)	$(0.356)	-	**$(1.288)**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.818	$0.489	$0.003	-	-	-	-	-	**$1.310**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.818	$0.489	$0.003	-	-	-	-	-	**$1.310**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-0.312

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	Ability to electronically access proof of repair documentation, as well as, track repair history.
Technology Capability	Gas T&D, Generation
Intangibles	Improved compliance through reduction in errors created by the manual process.
Intangibles	Improved employee engagement by providing a modern paperless experience.
Avoided Costs	Reducing costs by eliminating revisits and rework caused by errors in the manual data entry and recording process as well as removing manual process steps.
Intangibles	Reducing errors introduced by manual data entry when technicians collect voltage readings in the field
Intangibles	The new devices have the ability to provide a geographical location (latitude, longitude) for each test point read. Employees are currently relying on text point description (description inputted by field employees)to describe our asset location. With the geographical stamp, employees will increase the accuracy of our GIS Records and also allow for more effective routing for all work types.
Avoided Costs	The new system will use Power Apps to create reports, eliminating the need for manually created reports.

Customer Order Service Tracker

Report Pulled: 11/5/2025 **Item ID: 9062**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Short cycle orders including gas emergencies and meter services account for many of the incoming customer inquiries to the contact centers. This project will implement a service order status tracker to provide transparency to customers and oversight to internal teams supporting utility service orders across Company service areas. The tracker will provide timely and accurate service order updates, creating a more robust customer experience for tracking service order status and location-based updates.

Portfolio Customer Services > Customer Interaction Channels > Digital > Digital > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement

Customers have limited visibility to when Company assigned crews will be on premise and what work will be completed. This is due to features missing within the Company's digital channels for accurate updates from dispatch, scheduling, and field crews. The lack of awareness drives calls into the call center, resulting in approximately 346,000 annual contact center calls related to short cycle requests. Additionally, this lack of visibility increases truck rolls due to dispatchers being unaware of crew locations and routes which can cause crews to be assigned when a local crew could have completed the work. This leads to overall customer dissatisfaction because of a lack of visibility to scheduled and ongoing short cycle work. Enabling a digital channel for communication regarding utility service orders will improve customer experience and reduce the waste of repetitive crew dispatching.

Objectives

This project will add value to the Company and its customers by: (1) providing transparency for customers on the timing and location of the associated crew completing utility short cycle service orders, (2) reducing calls to contact centers by customers seeking clarification regarding arrival times through visibility to scheduling time-frames and providing notifications to customers when crews are en-route, (3) improving resource assignment by current location, which decreases wasted truck rolls through enabling location services for active crews, (4) increasing visibility into the service person(s) completing the order by enabling crews to connect with customers through digital channels, and (5) improving customer experience for short cycle service orders by implementing a channel of choice for Company interactions.

Scope

The scope for the project includes: (1) modifying the customer self-service portal to include features that support utility service order tracking, including the location of crews en-route, (2) providing desktop and mobile capabilities, (3) enhancing the existing ServiceBench platform to allow real-time status updates that can be communicated to customers, (4) utilizing location-based services to update internal portal in real time, and (5) enabling text and email notifications to alert customers of service crews arrival times.

Alternatives

Alternatives considered for this project include: (1) Deploy a mobile application to address utility service order tracking, (2) utilize a cloud hosted solution from a third-party, (3) modify the existing customer portal to enable customers and the Company to track utility service orders and crews. Options one and two were not selected as the cost associated with deployment would greatly outweigh the benefits with call reduction and improved customer experience. The third option was selected because it utilizes existing technologies, which reduces the implementation complexity and project cost and has faster value realization for the customer and the Company.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/10/2025	4/11/2025	6/13/2025	6/26/2026
	In-Service/Go-Live	**Closeout**	
	8/28/2026	11/20/2026	

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	$0.913	$2.815	-	-	-	-	-	$3.728
O&M	-	$0.262	$0.655	$0.050	$0.050	$0.050	$0.050	$0.050	$1.167
Total Cost of Ownership	-	$1.175	$3.470	$0.050	$0.050	$0.050	$0.050	$0.050	**$4.895**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$1.175	$1.050	-	-	-	-	-	**$2.225**
Outside Services	-	-	$1.400	$0.050	$0.050	$0.050	$0.050	$0.050	**$1.650**
Business Expense/Overheads	-	-	$1.020	-	-	-	-	-	**$1.020**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$1.175	$3.470	$0.050	$0.050	$0.050	$0.050	$0.050	**$4.895**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.262	$0.655	$0.050	$0.050	$0.050	$0.050	$0.050	**$1.167**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.262	$0.655	$0.050	$0.050	$0.050	$0.050	$0.050	**$1.167**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.913	$2.815	-	-	-	-	-	**$3.728**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.913	$2.815	-	-	-	-	-	**$3.728**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Customer Mgmt
Intangibles	Improve safety for both the Company's employees and customers by providing accurate estimated times of arrival, reducing the likelihood of threats of violence.
Intangibles	Improved customer experience related to real time updates from service crews completing activities in their area. The crews will have the ability to provide accurate estimated times of arrival and detail what work is being completed via digital channels. Building trust between the Company and its customers regarding the work being completed correctly, the first time a crew arrives.
Avoided Costs	Reduce Truck Rolls for appointments that weren't rescheduled in a timely manner and limiting truck rolls in locations where a crew can complete multiple jobs in a geographic location. Each avoided truck roll saves the company approximately $450.
Avoided Costs	Reduction in calls to validate arrival times of field crews based on more clarity and transparency regarding the service being completed. Currently 346,000 calls take place yearly regarding status of service orders. The project anticipates a 60% reduction over three years resulting in potential avoided costs of $537,996 per year. (Avg cost per call $7.63 [$9.76/call internal & $5.50/call H&H] * 69,000 calls reduced each year.)
Intangibles	Reduction in Customer Complaints regarding service orders, delays in service, and maintenance visits. Last year, the company received 6 formal complaints and 11 informal complaints regarding non-emergency maintenance work.

Data & Analytics Platform Rationalization

Report Pulled: 11/5/2025 **Item ID:** 13961

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will optimize the Data & Analytics system landscape by creating connections, migrating data into the Data Lake in the cloud, and building visualizations from the data in the Data Lake.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The IT Data & Analytics legacy systems (SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS) are outdated, inefficient, and becoming duplicative in nature with the introduction of DL 2.0. If these legacy systems are not retired, they will continue to cost the Company money as major investments are needed to maintain and support them.

Objectives This platform rationalization project creates value for the Company and its customers by reducing the total cost of ownership associated with maintaining and supporting legacy systems including licensing fees, maintenance costs, infrastructure, and support resources.

Scope The project scope includes: (1) the assessment of the existing Data & Analytics platforms including SSDL, SAP BW, SAP BOBJ, Native HANA, the BW Portal, and BODS; (2) inventory of data and reports still being used by stakeholders; (3) determination of migration strategy; (4) data migration to the Azure Data Lake; (5) report migration to Power BI; (6) organization change management; and (7) the retirement/decommissioning of the legacy platforms and applications.

Alternatives Alternatives considered: (1) upgrade legacy systems in place (on-premise). This alternative was not selected because this is costly and misaligned with the Company's cloud strategy. (2) Lift and shift these on-premise systems to the cloud through the Hybrid Cloud Transformation Program. This alternative was not selected because it would duplicate the work being done as part of the DL 2.0 project and would not provide the same efficiencies that DL 2.0 introduces. (3) Migrate all data sources to DL 2.0 and retire legacy systems. This alternative was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
3/3/2025	4/28/2025	5/30/2025	7/28/2027
	In-Service/Go-Live	**Closeout**	
	8/14/2027	9/18/2027	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$3.107	$4.013	$3.303	-	-	-	-	-	$10.423
O&M	$0.033	$0.715	$0.588	-	-	-	-	-	$1.337
Total Cost of Ownership	$3.140	$4.728	$3.891	-	-	-	-	-	**$11.760**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$1.326	$1.207	$0.993	-	-	-	-	-	**$3.526**
Outside Services	$1.112	$2.243	$1.846	-	-	-	-	-	**$5.201**
Business Expense/Overheads	$0.702	$0.836	$0.688	-	-	-	-	-	**$2.226**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.442	$0.364	-	-	-	-	-	**$0.806**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$3.140	$4.728	$3.891	-	-	-	-	-	**$11.760**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	$(0.610)	$(3.028)	$(2.427)	$(2.436)	$(2.445)	$(2.454)	-	-	**$(13.399)**
	Initial	$0.033	$0.715	$0.588	-	-	-	-	-	**$1.337**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$(0.577)	$(2.313)	$(1.838)	$(2.436)	$(2.445)	$(2.454)	-	-	**$(12.062)**
Cap+COR	Reduction	$(0.300)	-	$(2.000)	$(2.000)	-	-	-	-	**$(4.300)**
	Initial	$3.107	$4.013	$3.303	-	-	-	-	-	**$10.423**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.807	$4.013	$1.303	$(2.000)	-	-	-	-	**$6.123**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	0.238

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Attraction and Retention of High Performing I	Medium	Medium	By retiring legacy systems and shifting to industry leading technologies (Microsoft Azure), the Company can attract and retain talent.
Inaccuracy of Financial and Operational Repo	Medium	High	Due to limitations with legacy systems, system outages will continue to happen regularly which impact reporting metrics for many areas across the organization including potential impacts to month end close and Operations operating review metrics. As of May 2024, there have been six SAP BW/SAP BOBJ outages that impacted critical reporting

OTHER VALUE

Type	Description
Technology Capability	Investment Planning and Project Mgmt: Investment Analysis

Digital-Cloud Data and Analytics Platform

Report Pulled: 11/5/2025 **Item ID: 13443**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will provide Artificial Intelligence (AI) and analytics in the cloud across the business to uncover new paths to value, faster, allowing the organization to make better decisions and enable delivery outcomes for the NGDP, Electric Grid Integration, customer programs, and other business needs. The project will additionally establish data governance roles and responsibilities, processes, and implement tools to support best practices across the enterprise.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement Consumers Energy faces several challenges in the ongoing data modernization journey, which include: (1) legacy data platform operations; (2) long lead times for data exploration and identification of data assets; (3) lack of data ownership and quality, (4) limited data governance best practices across data ownership, access control & security; and (5) heavy dependence on IT for Business Intelligence reporting and analytics.

Objectives The project will add value by providing data to support business needs by: (1) optimizing data platform operations costs with workflow-based platform infrastructure deployment using pre-built modules and templates; (2) reducing data operations build complexity and data engineering costs through automation; (3) improving data quality and governance that leads to reduced costs of data provisioning, data duplication, and improved data accuracy; (4) streamlining data access requests, management, and governance to reduce risks and support efficiency; and (5) increasing the speed to deliver new data and data capabilities, improving productivity, and improving access to data. This project is an enabler for business areas to use these capabilities to build analytic models for asset and labor optimization that is anticipated to more than offset the project costs.

Scope The project scope includes: (1) developing and modernizing the analytics platform in the cloud to allow Consumers Energy to implement new use cases leveraging simplified infrastructure configurations and automated deployment processes; (2) build and deploy data management capabilities, controls, catalog, assets, and data flow; (3) developing data ordering workflows and data access management controls; (4) prioritization and new datasets; (5) simplifying infrastructure configuration; (6) automating deployment processes; (7) enabling data governance tools and processes.

Alternatives Alternatives considered include: (1) Address current pain points in existing on-premise and cloud analytics platforms. This alternative was not selected because the existing platforms requires new investment in licensing and infrastructure, delivery for new capabilities cannot keep pace with demand, still requires investment to address legacy system technical obsolescence, and business areas would not realize asset and labor optimizations. (2) Continue to utilize existing on-premise and cloud analytics platforms. This alternative was not selected because it would not address the current pain points in the existing on-premise and cloud analytics platforms, limiting the Company's ability to have required data and analytics capabilities to improve processes and realize asset and labor optimizations. (3) Implement a new data and analytics platform in the cloud. This alternative was selected because it provides improved analytics capabilities, faster access to data that is critical to improve business process, and reduces technical obsolescence.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
5/1/2023	5/1/2023	6/5/2023	7/31/2023
	In-Service/Go-Live	**Closeout**	
	7/31/2023	12/6/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$3.342	$9.027	$(0.178)	-	-	-	-	-	$12.191
O&M	$0.197	$1.062	$0.047	$1.588	$1.588	-	-	-	$4.483
Total Cost of Ownership	$3.539	$10.089	$(0.131)	$1.588	$1.588	-	-	-	**$16.673**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.726	$1.298	$0.002	-	-	-	-	-	**$2.025**
Outside Services	$1.912	$7.906	$(0.247)	-	-	-	-	-	**$9.571**
Business Expense/Overheads	$0.253	$0.408	$0.000	$0.084	$0.084	-	-	-	**$0.830**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.118	$0.114	-	-	-	-	-	**$0.232**
Licenses, Permits & Fees	$0.648	$0.358	-	-	-	-	-	-	**$1.007**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$3.539	$10.089	$(0.131)	$0.084	$0.084	-	-	-	**$13.666**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.197	$1.062	$0.047	$1.588	$1.588	-	-	-	**$4.483**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.197	$1.062	$0.047	$1.588	$1.588	-	-	-	**$4.483**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$3.342	$9.027	$(0.178)	-	-	-	-	-	**$12.191**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$3.342	$9.027	$(0.178)	-	-	-	-	-	**$12.191**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	Automated deployments for infrastructure decreases build time and increases time spent on higher value work for the IT platform team. This will also decrease future project implementation hours and associated labor costs. Avoided benefits will be finalized following phase 1.
Intangibles	Enhance Workplace Productivity and Collaboration: Improve Analytics Efficacy and time to insights with data catalog and data democratization.
Risk Mitigation	Reduce Data compliance Risk and Exposure: Reduced exposure to data loss, compliance risk, or potential for data platform interruption with integrated data catalog, controls and governance.

Digital-Hybrid Cloud and Data Center Migration

Report Pulled: 11/5/2025 **Item ID: 10502**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will optimize data center assets and asset replacement project purchases by migrating or retiring applications out of existing Company and co-location data centers into cloud services, reducing operational costs for running IT services and leveraging increased cloud capabilities to improve the efficiency, quality, and speed-to-market of customer-facing and internal IT services.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement The technology currently deployed in the Company's data centers meets many customers' needs today. However, the pace of digital transformation is increasing rapidly, and requirements for applications are evolving faster than the technology in the Company's data centers can respond in a cost-effective manner. These data center constraints lead to longer implementation times, missing capabilities, or reduced functionality in the applications that the Company can deploy.

Objectives This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective combination of data centers and public cloud services. Specifically, by migrating applications to cloud services, the project will: (1) reduce capacity, hardware maintenance, and security device costs at the co-location data center; (2) reduce hardware maintenance and security device costs at the production data center; (3) enable the ability to scale infrastructure quickly up or down without costly up-front hardware purchases; (4) reduce application risk through cost-effective, scalable infrastructure redundancy and availability; (5) reduce ongoing server and storage asset replacement costs; (6) reduce ongoing networking equipment replacement costs; (7) reduce operational support costs; and (8) enable the use of a vast array of cloud services to support Company applications.

Scope The project scope includes: (1) promoting the robust main co-location data center to become the primary data center for on-premise IT services; (2) demoting the Company's production data center to the disaster recovery data center for on-premise IT services; (3) analyzing applications for migration to cloud or retirement; (4) migrating applications from on-premise to cloud; (5) transforming applications to use cost-effective cloud services; (6) altering network architecture and deploying base infrastructure to allow each location (on-premise or in cloud) to function independently; (7) deploying cloud and on-premise cost management tooling and processes; (8) simplifying and optimizing backup and disaster recovery resources and processes using cloud services; (9) implementing additional automation for application deployment and management; (10) changing the operations model for support of cloud-based applications; (11) educating and increasing the skills of IT and other employees in leveraging public cloud services; and (12) transforming IT to become the broker of cloud services for the Company.

Alternatives Alternatives considered include: (1) migrating to public cloud services faster. This alternative was not chosen because the Company's ability to absorb new technologies coupled with the investments the Company has already made in data center equipment would prevent a faster move from being efficient and effective, introducing additional financial risk; (2) migrating to public cloud services slower or not at all. This alternative was not selected because delaying public cloud services and capabilities coupled with requiring an extension of the life of existing data center equipment creates increased financial and operational risk; and (3) contracting with an outside vendor to provide cloud services to run applications for the Company. This alternative was not selected because industry information shows the option as not yet cost effective or not providing a maturity level that the Company would be able to easily consume with limited in-house experience and expertise in public cloud. The alternative to migrate to a hybrid cloud and data center model was selected because of the expected cost benefits and technology capabilities it provides to the Company over a timeline that allows the Company to realize the value of existing investments.

DATES (phase end)

Initiation 1/1/2023
Project Plan & Scope Definition 4/15/2023
Final Engineering, Planning & Design 8/15/2023
Execution 10/1/2026
In-Service/Go-Live 12/1/2026
Closeout 12/15/2026

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	-	$2.779	$2.425	$3.666	$0.613	-	-	-	$9.482
O&M	-	$0.529	$0.783	$0.781	$10.348	$11.454	$11.354	$25.707	$60.956
Total Cost of Ownership	-	$3.308	$3.207	$4.447	$10.961	$11.454	$11.354	$25.707	**$70.439**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	-	$0.372	$1.004	$0.955	$0.550	-	-	-	**$2.880**
Outside Services	-	$1.062	$1.760	$3.149	-	-	-	-	**$5.971**
Business Expense/Overheads	-	$0.157	$0.222	$0.194	$0.223	-	-	-	**$0.796**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.379	$(0.074)	$0.127	-	-	-	-	**$0.431**
Licenses, Permits & Fees	-	$1.339	$0.296	$0.022	$1.100	$1.100	-	-	**$3.857**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$3.308	$3.207	$4.447	$1.873	$1.100	-	-	**$13.936**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	$(0.623)	$(1.382)	$(4.223)	$(6.008)	$(6.188)	$(6.374)	$(12.068)	**$(36.866)**
	Initial	-	$0.529	$0.783	$0.781	$10.348	$11.454	$11.354	$25.707	**$60.956**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$(0.094)	$(0.600)	$(3.442)	$4.341	$5.266	$4.980	$13.639	**$24.090**
Cap+COR	Reduction	-	$(5.624)	$(2.677)	$(3.155)	$(5.820)	$(5.995)	$(4.175)	$(12.910)	**$(40.356)**
	Initial	-	$2.779	$2.425	$3.666	$0.613	-	-	-	**$9.482**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$(2.845)	$(0.252)	$0.510	$(5.207)	$(5.995)	$(4.175)	$(12.910)	**$(30.873)**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) 0.173

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative and General Support
Risk Mitigation	Consumption of public cloud services offers infrastructure redundancy and availability at scale that cannot be duplicated in the Company's data centers, reducing the risk of running applications.
Intangibles	This project makes consumption of all types of public cloud resources possible to provide IT services in support of all business processes, enabling technology capabilities for Administrative and General Support.
Avoided Costs	With applications running in public cloud, the Company can expand and contract the consumption of IT services at will as appropriate versus purchasing hardware to expand in quantity and having no simple ability to contract.

Customer Consecutive Estimate Reduction Enablement

Report Pulled: 11/5/2025 **Item ID: 14017**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - One Time **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will resolve gas and electric accounts with consecutive estimates due to the service being disconnected and customer's usage being estimated.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement Consumers Energy experienced two show cause orders from MPSC for consecutive estimates and fines of $500,000 in 2016 and $1M in 2023 including $3M that is to be refunded to the customers from the money that is recovered from the vendor. If the funding is not recovered from the vendor, the total fine would result in $4M as the Company is responsible for the difference between the dollars recovered from the vendor and the $3M total established by MPSC.

Objectives The project objective is to reduce disconnected consecutive estimate accounts from 8% to less than 1% reducing non-compliance regulatory risk with MPSC rules.

Scope The project scope includes enhancing account and work management digital solutions to properly reflect disconnected account status.

Alternatives Process improvements were put into place after the 2016 show cause; however, increased electric meter failures, supply chain shortages, and a project focused on replacing meter technology due to the sunset of 3G communication led to issues that resulted in a second show cause order. Do nothing does not improve the customer experience. Our current solution of SAP CRM used by Call Center, SAP Work Management, ADMS for Storm and Service Suite for Field Work are all core platforms able to accomodate the change. Adding additional software or alternatives will complicate the technical solution and/or require additional training for Call Center & field personnel.

DATES (phase end)

Initiation 4/1/2025
Project Plan & Scope Definition 4/30/2025
In-Service/Go-Live 2/19/2026
Final Engineering, Planning & Design 6/30/2025
Closeout 3/5/2026
Execution 1/30/2026

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.641	$0.071	-	-	-	-	-	-	$0.712
O&M	$0.048	$0.048	-	-	-	-	-	-	$0.096
Total Cost of Ownership	$0.689	$0.119	-	-	-	-	-	-	**$0.808**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.481	$0.093	-	-	-	-	-	-	**$0.574**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.208	$0.026	-	-	-	-	-	-	**$0.234**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.689	$0.119	-	-	-	-	-	-	**$0.808**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	$(0.392)	-	-	-	-	-	-	-	**$(0.392)**
	Initial	$0.048	$0.048	-	-	-	-	-	-	**$0.096**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$(0.344)	$0.048	-	-	-	-	-	-	**$(0.296)**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.641	$0.071	-	-	-	-	-	-	**$0.712**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.641	$0.071	-	-	-	-	-	-	**$0.712**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.486

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	10 minutes per creation of storm disconnect, dispatching from pending screen, and completing of the work order. Year to date since implementation of the new data analytics application there were 150 storm disconnect requests processed over the course of 6 months. This does not include requests processed by Dispatch or other departments that are not easily tracked. 0.17 hrs/order * 150 orders/half a year * 2 * 35 $/hour = $2k Though these savings are small due to limited data tracking, the frustration from Electric Field Operations with having to call Dispatch, wait for the order, or go into an application that is not part of the standard technology would be a significant positive impact to morale for both Electric Field Operations and Dispatch.
Avoided Costs	Contact Center completes 15 installation corrections per day. This task takes approximately 15 minutes per order. 15 installations/day * 0.25 hours/order * 38 $/hour * 260 days/year = $37k in efficiency
Avoided Costs	Electric Meter Operations Supervisor completes 16 hours of review and follow up on consecutive estimate accounts. Exempt labor rate of $55 per hour. 16 hours/week * 52 weeks/year * 55 $/hour = $46k in efficiency allowing the Field Supervisor to be more present in the field for employee safety and job oversight
Avoided Costs	Revenue Recovery and Meter Reading complete 56 hours of investigation per week. Assuming exempt labor rate of $35 per hour. There is also IT labor for running the report that is not accounted in these savings. 56 hours/week * 52 weeks/year * 35 $/hour = $102k in efficiency

Energy Assistance Enhancements and Maintenance Annual Upd: Report Pulled: 11/5/2025 Item ID: 6683

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as Consumers Affordable Resource for Energy (CARE) project, will implement software changes to offer energy assistance to low-income customers and streamline the process for the assistance agencies who use the assistance portal. This is accomplished through improved user interfaces and updates to SAP to process various requests. Upcoming modifications will be identified following an ongoing and annual review of requests, that includes criteria from the Department of Health and Human Services (DHHS) and Michigan Public Service Commission (MPSC) to prioritize the list of changes.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement Each grant year, DHHS and MPSC stipulate the criteria required for customers to enroll in the CARE program, how the Company and agencies will manage the enrollment process and track active CARE customers, and how they will administer the Michigan Energy Assistance Program (MEAP) benefits through bill credits and arrears forgiveness. The criteria changes significantly each year; therefore, the Energy Assistance Enhancement and Maintenance Annual Updates application requires modifications to meet the new requirements. If the regulatory requirements are not fulfilled, the Company is at risk of losing state Low Income Energy Assistance Fund (LIEAF) funds to assist low-income customers with paying their energy bills, thereby increasing the customers risk of shutoff for non-payment. In addition, our energy assistance programs function within all software platforms in the company which consistently need enhancements and updates.

Objectives The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive LIEAF funding, which can be used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, thereby making it easier to assist customers in need of LIEAF funding; and (3) complete modifications to customer facing platforms.

Scope The project scope includes: (1) updating the enrollment and status process; (2) allowing for flat monthly bills; (3) improving reporting; (4) updating the arrears forgiveness plan; (5) satisfying additional regulatory requirements for the annual grant rule changes required by the Department of Health and Human Services and Michigan Public Service Commission; (6) updating CARE dunning process; and (7) updating the assistance portal (CE PASS) functionality to enhance Agency Self-Service.

Alternatives Alternatives considered include: (1) continue with current process. This alternative was not chosen because it would lead to loss of grant funding, thus decreasing or eliminating energy assistance dollars for customers; (2) transfer administration of Energy Assistance Programs to a third party organization. This alternative was not selected because it would remove ownership and visibility into the health of the program while increasing administrative costs; and (3) make annual updates to the application, which will allow agencies to easily enroll customers on assistance programs and allow placement of holds to stop or prolong credit activity until assistance decisions are granted. This option was selected since it provides long-term proactive energy assistance to customers and prevents loss of grant funds. Changes are required to internal systems such as SAP, a large internal system that supports broad areas of the business, and the Agency Portal, an internally developed web application, therefore a single cloud or third-party alternative is not viable. Additionally, retiring the existing Agency Portal for a new application would increase costs beyond that of the routine upgrades.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.339	$0.295	$0.335	$0.335	$0.335	$0.335	-	-	$1.975
Total Cost of Ownership	$0.339	$0.295	$0.335	$0.335	$0.335	$0.335	-	-	**$1.975**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.189	$0.233	$0.287	$0.287	$0.287	$0.287	-	-	**$1.568**
Outside Services	$0.150	$0.062	$0.027	$0.027	$0.027	$0.027	-	-	**$0.318**
Business Expense/Overheads	-	-	$0.022	$0.022	$0.022	$0.022	-	-	**$0.088**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.339	$0.295	$0.335	$0.335	$0.335	$0.335	-	-	**$1.975**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.339	$0.295	$0.335	$0.335	$0.335	$0.335	-	-	**$1.975**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.339	$0.295	$0.335	$0.335	$0.335	$0.335	-	-	**$1.975**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	As a result of our compliance with CARE requirements, we have access to MEAP funds that help to pay down low-income customer's arrears, therefore preventing those from being written off. This year, we are expecting to enroll 9,350 customers with an average arrears of $285, thus potentially avoiding $2.6M in bad debt write-offs.
Risk Mitigation	As a result of our compliance with CE PASS requirements, Department of Health and Human Service and other agencies would not be able to assist our customers. This could result in $60-$70 million dollars not able to be funded to the company.
Technology Capability	Customer Management - As a result of this project, we will better be able to manage our customers who otherwise would fall behind on bills.

Enhancements - Customer Experience and Operations- Cap

Report Pulled: 11/5/2025 **Item ID: 8776**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Enhancements – Customer Experience – Operations project provides funding for small changes and improvements to existing software to address requests needed due to changing business requirements.

Portfolio IT Services > Applications > Customer Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface requiring smaller effort software application changes. These software enhancements are neither projects nor operational work but require funding for resources. The annual budget cycle should ensure funding is provided for software enhancement small work efforts to ensure we are leveraging the value of existing IT investments to support business processes.

Objectives Requests for this funding are governed by a cross-functional board of representatives from each area which meets monthly to evaluate and prioritize the work. The board assesses requests for value using benefits that are categorized into hard cost savings, cost avoidance, safety, achieving corporate goals, and mitigating risk. Included in the implementation are small changes and functionality improvements to existing software application investments for Customer Experience and Operations.

Scope The enhancement requests are fulfilled to provide functionality for areas such as dunning, customer billing, programs for low income customers (i.e. Winter Protection Program, Special Protection Program), Company website, contact center, energy efficiency, and rates.

Alternatives Historically, specific budget was not allocated for enhancements work requiring efforts to identify funding for each request. As part of our review process the alternative considered was to not provide funding for enhancements. However, this limits our ability to make software changes to support process improvements, regulatory changes, and to meet legally required system changes.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.564	$1.368	-	-	-	-	-	-	$1.932
O&M	$0.042	$0.053	-	-	-	-	-	-	$0.095
Total Cost of Ownership	$0.605	$1.421	-	-	-	-	-	-	**$2.027**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.226	$1.173	-	-	-	-	-	-	**$1.399**
Outside Services	$0.315	$0.208	-	-	-	-	-	-	**$0.523**
Business Expense/Overheads	$0.065	$0.036	-	-	-	-	-	-	**$0.101**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.003	-	-	-	-	-	-	**$0.003**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.605	$1.421	-	-	-	-	-	-	**$2.027**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.042	$0.053	-	-	-	-	-	-	**$0.095**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.042	$0.053	-	-	-	-	-	-	**$0.095**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.564	$1.368	-	-	-	-	-	-	**$1.932**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.564	$1.368	-	-	-	-	-	-	**$1.932**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description

Enhancements-CX&O-O&M

Report Pulled: 11/5/2025 **Item ID: 11375**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The CX&O initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements in the CX&O Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope

Included in the implementation are small changes and functionality improvements to existing IT software application investments for CX&O. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience Operations, Applications Support and, Device Management.

Alternatives

Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.142	$0.176	-	-	-	-	-	-	$0.318
Total Cost of Ownership	$0.142	$0.176	-	-	-	-	-	-	**$0.318**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.053	$0.054	-	-	-	-	-	-	**$0.108**
Outside Services	$0.089	$0.120	-	-	-	-	-	-	**$0.209**
Business Expense/Overheads	-	$0.001	-	-	-	-	-	-	**$0.001**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.142	$0.176	-	-	-	-	-	-	**$0.318**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.142	$0.176	-	-	-	-	-	-	**$0.318**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.142	$0.176	-	-	-	-	-	-	**$0.318**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Customer Management
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-IT-Capital

Report Pulled: 11/5/2025 **Item ID: 11332**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-ENTERPRISE PRODUCTS AND SERV

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.057	$(0.007)	-	-	-	-	-	-	$0.049
O&M	$0.000	-	-	-	-	-	-	-	$0.000
Total Cost of Ownership	$0.057	$(0.007)	-	-	-	-	-	-	**$0.049**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.014	$(0.001)	-	-	-	-	-	-	**$0.013**
Outside Services	$0.000	$(0.000)	-	-	-	-	-	-	**$0.000**
Business Expense/Overheads	$0.042	$0.023	-	-	-	-	-	-	**$0.065**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	$(0.029)	-	-	-	-	-	-	**$(0.029)**
Licenses, Permits & Fees	$0.000	-	-	-	-	-	-	-	**$0.000**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.057	$(0.007)	-	-	-	-	-	-	**$0.049**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.000	-	-	-	-	-	-	-	**$0.000**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.000	-	-	-	-	-	-	-	**$0.000**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.057	$(0.007)	-	-	-	-	-	-	**$0.049**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.057	$(0.007)	-	-	-	-	-	-	**$0.049**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-IT-O&M

Report Pulled: 11/5/2025 **Item ID: 11334**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Infrastructure > Network Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-ENTERPRISE PRODUCTS AND SERV

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope

Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives

Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.004	-	-	-	-	-	-	-	$0.004
Total Cost of Ownership	$0.004	-	-	-	-	-	-	-	**$0.004**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	-	-	-	-	-	-	-	-
Outside Services	$0.003	-	-	-	-	-	-	-	**$0.003**
Business Expense/Overheads	$0.000	-	-	-	-	-	-	-	**$0.000**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.004	-	-	-	-	-	-	-	**$0.004**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.004	-	-	-	-	-	-	-	**$0.004**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.004	-	-	-	-	-	-	-	**$0.004**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-Operations-Capital

Report Pulled: 11/5/2025 Item ID: 11325

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-OPERATIONS

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in the Operations Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments for Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.000	$0.271	-	-	-	-	-	-	$0.272
O&M	$0.003	-	-	-	-	-	-	-	$0.003
Total Cost of Ownership	$0.004	$0.271	-	-	-	-	-	-	**$0.275**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	$0.156	-	-	-	-	-	-	**$0.156**
Outside Services	$0.003	$0.107	-	-	-	-	-	-	**$0.110**
Business Expense/Overheads	$0.000	$0.008	-	-	-	-	-	-	**$0.009**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.004	$0.271	-	-	-	-	-	-	**$0.275**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.003	-	-	-	-	-	-	-	**$0.003**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.003	-	-	-	-	-	-	-	**$0.003**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.000	$0.271	-	-	-	-	-	-	**$0.272**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.000	$0.271	-	-	-	-	-	-	**$0.272**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-Security-Capital

Report Pulled: 11/5/2025 **Item ID: 11338**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance.

Alternatives Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.412	$0.878	$0.816	$0.816	$0.816	$0.816	$0.816	-	$5.371
O&M	$0.037	$0.067	$0.153	$0.153	$0.153	$0.153	$0.153	-	$0.867
Total Cost of Ownership	$0.449	$0.946	$0.969	$0.969	$0.969	$0.969	$0.969	-	**$6.238**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.033	$0.852	$0.245	$0.245	$0.245	$0.245	$0.245	-	**$2.110**
Outside Services	$(0.103)	$0.036	$0.173	$0.173	$0.173	$0.173	$0.173	-	**$0.796**
Business Expense/Overheads	$0.008	$0.058	$0.525	$0.525	$0.525	$0.525	$0.525	-	**$2.690**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.008	-	$0.026	$0.026	$0.026	$0.026	$0.026	-	**$0.140**
Licenses, Permits & Fees	$0.502	-	-	-	-	-	-	-	**$0.502**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.449	$0.946	$0.969	$0.969	$0.969	$0.969	$0.969	-	**$6.238**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.037	$0.067	$0.153	$0.153	$0.153	$0.153	$0.153	-	**$0.867**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.037	$0.067	$0.153	$0.153	$0.153	$0.153	$0.153	-	**$0.867**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.412	$0.878	$0.816	$0.816	$0.816	$0.816	$0.816	-	**$5.371**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.412	$0.878	$0.816	$0.816	$0.816	$0.816	$0.816	-	**$5.371**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-Security-O&M

Report Pulled: 11/5/2025 **Item ID: 8237**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-SECURITY PROGRAM MGM

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements in Security lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope

Included in the implementation are small changes and functionality improvements to existing IT software application investments for Security in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance.

Alternatives

Prior to implementing a Security enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for Security enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.581	$0.414	$0.494	$0.494	$0.494	$0.494	$0.494	-	$3.465
Total Cost of Ownership	$0.581	$0.414	$0.494	$0.494	$0.494	$0.494	$0.494	-	**$3.465**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.349	$0.257	$0.373	$0.373	$0.373	$0.373	$0.373	-	**$2.472**
Outside Services	$0.132	$0.097	$0.016	$0.016	$0.016	$0.016	$0.016	-	**$0.312**
Business Expense/Overheads	$(0.000)	$0.000	$0.085	$0.085	$0.085	$0.085	$0.085	-	**$0.426**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.058	$0.002	$0.019	$0.019	$0.019	$0.019	$0.019	-	**$0.156**
Licenses, Permits & Fees	$0.043	$0.057	-	-	-	-	-	-	**$0.100**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.581	$0.414	$0.494	$0.494	$0.494	$0.494	$0.494	-	**$3.465**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.581	$0.414	$0.494	$0.494	$0.494	$0.494	$0.494	-	**$3.465**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.581	$0.414	$0.494	$0.494	$0.494	$0.494	$0.494	-	**$3.465**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Enhancements-TEOS-Capital

Report Pulled: 11/5/2025 **Item ID: 11328**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The TEOS initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-TRANS, OPS SUPPORT AND ENG

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in the TEOS Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for TEOS.

Scope The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering, Customer Energy Management, Electric Grid Integration, and Fleet .

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.017	$0.044	-	-	-	-	-	-	$0.061
O&M	$0.002	-	-	-	-	-	-	-	$0.002
Total Cost of Ownership	$0.019	$0.044	-	-	-	-	-	-	**$0.063**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.009	$0.044	-	-	-	-	-	-	**$0.053**
Outside Services	$0.000	-	-	-	-	-	-	-	**$0.000**
Business Expense/Overheads	$0.009	-	-	-	-	-	-	-	**$0.009**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.019	$0.044	-	-	-	-	-	-	**$0.063**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.002	-	-	-	-	-	-	-	**$0.002**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.002	-	-	-	-	-	-	-	**$0.002**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.017	$0.044	-	-	-	-	-	-	**$0.061**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.017	$0.044	-	-	-	-	-	-	**$0.061**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Electric T&D, Gas T&D, Generation
Risk Mitigation	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion.

Enterprise Print - Scan Suite

Report Pulled: 11/5/2025 **Item ID: 11651**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The projects intent is to upgrade the current Enterprise Print and Capture suite for improved data security and integration for the work from home business partner.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** Unspecified

WORK OBJECTIVES

Problem Statement The company currently maintains a print and capture suite that will have support ending in 2025. Only high-level security patches will be available after this date. The company maintains a fleet of servers that are scheduled to be upgraded. The current print and capture suite is not compatible with the targeted server operating systems. The lack of internal resources requires the company to continue to absorb increased costs to contract administrative personal.

Objectives This project maintains cost savings achieved by eliminating wasteful print jobs and further enables a productive, and flexible workforce for business partners working remotely. This project also ensures that the latest data transmission security requirements of are met by the solution.

Scope The project scope includes: (1) upgrading the current suite to the latest version; (2) consolidating the amount of print servers in the environment; (3) training for company personal to administer the suite; (4) converting all workflows from the current system; (5) implementing remediation for security vulnerability risk;. (6) integrating device management with Enterprise Configuration Management Database (CMDB) for asset tracking and monitoring.

Alternatives Alternatives considered: (1) migrating to cloud services. This alternative was not chosen at this time due to maturity levels found with subscription services. (2) other print-scan products. This alternative was not selected as it would required new print and scanning specific to another print-scan product.. (3) Print-scan products that were less costs. This alternative was not selected, due to fewer capabilities offered than the current product, which would introduction inefficiencies in the current processes. (4) upgrade current product. This alternative was chosen due to lower overall cost of not requiring new hardware, maturity of current product, and providing same level of capabilities required to support current processes.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/1/2024	2/6/2024	3/29/2024	5/31/2024
	In-Service/Go-Live	**Closeout**	
	7/31/2024	10/31/2024	

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.627	$0.032	-	-	-	-	-	-	$0.659
O&M	$0.085	-	-	-	$0.004	$0.004	-	-	$0.093
Total Cost of Ownership	$0.712	$0.032	-	-	$0.004	$0.004	-	-	**$0.751**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.047	-	-	-	-	-	-	-	**$0.047**
Outside Services	$0.645	-	-	-	-	-	-	-	**$0.645**
Business Expense/Overheads	$0.008	$0.029	-	-	-	-	-	-	**$0.037**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.012	$0.003	-	-	-	-	-	-	**$0.015**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.712	$0.032	-	-	-	-	-	-	**$0.743**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.085	-	-	-	$0.004	$0.004	-	-	**$0.093**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.085	-	-	-	$0.004	$0.004	-	-	**$0.093**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.627	$0.032	-	-	-	-	-	-	**$0.659**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.627	$0.032	-	-	-	-	-	-	**$0.659**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Risk Mitigation	Security maintenance on the current system will become unsupported which will expose the environment to vulnerabilities.
Risk Mitigation	Will allow for mitigation of a current vulnerability with data traffic not encrypted and exposed to any bad agent that would monitor the printer port.

Enterprise Risk Management

Report Pulled: 11/5/2025 **Item ID: 10481**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will implement software to streamline Enterprise Risk Management (ERM) processes, improve efficiency, provide risk identification and repository tools, and deliver real-time risk data.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement

The Enterprise Risk Team (ERT) collaborates with Risk Owners (ROs) annually to identify new risks, update existing ones, quantify impacts and likelihoods, document mitigation plans, identify trends, and formulate risk tolerance metrics. This process involves iterative exchanges between ERT and ROs to align on content. This effort culminates in multiple risk maps presented annually to senior management and the Board of Directors (BoD). The manual Enterprise Risk Management (ERM) process is intensive and time-consuming, creating risks of human error that can inaccurately quantify risks, introduce data anomalies, and create version tracking issues. The current process results in inefficient use of time by risk analysts and risk owners, limits the breadth of analysis, and affects the Company's ability to promptly identify, analyze, and communicate risks to senior leaders, potentially causing delays in responding to emerging risks. Due to its lengthy nature, the manual process is conducted only once a year but needs to be performed more frequently for proactive enterprise risk management. Utility industry peers use software to more effectively manage enterprise risk management programs.

Objectives

This project creates value for the Company by: (1) providing real-time risk information to stakeholders including the risk team, risk owners, senior management, and the Board of Directors (BoD); (2) supporting proactive risk management; (3) establishing a centralized repository for risk identification, management, and mitigation plans; (4) reducing waste through simplified processes; and (5) enhancing efficiency for risk owners and analysts.

Scope

The project scope includes: (1) creating risk analysis templates and tools for automated reporting; (2) establishing automated workflows to perform risk updates; (3) configuring dynamic templates that prompt the risk owners based on prior selections; (4) organizing risk assessments through an online and searchable data repository; (5) creating new reports and executive dashboards; (6) migrating data; and (7) setting record retention rules.

Alternatives

Alternatives considered include: (1) Continuing to use the current manual processes. This alternative was not chosen due to inefficiencies, poor quality results, and limited frequency of risk reviews. (2) Building a custom internal enterprise risk solution. This alternative was not selected because it does not incorporate best practices available in risk management software provided by industry leaders. (3) Implementing a software solution from a leading enterprise risk solution vendor. Although this introduces new license and ongoing support costs, it is preferred since it incorporates industry best practices, ensures application reliability, security, stability through vendor support, and provides innovation and insights via risk information reporting through management dashboards. Additionally, it aligns the Company with utility industry peer practices for more effective enterprise risk management.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
7/1/2027	10/1/2027	12/1/2027	5/1/2028
	In-Service/Go-Live	**Closeout**	
	6/1/2028	7/3/2028	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.100	$0.122	$0.115	$0.115	$0.115	$0.018	-	-	$0.586
Total Cost of Ownership	$0.100	$0.122	$0.115	$0.115	$0.115	$0.018	-	-	**$0.586**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.002	$0.009	$0.007	$0.007	$0.007	$0.006	-	-	**$0.037**
Outside Services	$0.004	$0.018	$0.014	$0.014	$0.014	$0.011	-	-	**$0.074**
Business Expense/Overheads	$0.000	$0.001	$0.000	$0.000	$0.000	$0.000	-	-	**$0.003**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.074	$0.074	$0.074	$0.074	$0.074	-	-	-	**$0.372**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.080	$0.102	$0.096	$0.096	$0.096	$0.018	-	-	**$0.487**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.100	$0.122	$0.115	$0.115	$0.115	$0.018	-	-	**$0.586**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.100	$0.122	$0.115	$0.115	$0.115	$0.018	-	-	**$0.586**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	Implementing a centralized solution will enhance risk management by effectively addressing potential risks. Currently, one-third of the 150 risk tolerance metrics are categorized as red. The number of risks tracked by the Corporate Risk group is expected to increase over time.
Avoided Costs	The ERM Group can save up to 252 hours annually through efficiencies in: (1) Risk form configuration (24 hours saved); (2) Workflow including email/phone conversations, report creation, and quality control (229 hours saved). These efficiencies would allocate more time for activities such as ad hoc analysis, risk updates to management, emerging risk evaluation, and risk mitigation planning. Business areas can save up to 127 hours annually through efficiencies in: (1) Risk template updates (61 hours saved); (2) Emails/phone calls with the Risk Group (33 hours saved); (3) Alignment with the Risk Group and their own management chains (32 hours saved). These efficiencies would allow risk owners to concentrate on business operations and implementing risk reduction mitigation rather than administratively filling out risk forms.

Enterprise Service Bus 2026-2027 Upgrade

Report Pulled: 11/5/2025 **Item ID: 14030**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will upgrade the current Enterprise Service Bus software versions in use at the company. This will also implement a container management system and migrate various services to containers.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. The lack of a container management solution prohibits the adoption of a more cloud native approach leading to retaining legacy solutions.

Objectives The value this project provides the Company includes: (1) implement a container management solution; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies.

Scope The project scope includes (1) implementing the current version of all applications that are part of the ESB application, database version, and required database drivers and (2) implementing a Kubernetes solution for container management and migrate targeted services that are identified as microservices to containers.

Alternatives Alternatives considered included: (1) Accept the current version levels and continue to pay for extended support costs and accept technical obsolescence risk. (2) Only upgrade the existing applications. (3) Upgrade all of the applications as well as evolve the cloud-based instance to a more cloud native architecture by converting containers and implementing a Kubernetes solution to manage the containers. This option was selected because it best meets the Company needs for the near future by maintaining vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
9/1/2026	9/7/2026	10/12/2026	1/5/2027
	In-Service/Go-Live	**Closeout**	
	10/9/2027	11/15/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	$1.331	-	-	-	-	-	-	$1.331
O&M	$0.059	$1.012	-	-	-	-	-	-	$1.070
Total Cost of Ownership	$0.059	$2.343	-	-	-	-	-	-	**$2.401**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.055	$1.300	-	-	-	-	-	-	**$1.355**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.004	$0.374	-	-	-	-	-	-	**$0.377**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.669	-	-	-	-	-	-	**$0.669**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.059	$2.343	-	-	-	-	-	-	**$2.401**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.059	$1.012	-	-	-	-	-	-	**$1.070**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.059	$1.012	-	-	-	-	-	-	**$1.070**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$1.331	-	-	-	-	-	-	**$1.331**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$1.331	-	-	-	-	-	-	**$1.331**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Unplanned Outages - Corporate	High	Low	Kubernetes provides resilience via self-healing capabilities to detect and replace failed containers, maintaining high availability and reducing outages

OTHER VALUE

Type	Description
Technology Capability	A&G Support
Intangibles	Consistency Across Environments: Ensures applications run consistently across development, testing, and production environments via configuration management
Intangibles	Implementing an Azure Kubernetes system provides autoscaling features

Enterprise Service Bus Application 2024-2025 Upgrade

Report Pulled: 11/5/2025 **Item ID: 11727**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will upgrade and migrate the Business Works developer application to the next version.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement

Newer ESB software versions offer improved integration with Rest/API services and applications. It is critical that this vital data tool or pathway, be more scalable, secure, and capable of integrating to a service-based environment. In addition, the messaging and event modules within the ESB are currently outside of their standard support windows. While it is possible to continue to get extended support by paying an estimated premium of approximately $80,000 annually, this is just temporary coverage and serves only to delay the need for an upgrade.

Objectives

The value this project provides the Company includes: (1) cost avoidance to avoid extensive payments for extend support purposes; (2) avoid technical obsolescence; (3) operational resiliency; and (4) improved administrative and operational efficiencies.

Scope

The project scope includes implementing current version of all applications that are part of the ESB application, database version, and required database drivers.

Alternatives

Alternatives considered included: (1) Accept the annual $80,000 extended maintenance cost. Given the critical nature of this application, it is not recommended to lose mainstream support for any of the applications involved. Any sustained ESB product deficiency would impact many areas of the Company, such as billing, revenue collection, and remote meter management. The current implementation of the ESB platform was built with 5 years of growth in mind. This alternative was not chosen due to risk to Company operations , and the additional expense. (2) Replace the on-premise upgrade plan to implement a cloud-based solution. A cloud migration would also take longer to complete, which would put the Company at risk of falling outside of the current vendor support window for the products current version. (3) Upgrade the existing application. This option was selected because it best meets the Company needs for the near future by restoring vendor support for fixes and patches, and enables product scalability to the measure required of business capabilities.

DATES (phase end)

Initiation 9/4/2024
Project Plan & Scope Definition 10/7/2024
In-Service/Go-Live 10/18/2025
Final Engineering, Planning & Design 11/15/2024
Closeout 11/21/2025
Execution 1/8/2025

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.012	$0.299	-	-	-	-	-	-	$0.311
Total Cost of Ownership	$0.012	$0.299	-	-	-	-	-	-	**$0.311**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.010	$0.142	-	-	-	-	-	-	**$0.152**
Outside Services	$0.002	$0.156	-	-	-	-	-	-	**$0.159**
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.012	$0.299	-	-	-	-	-	-	**$0.311**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.012	$0.299	-	-	-	-	-	-	**$0.311**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.012	$0.299	-	-	-	-	-	-	**$0.311**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Risk Mitigation	Consumers Energy will lose support on critical ESB software components that support OpenWay Collection Engine, SAP, ITRON, DIV, DRMS, MDM, IWP, PayGo, ADMS, Field Service Solution, and Digital Customer Experience. Rebuilding the ESB Platform and ensuring the current production integrations will not be impacted as well as meeting or exceeding current service levels is critical.
Avoided Costs	Consumers Energy will need to purchase an extended support contract with the vendor to maintain support of the older version. Going too long without upgrading puts Consumers at risk of losing any level of support from the vendor. Current estimate is $80,000 of extended support
Capacity	The current implementation of the ESB platform was built with 5 years of growth in mind. Upgrading the ESB on a regularly scheduled cadence will allow Consumers to grow the the application around the business' needs.

Field Contractor Work Management Technology Enablement

Report Pulled: 11/5/2025 **Item ID: 6740**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project provides the ability to electronically manage contractor work and increases accuracy and timeliness of information processing for field work deliverables. This project additionally creates new opportunities to measure and optimize field work processes supporting customer on-time delivery goals.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement Contractor field employees use manual, paper-based processes and generic communication technologies (phone, radio, email, collaboration sites) to perform work for the Company. Due to the non-electronic format, inaccuracy, and delay of information processing there are negative impacts to the availability and accuracy of work status. This limits the opportunity to measure and optimize field work processes that support customer on-time delivery and other goals.

Objectives The project will add value by: (1) improving on-time delivery of customer work by providing electronic work order information to contractors; (2) improving customer satisfaction through efficiency in scheduling work and reporting on the progress electronically; (3) increasing safety by tracking work and contractor status providing visibility into the last known location of the contractor; (4) improving material management; (5) making it easier to move emergent work to contractors to balance workloads and meet customer commitments; and (6) enabling real time updates to work order information, increasing data accuracy and reducing invoice reconciliation time.

Scope The project scope includes: (1) identifying requirements for a Bring Your Own Device (BYOD) field contractor work management technology solution and process; (2) developing, configuring, and testing interfaces, hardware, and software for the solution; (3) implementing the solution and process for the following work groups: Electric High-Voltage Distribution (HVD), Electric Low-Voltage Distribution (LVD), Mutual Assistance, Forestry, Gas Distribution, Gas Code Compliance, and Substation Operations Construction/Metro; (4) updating the following vendor contract types to support BYOD field contractor work management: zone, specific bid, ancillary, electric storm, and mutual assistance; and (5) training field contractors on the new technology and processes.

Alternatives The alternatives considered included: (1) Continue with the current paper-based process. This alternative was not selected because this approach does not allow for the timely, data-driven work management metrics required to improve service to customers. (2) Use the current Company mobile application. This alternative was not selected because the solution is not expected to receive long term investments by the vendor and the mobile application would require more upfront investment than the proposed option. (3) Use off-platform options such as ServiceBench. This alternative was not selected because contractors would not be able to leverage the benefits and integrations with the existing platform and it would require additional new integrations. (4) Provide Company-funded field devices to contractors. This alternative was not selected because the investment in hardware, management of on-boarding and off-boarding of devices to contractors, and training and change management is cost-prohibitive and introduces a risk of the loss of control of information security and corporate assets. Leveraging the existing field work management solution was chosen because it uses existing well-developed functionality while leveraging cloud-based, BYOD capabilities to move short-term and long-term contractors from paper processes to the established, standard work management system.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/31/2022	3/31/2022	9/30/2022	7/31/2023
	In-Service/Go-Live	**Closeout**	
	9/16/2024	10/1/2024	

FUNDING SUMMARY

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Cap+COR	-	$0.027	$0.343	$0.971	$0.045	-	-	-	$1.387
O&M	$0.243	$0.218	$0.023	$0.352	$0.002	$0.508	$0.508	$0.508	$2.361
Total Cost of Ownership	$0.243	$0.245	$0.367	$1.322	$0.047	$0.508	$0.508	$0.508	**$3.748**

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Labor	$0.229	$0.082	$0.098	$0.401	$0.043	-	-	-	**$0.853**
Outside Services	-	$0.144	$0.212	$0.550	$0.000	-	-	-	**$0.906**
Business Expense/Overheads	$0.014	$0.019	$0.054	$0.098	$0.009	-	-	-	**$0.193**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.003	$0.256	$(0.004)	-	-	-	**$0.255**
Licenses, Permits & Fees	-	-	-	$0.017	-	-	-	-	**$0.017**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.243	$0.245	$0.367	$1.322	$0.047	-	-	-	**$2.225**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2021	2022	2023	2024	2025	2026	2027	2028 +	Total
O&M	Reduction	-	-	$(0.144)	$(0.144)	$(0.144)	$(0.144)	$(0.144)	-	**$(0.719)**
	Initial	$0.243	$0.218	$0.023	$0.352	$0.002	$0.508	$0.508	$0.508	**$2.361**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.243	$0.218	$(0.120)	$0.208	$(0.142)	$0.364	$0.364	$0.508	**$1.642**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.027	$0.343	$0.971	$0.045	-	-	-	**$1.387**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.027	$0.343	$0.971	$0.045	-	-	-	**$1.387**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-0.823

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	"CE Way" Maturity - The project enables data to be more accessible electronically so that it can be visualized, access to data provides increased visibility to problem solving, and Service Suite forms allow for increased standardization.
Intangibles	Customer On-time Deliver (COTD) - Provides real-time updates for work order progression and completion, and provides increased efficiency in dispatching work to contractors.
Intangibles	Electric Reliability - Improves efficiency in dispatching of emergent work to contractors.
Avoided Costs	Engineering/System Owner Efficiencies: Estimated 1 hour per week @ 50 weeks for 10 system owners = 500 hours annually *$50/hr = $25,000 Annual $ Saved (Max). Annual $ Avoided (Min - 75% of Max) = $18,750 * 29.8% (O&M) = $5,588 annual avoided costs
Avoided Costs	Field Leader & Back End Efficiencies: 1 Hour per week for each long cycle field leaders/back office personnel - "200 people*50weeks= 20K hours * $50/hr = $500K." Annual $ Avoided (Min - 75% of Max) = $375K. $375K * 29.8% (O&M) = $111,750 annual avoided costs - ELECTRIC SPLIT
Avoided Costs	Field Leader & Back End Efficiencies: 1 Hour per week for each long cycle field leaders/back office personnel - "200 people*50weeks= 20K hours * $50/hr = $500K." Annual $ Avoided (Min - 75% of Max) = $375K. $375K * 29.8% (O&M) = $111,750 annual avoided costs - GAS SPLIT
Avoided Costs	Increase Back Office Productivity for Contractor Admins: 1 employee for 6 hours a week and 50 weeks per year. Total hours reclaimed annually = 300 hours * $50/hr = $15,000. Annual $ Avoided (Min - 75% of $15,000) = $11,250 * 29.8% (O&M) = $3,353.
Avoided Costs	Increased Productivity for Contractors: 150 hours reclaimed per month * 12 Months a year = 1,800 total hours reclaimed annually * rate of $71.70/hr = $129,060 total. Annual $ Avoided (Min - 75% of $139,060) = $96,795 * 29.8 (O&M)= $28,845
Technology Capability	Work Management

Field Mapping and Graphics

Report Pulled: 11/5/2025 **Item ID: 8771**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement a solution for the mobile field mapping and data collection that can search and view facility map data, view work order designs, and create work order as-built construction drawings in the field. This software technology increases process efficiency by consolidating field graphics functionality, reducing IT complexity and testing, and increasing adoption in the field through ease of use. In addition, it allows the Company to move to a supported application platform and retire the unsupported ArcPad solution.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement The current mapping and graphics application was implemented in 2002 and is no longer sold or supported in any capacity, and the customizations developed for the application cannot be changed. Due to the improved accuracy of the CE landbase (streets, political boundaries, etc.), the outdated electric maps that are referencing that data causes the map to be unreadable which causes a safety issue. Additionally, field employees have considerable challenges when attempting to use the software due to slowness, an aged interface, and dated processes.

Objectives The project will add value by: (1) providing more accurate geospatial data, including facility map data, pre-construction designs, and as-built construction drawings; (2) consolidating daily tasks into a more simplified process; (3) eliminating the process waste from duplicating asset data in two systems; (4) enabling the adoption of the Geographic Information System (GIS) standard; and (5) making mapping and graphics data available on field devices.

Scope The project scope includes: (1) installing a new mobile field mapping and graphics application; (2) creating the ability to search and view the facility map data in GIS format along with the ability to search by address; (3) viewing pre-construction work order designs in a new GIS format; and (4) creating as-built construction drawings in GIS format for assigned work orders.

Alternatives Four alternatives were evaluated and three were determined non-viable for the project: (1) Continue maintaining the current ArcPad application. This option was not selected because the Company is no longer able to make changes to the ArcPad application to mitigate issues if the application has critical defects. A total failure of the application could revert field crews back to paper-based facility maps, risking safety using static, outdated data; or require the creation of as-built construction drawings on paper documents. (2) Use the Adobe or Snagit applications for creating as-built construction drawings. This option was not selected because field users would have to use one solution for viewing facility maps and use rudimentary drawing tools like Adobe or Snagit for creating as-built construction drawings. This option was also not selected because it introduces additional costs due to the complexity and customization needed to integrate the applications. (3) Build a custom Mapping and Graphics solution. This option was not selected as existing industry solutions are available at a much lower cost with much less risk. (4) Implementing the new field mapping and graphics software was selected as this option will consolidate field graphics functionality into an efficient process and provide a current, supported solution.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/31/2021	4/30/2021	8/31/2021	6/1/2023
	In-Service/Go-Live	**Closeout**	
	6/30/2023	6/30/2023	

FUNDING SUMMARY

	2020	2021	2022	2023	2024	2025	2026	2027 +	Total
Cap+COR	-	$0.662	$1.559	$0.875	$0.747	$0.121	-	-	$3.965
O&M	$0.006	$0.016	$0.001	$0.040	$0.016	$0.052	-	-	$0.130
Total Cost of Ownership	$0.006	$0.678	$1.560	$0.915	$0.763	$0.174	-	-	**$4.095**

	2020	2021	2022	2023	2024	2025	2026	2027 +	Total
Labor	$0.005	$0.221	$0.299	$0.312	$0.229	$0.060	-	-	**$1.126**
Outside Services	-	$0.361	$1.046	$0.372	$0.454	$0.074	-	-	**$2.307**
Business Expense/Overheads	$0.000	$0.096	$0.214	$0.230	$0.080	$0.040	-	-	**$0.659**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	$0.001	$0.001	-	-	-	-	**$0.002**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.006	$0.678	$1.560	$0.915	$0.763	$0.174	-	-	**$4.095**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2020	2021	2022	2023	2024	2025	2026	2027 +	Total
O&M	Reduction	-	-	$(0.064)	$(0.064)	$(0.064)	$(0.064)	$(0.064)	-	**$(0.319)**
	Initial	$0.006	$0.016	$0.001	$0.040	$0.016	$0.052	-	-	**$0.130**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.006	$0.016	$(0.063)	$(0.024)	$(0.048)	$(0.011)	$(0.064)	-	**$(0.189)**
Cap+COR	Reduction	-	-	$(0.149)	$(0.149)	$(0.149)	$(0.149)	$(0.149)	-	**$(0.743)**
	Initial	-	$0.662	$1.559	$0.875	$0.747	$0.121	-	-	**$3.965**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.662	$1.410	$0.727	$0.599	$(0.027)	$(0.149)	-	**$3.222**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.775

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	Consumers Energy employees are experiencing decline in application performance due to age, which produces the risk of application failure.

OTHER VALUE

Type	Description
Intangibles	Currently, there is a decrease in morale and increase in stress when redlines aren't processed in a timely way or get held up with technology problems. The current process is go back to the crew to inquire if the redline was completed. When this is a system issue, it causes frustration because then the field has to re-do work in the field. Doing this project will improve morale and improve the relationship between management and the Union by reducing administrative pain, human struggle and disagreements, and wasted time repeating work.
Intangibles	Make OVH (overhead) data available to the field device. The current OVH CAD files have not been maintained in over five years.
Intangibles	Make URD-(Underground Maps) assets readable on field device. This is currently a safety issue.
Intangibles	Reduced errors/defects and postings improves Safety by reducing lag time in data updates and if there's a revisit to the Asset. The correct information is on file.
Risk Mitigation	The application is at risk of failure. It is no longer supported, cannot be upgraded or changed in any manner. Retiring the application and moving to a new application must occur in order for the risk to be removed.
Technology Capability	Work Management

Forward Web Proxy Services

Report Pulled: 11/5/2025 **Item ID:** 13974

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace the Company's existing web proxy service platform with a new, modern, and more resilient platform designed to support both secure internet access and advanced data loss prevention capabilities. A web proxy service acts as a secure intermediary between users and the internet, evaluating, filtering, and forwarding traffic while enforcing company security policies. It acts as an intermediary that evaluates, modifies, and forwards the client's requests to the destination web server. This service offers many benefits for the Company such as advanced filtering. Advanced filtering in a forward web proxy service can filter out unwanted or harmful content from the internet, such as malware and phishing. This can protect the client's device and network from cyberattacks and improve their browsing experience. Without advanced filtering, the Company's cyber assets are at risk of attacks such as ransomware.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement The current web proxy platform, implemeneted in 2021, has caused ongoing operational issues related to web filtering, inconsistent policy enforcement, and intermittent connectivity. These challenges have occasionally limited employee and contractor access to critical internet and cloud-based resources, impacting productivity and increasing security risk. As the Company accelerates its transition to cloud and Software-as-a-Service (SaaS) platforms, maintaining consistent, secure, and reliable internet access is critical. The new platform will provide high availability, improved performance, and enhanced visibility into outbound traffic to ensure that business operations continue seamlessly, even during peak or failover conditions. The platform will also be designed to support flexible deployment models for remote, hybrid, and field-based workers—ensuring that security policies apply consistently regardless of location. In addition to improving reliability, this project introduces data loss prevention (DLP) capabilities as a core function of the web proxy service. These DLP capabilities will help the Company prevent unauthorized transmission of sensitive or regulated information—such as customer data, intellectual property, or operational system details—to unapproved external destinations. Through content inspection, contextual analysis, and integrated policy enforcement, the new solution will identify and block risky behaviors before data leaves the organization. DLP policies will also align with existing information governance frameworks and compliance obligations to provide both proactive protection and auditable oversight of data handling practices

Objectives This project creates value for the Company by (1) increasing service reliability for employees and contractors to internet and cloud-based resources; (2) utilize technology to enable the Company to handle all types of different workloads from varying geographic locations and is highly available; (3) using a mature and scalable web proxy service provider; (4) providing Zero Trust by continuously verifying every connection request; and (5) implementing data loss prevention capabilities on our core web proxy services.

Scope The project scope includes: (1) replacing the current web proxy services solution and implementing a new system; (2) replacing physical web proxy hardware; (3) potentially changing SAAS cloud vendors; (4) and implementing data loss prevention for web proxy services. The Security team did extensive research on alternative web proxy services solutions.

Alternatives Alternatives considered include: (1) continue to use and maintain the current web proxy services platform as it currently is implemented. This alternative was not chosen due to the previous operational issues with the platform that make it unreliable. The result of an unreliable system means that employees and contractors are unable to access business critical services such as email, Teams, ServiceNow, SharePoint Online.; (2) Route all internet traffic through the Company's corporate data center. This alternative wasn't chosen because the capabilities of firewalls aren't as effective in stopping sophisticated cyber-attacks as using a web proxy service; (3) Perform an evaluation between existing product with expanded feature sets, such as data loss prevention and alternative vendors that could replace current system with modern vendor platform for web proxy services. This option was chosen because it offers additional analysis with the potential to enhance existing, in place, products with features such as enhanced data loss prevention mechanisms, browser isolation (the ability to contain web pages so that the web page can't affect the client workstation) and sandboxing (a way to safely execute malicious applications without impacting the Company's network). As part of the evaluation the Company reassessed based on outside advisors and industry trend analysis, focusing on the ability to execute and the vendor's company strategy.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/15/2027	2/15/2027	4/15/2027	6/1/2027
	In-Service/Go-Live	**Closeout**	
	11/15/2027	1/30/2028	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	$4.478	-	-	-	-	-	-	-	$4.478
O&M	$0.484	$0.139	$0.130	$0.130	$0.130	-	-	-	$1.013
Total Cost of Ownership	$4.962	$0.139	$0.130	$0.130	$0.130	-	-	-	**$5.491**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.059	$0.139	$0.130	$0.130	$0.130	-	-	-	**$0.587**
Outside Services	$0.192	-	-	-	-	-	-	-	**$0.192**
Business Expense/Overheads	$0.503	$0.001	-	-	-	-	-	-	**$0.504**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$4.208	-	-	-	-	-	-	-	**$4.208**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$4.962	$0.139	$0.130	$0.130	$0.130	-	-	-	**$5.491**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.484	$0.139	$0.130	$0.130	$0.130	-	-	-	**$1.013**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.484	$0.139	$0.130	$0.130	$0.130	-	-	-	**$1.013**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$4.478	-	-	-	-	-	-	-	**$4.478**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$4.478	-	-	-	-	-	-	-	**$4.478**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Information Theft	High	High	Avoid the cost and disruption of data loss from users, SaaS apps, and public cloud infrastructure due to accidental exposure, theft, or double extortion ransomware.
Information Theft	High	High	Stop advanced cyberthreats with built-in protections against botnets, command-and-control traffic, risky peer-to-peer sharing, malicious active content, cross-site scripting, fraud sites
Information Theft	High	High	The ability to know when patient zero phishing attacks are attempting to infiltrate the Company with advanced AI-based inline detection
Information Theft	High	High	The application will give the ability to know when patient zero phishing attacks are attempting to infiltrate the Company with advanced AI-based inline detection
Information Theft	High	High	The new solution will have the ability to filter risky and malicious domains and stop the use of DNS tunneling to transfer of malicious payloads and sensitive data

OTHER VALUE

Type	Description
Technology Capability	Browser isolation (the ability to contain web pages so that the web page can't effect the client workstation)
Technology Capability	Empower employees and contractors to securely access web applications and cloud services from anywhere, on any device—and ensure a great digital experience where applicable in the Company.
Technology Capability	Increase service reliability for employees and contractors to internet and cloud-based resources for employees and contractors
Technology Capability	Provide Zero Trust by continuously verifying every connection request
Technology Capability	Sandboxing (a way to safely execute malicious applications without impacting the Company's network)
Technology Capability	The new solution will provide more reliable protection against unwanted or harmful content from the internet, such as malware and phishing. This can protect the client's device and network from cyberattacks and improve their browsing experience. Without advanced filtering, the Company's cyber assets are at risk of being attacked by ransomware.

Gas Compression Digital Work Management

Report Pulled: 11/5/2025 **Item ID:** 12677

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project provides work management software and digital forms for Gas Compression facilities.

Portfolio Gas Delivery Systems > Gas Operations > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

The current work management process for Gas Compression is cumbersome, largely paper based, and is made up of multiple disconnected systems. This leads to poor visibility, process inefficiency and waste, re-work, regulatory risk, and human error.

Objectives

This project provides value to the Company through: (1) increased productivity by direct data entry in the field; (2) improved quality through increased accuracy of updates completed at the time and place of the work; (3) elimination of the need to enter data into multiple disconnected systems, and (4) improved safety through access to real-time information used at work sites rather than printed procedures.

Scope

The scope of the project includes: (1) Merging the existing work management tools into a single work management solution, (2) purchasing licenses to add Gas Compression users to the company's existing mobile work management software, and (3) configuring changes in SAP and the mobile work management software to replace the paper-dependent work management process with the ability to access and update maintenance, operations, and safety information for Gas Compression.

Alternatives

Alternatives considered include: (1) Utilize an SAP work management mobile solution. An SAP work management solution is not preferred since it is a new solution and requires additional project and support cost. (2) Continue the manual paper-based process. Continuing the manual paper-based process was not chosen because of process waste, re-work, and human error. (3) Customize the existing electronic Shift Operations Management System (eSOMS) mobile application to add work management functions. A custom eSOMS mobile application was not chosen because it would require additional project cost and an ongoing support budget for a custom solution that the eSOMS product was not intended to support. (4) Adopt a cloud based SAAS solution. This option was not selected as it was a high-cost option. (5) Utilize the existing Service Suite solution currently deployed for similar work processes in Gas Transmission. Service Suite is in other Gas and Electric departments. The Service Suite solution is the preferred option because it is a proven solution at the Company and provides the mobility and digital benefits at a lower cost.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/10/2023	4/30/2023	6/30/2023	2/24/2024
	In-Service/Go-Live	**Closeout**	
	2/24/2024	3/31/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	$0.343	$0.001	-	-	-	-	-	$0.344
O&M	$0.006	$0.032	-	$0.025	$0.025	$0.025	$0.025	-	$0.139
Total Cost of Ownership	$0.006	$0.375	$0.001	$0.025	$0.025	$0.025	$0.025	-	**$0.483**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.006	$0.118	-	-	-	-	-	-	**$0.123**
Outside Services	-	$0.230	-	-	-	-	-	-	**$0.230**
Business Expense/Overheads	$0.000	$0.028	$0.001	-	-	-	-	-	**$0.029**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.006	$0.375	$0.001	-	-	-	-	-	**$0.382**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	$(0.208)	$(0.208)	$(0.208)	$(0.208)	$(0.208)	-	**$(1.041)**
	Initial	$0.006	$0.032	-	$0.025	$0.025	$0.025	$0.025	-	**$0.139**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.006	$0.032	$(0.208)	$(0.183)	$(0.183)	$(0.183)	$(0.183)	-	**$(0.902)**
Cap+COR	Reduction	-	-	$(0.021)	$(0.021)	$(0.021)	$(0.021)	$(0.021)	-	**$(0.103)**
	Initial	-	$0.343	$0.001	-	-	-	-	-	**$0.344**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.343	$(0.020)	$(0.021)	$(0.021)	$(0.021)	$(0.021)	-	**$0.241**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) 0.846

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	Employee Engagement improves as the more tech savvy candidate pool for these positions are looking for mobile tools to help them do their jobs.
Intangibles	Productivity increases by using electronic work packages and reducing the need to return to desktop kiosks for updates. With the electronic work packages, (1) employees have remote access to manuals such as the Gas Operations Manual for Gas Compression and local maintenance procedures to reference standard work, (2) it eliminates multiple physical hand-offs of work documents related to the work management process and (3) it frees up planners' time to focus on long-range and outage planning to adhere to goals such as the Periodic Factor metric and Gas Flow Deliverability goal for Gas Compression. Productivity can also be tracked and measured for further improvements. This level of tracking is not possible with the current process and information.
Intangibles	Quality is improved and rework decreases when updates are performed right at the time and place of the work instead of afterwards. For Gas Compression, it (1) eliminates the manual process to update work scope and ensures access to the most up-to-date work order package, (2) allows cersw to input SAP Notifications while at the jobsite for improved accuracy of data collected (3) provides the ability to collect asset condition data accurately at the jobsite to feed the data lake for asset health, and allows for the development of electronic code forms with built-in validation to improve quality of compliance data being collected.
Intangibles	Safety is increased as the most current information is at the work site in the mobile device versus a printed procedure.
Avoided Costs	The labor savings on time charging on a toughpad versus re-entering time later in office is 10 mins/day/employee savings from the 15 mins/employee per day it currently takes to enter time. Employees currently take 15mins per day to enter time. 59 Gas Compression employees would save 10mins/day = 171Hour x 230 work days a year x 59 employees = 2,306.9 hours avoided per year * $61 Standard Labor Rate = $140,720.90 Avoided O&M Costs
Risk Mitigation	The project will mitigate the risk of work errors from using outdated procedures especially for performing Gas Compression code work inspections using electronic forms. Electronic forms will improve validation of required inspection data, thereby reducing the risk of MPSC audit findings and possible regulatory fines. It also reduces safety risk by having the ability to have jobsite access to Emergency Plans to meet corporate safety requirements.
Avoided Costs	With this project there are avoided costs in Gas Compression from eliminating paper work package assembly. The time for 6 exempt planners is 2 days per month; 8 planners x 2 days x 8 hours = 128 hours per month. The avoided cost for exempt planners is calculated at 128 hours/month x $48/hour x 12 months = $73,728 per year. Their capital/O&M split is 25/75 which breaks down to avoiding $18,432 in capital and $55,296 in O&M. Six non-exempt admins spend 8 hours/month; 6 admins x 8 hours = 48 hours per month. The avoided cost for non-exempt admins is calculated at 48 hours/month x $25/hour x 12 months = $14,400 per year. Their capital/O&M split is 15/85 which breaks down to avoiding $2,160 in capital and $12,240 in O&M.
Technology Capability	Work Management

Gas Distribution Probabilistic Risk Model

Report Pulled: 11/5/2025 **Item ID: 14010**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas distribution pipeline assets.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

Relative risk models are unit-less measures of risk derived from input information using qualitative data and ordinal scales to produce "risk index" scoring; in simple terms, the relative risk model does not provide true statistical measures. The risk assessment used in the current model provides a score for likelihood, consequence, and risk that is relevant only in comparison to other scores. While the outputs provide a sense of relative risk when comparing one pipeline with another, the scores do not provide quantitative scores for probability, frequency, or expected loss of events. Although pipeline operators commonly use relative risk models, the quality of the relative risk ranking relies on subject matter expert inputs, human inferences, and opinions.

Objectives

Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed pipeline replacement or improvement projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems). Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events; and (2) configure multiple data sources to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed decisions based on improved quality inputs in a measurable model; and (3) provide information for better decisions on Capital project improvements and integrity management. Unlike the current unit-less relative model a probabilistic model will be a unit based risk score, specifically in the unit of dollars, improving efficiency in interpreting risk results for business decisions.

Scope

The project scope encompasses the implementation of a probabilistic risk model for gas distribution. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards.

Alternatives

Alternatives considered for the project include: (1) Implement a custom, Excel-based probabilistic risk model through a consulting effort. This alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". (2) Implement a custom built probabilistic risk model. This alternative was not selected because the custom built solutions analyzed are not mature and have not been widely tested with transmission operators. (3) Implement a SaaS based solution. The option of implementing the SaaS probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven and upgradable technology, and ongoing vendor support.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/9/2026	2/25/2026	12/4/2026	3/24/2027
	In-Service/Go-Live	**Closeout**	
	4/6/2027	5/6/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	$4.479	$0.898	-	-	-	-	-	-	$5.377
O&M	$0.029	$0.182	$0.172	$0.172	$0.172	-	-	-	$0.728
Total Cost of Ownership	$4.508	$1.080	$0.172	$0.172	$0.172	-	-	-	**$6.105**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.360	$0.135	-	-	-	-	-	-	**$0.494**
Outside Services	$0.873	$0.461	-	-	-	-	-	-	**$1.334**
Business Expense/Overheads	$1.475	$0.484	$0.172	$0.172	$0.172	-	-	-	**$2.477**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$1.800	-	-	-	-	-	-	-	**$1.800**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$4.508	$1.080	$0.172	$0.172	$0.172	-	-	-	**$6.105**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.029	$0.182	$0.172	$0.172	$0.172	-	-	-	**$0.728**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.029	$0.182	$0.172	$0.172	$0.172	-	-	-	**$0.728**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$4.479	$0.898	-	-	-	-	-	-	**$5.377**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$4.479	$0.898	-	-	-	-	-	-	**$5.377**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Asset Management
Risk Mitigation	Implementation of a probabilistic risk model mitigates risk through a comprehensive, statistical analysis of threats to pipe segments, ensuring focus on solving the right problems and resolving the highest risk items.
Risk Mitigation	Prevention of distribution incidents (i.e. home explosions) and avoided cost of these incidents: A probabilistic risk model would increase our ability to identify potential incidents before they occur. An incident such as a home explosion can have a significant impact on the company, including the dollars cost to repair the damage as well as the impact to the public's perception of the Company. It is anticipated that there will be a reduction in the potential for types of incidents with this improved tool. Although the model will not necessarily eliminate the possibility that these types of incidents could occur in the future, the model will reduce the likelihood that they will occur because we have a better understanding of our system. The project investment could avoid actual and reputational costs by potential avoiding one of these incidents. In addition the new model will help better quantify the cost of an incident.
Intangibles	Quality improvement - Implementation of a probabilistic risk model provides quantifiable results that are more reliable, transparent, and understandable, rather than relatively ranked; improving confidence in data and leading to improved decision-making for strategic planning, financial planning, and regulatory oversight.
Intangibles	Waste elimination through potential productivity improvements. A true statistical model may eliminate workarounds with the current model that are necessary to support planning efforts by reducing investigation time and increasing user expertise through quantitative analysis and insight to core model functionality.

Gas Distribution ProjectWise

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 10681**

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description NO FURTHER ACTION / LET FALL OFF; ProjectWise is a suite of project collaboration software for engineering projects currently in use as the Company by gas transmission and generation engineering teams. It is capable of bundling, managing and handling the versions of records and documents related to designs, proposals, contract resources and record-keeping. The Gas Distribution ProjectWise project will expand the implementation of the software to gas distribution and be used to facilitate a management of change process for gas engineering design and gas system configuration changes.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

SharePoint and a centralized Company data store are currently used as a data warehouse for gas distribution engineering design documentation. The current solution has limited ability to meet the functionality required for managing and approving the files and drawings that are unique to engineering design work. Gaps include: (1) inability to track design edits and document design change authorization approval; (2) inability to manage multiple outage windows and potential impact of planned projects; (3) inability to track gas system configuration changes, both temporary and permanent; (4) no current standardized structure of project documents for ease of viewing/editing; and (5) no current structure for tracking as-built/final record completion. In addition, the engineering teams lack an effective tool to centralize the management of change processes for gas engineering design and gas system configuration, leading to unapproved changes to projects without proper knowledge and authorization. Without the proper controls and versioning in place, the opportunity for rework is enhanced causing extended project time for completion, negative impacts on other projects and increased costs.

Objectives

Completion of this project will provide value to the Company through: (1) comprehensive documentation of all design review changes from key technical Subject Matter Expert (SME) groups, ensuring that the final design is inclusive of all approved changes; (2) end to end workflow tracking and approval sign-off from initial design and engineering through field operations and final sign-off, providing for a centralized historical record that is traceable and verifiable; (3) consistent gas technical records across project and asset lifecycles; (4) increasing public and employee safety and regulatory compliance with complete and accurate records that are readily accessible and easily searchable; (5) providing visibility to and improving tracking for system outage windows and/or temporary pressure changes/reductions providing the ability to align outage schedules with distribution construction schedules; (6) tracking temporary and permanent gas distribution system configuration changes in a centralized repository; (7) maintaining spatial relationships within drawings and documents such that all documents pertinent to a geographic location can be quickly accessed and maintained; (8) providing a universal system of record for complex operating procedures; (9) creating a universal system of record for all construction prints; (10) centralizing tracking of Supervisory Control and Data Acquisition (SCADA) commissioning and decommissioning activities; (11) tracking project as-built and final project record completion; and (12) providing a centralized repository for document retention, archival and version tracking, resulting in records that are traceable and retrievable. Collectively, these items support the Company's implementation of the American Petroleum Institute (API) Recommended Practice 1173 Pipeline Safety and adherence to regulatory requirements. The project provides additional value by implementing a management of change tool with capabilities that can be replicated in other organizations, including gas engineering metering and regulation, gas system integrity, and gas transmission.

Scope

The scope of this project encompasses implementation of ProjectWise software modules for use by Gas Distribution Engineering. The project will: (1) configure the software modules within the application, and (2) design and develop integrations with other Company systems.

Alternatives

Alternatives considered include: (1) Continue with current SharePoint and shared data store warehousing solution for versioning of Gas Engineering designs and system outage windows. This alternative was not selected because it does not resolve the identified problems. (2) Develop and implement an in-house solution. This alternative was not selected due to costs and lack of expertise in developing a custom solution. (3) Implement ProjectWise software. This alternative was selected for the following reasons: (1) ProjectWise is available in a Software as a Service (SaaS) solution with out of the box capabilities, and (2) ProjectWise aligns with the Company direction as it has been implemented and is in use in other areas of the Company including Generation and Gas Transmission.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/1/2022	3/1/2022	7/1/2022	10/3/2022
	In-Service/Go-Live	**Closeout**	
	11/30/2022	12/15/2022	

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	-	$0.699	$0.491	$0.197	-	-	-	-	$1.387
O&M	$0.200	$0.036	$0.020	$0.011	$0.163	$0.178	-	-	$0.609
Total Cost of Ownership	$0.200	$0.736	$0.511	$0.208	$0.163	$0.178	-	-	**$1.995**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	$0.024	$0.100	$0.157	$0.055	-	-	-	-	**$0.336**
Outside Services	$0.163	$0.566	$0.258	$0.095	-	-	-	-	**$1.082**
Business Expense/Overheads	$0.013	$0.070	$0.096	$0.057	-	-	-	-	**$0.236**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.001	-	-	-	-	-	-	-	**$0.001**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.200	$0.736	$0.511	$0.208	-	-	-	-	**$1.654**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.200	$0.036	$0.020	$0.011	$0.163	$0.178	-	-	**$0.609**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.200	$0.036	$0.020	$0.011	$0.163	$0.178	-	-	**$0.609**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.699	$0.491	$0.197	-	-	-	-	**$1.387**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.699	$0.491	$0.197	-	-	-	-	**$1.387**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Asset Management
Risk Mitigation	Implementation of the solution supports the Company's adoption of the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems) that is being implemented as part of the Company's Gas Safety Management System.
Risk Mitigation	Increased public and employee safety and regulatory compliance with complete and accurate records that are readily available through the new solution.
Risk Mitigation	Mitigate the risk associated with incorrect, incomplete or missing design changes by establishing document retention, archival and version tracking resulting in records that are traceable and verifiable.
Risk Mitigation	Mitigate the risk with having different versions of engineering designs by providing a single source of truth for Gas Distribution technical records.
Risk Mitigation	Mitigates the risk of losing or not finding project documents because the new solution has the ability to maintain spatial relationships within drawings and documents such that all documents pertinent to a geographical location can be quickly located and maintained

Gas Leak Asset and Work Management

Report Pulled: 11/5/2025 Item ID: 6763

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will implement functionality to automate gas leak compliance tasks and track all gas leak activity in the Gas Geographic Information System (GIS), creating a single system of record for gas leak data, and providing a spatial display of leak data to improve leak management visibility.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement The gas leak process utilizes two systems to complete work and monitor gas leak compliance: SAP and Inspection Manager. Gas leak information is manually transferred between SAP and Inspection Manager and vice versa by compliance technicians. An internal audit identified 7818 leak orders, resulting in a 61% defect rate, with inconsistent information recorded between SAP and Inspection Manager. Lack of quality controls to help ensure accurate leak information across systems may inhibit managements ability to effectively monitor gas leaks and could result in leaks not being re-classified or repaired in a timely manner. This has regulatory compliance and safety impacts such as missed compliance dates which may result in fines and increased public safety risk resulting from untimely or missed leak repairs.

Objectives The project provides value to both the Company and its customers, including: (1) improving productivity and leak location accuracy; (2) enabling near-real time reporting and automated metric reporting on open leak backlog; (3) creating one system of record for all leak assets in GIS; (4) implementing quality improvements for scheduling and routing of leak crews; (5) reducing risk of future audit findings or non-compliance resulting from duplicate open leak orders; (6) optimizing resource allocation for gas service posting team by eliminating manual posting of leak repairs in GIS; (7) optimizing resource allocation for the gas compliance team by eliminating the posting of leak repairs in Inspection Manager; and (8) streamlining the leak survey workflow to improve the human struggle caused by use of paper maps and manual processes for leak order tracking.

Scope The scope of this project includes: (1) design and implementation of an integration between the asset system and the work management system to create, update, and manage leak maintenance, repair, and emergent orders and inspection schedules through the Enterprise Service Bus (ESB) or similar; (2) configuration of new SAP and Service Suite work order completion forms required to support new work processes; (3) updating the business intelligence dataset to support reporting; (4) reconfiguring workflows in Inspection Manager to capture all leak data from GIS; (5) design and implement a solution to replace the use of paper maps in the leak survey process; (6) implementing a workflow to communicate first time and repeated customer contacts for a given leak; (7) implementing an open leak order geospatial map of all open leak orders, utilized across office and field technology; (8) creating a system indicator that flags duplicate leak orders at the same location; and (9) implementing functionality to provide visibility through a listing of all open leak orders within a specified radius.

Alternatives Five alternatives were considered for the project: (1) Implement a Quality Assurance/Quality Control (QAQC) process to ensure data is consistent between both SAP and Inspection Manager. This alternative was not selected because it requires an increase in labor costs for manual reporting and data checks. In addition, as demonstrated by the audit, manual processes, even manual QAQC processes, are subject to human error, and each error creates safety and noncompliance risk. (2) Implement a Robotic Process Automation (RPA) to sync data. This solution was explored but is not viable because the business processes are too complex. (3) Implement a new GIS-based compliance solution that can be integrated with SAP. This alternative is too costly, given recent investment in the current Inspection Manager solution. (4) Defer project implementation. The alternative selected is to implement this project now, rather than later, as a result of recent gas leak red audit findings. (5) Implement functionality to automate gas leak compliance tasks and track all gas leak activity in the GIS. This alternative was selected because it leverages existing solutions in a new way, optimizing resources and technology investment. The use of Cloud technology was not considered due to the enhanced functionality being added to systems and applications that are already on-premise.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
11/1/2023	12/12/2023	4/1/2024	11/1/2024
	In-Service/Go-Live	**Closeout**	
	11/30/2024	12/18/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.005	$0.001	$0.013	$0.013	$0.013	$0.013	$0.013	-	$0.072
Total Cost of Ownership	$0.005	$0.001	$0.013	$0.013	$0.013	$0.013	$0.013	-	**$0.072**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.004	$0.001	-	-	-	-	-	-	**$0.006**
Outside Services	$0.000	$0.000	-	-	-	-	-	-	**$0.000**
Business Expense/Overheads	$0.000	-	-	-	-	-	-	-	**$0.000**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.005	$0.001	-	-	-	-	-	-	**$0.006**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.005	$0.001	$0.013	$0.013	$0.013	$0.013	$0.013	-	**$0.072**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.005	$0.001	$0.013	$0.013	$0.013	$0.013	$0.013	-	**$0.072**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Asset Management
Avoided Costs	Gas Distribution and Service leak classification reasonable expectancy (time estimate for completing the work) would be reduced due to better information being available to find the leak, because the employees will already know where the leak is versus spending time trying to find the leak again. It is estimated that annually approximately 2,500 leak investigation orders are duplicates from already existing leak orders 40% of the leaks are investigated by Distribution crews, and 60% are investigated by service workers. We could save 500 hours in reduced distribution crew labor, and 750 hours in reduced service worker labor. The expectation is that we would reduce the reasonable expectancy by 50% for each duplicate leak classification. 2,500*40%*1 hr*50%= 500 hours saved for distribution crew labor. 2,500*60%*1 hr*50%= 750 hours saved for service worker labor.
Intangibles	Implementation of a solution to replace the use of paper maps in the leak survey process will lead to improvements for scheduling and routing of leak crews.
Intangibles	Implementation of additional integration between the asset system and work management system for leak maintenance, repair and inspections will lead to improved productivity allowing gas compliance personnel to focus activity on higher value leak analysis versus time spent on data entry.
Risk Mitigation	Implementation of additional integration between the asset system and work management system will reduce the risk of future audit findings or non-compliance due to a reduction in data inconsistencies between the leak management and work order management applications
Risk Mitigation	Implementation of the application changes will reduce the risk of regulatory non-compliance due to a reduction in the duplication of open leak orders.
Avoided Costs	Leak Survey Compliance Technician would avoid 12 minutes per order of human struggle searching for new leak orders that should be tied to an already open deferred leak order allowing them to focus on higher priority work with the time saved.
Intangibles	Reconfiguring workflows in Inspection Manager to capture all leak data from GIS will enable creating one system of record for all leak assets in GIS.
Avoided Costs	Reduce gas compliance technician labor through the reduction in hours to support gas service GIS team by 2,000 hrs for compliance technician (nonexempt) to research and link leak repair orders.
Avoided Costs	Reduce gas compliance technician labor through the reduction in hours to support gas service GIS team by 6,100 hrs for compliance technician (nonexempt) to research and manually link leak classify orders to leak assessment orders in Inspection Manager and SAP.
Intangibles	Updating the business intelligence data-set will support more automated reporting on the open leak backlog.

Gas Nominations Replacement Solution

Report Pulled: 11/5/2025 **Item ID: 11767**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Nominations Replacement Solution project will replace the existing gas nominations application with a system that is capable of scheduling and tracking the receipt and redelivery of all the natural gas supply that flows onto and through the Company's gas transmission system to customers.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement The current gas nominations application has software and vendor support issues since its original implementation including major security risks, inadequate vendor support and issue response time, user inefficiencies and reporting issues, and various technical difficulties that make upgrades and contract administration challenging. Some of the problems have created waste by reverting to manual workarounds. The ongoing issues create a risk that can result in a disruption to the scheduling and tracking of natural gas supply, which in turn may create customer safety risks, result in breaches of confidential customer data, cause significant financial harm, or could cause damage to the Company's reputation. The Gas Nominations team is seeking a replacement application that will provide the full functionality required to maintain supply to our customers and address the issues identified with the current application.

Objectives The project will add value by: (1) mitigating the security risk associated with the existing software; (2) improving response to abnormal situations; and (3) reducing end user inefficiencies. In addition, the project will create value by eliminating waste and manual steps to create accurate reporting for gas suppliers to change gas allocations for each gas supplier, to support the implementation of the Operational Flow Order provisions in our tariffs, and to update Gas Transportation contract values required by tariff.

Scope The scope of this project includes: (1) replacing the existing gas nominations application; (2) developing reporting capability based on standard in-house software; and (3) retiring the legacy system (hardware and software).

Alternatives Alternatives considered include: (1) upgrade the existing application to the latest version; Option 1 was not selected because it requires a significant investment, does not mitigate security risks, and does not meet analytics, reporting, usability and accessibility needs. (2) Develop a custom in-house solution; Option 2 was not selected due to the complexity of the needed solution and the resources that would have to be involved. (3) Replace the existing application with a standard software offering, which may be a cloud offering. Option 3 was selected to increase functionality and minimize security risks inherent in the existing software. If this project is not completed then the inefficiencies, administrative challenges, and major system security risks of not meeting our IT standards identified above would not be addressed.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/4/2026	5/26/2026	9/1/2026	2/28/2027
	In-Service/Go-Live	**Closeout**	
	3/1/2027	4/5/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	$1.118	$0.265	-	-	-	-	-	-	$1.383
O&M	$0.152	$0.078	$0.050	$0.050	$0.050	-	-	-	$0.378
Total Cost of Ownership	$1.270	$0.342	$0.050	$0.050	$0.050	-	-	-	**$1.761**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.452	$0.130	-	-	-	-	-	-	**$0.582**
Outside Services	$0.270	$0.077	-	-	-	-	-	-	**$0.347**
Business Expense/Overheads	$0.276	$0.085	-	-	-	-	-	-	**$0.361**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.030	-	-	-	-	-	-	-	**$0.030**
Licenses, Permits & Fees	$0.240	-	-	-	-	-	-	-	**$0.240**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$1.268	$0.293	-	-	-	-	-	-	**$1.561**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.152	$0.078	$0.050	$0.050	$0.050	-	-	-	**$0.378**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.152	$0.078	$0.050	$0.050	$0.050	-	-	-	**$0.378**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.118	$0.265	-	-	-	-	-	-	**$1.383**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.118	$0.265	-	-	-	-	-	-	**$1.383**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	1 - Energy Portfolio Planning
Risk Mitigation	Implementing an industry standard solution will reduce our risk of providing ad-hoc reporting for our customers. Current technology is not conducive to ad-hoc reporting. Frequently, it is necessary to pull information from the Gas Nominations application, but we are unable to do so due to database structure.
Avoided Costs	Manual labor required to update records and calculate billing efforts can be avoided during an Operational Flow Order procedure. Assumption is that 200 hours per event could be avoided with one event per year.
Avoided Costs	Manual labor to review and update gas transportation tariff customer contracted values can be avoided through the use of a mass import/export function. Assumption is that 200 hours per year can be saved.
Avoided Costs	Manual workarounds required to change gas allocations for each gas supplier will be reduced when situations require gas supply restrictions. Assume 10 hours per event can be saved and 3 events per year, so 30 hours of manual labor can be saved.
Avoided Costs	Reduced reporting and end user inefficiencies will remove the human struggle in the Gas Nominations area when its resources have to take on additional work when existing reports don't work. Assumption is that the Gas Transportation & Customer Choice team could save 250 hours of manual labor per year (assumes 5 hours per week for 50 weeks) in assisting customers with reporting issues.
Risk Mitigation	Replacement of the existing solution will mitigate security risks associated with the slowness of the current software vendor to respond to upgrading its base software to include the most recent security patches from software vendors
Avoided Costs	Software enhancements/updates are very onerous and require a significant investment in time and resources. Additionally, these enhancements require vendor involvement to assist with the upgrade. Time savings is estimated at 3,000 hours across IT and Gas Engineering and Supply.
Avoided Costs	User administration requires approximately 10 hours per month to remind users of password expiration or resetting of passwords. If automated, this could save an additional 120 hours per year.

Gas SCADA Software Solution

Report Pulled: 11/5/2025 **Item ID: 6756**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Supervisory Control And Data Acquisition (SCADA) software solution project will replace the current Gas SCADA Software with a more standardized software package enabling the Company to more efficiently meet Federal and MPSC requirements.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement

The current Gas SCADA software solution was originally implemented in 2000 and was based on the gas system requirements at that time. While the solution has been maintained since its implementation, the Company's gas system has outgrown the current capabilities. As the solution ages, there is increased effort required to address obsolete application and database software architecture, and enhancements to the system are limited. To address the capability gaps, custom interim fixes and integrations have been developed where each requires maintenance and support. This environment adds complexity and cost to solution upgrades and troubleshooting issues. The current Gas SCADA solution will limit the ability to invest in digital solutions for increased system health monitoring and preventative maintenance capabilities due to the complexity to integrate these future capabilities with it.

Objectives

The project will add value by: (1) reducing risk of non-compliance by improving the ability to document and follow State and Federal requirements, improving customer safety; (2) improving efficiency and reliability when performing routine software upgrades, because standard out-of-the-box software has less risk of breaking during upgrades, as opposed to more custom-coded software; (3) reducing maintenance costs due to fewer individual software programs and less custom code; (4) improving Gas Control management capabilities that support the Federal and MPSC requirements for gas pipeline and Gas Distribution companies; (5) improving reliability by using proven gas industry standardized software with configuration features, rather than a fully customized system that has the possibility of being impacted by the next version update; (6) purchasing standard, out-of-the-box software that meets a high percentage of requirements and avoids multiple custom applications and specially coded programs to achieve results; and (7) providing a basis for capturing data required for use in computer-based preventative maintenance programs and more predictive technologies. In addition, implementing industry-specific software helps the collective gas industry users to encourage the vendor development of future version enhancements, which adds more value to gas industry users. The comprehensive Gas SCADA system is used to monitor and control the operating conditions of the transmission and distribution gas systems. The Gas SCADA system includes remote terminal units (RTUs), field devices (i.e. valves, meters, odorizers), and computers running SCADA software. This scope covers the Gas SCADA software solution only.

Scope

The project scope includes the following: (1) significant planning, including consulting assistance, to define the implementation strategy for the effort, given the magnitude of the technology effort; (2) selection and implementation of a new Gas SCADA software solution; (3) planning of a phased rollout of new hardware and software; and (4) retirement and decommissioning of the legacy gas SCADA solution and equipment once the new system is fully tested and operational.

Alternatives

Alternatives considered include: (1) continue to maintain the current solution, at the risk of increasing reliability issues that result in controlling and monitoring the Company's gas system; (2) invest in enhancing the existing Gas SCADA software solution which would introduce additional custom development and more specialized functions that may not be supported in future vendor releases; and (3) replace the solution with a gas SCADA software solution that meets requirements to support the NGDP. Alternative three has been selected to ensure sustainability for this critical solution. The current legacy system is operating at well beyond its original design specification, so the potential points of failure are not fully known or understood. If the SCADA project is not completed, the legacy system could become unstable and impact Gas Control's ability to operate and monitor real-time system conditions, maintain safe operations, and comply with regulatory requirements. It could also impact the ability to commission new facilities which require remote monitoring or control or cause the need for 24/7 manual field monitoring of certain facilities.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/1/2022	10/31/2023	5/30/2024	6/24/2024
	In-Service/Go-Live	**Closeout**	
	2/17/2026	4/30/2026	

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	-	$1.950	$3.404	$6.632	$1.309	-	-	-	$13.295
O&M	$0.632	$0.161	$0.248	$0.625	$0.671	$0.300	$0.300	$0.600	$3.537
Total Cost of Ownership	$0.632	$2.111	$3.652	$7.257	$1.980	$0.300	$0.300	$0.600	**$16.832**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	$0.045	$0.203	$0.602	$0.596	$0.411	-	-	-	**$1.856**
Outside Services	-	$0.221	$1.284	$3.429	$0.853	-	-	-	**$5.787**
Business Expense/Overheads	$0.587	$0.032	$0.240	$0.682	$0.716	-	-	-	**$2.257**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.947	$1.005	$0.058	-	-	-	-	**$2.010**
Licenses, Permits & Fees	-	$0.709	$0.523	$2.491	-	-	-	-	**$3.723**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.632	$2.111	$3.652	$7.257	$1.980	-	-	-	**$15.632**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.632	$0.161	$0.248	$0.625	$0.671	$0.300	$0.300	$0.600	**$3.537**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.632	$0.161	$0.248	$0.625	$0.671	$0.300	$0.300	$0.600	**$3.537**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$1.950	$3.404	$6.632	$1.309	-	-	-	**$13.295**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$1.950	$3.404	$6.632	$1.309	-	-	-	**$13.295**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	Medium	Medium	Server and Network Architecture is not current and does not meet current business needs due to: (1) SCADA Software and Operating System limitations require operation of Citect SCADA under a console session with administrative privileges which increases security risk; (2) SCADA Input/Output (I/O), SCADA Trend, and SCADA Alarm processes are hosted on the server as individual executables rather than services; and (3) SCADA functionality is hosted on a single server (with remote redundancy). Additional inefficiencies with the current solution include: (1) SCADA Services for Human Machine Interface (HMI), I/O, Trend, Alarm, Report; (2) file Services for Gas Control Procedure Documents, SCADA Configuration and Procedure Documents; (3) database Services - Reports, SCADA Configuration, SCADA HMI Configuration, SCADA HMI Navigation; (4) failover to Backup SCADA I/O requires manual processes and increases overall system outage time; and (5) current configuration is not appropriate for migration to an off-site data center

OTHER VALUE

Type	Description
Intangibles	A new SCADA software solution offers ability to: (1) improve On Screen Data quality; (2) implementation of Alarm Prioritization based on alarm severity; (3) GIS integration; (4) ability for schematic diagrams to include direction of flow; and (5) use of better screen resolution
Technology Capability	Energy Portfolio Planning
Avoided Costs	Gas Controller workload reduction due to the enhanced capabilities described within the new standardized software would be realized. New software functionality includes the ability to input data for log/archive purposes within the SCADA user interface. Current Controller documentation software, which exists on a separate corporate system and requires the Controller to move between secure SCADA environment and corporate computer systems, could be incorporated as a single working environment with the new SCADA system. Assumption is that Control Room is 24x7, 3 controllers x 24 hours x 10 min/hr time saved
Risk Mitigation	Implementation of a new SCADA software solution will mitigate the risk that our current SCADA solution may limit our ability to modernize the remote terminal unit (RTU) and electrical systems at city gates and regulator stations due to the customization that may be required to support this new equipment.
Risk Mitigation	Implementation of a new SCADA software solution will mitigate the risk with our current SCADA solution encountering performance issues as additional SCADA installations are completed at regulator stations. The Over Pressure Protection (OPP) program plans to install SCADA at 16-22 stations annually to reduce the possibility of MAOP (Maximum Allowable Operating Pressure) exceedance. The program has yielded past success as being partly responsible for decreasing the number of MAOP exceedances from over 30 annually to 1 in 2019.
Risk Mitigation	The current SCADA software solution requires changes to be performed in a linear fashion, which will create greater risk in implementing the Natural Gas Delivery Plan initiatives for adding remote control monitoring capabilities and accelerating the retirement of vintage materials
Intangibles	Upgrade or replacement of the old Gas SCADA software solution will improve stability and help to avoid issues with lost and unrecoverable data which could be considered non-compliant in reporting to the MPSC.

Gas Storage Probabilistic Risk Model

Report Pulled: 11/5/2025 **Item ID: 10513**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description NO FURTHER ACTION / LET FALL OFF; The Gas Storage Probabilistic Risk Model project will implement a risk analysis model for comprehensive predictive risk analysis and modeling on gas storage wells.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

The current Gas Storage model is a relative risk model that equates risk to dollars from input information using qualitative data and ordinal scales to produce a "risk ranking". In simple terms, the relative risk model is not capable of creating a statistically significant result. The risk assessment used in the current model provides a ranking for likelihood, consequence, and risk that is relevant only in comparison to other rankings. While the outputs provide a sense of relative risk when comparing one well to another, the ranks do not provide anything qualitative that relates to the failure of wells. Also, the current transmission model does not meet the requirements of the MPSC, as indicated in a letter of noncompliance (dated January 15, 2019), and rule-making for storage systems has historically followed transmission rule-making. Lastly, the current model introduces risk in PHMSA findings as a non-probabilistic model.

Objectives

Completion of this project will provide value to both the Company and its customers. Each party will benefit from safety improvements and risk mitigation through statistically-based risk modeling that leads to more informed well improvement projects and improved targeted plug and abandonment projects. Implementing probabilistic risk modelling supports the changes planned for in the Company's Natural Gas Delivery Plan (NGDP), including the Company Gas Management Safety System (GSMS). GSMS incorporates the Company's plan to implement the American Petroleum Institute (API) Recommended Practice 1173 (Pipeline Safety Management Systems).
Additionally, the implementation of a probabilistic risk model will: (1) calculate quantitative risk scores that include measures of probability, frequency, or expected loss of events, and (2) configure multiple data sources, to make advanced statistical calculations for interacting threats, both of which allow the Company to make more informed financial and strategic decisions based on improved quality inputs and mitigate the risk of PHMSA findings. The probabilistic model will rank the wells in risk-associated dollars making it easier to interpret risk results for the purpose of making business decisions. Furthermore, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has identified the probabilistic risk model as a potential best practice for storage operators over other risk models (PHMSA Pipeline Risk Modeling white paper, dated May 9, 2018), so the project adds value by aligning with industry best practices.

Scope

The project scope encompasses the implementation of a probabilistic risk model for gas storage wells. The project will: (1) install and configure risk model; (2) configure multiple data sources; and (3) develop reports and dashboards.

Alternatives

Alternatives considered include: (1) continue the use of the relative risk model, but invest in substantial effort to continually manually managing data inputs and quality checks (2) implement a custom, Excel-based probabilistic risk model through a consulting effort; (3) implement an on-premise probabilistic risk model, and (4) implement a cloud-based model. The first alternative was not selected because although the manual effort is possible, it is becoming increasingly difficult to complete as the model utilizes more data sources that need to be annually updated and validated. The second alternative was not selected because although the effort minimizes the IT cost of the project, the model requires the creation of secondary data sources, leading to multiple "sources of truth". The on-premise solutions analyzed are not mature and have not been widely tested with transmission operators, so alternative three was not selected. The fourth alternative of implementing the cloud-based probabilistic risk model was chosen because it is the most cost-effective long-term implementation approach, providing commercial, off-the-shelf capabilities, industry-proven technology, and an ongoing vendor support and upgraded model.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/3/2023	3/1/2023	7/31/2023	8/31/2024
	In-Service/Go-Live	**Closeout**	
	9/30/2024	10/31/2024	

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	-	$0.908	$0.617	-	-	-	-	-	$1.525
O&M	-	$0.115	$0.000	$0.001	$0.103	$0.103	-	-	$0.324
Total Cost of Ownership	-	$1.023	$0.618	$0.001	$0.103	$0.103	-	-	**$1.849**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	-	$0.003	$0.002	$0.000	-	-	-	-	**$0.005**
Outside Services	-	$0.466	$0.555	$0.001	-	-	-	-	**$1.022**
Business Expense/Overheads	-	$0.023	$0.061	-	-	-	-	-	**$0.084**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.532	-	-	-	-	-	-	**$0.532**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$1.023	$0.618	$0.001	-	-	-	-	**$1.642**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.115	$0.000	$0.001	$0.103	$0.103	-	-	**$0.324**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.115	$0.000	$0.001	$0.103	$0.103	-	-	**$0.324**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.908	$0.617	-	-	-	-	-	**$1.525**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.908	$0.617	-	-	-	-	-	**$1.525**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Asset Management
Avoided Costs	Assumes 540 hours in annual avoided labor due to reduced labor efforts in Gas Engineering & Supply areas for running existing risk models. The new model decreases 10-15 hours of data management and analysis per well, and assumes about 40-50 wells per year. The relative risk model utilizes large sets of data that are not consumed by any other company stakeholders. These are scoring-based data sets that are updated every time there is a change to the pipeline and periodically throughout the year. It is estimated that approximately 540 hours a year are spent updating these data sets, which can be avoided after the new model is implemented.
Risk Mitigation	Implementation of a probabilistic risk model mitigates risk through a comprehensive, statistical analysis of threats to wells, ensuring focus on solving the right problems and resolving the highest risk items.
Risk Mitigation	Prevention of wells failures and voided cost of ruptures: A probabilistic risk model would increase our ability to identify potential failures before they occur. A failure such as a well blowout can have a significant impact on the company, including the dollar cost to repair the damage as well as the impact to the supply of gas to the system and the public's perception of the Company and would cause a major unplanned release of methane. It is anticipated that there will be a reduction in the likelihood of these types of failures with this improved tool. Although the model will not necessarily eliminate the possibility that these types of ruptures will occur in the future, the model will reduce the likelihood that they will occur because we will have a better understanding of our system. The project investment could avoid large unplanned methane releases, actual costs, and reputational costs by potentially avoiding one of these failures, which has been estimated to cost the Company over $300 million. In addition, the new model will help better quantify the cost of a blowout.
Intangibles	Quality improvement - Implementation of a probabilistic risk model provides quantifiable results that are more reliable, transparent, and understandable, rather than relatively ranked; improving confidence in data and leading to improved decision-making for strategic planning, financial planning, and regulatory oversight.
Intangibles	Waste elimination through potential productivity improvements. A true statistical model may eliminate manual efforts that are necessary to populate and maintain the current excel-based model by pulling from populated databases that are centrally maintained by the data owners instead of a singular person.

Gas Supervisory Control and Data Acquisition (SCADA) Platfor: Report Pulled: 11/5/2025 Item ID: 14034

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Supervisory Control and Data Acquisition (SCADA) Platform Upgrade project will upgrade the software every 2 years. This will include the upgrade of the underlying operating systems and database platforms that the software resides on as needed to maintain vendor support. This system is used to monitor and control natural gas transmission and distribution field equipment. This project will add additional features and enhancements to Gas Monarch, the Company's Gas SCADA platform that improves efficiency and reliability

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement Running on an older version of the Gas SCADA Software could have potential impacts on the reliability and resiliency of the natural gas transmission and distribution system, as reliability metrics depend upon system availability. Maintaining an older version of the software creates risks associated with vendor responsiveness in addressing problems, as they arise. It will also take more effort to support any upgrades in the future because of difficulties resulting from longer durations between upgrade efforts. If upgrades are delayed, additional full-time resources will be required for the year upgrades occur to address upgrade complexities.

Objectives Upgrading the Gas SCADA software adds value to the Company by ensuring that problems are promptly addressed when they occur. Additionally, the upgrade includes enhancements and fixes to the core product that support the resiliency of gas delivery, ensuring that customers are receiving the energy they need when they need it. Also, the transmission and distribution system depends on availability of the gas system, staying current with the solution provider upgrades is critical to the resiliency of both systems.

Scope The scope of this project is an upgrade to the Gas SCADA software, which encompasses the following: (1) upgrading the application software; (2) upgrading the underlying operating systems and database platforms; (3) implementing new functionality for improved value to the Company; (4) making necessary configuration changes; and (5) updating documentation related to the integration changes.

Alternatives Alternative considered include: (1) Defer the biennial upgrade of the SCADA application. The Company targets SCADA biennial application upgrades to stay within two versions of the current application state to maintain application stability and cyber security, given the critical nature of the SCADA system. This alternative was not chosen due to increased security risk and need for vendor support of the application. (2) Alternative Vendor solution. This option was not chosen because the move from our current vendor would be time consuming and costly. It could also introduce instability as any alternative solutions have not been proven operationally. (3) Do nothing. This option was not chosen due to the critical nature of these systems and the potential operational risks associated with operating on an unsupported solution. (4) Implement a cloud solution. This option was not chosen as our internal security requirements do not allow us to host SCADA systems in the cloud. (5) The option chosen is to complete the upgrade project with associated software necessary to complete the project that will deliver new functionality for improved value.

DATES (phase end)

Initiation 3/8/2027
Project Plan & Scope Definition 3/19/2027
In-Service/Go-Live 2/25/2028
Final Engineering, Planning & Design 6/25/2027
Closeout 3/24/2028
Execution 2/25/2028

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	$0.519	$0.506	-	-	-	$1.025
O&M	-	-	-	$0.157	$0.156	$0.100	$0.100	$0.100	$0.612
Total Cost of Ownership	-	-	-	$0.675	$0.662	$0.100	$0.100	$0.100	**$1.637**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	-	-	$0.138	$0.184	-	-	-	**$0.322**
Outside Services	-	-	-	$0.100	$0.250	-	-	-	**$0.350**
Business Expense/Overheads	-	-	-	$0.338	$0.128	-	-	-	**$0.465**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	-	-	$0.575	$0.562	-	-	-	**$1.137**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	$0.157	$0.156	$0.100	$0.100	$0.100	**$0.612**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	$0.157	$0.156	$0.100	$0.100	$0.100	**$0.612**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	$0.519	$0.506	-	-	-	**$1.025**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	$0.519	$0.506	-	-	-	**$1.025**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Material Weakness in IT General Computer Co	High	Medium	Maintaining the SCADA software will minimize the risks associated with unreliable monitoring.

OTHER VALUE

Type	Description
Avoided Costs	Avoid 1 FTE from OT that will be required if the upgrade is delayed. This a 1 year FTE only.
Technology Capability	Expanded Technical Capacity. Minimize risk of maintaining associated applications for improved monitoring capabilities.

Gas T&D Historian

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 6757**

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Transmission and Distribution (T&D) Historian project will replace the current historian for Gas T&D, eDNA (a traditional Supervisory Control and Data Acquisition (SCADA) historian product from Schneider Electric), and migrate to the standard OSIsoft PI enterprise historian system. The PI system is a suite of software products that are used to collect, store, view, analyze, and share operational data with system users and subject matter experts.

Portfolio Gas Delivery Systems > Gas Engineering & Supply > IT Projects > IT Projects > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement The historian for Gas Transmission and Distribution resides on a decades old platform and is not the Company's historian standard. Data access is cumbersome, requires multiple tools to access it, and does not provide for the storing, analysis or visualization of operational data in a timely manner with appropriate change management control. With the implementation of smart meters, the Company standardized on the more robust OSIsoft PI historian which is used for: (1) Renewable Generation; (2) Electric T&D; and, (3) Smart Energy. The Gas T&D historian has yet to be migrated to OSISoft PI, and the eDNA gas data has limited accessibility and usability in its current state and is no longer supported by the vendor. In addition, maintaining the older platform along with the new system requires duplicate resources and skills. This project will create a more accessible and centralized data source with better controls that can be leveraged as the system of record.

Objectives The project will add value for both Gas Engineering and Gas Operations organizations within the Company by: (1) informing decision-making based on real-time data; (2) improving real-time situational awareness of Operations personnel for information that does not need to be monitored by Gas Control; (3) improving the ability to respond to abnormal situations that do not require immediate intervention through that direct communication to Operations personnel; (4) providing information for the development of proactive analytics to reduce potential catastrophic events; (5) streamlining data access through visualization and analytics; and (6) reducing the waste of using multiple interfaces to interpret data. From an IT perspective, consolidating to one standard historian platform will result in savings in hardware, software, maintenance, resources and training.

Scope This scope of this project includes: (1) replacing the eDNA Gas T&D historian, a traditional SCADA historian, and migrating to the enterprise historian, OSIsoft PI; (2) developing analytics, visualization and reporting capabilities to support tracking of metrics and making operational decisions; (3) replacing the decades-old Microsoft Access-based custom Daily Gas Reports solution; and (4) retiring the legacy Gas T&D eDNA system (hardware and software).

Alternatives An alternative considered for the project was to (1) upgrade eDNA Gas Historian to the latest version. This option was not selected because it requires a significant investment, and does not meet analytics, reporting, usability and accessibility needs as well as the software owner has announced the "sunset," for this software. Furthermore, the Company standard for historians is OSIsoft PI and maintaining two platforms results in redundant efforts in training, support personnel and technology. (2) The option to replace eDNA with the Company standard OSIsoft PI historian was selected to eliminate duplicate training, support personnel, and technology, and to leverage the more robust data analytic capabilities in the OSIsoft PI tool set. Currently the plan is to implement the Gas T&D Historian with the Gas SCADA Software Solution to eliminate the need to have duplicative historians while the Gas SCADA Software Solution is being implemented. If this project is not completed, an interruption of our operational data reporting capabilities could occur and could result in a non-compliance and could potentially interrupt certain volumetric accounting and billing functions.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
4/15/2024	5/27/2024	6/10/2024	7/15/2024
	In-Service/Go-Live	**Closeout**	
	2/16/2026	4/30/2026	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	$0.456	$0.360	$0.051	-	-	-	-	$0.867
O&M	-	$0.099	$0.021	$0.019	$0.100	$0.100	-	-	$0.339
Total Cost of Ownership	-	$0.555	$0.381	$0.070	$0.100	$0.100	-	-	**$1.206**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	-	$0.027	$0.097	$0.022	-	-	-	-	**$0.146**
Outside Services	-	$0.001	$0.205	$0.033	-	-	-	-	**$0.239**
Business Expense/Overheads	-	$0.006	$0.070	$0.010	-	-	-	-	**$0.086**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.000	$0.010	$0.005	-	-	-	-	**$0.015**
Licenses, Permits & Fees	-	$0.521	-	-	-	-	-	-	**$0.521**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$0.555	$0.381	$0.070	-	-	-	-	**$1.006**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	$(0.051)	$(0.150)	-	-	-	-	**$(0.201)**
	Initial	-	$0.099	$0.021	$0.019	$0.100	$0.100	-	-	**$0.339**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.099	$(0.030)	$(0.131)	$0.100	$0.100	-	-	**$0.138**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.456	$0.360	$0.051	-	-	-	-	**$0.867**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.456	$0.360	$0.051	-	-	-	-	**$0.867**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.858

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Gas Distribution System	High	Low	Avoid misstating cost of gas sold reducing company reputation risk. PI provides better controls for daily reporting and analysis, which reduces risk of misstating the cost of gas sold. The financial risk of misstating the cost of gas sold is $3,150,000 a year. This assumes: – Current CMS revenue of $6 billion – Misstated cost of gas sold was $60,000,000 – Misstated cost of gas was > 10% corporate threshold for having to restate financials – 282.5 million stock volume * $44.63 stock price (5/15/2018) – 1% probability of misstatement occurring – 50% probability being required to restate financials – 5% stock price lost (this occurred circa 2001) 282.5 million * $44.63 = $12.6 billion $12.6 billion * 5% = $630,000,000 $630,000,000 * 1% * 50% = $3,150,000
Technology Obsolescence	High	Medium	eDNA is multiple versions behind. The company has been awaiting for funding to transition to the company standard, Pi Historian.

OTHER VALUE

Type	Description
Avoided Costs	$10,000 avoided cost for Distribution System Pressure Exceeds Limit Report with benefit of being able to identify more MAOP exceedance events and be more proactive on the reporting of them which supports public safety, company reputation, and compliance
Avoided Costs	20 hrs/yr time savings in Calibration Bottle Gas Process. Average of 10 Calibration Bottle Exchanges per year, 3 hrs per Calibration Gas Order. PI software will be need to interface with SAP. Using PI, Gas Measurement Technician (GMT) Specialist would just need to review, approve, and submit the order to the vendor (0.5 hrs), track bottle delivery (negligible), and install (0.5 hrs).
Avoided Costs	- 45 hrs/yr time savings in Carrier (Helium) Bottle Gas Process. Average 90 Carrier Bottle Exchanges per year, 1 hr per Carrier Gas Order. PI software will need to interface with SAP. Using PI,
Avoided Costs	78 hrs/yr time savings for importing flow, pressure, and temperature data for pig run preparation, outage preparation, and pig run reporting as well as creating custom tracking sheets using real-time data.
Avoided Costs	Avoid additional Gas Control headcount - Replacing the DGR Database with a more robust PI historian will reduce daily reporting time and effort each month while providing results that are more accurate and available. (2 Gas Controllers * 1 hr/day * 365 days/yr = 730 hrs/yr)
Avoided Costs	Avoided IT Operational Technology Labor when eDNA retired, Savings from consolidating from two supported historian platforms to one: 6 hours per server times 6 servers saved from Critical Infrastructure Systems team, 160 hours saved from the effort that would be required to migrate to the new hardware and upgrading eDNA to the legacy fork of the software, including testing, 500 hours saved from not having to migrate eDNA to the modern architecture (InStep), 300 hours saved from not having to migrate custom (.NET 2.0) interfaces to new version of eDNA (SCADA to eDNA, eDNA to FlowCal, eDNA to Maximum Allowable Operating Pressure (MAOP) data)
Avoided Costs	Avoided Project to move forward to build a replacement for the DGR (Daily Gas Reports) Access Database [$300,000]
Technology Capability	Electric T&D, Gas T&D, Generation
Intangibles	Gas Control - Replacing the Daily Gas Reports Database with a more robust PI historian will enable the ability to remove non-PHMSA mandated monitoring from Gas Control SCADA and enhance public safety through reduction in Odorizer issues.
Avoided Costs	Gas Measurement Engineering 80 hrs/yr time savings through more efficient data analysis.
Avoided Costs	Total of $46,961, projected cost avoidance from IT work related to CITECH for Non-Code Preventive Maintenance. (Based on 2019 work order data totaling $62,615/yr then reducing that by a total of 75% over three years). Projected future waste reduction in time saved annually by avoiding on site facility visits for equipment issue diagnosing is estimated at 183 hrs/yr ($18,117/yr). (Based on 2017 data which was 244 hrs , $24156/yr and reducing that by 25%). Assuming this to be 75% reduction in time charged (some time is still required for reviewing PI notifications & performing data analysis). Conservatively associating work with IM only. Reduced occurrence of pressure regulation equipment failures. September 2017 incident in Lansing = $450,000÷ Assuming annual, levelized risk to be $100,000/yr (collateral and regulatory fines) *Assuming an hourly rate of $90/hr.

Genesys Cloud Migration

Report Pulled: 11/5/2025 **Item ID: 13423**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will migrate the Company's existing on-premise customer contact solution and deploy it to the Genesys Platform As A Service ("PAAS") cloud-based solution. It will provide the Company with the ability to reduce operational costs for performing upgrades and maintenance, take advantage of new enhancements offered by the vendor, and ensure continued support of a critical customer communication channel.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement In 2028, standard vendor support ends for the current on-premise software and extended support is not available from the vendor. Without vendor support, the application no longer receives security patches, bug fixes, or functionality support from the vendor, which creates security, stability, and reliability risk. With the upcoming end of standard support, the vendor is no longer offering feature enhancements to the current on-premise solution limiting the Company's ability to invest in new ways to better serve its customers.

Objectives This project will provide value to both the Company and its customers through: (1) reducing costs with cloud allocated hardware scalable to current usage needs; (2) reducing operating costs with vendor managed feature updates and maintenance provided without service disruption; (3) providing access to new and innovative capabilities to enhance customer service; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support.

Scope The project scope includes: (1) deploying the new PAAS cloud-based solution in the vendor cloud environment; (2) installing a new internet circuit to directly connect the Company's systems to the vendors cloud environment; (3) updating existing customer interactive voice response ("IVR") system to accommodate the new cloud implementation; (4) implement new features supporting analytics, quality, and reporting; and (5) implement a built-in customer survey tool.

Alternatives Alternatives considered include: (1) Defer to later years. This alternative was not selected due to requiring upgrades of existing on-premise hardware, impeding our ability to take advantage of new features offered by the cloud solution, and reducing cost savings opportunities presented by moving to the cloud. (2) Deploy Genesys on-premise solution to new on-premise hardware. This alternative was not selected due cost associated with purchasing new hardware and does not address the security, stability, and reliability risk resulting from the vendor end of support for the on-premise software. (3) Select and migrate to a new vendor software. This alternative was not selected due to the complexity of our existing internal integrations between the Genesys platform and the Company's other internal systems. As a result, selecting a new system with a new vendor would make the switch cost prohibitive. (4) Migrate to the Genesys Cloud platform. This alternative was selected due to it building on the Company strategy of moving to cloud, reducing operating and maintenance costs, and reduces risk by ensuring consistent, seamless vendor support.

DATES (phase end)

Initiation
3/1/2024

Project Plan & Scope Definition
6/1/2024

In-Service/Go-Live
9/11/2025

Final Engineering, Planning & Design
8/1/2024

Closeout
9/26/2025

Execution
2/10/2025

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.148	$0.015	$1.095	$1.132	$0.972	$0.031	-	-	$3.393
Total Cost of Ownership	$0.148	$0.015	$1.095	$1.132	$0.972	$0.031	-	-	**$3.393**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.001	$0.009	$0.004	$0.004	$0.002	-	-	-	**$0.020**
Outside Services	$0.147	$0.006	$0.301	$0.301	$0.150	-	-	-	**$0.905**
Business Expense/Overheads	-	-	$0.015	$0.015	$0.007	-	-	-	**$0.037**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	$0.744	$0.781	$0.781	-	-	-	**$2.305**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.148	$0.015	$1.063	$1.101	$0.941	-	-	-	**$3.268**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	$(0.597)	$(0.378)	$(0.303)	$(0.303)	$(0.153)	-	-	**$(1.736)**
	Initial	$0.148	$0.015	$1.095	$1.132	$0.972	$0.031	-	-	**$3.393**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.148	$(0.582)	$0.716	$0.828	$0.669	$(0.122)	-	-	**$1.657**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.477

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	Avoided costs of $1,000,000 associated with on-premise server upgrades which would require both internal and external labor to complete. Savings based on on-prem server upgrades estimated at a total of $970,000 and $30,000 in extended server support would not be needed for the year 2026.
Avoided Costs	Avoided costs of $2,669,170 associated with the Genesys indication of a 20% increase in on-premise software maintenance year over year until the on-premise end-of-life. Calculated by taking the difference between the IT forecasted on-premises software maintenance minus the estimated expected cost with 20% increase for each year starting in 2025. [2025: $1,717,174 (expected) - $1,623,397 (forecast) = $93,777] [2026: $2,060,608 (expected) - $1,638,077 (forecast) = $422,531] [2027: $2,472,730 (expected) - $1,638,077 (forecast) = $834,653] [2028: $2,967,286 (expected) - $1,638,077 (forecast) = $1,329,209] [Total Savings: $93,777 + $422,531 + $834,653 + $1,329,209 = $2,669,170]
Avoided Costs	Avoided costs of $365,000 associated with reduction of voice circuits. Savings based on $60,000 per year in SIP circuit costs + $60,000 per year in H&H voice circuit costs, minus $63,000 in annual costs for AWS direct connect. Assumes only partial year costs for AWS ciruict in 2024. [2024: $120,000 - $40,000 = $80,000] [2025: $120,000 - $63,000 = $57,000] [2026: $120,000 - $63,000 = $57,000] [2027: $120,000 - $63,000 = $57,000] [2028: $120,000 - $63,000 = $57,000] [2029: $120,000 - $63,000 = $57,000] [Total Savings = $80,000 + $57,000 + $57,000 + $57,000 + $57,000 + $57,000 = $365,000]
Avoided Costs	Reduces annual ongoing costs associated with running on-premise solution including virtual machines and storage. Approximate avoided cost of $728,092 per year which was estimated by including the monthly HCL management expense per virtual machine, Azure 3rd copy backup storage, VMware licenses, on-premise Commvault backup storage, operating system licenses, and other shared infrastructure costs.

HR Support Pack and Business Software Inc Upgrade 2023

Report Pulled: 11/5/2025 **Item ID: 12506**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

Objectives This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

Scope The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

Alternatives As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.

DATES (phase end)

Initiation
2/6/2023

Project Plan & Scope Definition
2/27/2023

In-Service/Go-Live
12/22/2023

Final Engineering, Planning & Design
4/3/2023

Closeout
12/29/2023

Execution
4/24/2023

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.652	$0.017	-	-	-	-	-	-	$0.669
Total Cost of Ownership	$0.652	$0.017	-	-	-	-	-	-	**$0.669**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.079	$0.003	-	-	-	-	-	-	**$0.082**
Outside Services	$0.532	$0.014	-	-	-	-	-	-	**$0.546**
Business Expense/Overheads	$0.040	-	-	-	-	-	-	-	**$0.040**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.001	-	-	-	-	-	-	-	**$0.001**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.652	$0.017	-	-	-	-	-	-	**$0.669**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.652	$0.017	-	-	-	-	-	-	**$0.669**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.652	$0.017	-	-	-	-	-	-	**$0.669**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Compliance & Ethics	High	High	Without the release of the new support packs from SAP, Consumers Energy would not be compliant with new HR and tax changes. As a result, it would not be able to calculate and distribute payroll.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The support packs are released throughout the course of the year to ensure compliance with HR and tax changes.

HR Support Pack and Business Software Inc Upgrade 2024

Report Pulled: 11/5/2025 **Item ID: 12507**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

Objectives This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

Scope The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

Alternatives As this is an upgrade of an existing system, the alternative considered was to delay the upgrade. This alternative was not chosen due to the risk of not complying with financial rules and regulations.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
2/5/2024	3/1/2024	4/1/2024	11/1/2024
	In-Service/Go-Live	**Closeout**	
	12/21/2024	12/31/2024	

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.519	-	-	-	-	-	-	-	$0.519
Total Cost of Ownership	$0.519	-	-	-	-	-	-	-	**$0.519**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.082	-	-	-	-	-	-	-	**$0.082**
Outside Services	$0.437	-	-	-	-	-	-	-	**$0.437**
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.519	-	-	-	-	-	-	-	**$0.519**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.519	-	-	-	-	-	-	-	**$0.519**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.519	-	-	-	-	-	-	-	**$0.519**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Compliance & Ethics	High	High	Without the release of the new support packs from SAP, Consumers Energy would not be compliant with new HR and tax changes. As a result, it would not be able to calculate and distribute payroll.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The support packs are released throughout the course of the year to ensure compliance with HR and tax changes.

HR Support Pack and Business Software Inc Upgrade 2025

Report Pulled: 11/5/2025 **Item ID: 12508**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The HR Support Pack and BSI upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

Objectives This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

Scope The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

Alternatives Alternatives considered include: (1) Not upgrading to the current support packs which results in noncompliance with financial rules and regulations and inaccurate payroll; (2) there is no economical cloud solution, so this option was not entertained; (3) apply the appropriate support pack upgrades. Option (3) is the preferred option because it enables the company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.

DATES (phase end)

Initiation
2/5/2025

Project Plan & Scope Definition
2/26/2025

In-Service/Go-Live
12/19/2025

Final Engineering, Planning & Design
3/31/2025

Closeout
12/31/2025

Execution
11/1/2025

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.414	-	-	-	-	-	-	-	$0.414
Total Cost of Ownership	$0.414	-	-	-	-	-	-	-	**$0.414**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.058	-	-	-	-	-	-	-	**$0.058**
Outside Services	$0.345	-	-	-	-	-	-	-	**$0.345**
Business Expense/Overheads	$0.011	-	-	-	-	-	-	-	**$0.011**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.414	-	-	-	-	-	-	-	**$0.414**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.414	-	-	-	-	-	-	-	**$0.414**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.414	-	-	-	-	-	-	-	**$0.414**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Compliance & Ethics	High	High	Without the release of the new support packs from SAP, Consumers Energy would not be compliant with new HR and tax changes. As a result, it would not be able to calculate and distribute payroll.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The support packs are released throughout the course of the year to ensure compliance with HR and tax changes.

HR Support Pack and Business Software Inc Upgrade 2026

Report Pulled: 11/5/2025 **Item ID: 12755**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Human Resources (HR) Support Pack and Business Software Inc (BSI) upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

Objectives This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

Scope The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

Alternatives oAlternatives considered include: (1) not upgrading to the current support packs, which results in noncompliance with financial rules and regulations and inaccurate payroll. (2) there is no economical cloud solution, so this option was not entertained. (3) the Company decided the best alternative is to apply the appropriate support pack upgrades. This option is preferred because it enables the Company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.

DATES (phase end)

Initiation 2/5/2026
Project Plan & Scope Definition 2/26/2026
In-Service/Go-Live 12/19/2026
Final Engineering, Planning & Design 3/31/2026
Closeout 12/31/2026
Execution 11/1/2026

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.665	-	-	-	-	-	-	-	$0.665
Total Cost of Ownership	$0.665	-	-	-	-	-	-	-	**$0.665**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.058	-	-	-	-	-	-	-	**$0.058**
Outside Services	$0.564	-	-	-	-	-	-	-	**$0.564**
Business Expense/Overheads	$0.044	-	-	-	-	-	-	-	**$0.044**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.665	-	-	-	-	-	-	-	**$0.665**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.665	-	-	-	-	-	-	-	**$0.665**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.665	-	-	-	-	-	-	-	**$0.665**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Compliance & Ethics	High	High	Without the release of the new support packs from SAP, Consumers Energy would not be compliant with new HR and tax changes. As a result, it would not be able to calculate and distribute payroll.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The support packs are released throughout the course of the year to ensure compliance with HR and tax changes.

HR Support Pack and Business Software Inc Upgrade 2027

Report Pulled: 11/5/2025 **Item ID:** 12756

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Human Resources (HR) Support Pack and Business Software Inc (BSI) upgrade will update the SAP system with HR Support Packs that are released annually by SAP to comply with HR and tax changes.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement SAP releases annual HR support packs to ensure compliance. Without them, the Company would be unable to comply with HR and tax changes, resulting in the inability to calculate and distribute payroll.

Objectives This project creates value for the Company by: (1) ensuring that its systems are in compliance with new financial rules and regulations; and (2) ensuring that it can calculate and distribute payroll.

Scope The scope of this project is to add SAP HR corrections to ensure proper reporting of financial information by the Company.

Alternatives oAlternatives considered include: (1) not upgrading to the current support packs, which results in noncompliance with financial rules and regulations and inaccurate payroll. (2) there is no economical cloud solution, so this option was not entertained. (3) the Company decided the best alternative is to apply the appropriate support pack upgrades. This option is preferred because it enables the Company to comply with HR and tax changes, resulting in the ability to correctly calculate and distribute payroll.

DATES (phase end)

Initiation
2/6/2027

Project Plan & Scope Definition
2/27/2027

In-Service/Go-Live
12/22/2027

Final Engineering, Planning & Design
4/2/2027

Closeout
12/29/2027

Execution
11/1/2027

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.665	-	-	-	-	-	-	-	$0.665
Total Cost of Ownership	$0.665	-	-	-	-	-	-	-	**$0.665**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.058	-	-	-	-	-	-	-	**$0.058**
Outside Services	$0.564	-	-	-	-	-	-	-	**$0.564**
Business Expense/Overheads	$0.044	-	-	-	-	-	-	-	**$0.044**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.665	-	-	-	-	-	-	-	**$0.665**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.665	-	-	-	-	-	-	-	**$0.665**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.665	-	-	-	-	-	-	-	**$0.665**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Compliance & Ethics	High	High	Without the release of the new support packs from SAP, Consumers Energy would not be compliant with new HR and tax changes. As a result, it would not be able to calculate and distribute payroll.

OTHER VALUE

Type	Description
Technology Capability	Compliance & Risk Management
Risk Mitigation	The support packs are released throughout the course of the year to ensure compliance with HR and tax changes.

Incident Command System (ICS) Management Software

Report Pulled: 11/5/2025 **Item ID:** 12679

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category: Strategic/Grow **Work Type:** Project

Alias: Product Family Enhancements-Electric & Gas Shared-Capital

Description: The Incident Command System (ICS) Management Software will allow Company departments to manage emergency situations more efficiently, automate manual processes, and reduce response times. This tool will also assist the Company in enhancing and maturing its response capabilities and support digital automation in alignment with the Company's Destination 2035 Strategy.

Portfolio: IT Services > Applications > Common Delivery Systems > * > * > *

Org: CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement: The current manual process for managing Emergency Incidents using the Incident Command System (ICS) across various departments (Storm Operations, Gas Operations, Generation, IT & Security, Applications & Analytics, etc.) is inefficient and error-prone. This hinders continuous improvement, program development, and response times. Departments seek automation to enhance emergency response capabilities. The Emergency Management Department struggles to administer processes and maintain compliance due to the absence of an ICS software and automation.

Objectives: This project will create value for the Company by: (1) managing and maintaining the documentation that supports emergency incident efforts, which if disrupted, would significantly impact the Company and customers; (2) providing a consistent, organized, and expedient response process when using ICS that is adaptable to any incident severity or scope; (3) offering a mechanism for identifying restoration gaps between critical business processes; (4) reducing or eliminating human error and waste; (5) decreasing the need for additional staffing to accommodate the creation of manual forms each operational period, as well as managing and tracking documents; and (6) enhancing and streamlining the user experience.

Scope: The project scope includes: (1) implementing an emergency incident management application for all company departments that use ICS to manage activations effectively; (2) automating reporting for tracking status and measuring the effectiveness and maturity of the Emergency Management program; (3) facilitating training exercises and response efforts through incident management tools based on Federal Emergency Management Agency (FEMA) National Incident Management System (NIMS) concepts; (4) providing program management tools for monitoring required deliverables; (5) transitioning from Word-based documents/management and storage for incidents; (6) increasing response efficiency through automated tools like objective lists by department, and enhancing self-service opportunities for using ICS forms and adhering to required standards; (7) enabling efficient task assignment, tracking, and management throughout incidents; (8) automating the post-incident process including task assignments, management, and tracking.

Alternatives: Alternatives considered include: (1) Purchasing licenses and implementing Incident and Crisis Management functionality from the Company's current Disaster Recovery and Business Continuity Application vendor. This alternative was not selected because it does not currently offer the capabilities needed to advance program maturity for a comprehensive response to business interruptions. It does not meet existing functional requirements to manage ICS activations and would require considerable customization for ICS form creation, resource management during an incident, and alignment with FEMA standards. (2) Continuing to use manual processes through Microsoft Excel, Word, and Teams. This alternative was not selected as the manual process is time-consuming for all company departments leveraging ICS, leading to duplicative work, deviations from the Emergency Management Standard, insufficient support for large-scale/multi-department activations, and reduced response efficiency and management. (3) Implementing a Cloud Software as a Service (SaaS) solution. This alternative was selected as there are better SaaS solutions that fit the outlined needs. The final application will be determined after issuing a Request for Proposal and selecting a vendor during the project plan phase.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/5/2026	3/2/2026	4/1/2026	9/1/2026
	In-Service/Go-Live	**Closeout**	
	10/1/2026	11/2/2026	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.114	$0.109	$0.109	$0.109	$0.109	$0.002	-	-	$0.553
Total Cost of Ownership	$0.114	$0.109	$0.109	$0.109	$0.109	$0.002	-	-	**$0.553**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.007	$0.005	$0.005	$0.005	$0.005	$0.001	-	-	**$0.027**
Outside Services	$0.013	$0.010	$0.010	$0.010	$0.010	$0.002	-	-	**$0.053**
Business Expense/Overheads	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	-	-	**$0.002**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.074	$0.074	$0.074	$0.074	$0.074	-	-	-	**$0.372**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.094	$0.089	$0.089	$0.089	$0.089	$0.002	-	-	**$0.454**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.114	$0.109	$0.109	$0.109	$0.109	$0.002	-	-	**$0.553**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.114	$0.109	$0.109	$0.109	$0.109	$0.002	-	-	**$0.553**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	An application leveraging automation would enable the Emergency Management Department to save 432 labor hours annually. Calculation: In 2024, there were 27 ICS activations requiring the team to spend an average of 16 hours per incident performing all the manual tasks necessary for program compliance. These tasks include manually collecting all incident action plans, creating multiple folders for document uploads, reviewing each file before uploading, initiating the After Action Report (AAR) process, collecting and uploading the AAR document, recording AAR tasks, manually monitoring the completion of AAR tasks, collecting and uploading other related documents, setting all documents to the correct archive retention level, and continuously monitoring and managing the close-out of activations through the AAR and other demobilization activities. These activities are conducted in various SharePoint and Microsoft Teams locations, which change throughout the activation duration. During a program audit, all collected documentation and associated information become part of the audit, necessitating a re-review during audit preparation to ensure documentation completeness.
Avoided Costs	An application with automation for Incident Management would save the Company's departments using ICS 108 labor hours annually. Calculation: In 2024, there were 27 ICS activations, each requiring an average of 4 hours for manual documentation of incident action plans, safety forms, AAR, and other required documents. ICS documentation is required for each operational period (typically 12 hours) of an incident.
Intangibles	Cloud technology enables maintenance, upgrades, and patching without any disruption to employee or contractor productivity.
Risk Mitigation	Cloud-based break glass accounts allow the company to create and manage ICS activations and ICS forms from any device during an event. These accounts are inherently part of the solution and are not managed within the company's authentication system. If a ransomware attack or other event disrupts the network, these accounts can still be used to access the tool for managing emergency situations.
Technology Capability	Compliance & Risk Management
Intangibles	Implementing an ICS incident management application would allow all departments within the company to respond more efficiently. Integrated Incident Command System forms and tools will save time and ensure clear and concise reporting and recordkeeping. Currently, planning documentation for incidents is difficult to use, format, produce actionable plans, and obtain approvals. The existing recordkeeping process is highly manual. This tool will serve as a centralized repository for planning, delivering plans, recording progress through multiple operational periods of an incident, and maintaining records. It will enhance after-action reporting, tracking, and follow-up tasks such as after-action task assignment, completion date tracking and assignment, escalation of late task completion, advanced management-level reporting, and integration with other work management systems like ServiceNow and SAP to enable pre-populating forms for incidents that originate in other work management applications.
Intangibles	Implementing an ICS/FEMA-based incident management application would enable the Company to enhance its ICS maturity level, address inefficiencies arising from manual processes, and improve response times.
Avoided Costs	The application will streamline the administration of the Emergency Management Program by enabling the Emergency Management Department to automate ICS response processes, AAR reporting, improvement item tracking, as well as comprehensive data and records management. AAR improvement items will be monitored and escalated through the application, ensuring their

ISIS Papyrus 2026 Upgrade

Report Pulled: 11/5/2025 **Item ID: 13461**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will upgrade the Papyrus Objects suite of applications to the most recent version available per vendor recommendation. The ISIS Papyrus application is critical to creating electronic and paper correspondence for customers, including bills and dunnings.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The application will be at least one major upgrade revision behind by 2026. It's imperative that customers retain unfettered access to their paper bills, dunning notices and other communications produced by ISIS. ISIS also makes customer bills available for online viewing through the website and mobile apps. Without the upgrade, vendors make no guarantee that any substantial patches or hot fixes impacting application reliability, capacity and security will be forthcoming. The upgrade will address these problems and challenges, as well as ensuring all other platform components comply with the Company's operational and security standards.

Objectives The value of this project includes: (1) providing a more stable operational model by upgrading to the most recent version available; (2) maintaining the necessary vendor support; and (3) resolving tuning and stability issues with the vendors.

Scope The scope of the project is to upgrade the various licensed products that comprise the Papyrus Objects suite of applications.

Alternatives Alternatives considered include: (1) delaying the upgrade and continuing to operate with the current version. This alternative was not chosen due to the risk of application stability and the inability to maintain cyber security patching. (2) The Company instead decided to upgrade to the current version. This alternative was chosen as it eliminates the risk of application instability and the inability to maintain cyber security patching.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
2/1/2026	3/1/2026	4/1/2026	6/1/2026
	In-Service/Go-Live	**Closeout**	
	9/1/2026	10/1/2026	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.217	-	-	-	-	-	-	-	$0.217
Total Cost of Ownership	$0.217	-	-	-	-	-	-	-	**$0.217**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.203	-	-	-	-	-	-	-	**$0.203**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.014	-	-	-	-	-	-	-	**$0.014**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.217	-	-	-	-	-	-	-	**$0.217**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.217	-	-	-	-	-	-	-	**$0.217**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.217	-	-	-	-	-	-	-	**$0.217**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	An out-of-support version of Papyrus Designer means that ISIS Papyrus no longer provides hotfix support. This will put the company network at risk, which is critical to avoid as this is responsible for paper billing.

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Newer versions of ISIS Papyrus enable better integration with newest operating systems (Linux) and database (SQL).
Intangibles	Newer versions of ISIS Papyrus will improve performance and enhance productivity for billing and invoices.

IT Operations Management - Service Operations

Report Pulled: 11/5/2025 **Item ID: 13929**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement an application service mapping tool to effectively manage business-critical services through identification of infrastructure components and application interactions. This tool automates the mapping process to create a complete, up-to-date, and accurate record of the mapped application service in the Database. Application service mapping works hand-in-hand with asset discovery, building on discovered infrastructure data to identify all the assets that support a service, and along with their service-specific relationships.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement As the IT systems steadily increase in complexity and evolve faster than the IT organization can respond to system issues in an optimized and cost-effective manner, the current configuration of the system does not provide the clarity needed in order to understand how the infrastructure interacts with the applications within the IT System it supports and in order to respond to emergent IT incidents in the most rapid and costs effective manner. These constraints can lead to lengthy response and implementation times; negligible or ineffective resolutions; reduced functionality; and elongated outage times in the infrastructure and applications in the system.

Objectives This project will create value for the Company by mapping critical application services through discovery of the underlying infrastructure associated with application services and its relationship to parent business applications. Specifically, by creating application service maps, this project will: (1) increase visibility and understanding between IT infrastructure and Configuration Items; (2) improve accuracy through real-time, automatically updated infrastructure and component changes; (3) reduce IT Subject Matter Expert time on emergent IT issues; (4) Utilize IT Service Management processes; and (5) Reduce downtime by identifying dependences and impact analysis.

Scope The project scope includes: (1) implementation of On-Premise application service maps which have significant business impact; and (2) establishment of process roles needed to support service maps built.

Alternatives Alternatives considered included: (1) Choose an alternate IT Operations Management System with Cloud capabilities. This alternative was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. This alternative was not chosen as there would be a correlation gap between application services and the underlying infrastructure and would not address the ever-increasing resolution costs. (4) Develop and implement an on-premises service mapping and process solution. This alternative was chosen due to the value in Information Technology (IT) Operations Management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can utilize the Configuration Management Database (CMDB) and work hand-in-hand with asset discovery.

DATES (phase end)

Initiation
10/1/2023

Project Plan & Scope Definition
12/1/2023

In-Service/Go-Live
3/9/2024

Final Engineering, Planning & Design
12/31/2023

Closeout
3/30/2024

Execution
1/1/2024

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$2.812	$0.200	-	-	-	-	-	-	$3.012
O&M	$0.634	$0.066	$0.015	$0.015	$0.015	$0.015	-	-	$0.760
Total Cost of Ownership	$3.446	$0.266	$0.015	$0.015	$0.015	$0.015	-	-	**$3.772**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.002	$0.007	-	-	-	-	-	-	**$0.009**
Outside Services	$0.074	$0.203	-	-	-	-	-	-	**$0.277**
Business Expense/Overheads	$0.028	$0.056	-	-	-	-	-	-	**$0.084**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$3.342	-	-	-	-	-	-	-	**$3.342**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$3.446	$0.266	-	-	-	-	-	-	**$3.712**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.634	$0.066	$0.015	$0.015	$0.015	$0.015	-	-	**$0.760**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.634	$0.066	$0.015	$0.015	$0.015	$0.015	-	-	**$0.760**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.812	$0.200	-	-	-	-	-	-	**$3.012**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.812	$0.200	-	-	-	-	-	-	**$3.012**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	By implementing ITOM application service mapping it enables the Top-Down Service aware CMDB that can utilize Information Technology Service Management processes and helps in quicker Business Impact determination which will help prioritize the actions and decisions for future enhancements.
Technology Capability	By implementing ITOM Application Service Mapping there will be better Administrative & General (A&G) Support, as this provides visibility into how the infrastructure is connected to applications. It will create a more Service aware configuration management which will improve technical impact Analysis and prioritization leading to a reduction in downtime, better root cause analysis of incidents for
Avoided Costs	Improving the MTTR (Mean Time to Resolution) for major incidents is one of the primary uses for having services mapped. Understanding the relationships between all of the CIs that make up a service, and easily seeing recent Incidents and Changes on those CIs, provides invaluable insight in both ensuring the Incident is routed to the right team quickly, and in troubleshooting an active issue. Projected Cost Saving - 30% of total labor cost - about $420K on Non-MI MTTR (Customer impacting P2 incidents - Performance/Degradation) and $360K on MI MTTR (P1 and P2 Critical incidents).
Technology Capability	Service Mapping makes the IT process more reliable with Automated mapping services that reduces the time users are handling errors and also enabling the mapping to be updated in real time.

Itron Enterprise Edition 2027 Upgrade

Report Pulled: 11/5/2025 **Item ID: 13415**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will upgrade Itron Enterprise Edition (IEE), which collects the reads from meters to ensure non-estimated bill accuracy.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-ELECTRIC

WORK OBJECTIVES

Problem Statement

Itron Enterprise Edition (IEE) is the Company's keystone application of the Advanced Metering Infrastructure (AMI), that provides billing data that includes time of use data. If this application does not stay current, the Company increases the risk business operations could be interrupted or compromised. Itron Enterprise Edition (IEE) is a key component in keeping the Company current, with billing capacity, stability, and accuracy obligations.

Objectives

This project creates value for the Company by: (1) ensuring the features and functionality needed to meet and exceed customer satisfaction and billing accuracy are available to business partners and IT; (2) meeting Information Security's requirement to keep applications patched and protected from cyber attack.

Scope

The scope of this project includes: (1) upgrading the Itron Enterprise Edition (IEE) applications to the next appropriate versions; (2) migrating the database to the next version required by the application; and (3) replacing hardware required by the next version to maintain operating system currency.

Alternatives

Alternatives considered include: (1) defering the upgrade. This alternative was not selected because it would decouple Itron IEE (Consumers Energy's MDM) from the Itron security infrastructure introducing application instability, security and dependency risks to the utility, possibly negatively impacting critical customer electric and gas billing operations. It would also likely affect other business critical Itron applications, creating more expense to support and no ability to leverage updated tool capability. (2) replacing the platform. Replacing IEE/MDM would require the application business owners to undertake a new initiative mirroring the expense and effort that went into the initial multi-million dollar project.(3) performing the upgrade is the best alternative. This option is superior for both customers and the Company because it maintains vendor support for hot fixes and patches, and aligns with all upgrade projects related to other Itron products.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/14/2027	2/16/2027	2/28/2027	4/14/2027
	In-Service/Go-Live	**Closeout**	
	10/20/2027	11/14/2027	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.266	-	-	-	-	-	-	-	$0.266
Total Cost of Ownership	$0.266	-	-	-	-	-	-	-	**$0.266**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.249	-	-	-	-	-	-	-	**$0.249**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.017	-	-	-	-	-	-	-	**$0.017**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.266	-	-	-	-	-	-	-	**$0.266**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.266	-	-	-	-	-	-	-	**$0.266**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.266	-	-	-	-	-	-	-	**$0.266**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	A&G Support
Risk Mitigation	If Consumers Energy does not upgrade this equipment, it would run the risk of losing support from the vendor, leading to security vulnerabilities and operational efficiency issues.
Risk Mitigation	Without the upgrade, supportability and operational efficiency issues may increase over time. Resolving these issues becomes very problematic if vendor support is not available. It would also be difficult to keep the system current with security updates.

Kubra 4.0 Upgrade

Report Pulled: 11/5/2025 **Item ID: 14018**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Consumers Energy (CE) has the overarching ambition of serving 1 in 3 Low-to-Moderate Income (LMI) customers (currently 1 in 6), while supporting the achievement of clean energy goals and reduction in Uncollectible Expense (UCX). 37% of CE customers are low to moderate income (LMI). Low Income (LI) accounts for 11% and means they are currently in crisis and unable to pay their bill. Moderate Income (MI) accounts for 26% and means they are one financial crisis away from being unable to pay their bill. As part of the LMI effort, we are prioritizing Behavior Based Direct Messaging: Meet the customer where they are, communicate about assistance options based on behavioral indicators, and increase the likelihood of enrollment into meaningful assistance programs ahead of a crisis, and Kubra 4.0 will aid in the success of those LMI goals.

Portfolio Customer Services > Customer Interaction Channels > Digital > Digital Operations > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement To help a customer avoid a crisis before it happens, we need the ability to proactively communicate to them when their behaviors signal the possibility of an issue, some examples being: (1) A customer misses a payment after record of making payments for several months, (2) The auto-pay system receives an insufficient funds alert from the customers' account, (3) Energy use is high, and a bill is projected to be 25-50% larger than usual, and (4) Localized / seasonal triggers such as heat waves, blizzards, and ice storms. Additionally, (5) it's imperative that we're able to test and modify message content that captures the customer's attention, so that we may drive awareness to programs that offer assistance ahead of a crisis. Kubra 4.0 platform is more flexible and configurable to help experimental design & marketing iterate on who/where/what to cut through digital noise.

Objectives This project creates value for the Company through improving customer communications by providing Consumers Energy (CE) with access to (1) templates and wording changes that previously required expensive Statement of Work (SOW) engagement to deliver and (2) reduce lengthy wait times to implement these aforementioned Statements of Work (SOWs). Finally, (3) this engagement will also introduce 12 net new alert messages, (4) allow for new means of communication and messaging via the mobile app push notification feature, and (5) provide better outage notification reliability and control via Application Programming Interface (API) data transfer instead of Secure File Transfer Protocol (SFTP) data transfer.

Scope The project scope includes: (1) 12 net new alerts including 4 for the Shut-off Protection Plan (SPP), missed payment(s), summer event alerting, winter event alerting, and 5 additional alerts to be detailed out during the plan & design phase of the effort based on current low-to-moderate income (LMI) customer communication needs, (2) new template editor as part of the upgraded platform, (3) New Push Notification option available for mobile app which will enable a fast follow enhancement to push notifications through more than just email and text, (4) all other updates and improvements through Kubra 4.0 including use of APIs and other technical improvements, and (5) a new Application Programming Interface (API) built specifically for CE's outage messages for better reliability - instead of the existing file transfer outage information which is less reliable.

Alternatives The alternatives considered include: (1) continue the expensive Statements of Work (SOW) approach for updating each message template and for bringing on any new messages. This would total approximately ~50k per new alert, for a total of 600k for all 12 net new alerts for this effort if pursued individually. This total is not including costs to any existing message adjustments. This alternative was not considered due to the extra cost and overhead. (2) Purchase a new customer communications system. This option was not selected as it would be extremely expensive to purchase and wouldn't have all of the requirements needed and would be a tremendous amount of labor to reintegrate with our existing communication channels. (3) Utilizing Microsoft Dynamics or Riverstar. This option was not selected as it would be a tremendous amount of labor to reintegrate with our existing communication channels nor would either of the platforms fully support the bandwidth or channels needed to properly communicate out what we send via Kubra today. (4) Implement the upgrade to include the new alerts. This alternative was selected because it will improve customer communications, improve accuracy and speed of message updates, and offer more message options to achieve the Low-to-Moderate income (LMI) 1-in-3 goal as we're able to keep expanding our communication options with the upgrade's features.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
3/4/2025	3/20/2025	5/1/2025	10/17/2025
	In-Service/Go-Live	**Closeout**	
	11/20/2025	12/1/2025	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.250	$0.007	-	-	-	-	-	-	$0.257
O&M	-	-	-	-	-	-	-	-	-
Total Cost of Ownership	$0.250	$0.007	-	-	-	-	-	-	**$0.257**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.142	$0.005	-	-	-	-	-	-	**$0.147**
Outside Services	$0.095	-	-	-	-	-	-	-	**$0.095**
Business Expense/Overheads	$0.012	$0.002	-	-	-	-	-	-	**$0.015**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.250	$0.007	-	-	-	-	-	-	**$0.257**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.250	$0.007	-	-	-	-	-	-	**$0.257**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.250	$0.007	-	-	-	-	-	-	**$0.257**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	Medium	Medium	If we do not update the system, it could pose risk to the stability of existing alerts
Technology Obsolescence	High	High	risk to app currency eventually/tech dept to not be able to use api eventually

OTHER VALUE

Type	Description

MS Self-hosted Gateway Solution and Migration

Report Pulled: 11/5/2025 **Item ID: 14008**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project is looking to retire the API Exchange Gateway used primarily by the Enterprise Service Bus and replace it with a new solution called Microsoft Self-Hosted Gateway in security Zone B. The API Exchange Gateway is used by the TIBCO ESB to integrate corporate applications. New development will need to be done to integrate this solution.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The Tibco API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform. The end of life date is 6/30/25

Objectives This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the Tibco API Exchange Gateway Exchange module), and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable.

Scope The project scope includes: (1) Implement the Self Hosted Gateway into Zone B as a replacement solution. (2) Migrate all current work items to the new platform or existing equivalent based on use case. (3) Conduct appropriate testing to ensure all Service Level Agreements are met.

Alternatives Alternatives considered include: (1) Evaluating the replacement of the current product with a new product that is not already in the Company environment. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor for the current platform has stopped all development for this product and the EOL has been set (3) Leveraging an existing solution already in the Company environment. This alternative was not selected as an existing product in the corporate Zone B layer does not exist. (4) Implement the Microsoft Self-Hosted Gateway and migrate current data into new platform. This alternative was selected as the most cost-effective solution that has ongoing support from the publisher.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/12/2026	1/19/2026	3/6/2026	3/9/2026
	In-Service/Go-Live	**Closeout**	
	10/10/2026	10/23/2026	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.314	-	-	-	-	-	-	-	$0.314
Total Cost of Ownership	$0.314	-	-	-	-	-	-	-	**$0.314**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.294	-	-	-	-	-	-	-	**$0.294**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.021	-	-	-	-	-	-	-	**$0.021**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.314	-	-	-	-	-	-	-	**$0.314**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.314	-	-	-	-	-	-	-	**$0.314**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.314	-	-	-	-	-	-	-	**$0.314**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	Due to Technology obsoleses, if this solution is not implemented, the company runs the risk of technology reliability issues to the platform and other connected applications. Current Vendor has stopped with updates for security and corrective patches. Which causes increased security vulnerability to the platform and integrated applications.

OTHER VALUE

Type	Description

Operational Technology - Service Management Upgrade

Report Pulled: 11/5/2025 **Item ID:** 13924

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement Operational Technology ("OT") service management capabilities. Service management provides automated asset tracking, maintenance, and incident management for the assets.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The Company' Internal Audit team conducted an audit of the Operational Technology (OT) asset environment and identified significant gaps in the patch management program. The patch management operating model is decentralized, has limited and inconsistent standards, doesn't have a company-wide governance structure to monitor all business areas of the Company and lacks a complete and accurate asset inventory. Due to the lack of a complete asset inventory, as well as a significant number of gaps identified in the patch management governance, operating model, processes, and controls to manage all assets within the Company's environment, an unknown magnitude of risk exists that critical patches were not installed timely, which could create the potential for increased security vulnerabilities.

Objectives The project provides value to the Company in three ways 1.) Establishes a complete and accurate asset inventory. 2.) Creates a Company-wide governance structure with documented standards and processes to manage the assets and 3.) Defines a comprehensive patch management operating model with clearly defined roles and responsibilities.

Scope The project scope includes: (1) the implementation of an asset management tool (2) the implementation of an incident management tool, (3) and the establishment of process roles needed to support the assets.

Alternatives Alternatives considered included: (1) Choose a Cloud-based alternate asset management system. This option was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. Continue to manually track or not track Operational Technology (OT) Digital assets at the Company, which will not address the need to effectively track OT Digital assets and plan for their support. (4) Develop and implement an asset management and incident management tool and processes. This alternative ultimately chosen has strengths in Information Technology (IT) service management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can help bridge the gap between IT and OT, enable the Company to manage both types of assets through a single interface.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
10/1/2023	11/4/2023	12/1/2023	12/3/2023
	In-Service/Go-Live	**Closeout**	
	3/7/2024	3/29/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$0.729	$0.166	-	-	-	-	-	-	$0.895
O&M	$0.148	$0.044	$0.005	$0.005	$0.005	$0.005	-	-	$0.212
Total Cost of Ownership	$0.877	$0.210	$0.005	$0.005	$0.005	$0.005	-	-	**$1.107**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.026	$0.038	-	-	-	-	-	-	**$0.065**
Outside Services	$0.039	$0.122	-	-	-	-	-	-	**$0.161**
Business Expense/Overheads	$0.009	$0.050	-	-	-	-	-	-	**$0.060**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.803	-	-	-	-	-	-	-	**$0.803**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.877	$0.210	-	-	-	-	-	-	**$1.087**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.148	$0.044	$0.005	$0.005	$0.005	$0.005	-	-	**$0.212**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.148	$0.044	$0.005	$0.005	$0.005	$0.005	-	-	**$0.212**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.729	$0.166	-	-	-	-	-	-	**$0.895**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.729	$0.166	-	-	-	-	-	-	**$0.895**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Consolidating Operational Technology Assets into a single database establishes the groundwork for potential future service management capabilities such as incident management, change management, and vulnerability management for the Operational Technology Team, all of which are poised to enhance operational performance.
Intangibles	Having Operational Technology Assets in one database will improve efficiencies (with data stored in a single system, resources spend less time searching for information across multiple platforms, leading to increased productivity and faster decision making), increase accuracy (centralizing data reduces the likelihood of errors and inconsistencies that can occur when information is spread across disparate systems), better collaboration (one system encourages collaboration across teams. This fosters teamwork and enhances communication within the organization), better insights (having data in a single database facilitates comprehensive analysis and reporting. This allows for deeper insights into operations, trends and enable informed decision making). Overall, having data in one system simplifies operations, enhances efficiency, and empowers the company to make better informed decisions.

Operational Technology (OT) Datacenter Migration

Report Pulled: 11/5/2025 **Item ID: 13963**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The OT environment consists of systems supporting the control and monitoring of electric grid, electric generation, gas compression, and natural gas pipeline. These systems are critical for safe and reliable natural gas and electric delivery. The OT Datacenter Migration project enhances the Company's capabilities by co-locating to an enhanced datacenter at a vendor facility.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement The Company's current datacenter for the OT environment needs modernization and relocation from the Parnall Data Center. The current location is not the preferred location to house servers and systems critical to the control of the Electric Grid or Gas Pipeline due to the close proximity to a railway system. The climate conditioners in the current OT datacenter are aging and have had faults resulting in unplanned shutdowns . The location of the datacenter in the basement of the Parnall building is nearby to the main water piping for the building. There have been instances of water infiltration in the past.

Objectives This project creates value for the Company by significantly strengthening capabilities through: (1) mitigating legacy physical and location risks at the current Parnall site; (2) migrating the OT infrastructure to a modern, highly secured environment with redundancy in climate conditions; and (3) better datacenter facilities support with a guarantee of redundant power.

Scope The scope of the project includes: (1) migration of the OT environment from the Parnall Data Center to a co-located vendor data center; (2) re-validation of the OT Production and Disaster Recovery procedures once migration is completed; (3) migration of IT systems required for supporting the OT environment; and (4) decommission the existing OT environment from the Parnall location.

Alternatives The Company performed an analysis of alternatives to expand capabilities as well as address constraints and risks: (1) Remain at the current Parnall Data Center; (2) migrate OT environments to the Cloud; and (3) relocate to a third-party co-location facility. Current industry best practices do not recommend migration of OT environments to the cloud. The co-location vendor provides the building, cooling, power, and physical security the Company lacks for its servers, storage, and other computing and networking equipment at the current Parnall location. Based on the analysis, the Company decided to implement the third alternative.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
6/30/2026	9/8/2026	11/24/2026	1/15/2027
	In-Service/Go-Live	**Closeout**	
	11/16/2027	12/1/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	$4.391	$3.358	-	-	-	-	-	-	$7.750
O&M	$2.311	$3.985	$1.816	$1.816	-	-	-	-	$9.928
Total Cost of Ownership	$6.702	$7.343	$1.816	$1.816	-	-	-	-	**$17.677**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.492	$0.658	-	-	-	-	-	-	**$1.150**
Outside Services	$0.864	$1.221	-	-	-	-	-	-	**$2.085**
Business Expense/Overheads	$1.828	$1.656	-	-	-	-	-	-	**$3.484**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$3.199	$1.811	-	-	-	-	-	-	**$5.010**
Licenses, Permits & Fees	$0.319	$0.181	-	-	-	-	-	-	**$0.500**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$6.702	$5.527	-	-	-	-	-	-	**$12.229**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.311	$3.985	$1.816	$1.816	-	-	-	-	**$9.928**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.311	$3.985	$1.816	$1.816	-	-	-	-	**$9.928**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$4.391	$3.358	-	-	-	-	-	-	**$7.750**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$4.391	$3.358	-	-	-	-	-	-	**$7.750**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	There could be impacts to business services, customer service, and Company reputation.
Risk Mitigation	There is a need for enhancement to Consumer Energy's DR capabilities. Without a clear understanding of the risks, mitigation of those risks, and communication to all key stakeholders, the Company may not be able to recover from a loss of the primary data centers at Parnall. This risk may result in impacts to day-to-day operations and customers, which could have broader financial, reputational, and regulatory impacts.
Risk Mitigation	Using a vendor managed co-location datacenter reduces Company risk as it relates to NERC/CIP regulatory requirement Physical Security CIP-006-6
Intangibles	With the OT Datacenter migration, there is a highly secured environment, heating and cooling redundancy, and a guarantee of 100% power efficiency.

Pipeline SCADA Security

Report Pulled: 11/5/2025 **Item ID: 10487**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - One Time **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement major modifications to the Gas Supervisory Control and Data Acquisition (SCADA) environment to ensure compliance to American Petroleum Institute (API) 1164 standard. API 1164 is an MPSC regulatory requirement with recent updates to the Gas Technical Standards. The project will implement IT, cyber security, and physical security equipment and site modifications necessary for regulatory compliance to API 1164.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-COMPLIANCE

WORK OBJECTIVES

Problem Statement The MPSC requires the implementation of pipeline cyber security regulations pursuant to API 1164 on the Company natural gas pipeline system. The Company's Gas SCADA system is outdated and non-standardized, requiring significant modifications to be compliant with API 1164. Without the technology updates, the gas SCADA system is vulnerable to cyber-attacks that potentially risk disrupting delivery to customers. Interruptions in gas delivery and non-compliance to API 1164 mandated requirements could be subject to fines and penalties from the MPSC and other regulatory entities (i.e., the Transportation Security Administration).

Objectives This project will add value to the Company by: (1) modernizing and standardizing the Gas SCADA network at the Company's gas compressor stations and control rooms; (2) mitigating cyber security vulnerabilities in the Gas SCADA network; (3) allowing the Company to fully comply with API 1164 requirements; and (4) fulfilling the commitment to the MPSC to provide a secure gas system that meets customer needs.

Scope The project scope includes updates for multiple gas SCADA-related locations, including: eight gas compressor stations, two gas control rooms, two data centers, and multiple intelligent pipeline field devices. To establish compliance with API 1164, the project will: (1) design a holistic network architecture to implement both physical and technical changes; (2) implement physical enhancements to impacted facilities, such as additional closets or data rooms, and modified HVAC systems to provide necessary climate control for the SCADA equipment; (3) install additional security cameras and/or card readers necessary to control access to new and existing equipment; (4) complete technology upgrades requiring design, development, testing and implementation for the Gas SCADA network at each of the planned locations. Upgrades will consist of endpoint protection, identity and access management, vulnerability management, business continuity capabilities, cyber incident response, asset management, and commensurate test environments; and (5) implement additional security measures on field devices, including change default credentials, secure communications, change management, and patching activities.

Alternatives As this is a regulatory compliance requirement, there are no alternatives to completing this project. Without the completion of this project, the Company could be subject to noncompliance fines and penalties from the MPSC.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
6/1/2020	10/31/2020	3/1/2021	6/30/2022
	In-Service/Go-Live	**Closeout**	
	7/1/2022	10/31/2023	

FUNDING SUMMARY

	2020	2021	2022	2023	2024	2025	2026	2027 +	Total
Cap+COR	$0.757	$2.663	$4.478	$4.055	$0.699	$(0.025)	-	-	$12.627
O&M	$0.047	$0.080	$0.146	$0.151	$0.066	$0.024	-	-	$0.515
Total Cost of Ownership	$0.804	$2.743	$4.624	$4.206	$0.764	$(0.000)	-	-	**$13.142**

	2020	2021	2022	2023	2024	2025	2026	2027 +	Total
Labor	$0.096	$0.692	$0.881	$1.303	$0.322	-	-	-	**$3.294**
Outside Services	$0.319	$0.142	$1.029	$1.409	$0.291	$(0.004)	-	-	**$3.187**
Business Expense/Overheads	$0.045	$0.329	$0.357	$0.900	$0.101	-	-	-	**$1.732**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.223	$1.316	$1.951	$0.373	$(0.091)	$(0.017)	-	-	**$3.754**
Licenses, Permits & Fees	$0.122	$0.263	$0.407	$0.222	$0.141	$0.021	-	-	**$1.176**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.804	$2.743	$4.624	$4.206	$0.764	$(0.000)	-	-	**$13.142**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2020	2021	2022	2023	2024	2025	2026	2027 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.047	$0.080	$0.146	$0.151	$0.066	$0.024	-	-	**$0.515**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.047	$0.080	$0.146	$0.151	$0.066	$0.024	-	-	**$0.515**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.757	$2.663	$4.478	$4.055	$0.699	$(0.025)	-	-	**$12.627**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.757	$2.663	$4.478	$4.055	$0.699	$(0.025)	-	-	**$12.627**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Unplanned Outages - Gas	High	Low	Unplanned Outage - Gas Supply (SCADA): The risk of loss of operational control of all or a portion of the gas system for an extended period due to a cyber-attack, resulting in disruption of business operations, including lost revenue, restoration costs, and reputational damage.
Unplanned Outages - Generation	High	Low	Unplanned Outage - Generation: Risk of an unplanned outage at one or more large power plants for an extended period due to a cyber-attack

OTHER VALUE

Type	Description
Technology Capability	Electric T&D, Gas T&D, Generation
Risk Mitigation	modernizing and standardizing the Gas SCADA network at the Company's gas compressor stations and controls rooms will help mitigate unplanned outage and cyber security related risks seen with Gas Supply and Generation.

Privileged Access Management Cloud Migration

Report Pulled: 11/5/2025 **Item ID: 14035**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will perform the implementation of a Privileged Access Management (PAM) solution to enhance security by securely storing, rotating, and isolating privileged credentials for both human and non-human users. It provides robust monitoring and control of privileged access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement The Company faces significant security risks related to the management of privileged access, including potential data breaches, unauthorized access, and compliance issues. The Company's current methods of managing privileged accounts are often manual, error-prone, and insufficient to address the complexities of modern IT environments. There is a critical need for a robust solution that can automate and secure the management of privileged credentials, provide comprehensive monitoring and control, and ensure compliance with security policies across on-premises, cloud, and hybrid environments.

Objectives This project creates value for the Company through: (1) securely storing and managing privileged credentials; (2) automating credential rotation; (3) isolating access to prevent unauthorized use; (4) improving compliance with regulatory requirements through comprehensive audit trails, and reporting; (5) increasing efficiency by automating password management; and (6) reducing manual tasks that can be prone to human error.

Scope The project scope includes migrating the Company's current system Privileged Access Management (PAM) system to a cloud vendor, implementing new features not available in the current on-prem solution.

Alternatives Alternatives considered included: (1) manual password rotation. This alternative was not chosen because it requires significant time and effort to manage and update passwords manually. It also increases the risk of human error including mistakes, such as forgetting to update passwords or using predictable patterns; (2) Access Control Lists (ACLs). This alternative was not chosen because of scalability issues. ACLs are difficult to manage as the number of users and resources grows. This option also requires regular updates and reviews to ensure accuracy and security; (3) manual audit logs. This alternative was not chosen because it is very labor intensive. It requires significant effort to maintain and review logs manually. The use of manual audit logs increases the risk of inaccuracy by having a higher chance of errors and incomplete records; (4) periodic security reviews. This alternative was not chosen because it is very resource intensive and requires time and expertise to conduct thorough reviews. Periodic security reviews may also miss issues that arise between review periods; and (5) implementation of a cloud based Privileged Access Management (PAM) solution was the chosen option. It provides robust monitoring and control of privileged access across on-premises, cloud, and hybrid environments. Additionally, it automates password management, reducing administrative tasks and minimizing the risk of credential exposure.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/16/2027	2/13/2027	3/13/2027	10/22/2027
	In-Service/Go-Live	**Closeout**	
	10/23/2027	11/27/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	$2.410	-	-	-	-	-	-	$2.410
O&M	-	$0.351	-	-	-	-	-	-	$0.351
Total Cost of Ownership	-	$2.760	-	-	-	-	-	-	**$2.760**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	-	$0.138	-	-	-	-	-	-	**$0.138**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.597	-	-	-	-	-	-	**$0.597**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$2.025	-	-	-	-	-	-	**$2.025**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$2.760	-	-	-	-	-	-	**$2.760**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.351	-	-	-	-	-	-	**$0.351**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.351	-	-	-	-	-	-	**$0.351**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$2.410	-	-	-	-	-	-	**$2.410**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$2.410	-	-	-	-	-	-	**$2.410**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Improve compliance with regulatory requirements for privileged access through comprehensive audit trails, and reporting.
Technology Capability	Increasing efficiency by automating password management for privileged access accounts.
Technology Capability	Isolate privileged access to prevent unauthorized use.
Technology Capability	Securely storing and managing privileged credentials will prevent unauthorized use.

Product Family Enhancements-Application Platforms Services-C Report Pulled: 11/5/2025 Item ID: 13931

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Portfolio

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.389	$0.503	$0.940	$0.940	$0.940	$0.940	$0.940	-	$5.595
O&M	$0.008	$0.219	$0.311	$0.311	$0.311	$0.311	$0.311	-	$1.779
Total Cost of Ownership	$0.397	$0.722	$1.251	$1.251	$1.251	$1.251	$1.251	-	**$7.374**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.203	$0.497	$0.904	$0.904	$0.904	$0.904	$0.904	-	**$5.220**
Outside Services	$0.098	$0.164	-	-	-	-	-	-	**$0.262**
Business Expense/Overheads	$0.059	$0.061	$0.347	$0.347	$0.347	$0.347	$0.347	-	**$1.855**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.008	$0.001	-	-	-	-	-	-	**$0.009**
Licenses, Permits & Fees	$0.030	-	-	-	-	-	-	-	**$0.030**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.397	$0.722	$1.251	$1.251	$1.251	$1.251	$1.251	-	**$7.374**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.008	$0.219	$0.311	$0.311	$0.311	$0.311	$0.311	-	**$1.779**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.008	$0.219	$0.311	$0.311	$0.311	$0.311	$0.311	-	**$1.779**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.389	$0.503	$0.940	$0.940	$0.940	$0.940	$0.940	-	**$5.595**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.389	$0.503	$0.940	$0.940	$0.940	$0.940	$0.940	-	**$5.595**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Application Platforms Services-C Report Pulled: 11/5/2025 Item ID: 13933

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope

Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives

Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.310	$0.096	$0.170	$0.170	$0.170	$0.170	$0.170	-	$1.255
Total Cost of Ownership	$0.310	$0.096	$0.170	$0.170	$0.170	$0.170	$0.170	-	**$1.255**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.164	$0.078	$0.159	$0.159	$0.159	$0.159	$0.159	-	**$1.036**
Outside Services	$0.097	$0.015	-	-	-	-	-	-	**$0.112**
Business Expense/Overheads	-	-	$0.011	$0.011	$0.011	$0.011	$0.011	-	**$0.056**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.013	$0.003	-	-	-	-	-	-	**$0.016**
Licenses, Permits & Fees	$0.036	-	-	-	-	-	-	-	**$0.036**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.310	$0.096	$0.170	$0.170	$0.170	$0.170	$0.170	-	**$1.255**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.310	$0.096	$0.170	$0.170	$0.170	$0.170	$0.170	-	**$1.255**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.310	$0.096	$0.170	$0.170	$0.170	$0.170	$0.170	-	**$1.255**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Corporate-Capital

Report Pulled: 11/5/2025 **Item ID: 13372**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services.

Scope The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.257	$1.035	$1.115	$1.115	$2.509	$2.509	$2.509	-	$12.050
O&M	$0.133	$(0.008)	$0.249	$0.249	$0.249	$0.249	$0.249	-	$1.370
Total Cost of Ownership	$1.390	$1.027	$1.364	$1.364	$2.758	$2.758	$2.758	-	**$13.420**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.246	$0.759	$0.960	$0.960	$1.871	$1.871	$1.871	-	**$8.538**
Outside Services	$0.624	$0.177	-	-	-	-	-	-	**$0.801**
Business Expense/Overheads	$0.077	$0.091	$0.403	$0.403	$0.888	$0.888	$0.888	-	**$3.638**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.002	-	-	-	-	-	-	-	**$0.002**
Licenses, Permits & Fees	$0.440	-	-	-	-	-	-	-	**$0.440**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.390	$1.027	$1.364	$1.364	$2.758	$2.758	$2.758	-	**$13.420**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.133	$(0.008)	$0.249	$0.249	$0.249	$0.249	$0.249	-	**$1.370**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.133	$(0.008)	$0.249	$0.249	$0.249	$0.249	$0.249	-	**$1.370**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.257	$1.035	$1.115	$1.115	$2.509	$2.509	$2.509	-	**$12.050**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.257	$1.035	$1.115	$1.115	$2.509	$2.509	$2.509	-	**$12.050**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Corporate-O&M

Report Pulled: 11/5/2025 **Item ID: 13373**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Corporate Services initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in the Corporate Services Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Corporate Services.

Scope The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as People and Culture (Human Resources), Legal, Finance and Governmental, Regulatory and, Public Affairs.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.397	$0.325	$0.258	$0.258	$0.258	$0.258	$0.258	-	$2.013
Total Cost of Ownership	$0.397	$0.325	$0.258	$0.258	$0.258	$0.258	$0.258	-	**$2.013**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.098	$0.133	$0.241	$0.241	$0.241	$0.241	$0.241	-	**$1.438**
Outside Services	$0.299	$0.185	-	-	-	-	-	-	**$0.484**
Business Expense/Overheads	-	-	$0.017	$0.017	$0.017	$0.017	$0.017	-	**$0.084**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	$0.007	-	-	-	-	-	-	**$0.008**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.397	$0.325	$0.258	$0.258	$0.258	$0.258	$0.258	-	**$2.013**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.397	$0.325	$0.258	$0.258	$0.258	$0.258	$0.258	-	**$2.013**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.397	$0.325	$0.258	$0.258	$0.258	$0.258	$0.258	-	**$2.013**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Customer-Capital

Report Pulled: 11/5/2025 **Item ID: 13374**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Customer initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.573	$2.300	$2.352	$2.352	$2.352	$2.352	$2.352	-	$15.632
O&M	$0.862	$0.388	$0.124	$0.124	$0.126	$0.126	$0.126	-	$1.876
Total Cost of Ownership	$2.435	$2.688	$2.476	$2.476	$2.478	$2.478	$2.478	-	**$17.508**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.408	$0.189	$0.112	$0.112	$0.112	$0.112	$0.112	-	**$1.159**
Outside Services	$1.926	$2.128	$2.303	$2.303	$2.303	$2.303	$2.303	-	**$15.569**
Business Expense/Overheads	$0.101	$0.236	$0.051	$0.051	$0.054	$0.054	$0.054	-	**$0.600**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.009	$0.009	$0.009	$0.009	$0.009	-	**$0.045**
Licenses, Permits & Fees	-	$0.135	-	-	-	-	-	-	**$0.135**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$2.435	$2.688	$2.476	$2.476	$2.478	$2.478	$2.478	-	**$17.508**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.862	$0.388	$0.124	$0.124	$0.126	$0.126	$0.126	-	**$1.876**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.862	$0.388	$0.124	$0.124	$0.126	$0.126	$0.126	-	**$1.876**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.573	$2.300	$2.352	$2.352	$2.352	$2.352	$2.352	-	**$15.632**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.573	$2.300	$2.352	$2.352	$2.352	$2.352	$2.352	-	**$15.632**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Customer-O&M

Report Pulled: 11/5/2025 **Item ID:** 13375

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Customer initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements in the Customer Portfolio lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope

Included in the implementation are small changes and functionality improvements to existing IT software application investments for Customer. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Customer Experience and Operations, Applications Support and, Device Management.

Alternatives

Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.080	$0.027	$0.300	$0.300	$0.300	$0.300	$0.300	-	$1.609
Total Cost of Ownership	$0.080	$0.027	$0.300	$0.300	$0.300	$0.300	$0.300	-	**$1.609**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	-	-	$0.179	$0.179	$0.179	$0.179	$0.179	-	**$0.895**
Outside Services	$0.080	$0.027	$0.102	$0.102	$0.102	$0.102	$0.102	-	**$0.615**
Business Expense/Overheads	-	-	$0.020	$0.020	$0.020	$0.020	$0.020	-	**$0.098**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.080	$0.027	$0.300	$0.300	$0.300	$0.300	$0.300	-	**$1.609**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.080	$0.027	$0.300	$0.300	$0.300	$0.300	$0.300	-	**$1.609**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.080	$0.027	$0.300	$0.300	$0.300	$0.300	$0.300	-	**$1.609**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Electric & Gas Shared-Capital

Report Pulled: 11/5/2025 **Item ID: 13376**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Electric and Gas operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in Electric and Gas operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$1.538	$2.947	$1.037	$1.037	$1.037	$1.037	$1.037	-	$9.669
O&M	$0.395	$0.161	$0.155	$0.155	$0.155	$0.155	$0.155	-	$1.333
Total Cost of Ownership	$1.933	$3.109	$1.192	$1.192	$1.192	$1.192	$1.192	-	**$11.002**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.263	$2.011	$0.155	$0.155	$0.155	$0.155	$0.155	-	**$3.052**
Outside Services	$1.596	$0.938	$0.843	$0.843	$0.843	$0.843	$0.843	-	**$6.747**
Business Expense/Overheads	$0.071	$0.149	$0.179	$0.179	$0.179	$0.179	$0.179	-	**$1.116**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.003	$0.011	$0.015	$0.015	$0.015	$0.015	$0.015	-	**$0.087**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$1.933	$3.109	$1.192	$1.192	$1.192	$1.192	$1.192	-	**$11.002**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.395	$0.161	$0.155	$0.155	$0.155	$0.155	$0.155	-	**$1.333**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.395	$0.161	$0.155	$0.155	$0.155	$0.155	$0.155	-	**$1.333**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.538	$2.947	$1.037	$1.037	$1.037	$1.037	$1.037	-	**$9.669**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.538	$2.947	$1.037	$1.037	$1.037	$1.037	$1.037	-	**$9.669**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Electric & Gas Shared-O&M

Report Pulled: 11/5/2025 **Item ID: 13377**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Electric and Gas operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement

As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives

The value of software enhancements in Electric and Gas Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Electric and Gas Operations.

Scope

The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Electric, Gas and Generation Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls.

Alternatives

Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Companys ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.077	$2.009	$0.216	$0.216	$0.216	$0.216	$0.216	-	$3.166
Total Cost of Ownership	$0.077	$2.009	$0.216	$0.216	$0.216	$0.216	$0.216	-	**$3.166**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.010	$1.109	$0.154	$0.154	$0.154	$0.154	$0.154	-	**$1.890**
Outside Services	$0.067	$0.816	$0.046	$0.046	$0.046	$0.046	$0.046	-	**$1.111**
Business Expense/Overheads	-	$0.084	$0.014	$0.014	$0.014	$0.014	$0.014	-	**$0.154**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.000	$0.002	$0.002	$0.002	$0.002	$0.002	-	**$0.012**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.077	$2.009	$0.216	$0.216	$0.216	$0.216	$0.216	-	**$3.166**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.077	$2.009	$0.216	$0.216	$0.216	$0.216	$0.216	-	**$3.166**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.077	$2.009	$0.216	$0.216	$0.216	$0.216	$0.216	-	**$3.166**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Gas-Capital

Report Pulled: 11/5/2025 **Item ID: 13380**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Engineering and Operations initiative will utilize both Capital and O&M funding to make enhancements to existing software and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.334	$(0.055)	$0.463	$0.463	$1.077	$1.138	$1.138	-	$4.557
O&M	$0.107	$0.140	$0.096	$0.096	$0.096	$0.096	$0.096	-	$0.727
Total Cost of Ownership	$0.441	$0.085	$0.559	$0.559	$1.173	$1.234	$1.234	-	**$5.284**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.106	$0.052	$0.130	$0.130	$0.520	$0.520	$0.520	-	**$1.977**
Outside Services	$0.306	$0.030	$0.310	$0.310	$0.311	$0.311	$0.311	-	**$1.888**
Business Expense/Overheads	$0.044	$0.003	$0.096	$0.096	$0.342	$0.402	$0.402	-	**$1.385**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$(0.014)	-	$0.024	$0.024	-	-	-	-	**$0.033**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.441	$0.085	$0.559	$0.559	$1.173	$1.234	$1.234	-	**$5.284**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.107	$0.140	$0.096	$0.096	$0.096	$0.096	$0.096	-	**$0.727**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.107	$0.140	$0.096	$0.096	$0.096	$0.096	$0.096	-	**$0.727**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.334	$(0.055)	$0.463	$0.463	$1.077	$1.138	$1.138	-	**$4.557**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.334	$(0.055)	$0.463	$0.463	$1.077	$1.138	$1.138	-	**$4.557**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Gas-O&M

Report Pulled: 11/5/2025 **Item ID:** 13381

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Gas Engineering and Operations initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements in Gas Engineering and Operations lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvements to existing IT software application investments for Gas Engineering and Operations.

Scope The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as Gas Engineering and Operations, Operations Performance, Operations and Financial Reporting and, Operations Compliance and Controls.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.382	$0.115	$0.442	$0.442	$0.442	$0.442	$0.442	-	$2.710
Total Cost of Ownership	$0.382	$0.115	$0.442	$0.442	$0.442	$0.442	$0.442	-	**$2.710**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.102	$0.065	$0.290	$0.290	$0.290	$0.290	$0.290	-	**$1.616**
Outside Services	$0.280	$0.048	$0.122	$0.122	$0.122	$0.122	$0.122	-	**$0.939**
Business Expense/Overheads	$0.001	$0.002	$0.029	$0.029	$0.029	$0.029	$0.029	-	**$0.147**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.001	$0.001	$0.001	$0.001	$0.001	-	**$0.007**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.382	$0.115	$0.442	$0.442	$0.442	$0.442	$0.442	-	**$2.710**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.382	$0.115	$0.442	$0.442	$0.442	$0.442	$0.442	-	**$2.710**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.382	$0.115	$0.442	$0.442	$0.442	$0.442	$0.442	-	**$2.710**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Infrastructure Platforms Service

Report Pulled: 11/5/2025 **Item ID:** 13932

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Portfolio

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize both Capital and O&M funding to make enhancements to existing software & hardware and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & SI

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.548	$0.198	$0.589	$0.589	$0.589	$0.589	$0.589	-	$3.691
O&M	$0.080	$0.140	$0.201	$0.201	$0.201	$0.201	$0.201	-	$1.225
Total Cost of Ownership	$0.628	$0.337	$0.790	$0.790	$0.790	$0.790	$0.790	-	**$4.916**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.257	$0.239	$0.572	$0.572	$0.572	$0.572	$0.572	-	**$3.359**
Outside Services	$0.169	$0.025	-	-	-	-	-	-	**$0.194**
Business Expense/Overheads	$0.054	$0.049	$0.218	$0.218	$0.218	$0.218	$0.218	-	**$1.191**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.147	$0.024	-	-	-	-	-	-	**$0.171**
Licenses, Permits & Fees	$0.000	-	-	-	-	-	-	-	**$0.000**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.628	$0.337	$0.790	$0.790	$0.790	$0.790	$0.790	-	**$4.916**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.080	$0.140	$0.201	$0.201	$0.201	$0.201	$0.201	-	**$1.225**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.080	$0.140	$0.201	$0.201	$0.201	$0.201	$0.201	-	**$1.225**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.548	$0.198	$0.589	$0.589	$0.589	$0.589	$0.589	-	**$3.691**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.548	$0.198	$0.589	$0.589	$0.589	$0.589	$0.589	-	**$3.691**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Product Family Enhancements-Infrastructure Platforms Services Report Pulled: 11/5/2025 Item ID: 13934

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The IT initiative will utilize O&M funding to make enhancements to existing software and to address requests generated by changing business requirements.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & S

WORK OBJECTIVES

Problem Statement As business processes improve and change, new requirements surface that call for smaller-effort software application changes that typically emerge from new or changing business conditions, compliance requirements, needs for new capabilities, customer feedback, and other improvement ideas. Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, and limit the Company's ability to consistently meet objectives.

Objectives The value of software enhancements that benefit the IT organization lies in: (1) cost savings and cost avoidance; (2) technology and business process efficiencies; (3) improved customer experience; (4) risk mitigation; (5) safety improvements; and (6) achieving corporate goals, among others. While these small-work software efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment.

Scope Included in the implementation are small changes and functionality improvements to existing IT software application investments that are utilized by IT employees in support of tracking hardware and software fixes and managing technology projects for the various business areas within the Company. The scope of application enhancements encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as IT resource management, IT project management, IT financial and regulatory, IT applications operations, and IT infrastructure management.

Alternatives Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and to assess requests for value using categorized benefits. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.144	$0.076	$0.047	$0.047	$0.047	$0.047	$0.047	-	$0.454
Total Cost of Ownership	$0.144	$0.076	$0.047	$0.047	$0.047	$0.047	$0.047	-	**$0.454**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.007	$0.068	$0.044	$0.044	$0.044	$0.044	$0.044	-	**$0.294**
Outside Services	$0.137	$0.008	-	-	-	-	-	-	**$0.145**
Business Expense/Overheads	-	-	$0.003	$0.003	$0.003	$0.003	$0.003	-	**$0.015**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.144	$0.076	$0.047	$0.047	$0.047	$0.047	$0.047	-	**$0.454**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.144	$0.076	$0.047	$0.047	$0.047	$0.047	$0.047	-	**$0.454**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.144	$0.076	$0.047	$0.047	$0.047	$0.047	$0.047	-	**$0.454**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Maintaining an optimal degree of application currency helps the Company to avoid: (1) application failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) disruption of employee work completion. The benefit of implementing the enhancements will be reviewed and agreed upon by the cross organization governance board.

Public Key Infrastructure (PKI) Upgrade

Report Pulled: 11/5/2025 **Item ID: 13691**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Replace on-premise PKI to stay supported by the manufacturer.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STAND.

WORK OBJECTIVES

Problem Statement The existing PKI that issues certificates to IT systems for secure communications needs to be upgraded to stay supported by the manufacturer. If the PKI is not maintained, in the event of a system failure the Company would not have support in recovering. All IT systems requiring secure communications via certificates would go offline within three days.

Objectives Replace existing PKI with new PKI that is supported by the manufacturer.

Scope The project will build and configure the servers necessary to provide Public Key Infrastructure services, put in place physical token management for maintaining security, migrate certificate issuing and management to the new system and decommission the old system.

Alternatives The Company has a limited use service for PKI on the Internet only. (1) The Company looked into expanding the service to include usage on the Company network but found the solution to not be economically viable. (2) The Company also looked at full cloud solutions, but it did not meet the security standards currently being used around physical token use. (3) The Company looked at continuing extended support, however the continuing extended support is not available by the vendor. (4) The Company selected a hybrid solution of part cloud and part on-premise to meet all operational and security compliance requirements. The opportunity is to retain ownership of the keys on-premise prior to evaluating ownership through the cloud.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
10/9/2023	10/23/2023	12/4/2023	12/15/2023
	In-Service/Go-Live	**Closeout**	
	7/1/2024	7/12/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$0.154	$1.234	$0.191	-	-	-	-	-	$1.579
O&M	$0.084	$0.188	$0.137	-	-	-	-	-	$0.410
Total Cost of Ownership	$0.238	$1.422	$0.328	-	-	-	-	-	**$1.989**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.015	$0.239	$0.001	-	-	-	-	-	**$0.255**
Outside Services	$0.016	$0.267	$0.285	-	-	-	-	-	**$0.568**
Business Expense/Overheads	$0.002	$0.135	$0.018	-	-	-	-	-	**$0.155**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.672	$(0.026)	-	-	-	-	-	**$0.646**
Licenses, Permits & Fees	$0.205	$0.109	$0.051	-	-	-	-	-	**$0.366**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.238	$1.422	$0.328	-	-	-	-	-	**$1.989**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.084	$0.188	$0.137	-	-	-	-	-	**$0.410**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.084	$0.188	$0.137	-	-	-	-	-	**$0.410**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.154	$1.234	$0.191	-	-	-	-	-	**$1.579**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.154	$1.234	$0.191	-	-	-	-	-	**$1.579**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
System Failure (SAP & Other)	High	Medium	Consumers Energy's vendor, Thales only offers full support for seven years after purchase of a solution. After the end of support no more operational or security patches are available and if an issue is encountered the manufacturer will not assist in resolving.

OTHER VALUE

Type	Description
Risk Mitigation	DR Risks/Impacts Description – If the Company doesn't upgrade to a supported version and the system becomes unrecoverable, we are at risk of the of the following: (1) Lost productivity of approximately 8,000 employees and 4,000 contractors who are unable to access system is estimated to be 3.12M (Half day – 13,000 *$60 *4 hours) to 12.48M (2 days – 13,000 people * $60 * 16 hours). (2) Deferred revenue – payment from customers estimated to be $12-44M daily. (3) Life Safety Incidents – loss of ability to report a down powerline, gas leak type events. (4) Negatively impacts our ability to assist with Storm Restoration. (5) Call centers will go down.
Risk Mitigation	The Company's research demonstrates that industry standards on refreshing hardware are generally three to five years. Using these recommendations allows the Company to: (1) Avoid increasing costs as the result of hardware failures; (2) avert customer frustration and employee downtime; (3) reduce security risks by ensuring that devices are updated and patched to prevent vulnerabilities; (4) continue operating system support as older versions are retired by the manufacturer; and (5) ensure employees have the required software to perform their work.

Rate Change Maintenance

Report Pulled: 11/5/2025 **Item ID: 13957**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Rates Change Maintenance project will modify SAP billing in accordance with pricing and rate change requirements.

Portfolio IT Services > Applications > Customer Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement For the Company to continue to meet and comply with certain MPSC requirements and to enable it to update its rates when rate changes are approved, there is a need to make periodic updates/modifications to existing prices and rate structures. These updates help ensure accuracy of billing and provide optimal rates for customers.

Objectives The project will add value for both the Company and its customers through: (1) improved customer satisfaction by providing accurate billing; (2) optimized rate configuration enabling rate changes to be made more efficiently; and (3) timely updates to Company applications that incorporate mandatory changes to the rate structure that includes new surcharges, price changes, and energy efficiency programs.

Scope The scope of this project encompasses (1) implementation of annual or monthly (or both) electric and gas customer price changes, and rate structure changes as approved by the MSPC; and (2) optimizing the rate configuration in the Company's back-end system for more efficient rate changes.

Alternatives Alternative considered include: (1) a fully dedicated offshore development model. The option ensured resources were readily available with a more cost-effective labor expense. This alternative was not chosen due to the risk of billing inaccuracies and customer complaints. These risks were deemed too high because of the complexities of the rate structure, new development, and the time it would take for testing of this model; and (2) Instead, the Company chose to leverage onshore resources to plan, coordinate, and execute the rate changes. This option was selected as it supports the Company's operation model for rate changes.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.264	$0.332	$0.345	$0.345	$0.345	$0.345	$0.345	-	$2.323
Total Cost of Ownership	$0.264	$0.332	$0.345	$0.345	$0.345	$0.345	$0.345	-	**$2.323**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.014	$0.011	$0.323	$0.323	$0.323	$0.323	$0.323	-	**$1.639**
Outside Services	$0.250	$0.320	-	-	-	-	-	-	**$0.571**
Business Expense/Overheads	-	-	$0.023	$0.023	$0.023	$0.023	$0.023	-	**$0.113**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.264	$0.332	$0.345	$0.345	$0.345	$0.345	$0.345	-	**$2.323**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.264	$0.332	$0.345	$0.345	$0.345	$0.345	$0.345	-	**$2.323**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.264	$0.332	$0.345	$0.345	$0.345	$0.345	$0.345	-	**$2.323**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Risk Mitigation	Completing timely rate changes reduces the risk of increasing noncollectable revenue due to delays with rate implementation. The Company could risk millions of dollars if rate changes are delayed; establishing an optimized process for rate changes is crucial to mitigate this risk.
Technology Capability	Customer Management
Avoided Costs	Following the Rate Optimization implementation the team responsible for rate changes can streamline their efforts; preventing waste in the form of waiting and rework. Multiple changes can be completed at once versus sequencing them which causes rework when priorities shift.
Risk Mitigation	Maintain compliance by fulfilling MPSC rates requirements, ensuring customer bills remain accurate as the Company implements various rate changes. This will help the Company provide the best rates for customers as they're identified.

Replacement for Gas Automated Meter Reading (AMR) Technol Report Pulled: 11/5/2025 Item ID: 13960

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Condition **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will replace Itron Field Collection Systems (FCS) and Itron Mobile with the newest Itron Software as a Service (SaaS) Temetra along with replacing Itron Mobile with Temetra Mobile for Gas AMR meters. This will allow the Company to leverage new cloud capabilities and align with the Company's Cloud strategy.

Portfolio IT Services > Applications > Gas Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-ELECTRIC

WORK OBJECTIVES

Problem Statement The Company is using FCS and FCS mobile to gather gas meter reads. The vendor is replacing these systems with new Cloud software called Temetra and Temetra Mobile due to FCS and Itron Mobile being end of life December 2026. The software migration is necessary to maintain vendor support (latest security patches, bug fixes, latest functionality) while avoiding security, stability, and reliability risks for the Company. Moving to Itron Temetra will ensure no gas meter reading disruption and continued integration with existing gas communication modules and Itron Security Manager.

Objectives The project adds value by: (1) continuing to collect accurate and timely gas meter reads; (2) removing the risk of being on unsupported versions; (3) utilizing the latest functionality such as retrieving historic read data, photos and reports directly from Temetra; (4) seamlessly getting up to date security patches; (5) and reducing ongoing networking equipment replacement and upgrade costs.

Scope Included in the implementation is: (1) configuring and deploying Temetra and Temetra Mobile; (2) migrating data; (3) integrating to Itron Enterprise Edition (IEE), Itron Security Manager (ISM), gas AMR PI Historian and Data Lake; (4) integrating to Mobile Collectors (MC3s); (5) testing the software, data migrations and integrations; (6) educating and increasing the skills of the employees to leverage the new cloud services; (7) and decommissioning FCS and Itron Mobile and the on-premise databases and servers.

Alternatives Alternatives considered included: (1) continuing to use the FCS application and Itron Mobile without vendor support. This alternative was not selected because it would add application stability, security, and dependency risks to gas meter reading data collection which would negatively impact critical customer billing operations. It would also de-couple from the Itron security infrastructure that the other business critical Itron applications use, creating more expense and complexity in the technology environment. (2) Replace the platform with a different mobile gas reading application, which would also require the Company to replace the 1.2 million gas communication modules on the meters. Replacing FCS would require the application business owners to undertake a large initiative requiring multiple years to implement and a multi-team effort from start to finish. It would also increase the amount of technology needed to be supported and add cost to support as it would be a standalone product. (3) Move to Itron's Cloud technology (Temetra and Temetra Mobile). This option best suits customers and the Company's needs for the future as it offers new functionality while maintaining the system integrated into the Itron Security infrastructure and with the other Itron software products in use at the Company.

DATES (phase end)

Initiation 1/12/2026	**Project Plan & Scope Definition** 1/26/2026	**Final Engineering, Planning & Design** 2/26/2026	**Execution** 7/30/2026
	In-Service/Go-Live 9/24/2026	**Closeout** 10/15/2026	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	$1.085	-	-	-	-	-	-	-	$1.085
O&M	$0.277	-	-	-	-	-	-	-	$0.277
Total Cost of Ownership	$1.362	-	-	-	-	-	-	-	**$1.362**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.209	-	-	-	-	-	-	-	**$0.209**
Outside Services	$0.063	-	-	-	-	-	-	-	**$0.063**
Business Expense/Overheads	$0.123	-	-	-	-	-	-	-	**$0.123**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.803	-	-	-	-	-	-	-	**$0.803**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$1.197	-	-	-	-	-	-	-	**$1.197**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.277	-	-	-	-	-	-	-	**$0.277**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.277	-	-	-	-	-	-	-	**$0.277**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.085	-	-	-	-	-	-	-	**$1.085**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.085	-	-	-	-	-	-	-	**$1.085**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Gas T&D
Intangibles	Latest software of Temetra enables the best integration with other Itron products, such as future versions of Itron Security Manager. Failure to stay current, will impact the upgradability of the entire Itron software suite as well as gas meters from gas-only customers.
Intangibles	The Company has adopted a cloud-first policy. The move from FCS to Temetra will align with that policy.
Intangibles	This project will assist in improving performance of the platform through bug fixes and performance tuning and latest enhancements. Ensuring the Company is on the latest platform will enhance usability while also guaranteeing it is running the most secure configuration.
Risk Mitigation	To mitigate the risks of software reaching end-of-life, we need to transition to this new, supported solution. Temetra and Temetra mobile are essential to ensure vendor support with the latest security patches, bug fixes and latest functionality.
Avoided Costs	With applications in the cloud, the Company can reduce it's purchasing of on-premise servers and on-premise software

SAP HANA Database Migration

Report Pulled: 11/7/2025 **Item ID: 11774**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description In preparation for SAP's planned end of support for its Business Suite product in 2027, the Company will migrate its existing SAP databases from Oracle to SAP HANA in advance of the required move to S/4HANA.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement The Company's SAP applications currently utilize Oracle's relational database management system as their underlying database storage technology. SAP has informed its customers that standard support for its legacy Business Suite (aka ECC) product will end in 2027, along with support for all non-SAP database platforms. SAP has also informed customers that the future direction for their enterprise solution is S/4HANA, a solution built explicitly for their HANA database platform. To prepare for these upcoming events, the company will migrate all of its SAP databases off of Oracle and onto SAP HANA.

Objectives This project lays the groundwork for the company's eventual shift to SAP's HANA-based solutions by: (1) proactively migrating SAP databases to a database technology that is fully supported by SAP beyond 2027; and (2) mitigating the risk of a complete loss of support for the current Oracle database technology in 2027.

Scope Project scope includes: (1) procurement of HANA software licensing to cover all migrated SAP applications; (2) data migration for all SAP applications from the Oracle database to SAP HANA; and (3) implementation of new application support policies, procedures and tools required to manage the newly migrated SAP HANA applications.

Alternatives Given SAP's announcement regarding the end of support for its ECC product in 2027, all customers running SAP on database software other than HANA will also lose support for their associated database software in 2027. SAP is offering no other options for databases other than HANA beyond 2027. While there is no alternative to the HANA database for SAP going forward, the Company has considered multiple options: (1) Perform a direct migration from SAP Business Suite on Oracle to S/4HANA. A direct migration to S/4HANA brings greater operational risk to the Company as both the underlying database technology and the SAP application's functionality would change simultaneously, so this alternative was not selected. (2) Remain on the current SAP Business Suite product but competitively bid support services to a third-party provider instead of SAP. This alternative was not selected because moving to a third-party support model forces the Company to remain on outdated SAP software and eliminates any possibility of benefitting from new business functionality provided by S/4HANA. It will also require the Company to accept significant risk due to the fact that SAP security patches, application patches and upgrades will not be available upon termination of the SAP maintenance agreement. (3) Migrate to SAP's Software as a Service (SaaS) implementation of S/4HANA. This alternative was not selected because an S/4HANA SaaS migration is a much more disruptive option as the Company's business processes must be adjusted to accommodate functionality differences between ECC and S/4HANA. The risk of negative business impact is significantly greater than simply changing the underlying database technology. (4) Migrate the SAP databases to HANA prior to implementing S/4HANA. This alternative was selected as it gives the Company several years to solidify its HANA database infrastructure before introducing the substantial business process changes required with S/4HANA.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
7/3/2023	7/31/2023	10/2/2023	1/2/2024
	In-Service/Go-Live	**Closeout**	
	11/1/2025	12/2/2025	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$2.392	$2.841	$3.099	-	-	-	-	-	$8.331
O&M	$0.181	$0.840	$0.390	-	-	-	-	-	$1.411
Total Cost of Ownership	$2.572	$3.681	$3.489	-	-	-	-	-	**$9.742**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.101	$0.592	$1.600	-	-	-	-	-	**$2.294**
Outside Services	$0.180	$2.146	$0.378	-	-	-	-	-	**$2.704**
Business Expense/Overheads	$0.035	$0.285	$0.250	-	-	-	-	-	**$0.570**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.000	-	-	-	-	-	**$0.000**
Licenses, Permits & Fees	$2.255	$0.659	$1.260	-	-	-	-	-	**$4.174**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$2.572	$3.681	$3.489	-	-	-	-	-	**$9.742**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	$(1.096)	$(1.096)	-	-	-	**$(2.192)**
	Initial	$0.181	$0.840	$0.390	-	-	-	-	-	**$1.411**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.181	$0.840	$0.390	$(1.096)	$(1.096)	-	-	-	**$(0.781)**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.392	$2.841	$3.099	-	-	-	-	-	**$8.331**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.392	$2.841	$3.099	-	-	-	-	-	**$8.331**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.825

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Risk Mitigation	By completing this work in advance of December 2027, when SAP will cease support of its Business Suite (ECC) product, and by performing this work in a phased approach (migrating to HANA database first, before migrating the application to S/4HANA), the Company avoids potential operational stability issues.
Technology Capability	SAP is eliminating support for all databases other than HANA beginning in 2027. By migrating to HANA in advance of this 2027 date, the Company is able to eliminate its reliance on Oracle's database software and move to SAP's long-term database solution, HANA.

SAP Support Pack Upgrade 2023-2024

Report Pulled: 11/5/2025 **Item ID: 12500**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The SAP Support Pack Upgrade project is to maintain the currency levels of all SAP applications. This will ensure the applications are at version levels that are supported by SAP, have the latest patches and bug fixes, and provide cross-application compatibility for our business partners.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement To continue to maintain SAP application version currency, across all applications, the support packs released by SAP must be routinely applied. Without maintaining application currency, the core business applications running on the SAP platform are at risk of losing vendor support, resulting in the inability to apply bug fixes and patches, including security patches, and maintain application interoperability and stability.

Objectives The project will add value by: (1) maintaining supportability of SAP applications; (2) mitigating system security, stability and reliability risks by ensuring the applications are up-to-date with the most current patches and bug fixes released by SAP; and (3) ensuring ongoing cross-application compatibility.

Scope The scope of this project includes routine support pack upgrades to all SAP applications, which include: Enterprise Core Component (ECC), Customer Relationship Manager (CRM), Enterprise Portal, Process Orchestration (PO), Business Warehouse (BW), Business Objects (BOBJ), Data Services (DS), Governance, Risk and Compliance (GRC), Solution Manager, Data Quality Manager (DQM), Graphical User Interface (GUI), Single Sign On (SSO), System Landscape Directory (SLD) and other related SAP applications.

Alternatives Alternatives considered include: (1) Divide the scope into individual projects by SAP application. This alternative was not selected because the efforts are interrelated and completing them separately could lead to duplication of work, especially testing efforts, and therefore potentially higher costs. (2) Migrate to SAP S/4HANA. This option was not selected at this time because it is part of the long-term digital plan and requires substantial planning and investment, (3) Balance the project scope through regular support pack upgrades. This alternative was selected because it provides the best balance of minimizing cost and maintaining support by combining multiple application upgrades through a single support pack upgrade effort.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
2/1/2024	4/1/2024	6/1/2024	7/1/2024
	In-Service/Go-Live	**Closeout**	
	10/15/2024	10/31/2024	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.011	$0.162	-	-	-	-	-	-	$0.172
Total Cost of Ownership	$0.011	$0.162	-	-	-	-	-	-	**$0.172**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.001	$0.021	-	-	-	-	-	-	**$0.022**
Outside Services	$0.009	$0.141	-	-	-	-	-	-	**$0.150**
Business Expense/Overheads	$0.001	-	-	-	-	-	-	-	**$0.001**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.011	$0.162	-	-	-	-	-	-	**$0.172**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.011	$0.162	-	-	-	-	-	-	**$0.172**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.011	$0.162	-	-	-	-	-	-	**$0.172**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Ensure all SAP applications are compatible with each other.
Intangibles	Ensure all SAP applications are fully supported by SAP.
Risk Mitigation	Risk mitigation against system and information security related issues by ensuring that all the SAP applications have the latest patches and bug fixes.

SAP Support Pack Upgrade 2026

Report Pulled: 11/5/2025 **Item ID: 12501**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The SAP Support Pack Upgrade project is to maintain the currency levels of all SAP applications. This will ensure the applications are at version levels that are supported by SAP, have the latest patches and bug fixes, and provide cross-application compatibility for business partners.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERV

WORK OBJECTIVES

Problem Statement To continue to maintain SAP application version currency, across all applications, the support packs released by SAP must be routinely applied. Without maintaining application currency, the core business applications running on the SAP platform are at risk of losing vendor support, resulting in the inability to apply bug fixes and patches, including security patches, and maintain application interoperability and stability.

Objectives The project will add value by: (1) maintaining supportability of SAP applications; (2) mitigating system security, stability and reliability risks by ensuring the applications are up-to-date with the most current patches and bug fixes released by SAP; and (3) ensuring ongoing cross-application compatibility.

Scope The scope of this project includes routine support pack upgrades to all SAP applications, which include: Enterprise Core Component (ECC), Customer Relationship Manager (CRM), Enterprise Portal, Process Orchestration (PO), Business Warehouse (BW), Business Objects (BOBJ), Data Services (DS), Solution Manager, Data Quality Manager (DQM), Graphical User Interface (GUI), Single Sign On (SSO), System Landscape Directory (SLD) and other related SAP applications.

Alternatives Alternatives considered include: (1) dividing the scope into individual projects by SAP application. This alternative was not selected because the efforts are interrelated and completing them separately could lead to duplication of work, especially testing efforts, and therefore potentially higher costs. (2) migrating to SAP S/4HANA. This option was not selected because SAP S/4HANA is a multi-year project that is not expected to be completed by year-end 2026. So an alternative approach is needed to perform the application upgrades and maintain currency in the meantime. (3) Ultimately, the Company chose to balance the project scope through regular support pack upgrades. This alternative was selected because it provides the best balance of minimizing cost and maintaining support by combining multiple application upgrades through a single support pack upgrade effort.

DATES (phase end)

Initiation 2/1/2026
Project Plan & Scope Definition 4/1/2026
In-Service/Go-Live 10/15/2026
Final Engineering, Planning & Design 6/1/2026
Closeout 10/31/2026
Execution 7/1/2026

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.454	-	-	-	-	-	-	-	$0.454
Total Cost of Ownership	$0.454	-	-	-	-	-	-	-	**$0.454**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	$0.064	-	-	-	-	-	-	-	**$0.064**
Outside Services	$0.361	-	-	-	-	-	-	-	**$0.361**
Business Expense/Overheads	$0.030	-	-	-	-	-	-	-	**$0.030**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.454	-	-	-	-	-	-	-	**$0.454**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.454	-	-	-	-	-	-	-	**$0.454**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.454	-	-	-	-	-	-	-	**$0.454**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Intangibles	Ensure all SAP applications are compatible with each other.
Intangibles	Ensure all SAP applications are fully supported by SAP.
Risk Mitigation	Risk mitigation by ensuring all SAP applications have the latest patches and bug fixes.

Saviynt Enterprise Identity Governance and Access (EIGA) Impl | Report Pulled: 11/5/2025 | Item ID: 13302

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will implement Saviynt EIGA module, consolidate Identity Access Management (IAM) functionality into Saviynt, and retire the Identity Manager application. By implementing the new solution, the Company will optimize IAM functionality, eliminate complexity, and reduce support costs. In addition, the project will integrate the OT network with an IAM solution that will allow for automated management of users and entitlements in the OT Active Directory domains and applications.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement

Current AccessNow version was identified as end of life in December 2022 and support from One Identity was discontinued as of January 2023. Additionally, the application contains numerous customized workflows and integrations to support CE business and IT processes. This customization requires One Identity professional services to support ongoing use of the application and when changes are required. Current version of AccessNow is lacking proper data analytics and reporting for end users in order to identity waste elimination opportunities. Since AccessNow is an enterprise wide platform that supports access provisioning, access controls, and processes that support regulatory compliance including SOX, NERC CIP, TSA, and MPSC requirements, the risk of operating without vendor support includes the following: Inability to perform critical defect fixes due to lack of vendor support, impacting ability to perform critical business functions; Software incompatibility with integrated systems such as Active Roles Server, upgrade other dependent software or hardware assets; Compliance issues, including non-compliance with regulatory standards, and the risk of fines that may result from non-compliance; Increased operations and maintenance costs; Degraded or poor performance, or application reliability risk (downtime risk).

Objectives

The project provide value through Two Options:
1) Option is to Upgrade AccessNow application and web portal to current versioning to obtain at least 3 years of in support compliance as well as introduce new functionality including: 1) Simplifying processes through standardization of the web portal from customized to standard Angular code. Will reduce the dependency of professional services through reduction in complexity by transforming customized portal design into standardized Angular code 2) New and improved portal design for more intuitive end user experience and reduce human struggle in access request processes. 3) More responsive portal and better performance reducing user wait time in requesting access. 4) Implement analytic capabilities for real time analysis of processes and workflows to identify waste elimination opportunities
2) The second option and Preferred Approach:
Implement Saviynt Enterprise Identity Governance and Administration (IGA) Module to consolidate IAM platforms. Consolidate multiple IAM tools and implement improved functionality into Saviynt. CE has three Identity and Access Management tools performing multiple critical Identity functions for CE. In order to optimize, eliminate complexity, and reduce support costs, CE can implement improved functionality into Saviynt instead of existing AccessNow and Active Roles Server (ARS) platforms.
1) Implement 112 Identity Access Management use cases into Saviynt (100 AccessNow, 12 ARS)
2) Eliminate One Identity professional services support costs (Estimated 125k annually)
3) Eliminate AccessNow tool and associated on premise infrastructure and internal support
4) Reduce complexity by eliminating interfaces from multiple identity tools
5) Implement HR interface for employee data processing
6) Improved portal for intuitive end user experience to reduce human struggle for access requests
7) Remove customization through standard OOTB functionality w/ Saviynt. Support only configurations, not custom code
8) Enhance Elevated Access Management through integrating SAP logs for end-to-end EAM process management
For HR Process Integrations and Improvement:
1) Automate current HR Daily chronological batch file jobs and customized scripts into API direct processing of employee joiner, mover, leaver actions from SAP HR to CE's Identity and Access Management tool. 2) Allow for real time processing of employee actions and associated access requirements. 3) Eliminate failures in the process that have resulted in major IT incidents and compliance deficiencies due to access issues related to employee job changes. 4) Retire the custom built ITSDB by modernizing the functionality within the CE's IAM tool allowing for the elimination of labor support and infrastructure of the ITSDB. 5) Reduce SOX risk through creation of a SOX Control for SAP Access attestations upon transfer of an employee to a new job function.

Scope

Implement Savivnt EIGA module. Remove customized code and transform into Out of The Box (OOTB) functionality in new version to standardize. If Saviynt is the integration option, scope will include implementing 112 IAM use cases to replace and improve AccessNow and some functionality of ARS. Additionally, Saviynt would eliminate professional services support from One Identity and associated licenses for AccessNow. The problems for the Aging Application Issues, multiple IAM Platforms and Integration Challenges, and Antiquated HR Processing issues identified in the Problem Statement will be eliminated with the Saviynt implementation.

Alternatives

Alternatives considered include: 1) Implement hot fixes to AccessNow version 8.1.5 to ensure support through summer of 2023 - 150-250k (3 months of professional services), 2) Upgrade only the application to current supported version. Will not include the new web portal but will include new application functionality. 400k, 3) Implement IAM functions in Saviynt platform to manage access requests, including Active Directory, SAP, SAP HR, and disconnected systems as well as existing API integrations. Estimated cost: $1.25 million, 4) Remain on current version that will be unsupported as of Jan 2023. Any break / fix will require One Identity professional services. Patches and enhancements may introduce additional risk of version instability. The solution chosen implements the new Savivnt system, eliminating AccessNow software.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
3/1/2024	4/5/2024	6/15/2024	8/1/2024
	In-Service/Go-Live	**Closeout**	
	5/29/2026	6/30/2026	

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$2.795	$1.947	$1.274	-	-	-	-	-	$6.015
O&M	$0.236	$0.450	$0.060	$0.765	$0.765	$0.765	$0.765	-	$3.806
Total Cost of Ownership	$3.031	$2.396	$1.334	$0.765	$0.765	$0.765	$0.765	-	**$9.821**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.390	$0.713	$0.281	-	-	-	-	-	**$1.384**
Outside Services	$0.410	$1.410	$0.600	-	-	-	-	-	**$2.421**
Business Expense/Overheads	$0.179	$0.273	$0.404	-	-	-	-	-	**$0.856**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	$0.050	-	-	-	-	-	**$0.050**
Licenses, Permits & Fees	$2.051	-	-	-	-	-	-	-	**$2.051**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$3.031	$2.396	$1.334	-	-	-	-	-	**$6.761**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.236	$0.450	$0.060	$0.765	$0.765	$0.765	$0.765	-	**$3.806**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.236	$0.450	$0.060	$0.765	$0.765	$0.765	$0.765	-	**$3.806**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.795	$1.947	$1.274	-	-	-	-	-	**$6.015**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.795	$1.947	$1.274	-	-	-	-	-	**$6.015**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	Administrative and General (A&G) Support

Application Control Enablement

Report Pulled: 11/5/2025 **Item ID: 14019**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement a technology called Application Control. Application control, also known as application allow listing, is a security strategy that permits only approved applications to run on a system. This approach helps prevent unauthorized software and malware from executing, thereby enhancing the overall security of the network.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement The rapid multiplication of unauthorized and potentially malicious applications in the current threat landscape poses a substantial risk to corporate data, network infrastructure, and overall business operations. The Company currently does not have an application control solution to mitigate this threat. Without a robust application control product, unauthorized applications can introduce vulnerabilities into the Company's network, leading to data breaches, malware infections, and other cyber threats. Failure to control application usage on the Company's network can result in non-compliance with industry regulations and standards, potentially leading to legal and financial repercussions. Unmanaged applications can cause system conflicts, performance degradation, and downtime, disrupting business continuity and productivity. Inadequate control over applications in the Company's environment increases the risk of data leakage and loss, compromising sensitive information and intellectual property. Uncontrolled application usage can; (1) lead to inefficient use of IT resources; (2) increase licensing costs for software that should not be installed or leveraged by a particular user or department; and (3) reduce efficiency due to deploying computers with more resources than are required because users are installing unneeded software.

Objectives This project creates value for the Company by (1) Protecting the Company's IT environment by preventing unauthorized and potentially harmful applications from being installed or executed; (2) Maintaining adherence to industry regulations and standards by controlling application usage. This helps avoid legal and financial penalties associated with non-compliance and ensures the Company meets its regulatory obligations.

Scope The project scope includes: (1) implementing a Software as a Service (SAAS) application control solution on all corporate computers and (2) implementing stringent restrictions using high enforcement mode on critical assets to prevent running any unauthorized software.

Alternatives Alternatives considered include; (1) removal of local administrator permissions for all users. This option was not chosen as there are legitimate business uses for users to have the ability to make modifications to their workstations.; (2) leverage already existing in place antivirus or endpoint detection and response software. This alternative was not selected as this does not prevent unauthorized installation or running of unauthorized software.; (3) implementing a privilege management tool. A privilege management tool is a security solution designed to control and monitor access to critical resources within an organization. It helps protect against cyber threats by ensuring that only authorized users have access to sensitive information and systems. This alternative was not chosen as it does not prevent a bad actor that has established privilege into the Company network to install malicious software.; and (4) implement an application control solution. This option was chosen because it meets all of the required use cases which reduces risk to corporate data, network infrastructure, and overall business operations.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
1/6/2025	2/3/2025	4/11/2025	9/26/2025
	In-Service/Go-Live	**Closeout**	
	9/29/2025	10/31/2025	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$0.694	-	-	-	-	-	-	-	$0.694
O&M	$0.088	$0.025	$0.025	$0.025	-	-	-	-	$0.163
Total Cost of Ownership	$0.782	$0.025	$0.025	$0.025	-	-	-	-	**$0.857**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.114	-	-	-	-	-	-	-	**$0.114**
Outside Services	$0.000	-	-	-	-	-	-	-	**$0.000**
Business Expense/Overheads	$0.096	$0.025	$0.025	$0.025	-	-	-	-	**$0.171**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	-	-	-	-	-	-	-	**$0.000**
Licenses, Permits & Fees	$0.572	-	-	-	-	-	-	-	**$0.572**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.782	$0.025	$0.025	$0.025	-	-	-	-	**$0.857**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.088	$0.025	$0.025	$0.025	-	-	-	-	**$0.163**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.088	$0.025	$0.025	$0.025	-	-	-	-	**$0.163**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.694	-	-	-	-	-	-	-	**$0.694**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.694	-	-	-	-	-	-	-	**$0.694**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	Government recommendation to implement CISA Cyber Security Performance Goal 2.D – Application Control. Description: Implement application control to allow only authorized software to execute and block unauthorized or malicious applications from running on enterprise assets. Objective: Prevent unauthorized or potentially harmful software from executing, reducing the risk of malware and unauthorized software exploitation.
Technology Capability	Maintaining adherence to industry regulations and standards by controlling application usage. This helps avoid legal and financial penalties associated with non-compliance and ensures the Company meets its regulatory obligations.
Risk Mitigation	Protecting the Company's IT environment by preventing unauthorized and potentially harmful applications from being installed or executed

Security/OT Field Modernization

Report Pulled: 11/5/2025 **Item ID: 13949**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement new infrastructure for accomplishing improved security in the field for OT assets.

Portfolio IT Services > Infrastructure > * > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement

Gas and Electric technicians are using corporate laptops, to manage critical OT infrastructure which does not follow cyber security best practices for managing critical infrastructure. Vendors and contractors have access to the Company's critical infrastructure using non-Company laptops. Best practice is to use dedicated laptops to connect to critical infrastructure.

Objectives

The value of this project is deploying dedicated Company OT laptops and associated OT infrastructure that can move between OT locations only and providing a secure environment.

Scope

This project will procure and configure approximately 130 devices that will be used to manage critical OT infrastructure.

Alternatives

The Company reviewed several options to mitigate cyber security risks inherent with the use of standard corporate laptops managing critical infrastructure. The alternatives considered are: (1) Continue utilizing existing workflow of using Corporate domain laptops with software installed; (2) Bring in an outside vendor to design and implement a proposed infrastructure; (3) Complete disallowance of all local access to critical systems; (4) Extending the OT network to remote Company locations; (5) Deploy a dedicated Company OT laptop and OT communications circuits, which includes cellular connectivity. The dedicated OT laptop and communications circuits presented the best way to secure the critical infrastructure by limiting internet and e-mail access. Vendors and contractors could also utilize these approved dedicated systems for managing infrastructure they help support at Company locations. Based on the analysis performed, the Company chooses to deploy a dedicated OT laptop and communications circuits which is not a cloud related solution, since it is hardware and not software.

DATES (phase end)

Initiation 1/13/2025
Project Plan & Scope Definition 3/7/2025
Final Engineering, Planning & Design 4/30/2025
Execution 6/30/2025
In-Service/Go-Live 3/1/2026
Closeout 6/1/2026

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$1.161	$0.567	-	-	-	-	-	-	$1.728
O&M	$0.322	$0.496	$0.294	$0.294	$0.294	$0.294	-	-	$1.994
Total Cost of Ownership	$1.483	$1.063	$0.294	$0.294	$0.294	$0.294	-	-	**$3.721**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.256	$0.460	-	-	-	-	-	-	**$0.716**
Outside Services	$0.119	-	-	-	-	-	-	-	**$0.119**
Business Expense/Overheads	$0.062	$0.144	-	-	-	-	-	-	**$0.206**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.810	$0.231	-	-	-	-	-	-	**$1.041**
Licenses, Permits & Fees	$0.237	$0.025	-	-	-	-	-	-	**$0.262**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$1.483	$0.860	-	-	-	-	-	-	**$2.342**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.322	$0.496	$0.294	$0.294	$0.294	$0.294	-	-	**$1.994**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.322	$0.496	$0.294	$0.294	$0.294	$0.294	-	-	**$1.994**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.161	$0.567	-	-	-	-	-	-	**$1.728**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.161	$0.567	-	-	-	-	-	-	**$1.728**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Risk Mitigation	By utilizing dedicated Operational Technology (OT) laptops without internet or e-mail access, we are mitigating the risk of a device with internet and e-mail access compromising the critical infrastructure at various Electric and Gas sites while connecting to critical control systems.
Risk Mitigation	Mandating vendors to use a dedicated Consumers Energy devices to connect to CE industrial infrastructure mitigates risk to critical systems from unknown and untrusted devices.
Intangibles	There could be impacts to business services, customer service, and Company reputation.

SiteCore Primary Upgrade 2025

Report Pulled: 11/5/2025 **Item ID: 12727**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will refresh all components of the website hosting, delivery, search, and analytics applications to add new features and improve search capabilities. Sitecore is the content management application for the consumersenergy.com website, a channel many customers use for accessing account information and bill payment.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement Sitecore is currently operating on version 10.3, which is due to end mainstream support at the end of 2025. If this occurs, there will be an increase in support and maintenance fees of 10% above the annual subscription spend in order to purchase extended support, security updates and fixes will only be made available if the extended support is purchased, and product support for errors or required hotfixes that may impact platform stability will not be available even if extended support is purchased.

Objectives The project will add value for the Company by: (1) avoiding costs for extended maintenance agreements required at the end of mainstream support; (2) ensuring that the website retains the most up-to-date security posture; and (3) supporting the Company's CXI goals by improving reliability and performance.

Scope The project scope includes: (1) upgrading the Sitecore content management software to include content hosting and delivery allowing the use of new features and functionality; (2) migrating the Sitecore platform to the most up-to-date "hardware" and software by refreshing the application and database servers to a newer version of Windows Server and SQL Server and placing them into Azure Cloud (PaaS & IaaS); (3) implementing autoscaling App Services within Azure to reduce or increase the amount of compute we are paying for based on the need of the customers (i.e. more compute during storm).

Alternatives Alternatives considered include: (1) Delay the upgrade. This alternative was not chosen due to the current version falling outside of the mainstream support window, requiring an additional 10% in maintenance fees. Along with rapidly changing feature sets that are continually being developed by the vendor, the Company would be in a worse position to handle constantly changing cyber threats; (2) Migrate to Sitecore's cloud SaaS solution. This alternative was not chosen due to the cost/benefit analysis of re-architecting our current Sitecore implementation to facilitate use of their SaaS/PaaS not being viable at this time; and (3) Upgrade Sitecore on a two-year cycle. This alternative was chosen as it provides up-to-date functionality, stability, and mitigates cyber security risks while minimizing cost and impact.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/15/2025	3/22/2025	5/24/2025	9/30/2025
	In-Service/Go-Live	**Closeout**	
	10/1/2025	10/16/2025	

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.234	-	-	-	-	-	-	-	$0.234
Total Cost of Ownership	$0.234	-	-	-	-	-	-	-	**$0.234**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.233	-	-	-	-	-	-	-	**$0.233**
Outside Services	$0.001	-	-	-	-	-	-	-	**$0.001**
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	$0.000	-	-	-	-	-	-	-	**$0.000**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.234	-	-	-	-	-	-	-	**$0.234**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.234	-	-	-	-	-	-	-	**$0.234**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.234	-	-	-	-	-	-	-	**$0.234**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	Avoid the cost of purchasing extended support from the vendor which comes at a 10% increase from normal licensing costs.
Risk Mitigation	If this project is not completed the company and the customers are at greater risk of encountering more reliability issues and cyber threats which could compromise the website. Keeping the Sitecore platform up to date will improve overall performance and reduce likelihood of operational issues. Additionally, the risk of cyber threats is reduced as patches and fixes are released on routine schedules.
Risk Mitigation	If website is either unavailable or not performing sufficiently, it will lead to a negative impact to Consumers Energy reputations with customers and lower JD Power scores. The website is a core contact point for the Company to interact with their customers. When Sitecore is not functioning completely the website will be impacted; potentially preventing customers from viewing their bill, make a payment, report an outage, and other functions.

SiteCore Secondary Upgrade 2027

Report Pulled: 11/5/2025 **Item ID:** 12740

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will refresh all components of the website hosting, delivery, search, and analytics applications to add new features and improve search capabilities. Sitecore is the content management application for the consumersenergy.com website, a channel many customers use for accessing account information and bill payment.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CUSTOMER EXP & OPS

WORK OBJECTIVES

Problem Statement Sitecore requires regular upgrades to adhere to the vendors support lifecycle to ensure system reliability, take advantage of new application features, maintain current security updates, and improve the customer's website experience.

Objectives The project will add value for the Company by: (1) avoiding costs for extended maintenance agreements required at the end of mainstream support; (2) ensuring that the website retains the most up-to-date security posture; and (3) supporting the Company's CXI goals by improving reliability and performance.

Scope The project scope includes: (1) upgrading the Sitecore content management software to the latest available version.

Alternatives Alternatives considered include: (1) Delay the upgrade. This alternative was not chosen due to the need to prevent the application from falling outside of the mainstream support window, requiring an additional 10% in maintenance fees. Along with rapidly changing feature sets that are continually being developed by the vendor, the Company would be in a worse position to handle constantly changing cyber threats; (2) Migrating to a cloud solution was also considered. This alternative was not chosen due to the cost/benefit analysis of re-architecting the Company's current Sitecore implementation to facilitate cloud migration that is not viable at this time; and (3) Rejecting these alternatives, the Company chose to upgrade Sitecore on a two-year cycle because it provides up to-date functionality, stability, and mitigates cyber security risks while minimizing cost and impact.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/18/2027	3/22/2027	4/5/2027	9/30/2027
	In-Service/Go-Live	**Closeout**	
	10/1/2027	10/15/2027	

FUNDING SUMMARY

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.106	-	-	-	-	-	-	-	$0.106
Total Cost of Ownership	$0.106	-	-	-	-	-	-	-	**$0.106**

	2027	2028	2029	2030	2031	2032	2033	2034 +	Total
Labor	$0.099	-	-	-	-	-	-	-	**$0.099**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	$0.007	-	-	-	-	-	-	-	**$0.007**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.106	-	-	-	-	-	-	-	**$0.106**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2027	2028	2029	2030	2031	2032	2033	2034 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.106	-	-	-	-	-	-	-	**$0.106**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.106	-	-	-	-	-	-	-	**$0.106**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Risk Mitigation	If this project is not completed the company and the customers are at greater risk of encountering more reliability issues and cyber threats which could compromise the website. Keeping the Sitecore platform up to date will improve overall performance and reduce likelihood of operational issues. Additionally, the risk of cyber threats is reduced as patches and fixes are released on routine schedules.
Risk Mitigation	If website is either unavailable or not performing sufficiently, it will lead to a negative impact to Consumers Energy reputations with customers and lower JD Power scores. The website is a core contact point for the Company to interact with their customers. When Sitecore is not functioning completely the website will be impacted; potentially preventing customers from viewing their bill, make a payment, report an outage, and other functions.

Software Asset - Service Management Upgrade

Report Pulled: 11/5/2025 **Item ID: 13928**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will optimize the software asset management process by systematically monitor, assess and oversee software licenses and compliance using Software Asset Management Professional.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVIC

WORK OBJECTIVES

Problem Statement

The on-premises software asset management technology currently used in the Company lacks compatibility to automate license reclamation, cost optimization, and license forecasting. These software asset management constraints lead to the inability to optimize software license purchasing and effective license demand management.

Objectives

This project will create value by ensuring the Company's technology requirements are met through a comprehensive and cost-effective software asset management processes and workflow. Specifically, by replacing the on-premise application, the project will: (1) streamline the software request workflow including license reclamation and software deployment; (2) help ensure compliance with software license agreements; (3) identify opportunities of license optimization leading to cost optimization; (4) mitigate risk related to software asset management; (5) optimize license forecasting and (6) increase asset visibility.

Scope

The project scope includes: (1) the implementation of software asset management tool; (2) the establishment of process and process roles needed to support the assets; and (3) retirement of the on-premise software asset management tool.

Alternatives

Alternatives considered included: (1) Choose an alternate Cloud based asset management system. This alternative was not chosen as it would require introducing and integrating an additional vendor product into the technical landscape. (2) Develop a custom solution. This alternative was not chosen since the cost to build and maintain similar capabilities and to integrate the custom solution would not be feasible or cost effective. (3) Do nothing. This alternative was not selected as the current Software Asset Management tool that lacks integration and automation and will not address optimizing and effective management of licenses and purchases. (4) Develop and implement an on-premises Software Asset Management solution. This alternative ultimately chosen has strengths in software asset management and its integration capabilities with other platform modules from the same vendor. It offers a unified platform that can helps license compliance, optimization and automation.

DATES (phase end)

Initiation
6/1/2023

Project Plan & Scope Definition
9/1/2023

In-Service/Go-Live
2/29/2024

Final Engineering, Planning & Design
9/30/2023

Closeout
3/15/2024

Execution
10/1/2023

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$1.050	$0.070	-	-	-	-	-	-	$1.120
O&M	$0.180	$0.080	$0.005	$0.005	$0.005	$0.005	-	-	$0.280
Total Cost of Ownership	$1.230	$0.150	$0.005	$0.005	$0.005	$0.005	-	-	**$1.401**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.074	$0.060	-	-	-	-	-	-	**$0.134**
Outside Services	$0.331	$0.086	-	-	-	-	-	-	**$0.416**
Business Expense/Overheads	$0.029	$0.005	-	-	-	-	-	-	**$0.034**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.796	-	-	-	-	-	-	-	**$0.796**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$1.230	$0.150	-	-	-	-	-	-	**$1.381**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	$(0.180)	$(0.064)	-	-	-	-	-	**$(0.244)**
	Initial	$0.180	$0.080	$0.005	$0.005	$0.005	$0.005	-	-	**$0.280**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.180	$(0.100)	$(0.059)	$0.005	$0.005	$0.005	-	-	**$0.036**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.050	$0.070	-	-	-	-	-	-	**$1.120**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.050	$0.070	-	-	-	-	-	-	**$1.120**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -0.803

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Avoided Costs	Avoided cost by having automation built to reclaim licenses when a resource leaves the Company. SAM Pro will serve as the new Software Asset Management system of record, resulting in an annual cost savings of $66,000 and providing a single source to manage and request software and hardware. The cost savings here is from the 0.5 FTE HCL resource ($43,500) and 0.25 FTE CE resource ($22,500) that are not needed to manually maintain this process.
Technology Capability	By replacing the on-premise infrastructure with a Cloud Based System aligns with the Company goal of moving to the Cloud for better scalability and flexibility. This capability will help mitigate the labor of maintaining the current on-premise infrastructure with patching.
Technology Capability	SAM Pro provides the capability for better Automation on Software requests. With SNOW when a user requests for new Software, it took some time to check for the license availability and fulfill the request, but with SAM Pro the check happens real time and the latest version is procured. Governance improvements were made by adding extra checks in the workflow for EA (enterprise Architecture) and Cyber Security to do a high level review of the Software being requested to address any concerns early on.
Technology Capability	With the implementation of SAM Pro, there is no longer the need to sync up the software versions on 2 different systems (ServiceNow and SNOW) along with keeping the Product Owners and Technical Owners in sync for the software. SAM Pro also ensures that the SCCM ID has the latest version of the software to be pushed over to the user PC's when requested.

Software Platform Refresh

Report Pulled: 11/5/2025 **Item ID: 6843**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The Software Platform Refresh project will upgrade server operating systems, hypervisors, databases and infrastructure platforms to retain low-cost vendor support.

Portfolio IT Services > Infrastructure > Data Center - Enterprise Computing > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-INFRASTRUCTURE PLATFORMS & SI

WORK OBJECTIVES

Problem Statement For systems that go beyond their normal manufacturer support ending, there will be increased support and maintenance fees of 20% to 100% above current support and maintenance depending on vendor. Completing this project allows the organization to (1) avoid high support costs; (2) provide for system security; and (3) stay current to promote seamless interoperability among servers, applications, and databases. Aging platforms are more susceptible to security vulnerabilities and performance issues that ultimately could affect the business and customers.

Objectives The project will add value for the Company by: (1) avoiding costs for special maintenance agreements required at the end of normal manufacturer support; (2) ensuring reliability and compliance with Information Security requirements; (3) improving data center environment stability; and (4) avoiding the need for high risk upgrades that cross multiple versions.

Scope The project scope includes: (1) upgrading operating systems and databases on servers that are near end of support with a given vendor; and (2) maintaining hypervisors and infrastructure platforms at the current version for stability and performance.

Alternatives A funding options matrix was completed to review the potential alternatives. The alternatives identified were: (1) Complete the full scope of the solution for $1 million in order to eliminate the need for ongoing extended support; (2) Reduce the scale of the solution, which requires $1.6 million in ongoing extended support; (3) Reduce the scale of the solution even further, which requires $2.4 million in ongoing extended support; (4) Do not complete a software platform refresh, which requires $3.3 million in ongoing extended support. Alternative 1 was selected as the most cost effective solution to ensure ongoing system stability; seamless integration; and mitigation of cyber-security risks without the significant cost of extended support necessary for end of life software systems.

DATES (phase end)

Initiation **Project Plan & Scope Definition** **Final Engineering, Planning & Design** **Execution**

In-Service/Go-Live **Closeout**

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	-	-	-	-	-	-	-	-	-
O&M	$0.139	$0.089	$0.000	-	-	-	-	-	$0.229
Total Cost of Ownership	$0.139	$0.089	$0.000	-	-	-	-	-	**$0.229**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.089	$0.021	$0.000	-	-	-	-	-	**$0.111**
Outside Services	$0.042	$0.011	$0.000	-	-	-	-	-	**$0.053**
Business Expense/Overheads	$0.008	-	-	-	-	-	-	-	**$0.008**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.058	-	-	-	-	-	-	**$0.058**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost (Annual)	$0.139	$0.089	$0.000	-	-	-	-	-	**$0.229**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.139	$0.089	$0.000	-	-	-	-	-	**$0.229**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.139	$0.089	$0.000	-	-	-	-	-	**$0.229**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	High	There is a high risk of technology obsolescence that would result in a high impact to business and customer service operations. To mitigate this risk Consumers Energy can choose to pay significantly more for extended maintenance or complete the project with increased functionality at a lower cost.

OTHER VALUE

Type	Description
Technology Capability	Administrative & General (A&G) Support
Avoided Costs	Consumers Energy has 1,112 instances of operating systems, databases, and hypervisors that will require special maintenance contracts by January of 2020. Microsoft has identified additional maintenance costs of $705 per Central Processing Unit (CPU) Core running Windows 2008 starting in January of 2020. Consumers Energy has 4,718 CPU Cores running in the Windows 2008 environment for a total of $3,326,190 in additional maintenance charges.
Risk Mitigation	This project addresses the problem of new security vulnerabilities that would not be patched under extended maintenance.
Risk Mitigation	Through this project, Consumers Energy will be able to proactively patch systems to avoid bugs and stay current to promote seamless interoperability among servers.

Spatial Asset Management

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 13940**

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This initiative will implement SAP's Spatial Asset Management module. It will allow users to view assets, notifications, and orders geospatially using a map. The module will allow the Company to create and maintain asset maintenance plans for each segment of our gas and electric distribution networks (linear assets). The Company will create linear assets as technical objects (such as functional locations and equipment) and store linear data. The Company will enable creation of maintenance plans for these technical objects which result in notifications, maintenance orders, and measurement documents. We will enable monitoring the condition of our linear assets, identify where there is damage or a defect (using the start point and end point and offset), and manage all types of maintenance tasks (planned, unplanned, and preventative).

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement Currently, the Company lacks spatial visualization and spatial awareness of work and assets impacting requirements for first time quality and impacting the ability to plan, bundle and execute nearby work. The lack of a linear asset management capability affects the full work management value stream resulting in overproduction of asset maintenance activity such as assessments, surveys, and inspections.

Objectives This project creates value for the Company by (1) providing capability in SAP to view assets, notifications, and work orders on a map; (2) providing location awareness in SAP for assets and work; (3) establishing linear asset management capability in SAP for gas and electric delivery networks; and (4) enabling end-to-end map-based workflows.

Scope The scope of this project encompasses implementation in SAP of the Spatial Asset Management module.

Alternatives Alternatives considered include: (1) Implement a cloud-based individualized asset integration between GIS and SAP. This alternative was not selected as it proves ineffective in addressing needs of the end-to-end work management value stream while increasing the technical footprint of customization. There are also performance concerns with cloud to on-prem integrations; (2) Implement work group centric approaches to viewing work on a map. This alternative was not selected as it does not support standard operation through the entire work management value stream; (3) Do nothing. This alternative was not selected as this would result in increasing costs and inefficiencies in gas and electric work management; and (4) The alternative to implement the Spatial Asset Management module in SAP was chosen as it expands use of a core technology investment, supports current investment in our work management value stream, and is compatible with our GIS technology.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
12/4/2023	4/30/2024	1/31/2026	2/28/2026
	In-Service/Go-Live	**Closeout**	
	5/1/2026	5/31/2026	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$1.436	$0.739	$0.657	$0.357	-	-	-	-	$3.189
O&M	-	$0.019	$0.090	$0.226	$0.172	$0.172	$0.172	-	$0.850
Total Cost of Ownership	$1.436	$0.758	$0.747	$0.583	$0.172	$0.172	$0.172	-	**$4.039**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	-	$0.052	$0.471	$0.120	-	-	-	-	**$0.643**
Outside Services	$0.160	$0.351	$0.185	$0.210	-	-	-	-	**$0.906**
Business Expense/Overheads	$0.100	$0.121	$0.091	$0.080	-	-	-	-	**$0.392**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$1.176	$0.233	-	-	-	-	-	-	**$1.409**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$1.436	$0.758	$0.747	$0.410	-	-	-	-	**$3.351**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.019	$0.090	$0.226	$0.172	$0.172	$0.172	-	**$0.850**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.019	$0.090	$0.226	$0.172	$0.172	$0.172	-	**$0.850**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$1.436	$0.739	$0.657	$0.357	-	-	-	-	**$3.189**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$1.436	$0.739	$0.657	$0.357	-	-	-	-	**$3.189**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) +1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Intangibles	SAM supports a single platform for engineers and designers that consolidates multiple data sources & third-party tools and provides templates to accelerate projects.
Intangibles	SAM supports workflow and collaboration thru smart notifications, annotations, and messaging embedded throughout the platform.

Talent Management Enablement

Report Pulled: 11/5/2025 **Item ID: 11828**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will deliver technology solutions to enable best-in-class Talent Management programs and processes that are critical to achieve the Company's overarching Talent Strategy Plan. The Talent Strategy Plan is a key enabler of the company's Integrated Resource Plan (IRP), Electric Distribution Infrastructure Investment Plan (EDIIP), and Natural Gas Delivery Plan (NGDP). Effective Talent Management programs and processes are critical to develop the skills, capabilities, productivity, and experience necessary to successfully execute these plans that deliver clean, reliable, affordable energy through an exceptional customer experience.

Portfolio IT Services > Applications > Corporate Services > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement Significant technology improvements are required to transform Human Resources (HR) to develop the skills and capabilities necessary to achieve the Company's strategic destination. Currently, many Talent Management processes are manually managed with little or no technology enablement. Specifically, the talent compensation processes are mostly manually done outside the system which introduces waste, and a potential for errors. In addition there is a limited visibility of competency gaps within the workforce. The Company cannot effectively place talent in accelerated development programs aligned to competency gaps, nor can it recognize and motivate employees for quickly increasing competency and performance. Furthermore, the Company operates in an increasingly competitive job market where candidates and employees expect best-in-class processes, technologies and experiences relative to their employment and career development. The lack of full technical enablement across Talent Management programs poses a risk to employee attraction, retention and limits the ability to develop the right skills at the right time to deliver on Company strategies.

Objectives This project will add value to the Company through technology that will enable: (1) fully functional integrated compensation module; (2) accelerated and targeted talent development of critical skills necessary to deliver on the Company's commitment to clean energy and exceptional customer experience; (3) transparency into talent and skill gaps in order to identify retention and service delivery risks within critical areas, as well as inform succession and hiring strategies; (4) improved knowledge transfer, business continuity, and customer service during a time when retirement eligibility is high and risk of knowledge loss has the potential to negatively impact customer service and satisfaction; and (5) increased efficiency and quality of talent management through simplified and automated processes that reduce costs associated with recruiting, onboarding, and developing employees. Talent Management Enablement will deliver the best-practice technology to enable and enhance (1) Fully functional integrated talent compensation management; (2) Simplified and automated talent management process for employee lifecycle management from on-boarding through Off-boarding; (3) Succession Planning and Business Continuity; (4) Career Development and Employee Retention.

Scope The scope will include: (1) implementation of each system/application; (2) integration with current systems, applications and processes as applicable; (3) retrofit current systems and applications to ensure a seamless end-to-end experience of HR processes; (4) delivery of mobile capabilities for in scope processes; (5) reporting and analytics dashboards and report insights for in scope processes.

Alternatives Three alternatives were considered for these Talent Management programs and processes: (1) Develop custom, internally built solutions that could meet most requirements. This alternative was not selected because a custom solution would result in higher overall costs, higher maintenance costs, fewer upgrades, and would not leverage industry best practices to ensure best-in-class delivery. (2) Select an on-premise software tool. This alternative was not selected because it requires internal maintenance, increases infrastructure costs, and would have less frequent upgrades which would hinder the Company's ability to ensure processes are evolving alongside industry trends and best practices. (3) Evaluate and select cloud/SaaS solution(s) which would have lower infrastructure costs, less internal maintenance than an on-premise solution, and would be built and evolved with upgrades based on industry best practices. Based on research, internal experience with successful best practice implementations, and vendor demonstrations, option three was selected.

DATES (phase end)

Initiation	**Project Plan & Scope Definition**	**Final Engineering, Planning & Design**	**Execution**
2/1/2023	3/1/2023	5/1/2023	7/1/2023
In-Service/Go-Live		**Closeout**	
8/30/2025		10/30/2025	

FUNDING SUMMARY

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Cap+COR	$0.229	$0.052	$0.076	-	-	-	-	-	$0.358
O&M	$0.204	$0.180	$0.236	$0.100	$0.100	-	-	-	$0.820
Total Cost of Ownership	$0.433	$0.233	$0.312	$0.100	$0.100	-	-	-	**$1.178**

	2023	2024	2025	2026	2027	2028	2029	2030 +	Total
Labor	$0.020	$0.007	$0.034	-	-	-	-	-	**$0.061**
Outside Services	$0.388	$0.225	$0.268	-	-	-	-	-	**$0.880**
Business Expense/Overheads	$0.026	$0.000	$0.010	-	-	-	-	-	**$0.036**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.433	$0.233	$0.312	-	-	-	-	-	**$0.978**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2023	2024	2025	2026	2027	2028	2029	2030 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.204	$0.180	$0.236	$0.100	$0.100	-	-	-	**$0.820**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.204	$0.180	$0.236	$0.100	$0.100	-	-	-	**$0.820**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.229	$0.052	$0.076	-	-	-	-	-	**$0.358**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.229	$0.052	$0.076	-	-	-	-	-	**$0.358**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	9 - Administrative & General Support
Intangibles	Avoid inability to meet and support quality and timely delivery of the Company's customer centric strategy
Technology Capability	Deliver mobile-enabled Talent Management processes that will facilitate leaders' ability to minimize administrative downtime by increasing accessibility to core talent management processes, forms, approvals, and tracking.
Intangibles	Delivery of best-in-class technically enabled talent programs will enhance the attraction and retention of top talent in an increasingly competitive and geographically expanding job market.
Technology Capability	Eliminate wasted hours associated with the manual management of the Succession Planning process
Risk Mitigation	Mitigate risk due to 19% of the current customer-facing workforce that has 25+ years tenure by enabling effective Talent Management processes to prepare for these retirements to ensure continuation of strong customer delivery by facilitating employee development, engagement, succession planning and performance management
Risk Mitigation	Mitigate the risk of losing high performing talent or not being able to recruit the strongest talent to deliver on company strategies which support customer service and value delivery.
Technology Capability	Reduce waste generated by manual consolidation of data for reporting purposes by delivering standard and custom Talent Management reporting.

Tibco API Exchange Gateway Replacement

Report Pulled: 11/5/2025 **Item ID: 11728**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project is looking to retire the API Exchange Gateway within the Tibco ESB and replace it with a new solution called Microsoft Self-Hosted Gateway. The API Exchange Gateway is used by the TIBCO ESB to integrate to external vendors, all new development will need to be done to integrate this solution.

Portfolio IT Services > Applications > Foundational Enterprise Applications > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-APPLICATION PLATFORMS & SERVI

WORK OBJECTIVES

Problem Statement The Tibco API Exchange Gateway is anticipated to be sunset by the vendor, as they have already dropped all development of enhancements for the platform.

Objectives This project creates value for the Company by: (1) Avoiding the risk of running a project no longer supported by the vendor (i.e. the Tibco Enterprise Service Bus API Exchange module), and (2) Enabling the Company the opportunity to move to a product that is more stable, secure, and usable.

Scope The project scope includes: (1) Conducting a RFP to procure a replacement product and work with architecture team to migrate the product. (2) Migrate all current work items to the new platform. (3) Conduct appropriate testing to ensure all Service Level Agreements are met.

Alternatives Alternatives considered include: (1) Evaluating the replacement of the current product with a new product that is not already in the Company environment. This alternative was not selected because it would not be cost effective. (2) Keeping the current application as-is. This alternative was not selected as the vendor for the current platform has stopped all development for this product. (3) Leveraging an existing solution already in the Company environment. This alternative was selected as it avoids multiple solutions with redundant capabilities and avoids costs for supporting and maintaining a second solution.

DATES (phase end)

Initiation 1/15/2024	**Project Plan & Scope Definition** 2/5/2024	**Final Engineering, Planning & Design** 3/5/2024	**Execution** 4/1/2024
	In-Service/Go-Live 8/5/2024	**Closeout** 12/13/2024	

FUNDING SUMMARY

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Cap+COR	$0.162	$0.015	-	-	-	-	-	-	$0.177
O&M	$0.110	$0.007	-	-	-	-	-	-	$0.117
Total Cost of Ownership	$0.272	$0.022	-	-	-	-	-	-	**$0.294**

	2024	2025	2026	2027	2028	2029	2030	2031 +	Total
Labor	$0.133	$0.006	-	-	-	-	-	-	**$0.139**
Outside Services	$0.139	$0.016	-	-	-	-	-	-	**$0.155**
Business Expense/Overheads	-	-	-	-	-	-	-	-	-
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.272	$0.022	-	-	-	-	-	-	**$0.294**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2024	2025	2026	2027	2028	2029	2030	2031 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.110	$0.007	-	-	-	-	-	-	**$0.117**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.110	$0.007	-	-	-	-	-	-	**$0.117**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.162	$0.015	-	-	-	-	-	-	**$0.177**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.162	$0.015	-	-	-	-	-	-	**$0.177**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Technology Obsolescence	High	Medium	TIBCO has announced that the API Exchange Gateway will no longer be developed and supported, so we are at risk of being reliant on software that is obsolete.

OTHER VALUE

Type	Description

Total Information Management (TIM) Platform Upgrade

Report Pulled: 11/5/2025 **Item ID: 14013**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Maintain - Interval **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will replace the existing Total Information Management (TIM) on-premise solution with a cloud-based OpenText Software as a Service (SaaS) solution. It will provide the Company with the ability to reduce operational costs for performing upgrades and maintenance, take advantage of new enhancements offered by the vendor, and ensure continued support of the platform.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-CORPORATE

WORK OBJECTIVES

Problem Statement The existing on-premise Total Information Management (TIM) solution hardware and software is at end of support. The state of the current infrastructure creates security, stability, and reliability risk for the platform. Without vendor support, the application no longer receives security patches, bug fixes, or functionality support from the vendor, which creates additional security, stability, and reliability risk.

Objectives This project will provide value to the Company through: (1) reducing costs with cloud allocated hardware scalable to current usage needs; (2) reducing operating costs with vendor managed feature updates and maintenance provided without service disruption; (3) providing access to new and innovative capabilities; and (4) reducing security, stability, and performance risk by ensuring consistent, seamless vendor support.

Scope The project scope includes: (1) migrating, upgrading, and transforming the dataset to the latest version of OpenText Extended Enterprise Content Management (xECM) Cloud Edition and deploying in the vendor hosted cloud; (2) migrating on-premise documents to the vendor hosted OpenText Core Archive cloud; and (3) enabling new functionality including a new user interface, new workflow capabilities, new workgroup management features, and new integrations with Microsoft 365 applications.

Alternatives Alternatives considered include: (1) Defer to a future date. This alternative was not selected due to requiring upgrades of existing on-premise hardware, impeding our ability to take advantage of new features offered by the cloud solution, and reducing cost savings opportunities presented by moving to the cloud. (2) Deploy OpenText on-premise solution to new on-premise hardware. This alternative was not selected due to cost associated with purchasing new hardware, cost associated to maintain, and it does not free up internal resources to focus on other value-added initiatives. (3) Select and migrate to a new vendor software. This alternative was not selected due to the cost, effort, and complexity of replacing the platform with a whole new technology. (4) Migrate to the OpenText cloud platform. This alternative was selected due to it building on the Company strategy of moving to cloud, reducing operating and maintenance costs, and it reduces risk by ensuring consistent, seamless vendor support.

DATES (phase end)

Initiation
2/12/2025

Project Plan & Scope Definition
3/17/2025

In-Service/Go-Live
7/31/2025

Final Engineering, Planning & Design
4/17/2025

Closeout
8/31/2025

Execution
6/30/2025

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	$2.572	-	-	-	-	-	-	-	$2.572
O&M	$0.561	-	-	-	-	-	-	-	$0.561
Total Cost of Ownership	$3.132	-	-	-	-	-	-	-	**$3.132**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	$0.339	-	-	-	-	-	-	-	**$0.339**
Outside Services	$2.308	-	-	-	-	-	-	-	**$2.308**
Business Expense/Overheads	$0.075	-	-	-	-	-	-	-	**$0.075**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	$0.411	-	-	-	-	-	-	-	**$0.411**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$3.132	-	-	-	-	-	-	-	**$3.132**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.561	-	-	-	-	-	-	-	**$0.561**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.561	-	-	-	-	-	-	-	**$0.561**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$2.572	-	-	-	-	-	-	-	**$2.572**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$2.572	-	-	-	-	-	-	-	**$2.572**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Document Management & Utilities
Avoided Costs	Migrating OpenText solution from on-premise to SaaS is projected to result in $220K of annual cost avoidance ($1.1M for 5 years) due to avoiding annual costs associated with application currency, software maintenance, upgrades, infrastructure maintenance, server patching, vulnerability testing, and cloud hosting services.
Intangibles	Migrating to a SaaS cloud managed service simplifies the company's IT environment, makes it easier and less costly to maintain, minimizes potential for downtime and disruptions, and frees up IT resources to focus less on maintaining the platform and allocate more time to delivering solutions within the platform or value through other initiatives.
Intangibles	New features will be available by upgrading from the Extended ECM plan to the X1 X-Plan SaaS solution which includes Microsoft 365 Integration, Electronic Signature, Controlled Viewing and Printing, XML Workflow Extensions, and will optimize user licensing and provide additional add-on opportunities.
Risk Mitigation	Risk will be mitigated using the SaaS solution by providing infrastructure scaling as needed, minimizing service disruption through vendor managed feature updates and maintenance, enabling access to new and innovative capabilities, and reducing security, stability, and performance risk by leveraging a vendor managed cloud-based SaaS solution. Mitigates Security Vulnerability: Oracle JRE VAPT-CVE-2022-34169. Our current version of TIM runs Tomcat v8, which is subject to this vulnerability. We need to upgrade our TIM environment to the latest vendor supported version, so that we can migrate to the version of Apache Tomcat (v9.0.x or later) that closes this vulnerability. All other JAVA vulnerabilities were closed with the migration to Azul.

Tracking & Traceability

EXECUTIVE SUMMARY

Report Pulled: 11/5/2025 **Item ID: 6863**

BASIC INFORMATION

Work Category Comply - One Time **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description Tracking and Traceability is a project driven from proposed regulatory rules that will require utilities to map new and replacement installations with tracking and traceability data for plastic pipes, fittings, and fusions for the lifetime of the asset.

Portfolio IT Services > Applications > Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-GAS

WORK OBJECTIVES

Problem Statement

The Company does not currently have a Tracking and Traceability program that will meet PHMSA proposed requirements (PHMSA-2014-0098), also known as the Plastic Pipe Rule. Tracking and traceability refers to the collection of information that provides manufacturing, material type, and location information for pipe and components. PHMSA defines the terms "tracking" and "traceability" as follows: (1) Tracking is information that provides for the identification and location of pipe and components, the date installed, and the person who made the joints in the pipeline system; and (2) Traceability is within American Society for Testing and Materials (ASTM) F2897-11a and includes a unique identifier for the location of manufacture, production, lot information, size, material, pressure rating, temperature rating and, as appropriate, type, grade and model of pipe and components. PHMSA will be requiring each pipeline operator to maintain tracking and traceability information for the life of installed pipeline segments. The lack of adequate traceability for plastic pipe and tracking of pipe location prevents gas pipeline operators from having enough information to identify systemic issues related to incidents involving plastic pipe. The lack of this information makes it difficult for operators and regulators to determine whether plastic pipe or component failures are related to a certain type or vintage of material, specific product defect or design, heat/lot of the product, or whether it was produced by a certain manufacturer at a certain time. The lack of information can result in excessive pipe excavations due to an inability to locate the affected sections of pipe or fittings when responding to plastic pipe or component manufacturer recalls.

Objectives

This project will develop a sustainable Tracking and Traceability program that will meet PHMSA requirements (PHMSA-2014-0098) which address the proposed tracking and traceability requirements. The project adds value by capturing traceability data via barcode readers and location tracking information via Global Positioning System (GPS) equipment to improve the quality of data and assist the Company in determining future scopes of work in the event of any component manufacture recalls.

Scope

The scope of work will include: (1) changes in SAP Supply Chain processes to capture the required barcode information for all plastic components used in gas distribution and service lines; (2) changes in SAP Work Management processes to account for capturing barcode information as part of material components added to work orders, capturing fusion information from work order completion and capturing GPS coordinates from work order completion; (3) changes in GIS to capture GPS coordinates of plastic components and GPS coordinates of component fusions; (4) building of a repository for tracking and traceability reporting and analysis; (5) purchasing barcode reading equipment for storerooms and gas distribution trucks; and (6) purchasing of GPS locating equipment to capture coordinates.

Alternatives

Alternatives considered: (1) The do nothing alternative, which was not selected because it would expose the company to significant legal and financial risk resulting from non-compliance. (2) Internally develope digital technology supporting the tracking & traceability standards included in the PHMSA-2014-0098 plastic pipe rule. The second alternative is being pursued by the Company.

DATES (phase end)

Initiation 1/1/2026
Project Plan & Scope Definition 4/1/2026
In-Service/Go-Live 4/30/2028
Final Engineering, Planning & Design 9/1/2026
Closeout 6/30/2028
Execution 9/30/2027

FUNDING SUMMARY

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Cap+COR	-	$3.326	$7.278	$4.261	-	-	-	-	$14.865
O&M	-	$0.755	$0.753	$0.320	$0.320	$0.320	$0.320	-	$2.789
Total Cost of Ownership	-	$4.082	$8.031	$4.581	$0.320	$0.320	$0.320	-	**$17.654**

	2025	2026	2027	2028	2029	2030	2031	2032 +	Total
Labor	-	$2.125	$2.125	-	-	-	-	-	**$4.250**
Outside Services	-	$0.406	$0.404	-	-	-	-	-	**$0.810**
Business Expense/Overheads	-	$1.015	$1.245	$0.249	-	-	-	-	**$2.508**
Employee Benefits	-	-	-	-	-	-	-	-	**-**
Materials	-	$0.291	$4.012	$4.012	-	-	-	-	**$8.315**
Licenses, Permits & Fees	-	$0.245	$0.245	$0.245	$0.245	$0.245	$0.245	-	**$1.470**
Other	-	-	-	-	-	-	-	-	**-**
Total Project Cost	-	$4.082	$8.031	$4.506	$0.245	$0.245	$0.245	-	**$17.354**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2025	2026	2027	2028	2029	2030	2031	2032 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.755	$0.753	$0.320	$0.320	$0.320	$0.320	-	**$2.789**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.755	$0.753	$0.320	$0.320	$0.320	$0.320	-	**$2.789**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$3.326	$7.278	$4.261	-	-	-	-	**$14.865**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$3.326	$7.278	$4.261	-	-	-	-	**$14.865**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description
Gas Distribution System	Medium	Medium	DRAM Risk Model – Distribution risk model accuracy. Improve quality of gas pipe attribution. Improve location of leak location.
Compliance - Gas Code	Low	Medium	MPSC Non-compliance - Excavation Tickets; Construction practices – failure to install components (through capturing the barcode we have check/balance)

OTHER VALUE

Type	Description
Risk Mitigation	Accurate positional data (valves in particular) leads to better emergency response.
Technology Capability	Automation for asset and location capture to GIS.
Avoided Costs	Data collection efforts through bar code scanning automation vs manual entry of bar code numbers. Average annual savings based upon 10 mins saved at $200 / hour across 10,000 work orders = approximately $330,000
Intangibles	Data collection for asset information being much more accurate
Risk Mitigation	Ease isolation/plan of attack for Risk Mitigation (DIMP System Integrity)
Risk Mitigation	Expired material identification (Pipe or fittings exposed to UV) (link to supply chain business case)
Intangibles	Fusion collection tied to each joint - Equipment used, Operator OQ
Risk Mitigation	Improve coordination with 3rd party entities.
Intangibles	Leak Data accuracy and analysis
Risk Mitigation	Location of factory recalled components
Intangibles	Public Reputation: What we might get from the public being a world-class company. Less damage to property with subsequent maintenance.
Technology Capability	Quality control capabilities in real-time

'Additional 'Other Value' statement(s). Open BPS to view

TSA Critical Facility Structure

Report Pulled: 11/5/2025 **Item ID: 12443**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Comply - One Time **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement enhanced security measures outlined by the Transportation Security Administration (TSA) for critical facility assets in order to bring the locations up to enhanced status and avoid non-compliances. This project will increase the security and reliability of gas delivery to our customers while also meeting federal requirements.

Portfolio Corporate Services > Security Services > Security > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-COMPLIANCE

WORK OBJECTIVES

Problem Statement Pipeline facilities that are deemed critical are required to apply enhanced security measures. Today, the Company currently has designated 4 locations as critical. However, based on the April 2021 update to the TSA Pipeline Security Guidelines, Section 5 (Critical Facility Criteria), a significant number of our gas infrastructure that were not previously subject to evaluation will now fall into scope. As the Company continues to analyze the remainder of our gas assets, there is the potential for an additional 1,000 pipeline facilities (pipeline interconnections, metering and/or regulating stations, pump stations, compressor stations, operational control facilities, main line valve, tank farms and terminals, etc.) that may be deemed critical. The Company will be taking a phased implementation approach and will begin the process by implementing the enhanced security measures at the reminder of our compressor stations. Failure to update our sites will put the Company out of compliance with the updated guidelines.

Objectives This project provides value to the Company by: (1) Implementing enhanced security measures outlined by the TSA for four critical assets; and (2) Increasing the security and reliability of gas delivery to our customers while meeting federal requirements.

Scope This project will implement the following enhanced security measures: (1) access controls; (2) access readers; (3) cameras; (4) video and audio programming; (5) fencing and barriers; (6) gates; (7) locks and key control; (8) fence intrusion; (9) subcontractor work of trenching poles, etc.; (10) facility lighting; (11) background investigations for personnel working at the site; (12) security equipment maintenance and testing; (13) security vulnerability assessments; (14) security communication plans; (15) personnel training; and (16) security drills and exercises for the identified locations.

Alternatives Alternatives considered were: (1) To not implement the enhanced security measures outlined by the Transportation Security Administration (TSA) for critical facility assets. This option was not chosen due to the risk of not complying with the TSA enhanced security measures. (2) To implement the enhanced security measures outlined by the Transportation Security Administration (TSA) for critical facility assets. This alternative was chosen to avoid the risk of not complying with the TSA enhance security measures, such as increased vulnerability of attacks, financial penalties, and operational disruptions.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/1/2023	3/31/2023	6/30/2023	10/31/2025
In-Service/Go-Live		**Closeout**	
11/1/2025		11/30/2025	

FUNDING SUMMARY

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Cap+COR	$0.074	$1.000	$1.866	$3.592	$1.753	-	-	-	$8.285
O&M	$0.285	$0.124	$0.060	$0.009	$0.094	-	-	-	$0.571
Total Cost of Ownership	$0.358	$1.124	$1.927	$3.601	$1.847	-	-	-	**$8.856**

	2021	2022	2023	2024	2025	2026	2027	2028 +	Total
Labor	$0.131	$0.100	$0.243	$0.111	$0.091	-	-	-	**$0.677**
Outside Services	$0.227	$0.650	$0.639	$2.281	$0.958	-	-	-	**$4.754**
Business Expense/Overheads	$0.000	$0.024	$0.056	$0.034	$0.030	-	-	-	**$0.145**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.350	$0.987	$1.175	$0.768	-	-	-	**$3.280**
Licenses, Permits & Fees	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.358	$1.124	$1.927	$3.601	$1.847	-	-	-	**$8.856**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2021	2022	2023	2024	2025	2026	2027	2028 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.285	$0.124	$0.060	$0.009	$0.094	-	-	-	**$0.571**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.285	$0.124	$0.060	$0.009	$0.094	-	-	-	**$0.571**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	$0.074	$1.000	$1.866	$3.592	$1.753	-	-	-	**$8.285**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.074	$1.000	$1.866	$3.592	$1.753	-	-	-	**$8.285**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description

Vulnerability and Exposure Management Program Enablement

Report Pulled: 11/5/2025 **Item ID: 14033**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will enhance the Company's Vulnerability Management program by implementing a cohesive suite of technologies focused on Vulnerability Management. These technologies will include minimally the following capabilities: vulnerability management, web application static and dynamic analysis, and attack surface management. Vulnerability Management is a critical process for identifying, assessing, and mitigating security weaknesses within an organization's IT infrastructure. This proactive approach involves continuous monitoring and evaluation of systems to detect vulnerabilities that could be exploited by cyber threats. By prioritizing vulnerabilities based on risk, cost, and potential impact, organizations can effectively allocate resources to address the most critical issues first. Implementing a robust Vulnerability Management program not only enhances the security posture of the organization but also ensures compliance with industry regulations and

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STAND/

WORK OBJECTIVES

Problem Statement The Company's current Vulnerability Management program relies on multiple disparate tools to perform core activities such as scanning, analysis, and remediation tracking. This multi-tool approach can create inefficiencies, increase the likelihood of data gaps, and require additional effort from users to correlate and interpret information across platforms. The use of several systems to manage vulnerabilities can lead to inconsistent workflows, duplicated efforts, and reduced coordination between teams. Streamlining the tool set or improving integration between existing solutions would enhance operational efficiency and support a more cohesive vulnerability management process.

Objectives This project creates value for the Company by (1) enhancing the efficiency and effectiveness of the Vulnerability Management program through improved integration and reduced reliance on multiple standalone tools; and (2) supporting risk-based decision-making by enabling more consistent identification, prioritization, and remediation of vulnerabilities. These improvements will reduce operational overhead, minimize security exposure, and help ensure continued alignment with industry regulations and cybersecurity frameworks.

Scope The project scope includes evaluating and implementing a new vulnerability solution. The scope also includes enablement of active scanning with the new solution, consolidating data sources, and improving cross-platform visibility.

Alternatives Alternatives considered include: (1) continuing with the current multi-tool Vulnerability Management program. This option was not selected as it perpetuates inefficiencies, inconsistent workflows, and limited visibility across platforms; (2) increasing manual efforts to correlate and manage data between existing tools. This alternative was not chosen due to the high resource demands and increased risk of human error, which may further delay remediation timelines; (3) procurement of a new, cloud-based consolidated vulnerability management platform. This option was chosen as it allows the Company to enhance vulnerability data, threat intelligence, and process efficiencies within the current environment to deliver immediate value with high confidence in the vulnerability data that is being provided.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/15/2027	2/27/2027	3/27/2027	10/26/2027
	In-Service/Go-Live	**Closeout**	
	10/28/2027	11/27/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	$1.419	-	-	-	-	-	-	$1.419
O&M	-	$0.291	-	-	-	-	-	-	$0.291
Total Cost of Ownership	-	$1.710	-	-	-	-	-	-	**$1.710**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	-	$0.140	-	-	-	-	-	-	**$0.140**
Outside Services	-	$0.035	-	-	-	-	-	-	**$0.035**
Business Expense/Overheads	-	$0.380	-	-	-	-	-	-	**$0.380**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$1.155	-	-	-	-	-	-	**$1.155**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$1.710	-	-	-	-	-	-	**$1.710**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.291	-	-	-	-	-	-	**$0.291**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.291	-	-	-	-	-	-	**$0.291**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$1.419	-	-	-	-	-	-	**$1.419**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$1.419	-	-	-	-	-	-	**$1.419**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall) -1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Enhance the efficiency and effectiveness of the Vulnerability Management program through improved integration and reduced reliance on multiple standalone tools.
Technology Capability	Support risk-based decision-making by enabling more consistent identification, prioritization, and remediation of vulnerabilities.
Technology Capability	The Vulnerability Management program supports business continuity and protects sensitive information and systems.

Work Management Scheduling Analytics and Reporting

Report Pulled: 11/5/2025 **Item ID: 6811**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description The project will implement a solution to optimize the key components of the Distribution Planning and Scheduling functions including forecasting, work order intake, resource identification, work schedule creation, work execution preparation and associated work order analytics.

Portfolio IT Services > Applications > Common Delivery Systems > * > * > *

Org CX&T **Bus Unit** INFORMATION TECHNOLOGY **Dept** CX&T-IT-WORK MANAGEMENT

WORK OBJECTIVES

Problem Statement The Distribution Planning, Scheduling and Administrative Support & Financial Services (Work Plan Strategy) teams are utilizing manually intensive work methods, systems and forecasting models. These inefficiencies impact the creation of work plans, lack predictive capacity planning, and reduce productivity of operational partners.

Objectives The project will add value by providing: (1) streamlined processes tied to workload review and preparatory analysis, leading to increased focus on workload priority, execution of work and a reduction of human struggle; (2)increased accuracy in crew work schedules, leading to improved customer satisfaction and on-time delivery of customer requested work, system integrity work, and gas compliance requirements; (3) reduced manual scheduling steps, reporting and analysis of data associated with work management processes and systems; thereby minimizing the risk of human error hours spent developing and updating crew route sheets; and (4) improved forecasting accuracy, that results in greater transparency into the weekly schedule and associated work plan.

Scope The project scope includes: (1) implement a solution to facilitate the review of work orders from various engineering organizations, allowing for streamlined check-in of work orders; (2) implement a scheduling tool that utilizes predictive modelling and advanced analytics and streamlines daily schedule modifications; (3) enhance integration with the Arcos application to bring in employee capacity and availability information; (4) integrate with SAP to retrieve work order data and manage record keeping requirements; (5) enhance integration with Field Service Suite (FSS) for quicker access to MISS DIG information and work order assignments; and (6) implement associated analytics and reporting.

Alternatives Three primary alternatives were considered for this project: (1) Automating manual data movement across excel and current systems through Robotic Process Automation. This option was not chosen because it will not meet base requirements and will not provide desired insights into whether the schedule supports operating priorities and metrics, financial scenarios, first time completion of work, and daily goals; (2) Integrating an off-the-shelf planning and scheduling system. This option is not preferred due to associated up-front and long-term costs; and (3) Implementing a hybrid of an off-the-shelf planning component with custom built scheduling functions. This is the preferred option to provide a more cost-effective and targeted fit for the organization.

DATES (phase end)

Initiation	Project Plan & Scope Definition	Final Engineering, Planning & Design	Execution
1/11/2022	4/16/2022	6/18/2022	1/28/2023
	In-Service/Go-Live	**Closeout**	
	10/9/2024	10/16/2024	

FUNDING SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Cap+COR	$0.825	$0.952	$0.103	$0.052	-	-	-	-	$1.932
O&M	$0.071	$0.046	$0.047	$0.033	$0.075	$0.075	$0.075	-	$0.422
Total Cost of Ownership	$0.896	$0.998	$0.150	$0.085	$0.075	$0.075	$0.075	-	**$2.354**

	2022	2023	2024	2025	2026	2027	2028	2029 +	Total
Labor	$0.122	$0.195	$0.038	$0.011	-	-	-	-	**$0.365**
Outside Services	$0.678	$0.630	$0.052	$0.047	-	-	-	-	**$1.407**
Business Expense/Overheads	$0.088	$0.141	$0.013	$0.009	-	-	-	-	**$0.251**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	$0.000	$0.019	$0.018	-	-	-	-	**$0.038**
Licenses, Permits & Fees	$0.009	$0.032	$0.027	-	-	-	-	-	**$0.068**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	$0.896	$0.998	$0.150	$0.085	-	-	-	-	**$2.129**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2022	2023	2024	2025	2026	2027	2028	2029 +	Total
O&M	Reduction	-	$(0.045)	$(0.054)	$(0.054)	$(0.054)	$(0.054)	$(0.054)	-	**$(0.314)**
	Initial	$0.071	$0.046	$0.047	$0.033	$0.075	$0.075	$0.075	-	**$0.422**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.071	$0.001	$(0.007)	$(0.020)	$0.021	$0.021	$0.021	-	**$0.109**
Cap+COR	Reduction	-	$(0.159)	$(0.191)	$(0.191)	$(0.191)	$(0.191)	$(0.191)	-	**$(1.113)**
	Initial	$0.825	$0.952	$0.103	$0.052	-	-	-	-	**$1.932**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	$0.825	$0.793	$(0.087)	$(0.139)	$(0.191)	$(0.191)	$(0.191)	-	**$0.819**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-0.497

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	5 - Work Management
Intangibles	As a result of improved forecasting accuracy, greater transparency into the weekly schedule and associated work plan would lead to improved on time completion of workplan elements relating to customer requested work and system improvement projects. It would also support problem solving in unit/hourly costs.
Intangibles	Employee engagement is improved by reducing human struggle, while being able to focus on priority and execution of work versus relying on workarounds and extra steps to meet daily scheduling needs.
Intangibles	Increased accuracy in crew work schedules, resulting in increased on-time completion of electric system integrity and gas compliance work. Based on the reduction of scheduling errors, a projected increase of 10% in the First Time Quality scheduling metric.
Intangibles	Increased accuracy of crew work schedules and First Time Quality are projected to lead to a 4% increase in Customer Satisfaction as measured by CXi
Avoided Costs	Initial savings based on implementation at one Company service center yielded $50,000 in savings from reduced truck rolls and reduced job delays through an enhanced quality control process . It is the intention of the Company to expand this statewide where further savings will be realized.

Workstation Temporary Administrative Access

Report Pulled: 11/5/2025 **Item ID: 10497**

EXECUTIVE SUMMARY

BASIC INFORMATION

Work Category Strategic/Grow **Work Type** Project

Alias Product Family Enhancements-Electric & Gas Shared-Capital

Description This project will implement controls that will allow local least administrative access to workstations on a time limited basis. Non-IT and Security resources will be able to request this access. Temporary administrative access to workstations is required to support some application installations, local system configuration, or to troubleshoot workstation issues. Currently, administrative access is only allowed on employee workstations for authorized users that is granted by a manual process. The current process allows the authorized user to have access to everything on the employee workstation which allows for human error. The process is resource intensive and requires manual removal of access.

Portfolio Corporate Services > Security Services > Cyber Security & Shared Services > * > * > *

Org CX&T **Bus Unit** SECURITY **Dept** CX&T-SECURITY-CYBER SEC ENG & STANDA

WORK OBJECTIVES

Problem Statement Cyber Security and Information Technology (IT) teams do not have controls in place to restrict the usage of local administrative accounts or monitoring capabilities to detect misuse without human intervention. The current state creates an environment for misuse where broad admin access could be leveraged for data breaches and ransomware. A successful attack would impact the Company's ability to serve our customers.

Objectives This project creates value for the Company by: (1) reducing risk by eliminating over 1,000 local administrative accounts; (2) adding the ability to implement security controls and restrictions on local administrative functions; (3) increasing productivity by reducing the time and resources needed to provision, manage, and audit local accounts for security compliance; (4) adding the ability to provide administrative access for a specific and limited duration of time, thereby reducing cyber security risk of workstation compromise.

Scope This project will implement a platform that can enforce security controls and audit the security compliance of local administrative accounts for Company workstations. The features of this platform include: (1) the ability to give administrator access for a specific duration of time; (2) enable applications to automatically run in a privileged state; (3) the ability to remotely change the administrator password; and (4) generate a single-use administrator password.

Alternatives Alternatives considered include: (1) accepting the risk of using local accounts that are not managed centrally for end point administration. This alternative was not chosen because the usage of these accounts doesn't follow company standards for software provisioning and introduces unsupported software versions and vulnerabilities into the environment; (2) continuing the existing practice of manual oversight to grant local administrative access which does not eliminate the risk of misuse of administrator access. This alternative was not selected because it doesn't follow company standards for software provisioning and introduces unsupported software versions and vulnerabilities into the environment; (3) developing a platform for administrative account access internally. This alternative was not chosen due to the time frame it would take internal resources to develop and maintain the solution at the same level of quality and feature parity as a commercial product; and (4) implement a cloud platform specifically developed for managing local administrative accounts. This option was chosen because of the features designed for managing local administrative accounts will reduce the risk of misuse of administrative credentials within the Company.

DATES (phase end)

Initiation 2/1/2027	**Project Plan & Scope Definition** 3/2/2027	**Final Engineering, Planning & Design** 4/3/2027	**Execution** 6/25/2027
	In-Service/Go-Live 6/26/2027	**Closeout** 7/30/2027	

FUNDING SUMMARY

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Cap+COR	-	$0.995	-	-	-	-	-	-	$0.995
O&M	-	$0.190	-	-	-	-	-	-	$0.190
Total Cost of Ownership	-	$1.185	-	-	-	-	-	-	**$1.185**

	2026	2027	2028	2029	2030	2031	2032	2033 +	Total
Labor	-	$0.083	-	-	-	-	-	-	**$0.083**
Outside Services	-	-	-	-	-	-	-	-	-
Business Expense/Overheads	-	$0.353	-	-	-	-	-	-	**$0.353**
Employee Benefits	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-
Licenses, Permits & Fees	-	$0.750	-	-	-	-	-	-	**$0.750**
Other	-	-	-	-	-	-	-	-	-
Total Project Cost	-	$1.185	-	-	-	-	-	-	**$1.185**

VALUE & IMPACTS SUMMARY

FINANCIAL IMPACTS

		2026	2027	2028	2029	2030	2031	2032	2033 +	Total
O&M	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.190	-	-	-	-	-	-	**$0.190**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.190	-	-	-	-	-	-	**$0.190**
Cap+COR	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	$0.995	-	-	-	-	-	-	**$0.995**
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	$0.995	-	-	-	-	-	-	**$0.995**
Revenue	Reduction	-	-	-	-	-	-	-	-	-
	Initial	-	-	-	-	-	-	-	-	-
	Incremental	-	-	-	-	-	-	-	-	-
	Net	-	-	-	-	-	-	-	-	-

B/C Ratio (Overall)	-1.000

Risk Tolerance

Corporate Risk	Impact	Likelihood	Description

OTHER VALUE

Type	Description
Technology Capability	Add the ability to implement security controls and restrictions on local administrative functions.
Technology Capability	Add the ability to provide administrative access for a specific and limited duration of time, thereby reducing cyber security risk of workstation compromise.
Technology Capability	Increase productivity by reducing the time and resources needed to provision, manage, and audit local accounts for security compliance.
Technology Capability	Reduce risk by eliminating over 1,000 local administrative accounts.

EXHIBIT A-23 (SHB-8)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 1 of 16
Witness: SHBaker
Date: December 2025

ARP-Collaboration

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	ClickShare Refresh	$2,807	0	2	$0	$5,614	$4,678	$1,579
2	Conference room refresh/modernize - Auditorium	$150,000	2	0	$300,000	$0	$50,000	$16,880
3	Conference room refresh/modernize - Auditorium	$159,000	0	1	$0	$159,000	$132,500	$44,732
4	Conference room refresh/modernize - Large	$50,000	2	0	$100,000	$0	$16,667	$5,627
5	Conference room refresh/modernize - Large	$53,000	0	1	$0	$53,000	$44,167	$14,911
6	Conference room refresh/modernize - Medium	$15,000	2	0	$30,000	$0	$5,000	$1,688
7	Conference room refresh/modernize -Small	$5,490	0	5	$0	$27,450	$22,875	$7,723
8	Digital Signage refresh - LCD Displays	$1,054	16	0	$16,864	$0	$2,811	$949
9	Digital Signage refresh - LCD Displays	$1,279	0	16	$0	$20,464	$17,053	$5,757
10	Microsoft Teams Rooms	$10,000	11	0	$110,000	$0	$18,333	$6,189
11	Oracle (SBC) Session Border Controls	$30,541	0	4	$0	$122,164	$101,803	$34,369
12	Projectors - bundled	$6,658	0	2	$0	$13,316	$11,097	$3,746
13	Standalone Hub Mics	$2,800	33	0	$92,400	$0	$15,400	$5,199
14	Surface Hubs 50"	$13,340	11	0	$146,740	$0	$24,457	$8,257
15	Surface Hub 85"	$28,140	7	0	$196,980	$0	$32,830	$11,083
16	Verint Servers/Software	$418,260	1	0	$418,260	$0	$69,710	$23,534
17	Accessories				$71,296	$65,000	$66,049	$22,298
18	Software, labor, contractor and overhead and other costs				$114,626	$302,648	$271,311	$91,595
19	**Total Gas Allocation**				$1,597,166	$768,656	**$906,741**	**$306,116**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
20	49" Display Monitor	$2,027	1	0	$2,027	$0	$615	$0
21	55' LED Public Display Monitor	$1,051	1	0	$1,051	$0	$319	$0
22	55' LED Public Display Monitor	$1,336	1	0	$1,336	$0	$405	$0
23	Cisco Analog Gateway - 24 port	$5,447	0	2	$0	$10,894	$0	$3,424
24	Cisco Analog Gateway - 48 port	$10,774	0	2	$0	$21,548	$0	$6,773
25	ClickShare Refresh	$2,807	0	8	$0	$22,456	$0	$7,058
26	Conference room refresh/modernize - Small	$5,490	0	33	$0	$181,170	$0	$56,942
27	Conference room refresh/modernize - Auditorium	$8,457	0	9	$0	$76,113	$0	$23,922
28	Digital Signage	$1,749	1	0	$1,749	$0	$531	$0
29	Digital Signage Monitor	$768	1	0	$768	$0	$233	$0
30	Digital Signage Replacement	$2,027	1	0	$2,027	$0	$615	$0
31	Display	$931	1	0	$931	$0	$283	$0
32	Display	$1,383	1	0	$1,383	$0	$420	$0
33	Display	$2,906	1	0	$2,906	$0	$882	$0
34	Display Replacement	$1,290	1	0	$1,290	$0	$392	$0
35	Display Replacement	$3,305	1	0	$3,305	$0	$1,003	$0
36	Display Replacement	$1,212	1	0	$1,212	$0	$368	$0
37	Display Replacement	$1,617	1	0	$1,617	$0	$491	$0
38	Display Replacement - 49" TV	$1,118	1	0	$1,118	$0	$339	$0
39	Display replacement with cart 32"	$1,361	1	0	$1,361	$0	$413	$0
40	LCD Projector	$2,695	1	0	$2,695	$0	$818	$0
41	LCD Displays	$1,279	0	3	$0	$3,837	$0	$1,206
42	LED Commercial TV	$1,447	1	0	$1,447	$0	$439	$0
43	Microsoft Surface Hub	$11,093	1	0	$11,093	$0	$3,367	$0
44	Microsoft Teams Room	$5,718	1	0	$5,718	$0	$1,735	$0
45	Microsoft Teams Room	$6,303	1	0	$6,303	$0	$1,913	$0
46	Microsoft Teams Room	$6,603	16	0	$105,648	$0	$32,064	$0
47	Microsoft Teams Room	$6,322	1	0	$6,322	$0	$1,919	$0
48	Microsoft Teams Room	$6,647	1	0	$6,647	$0	$2,017	$0
49	Microsoft Teams Room	$6,365	1	0	$6,365	$0	$1,932	$0
50	Microsoft Teams Room	$6,148	1	0	$6,148	$0	$1,866	$0
51	Monitor Replacement	$940	1	0	$940	$0	$285	$0
52	Oracle (SBC) Session Border Controls	$30,541	0	4	$0	$122,164	$0	$38,396
53	Projectors - bundled	$6,658	0	2	$0	$13,316	$0	$4,185
54	Projector Replacement	$2,243	1	0	$2,243	$0	$681	$0
55	Projector Replacement	$11,163	1	0	$11,163	$0	$3,388	$0
56	Projector Replacement	$3,644	1	0	$3,644	$0	$1,106	$0
57	Rally Room Audio	$25,949	1	0	$25,949	$0	$7,875	$0
58	Simulator Room Monitors	$1,781	1	0	$1,781	$0	$541	$0
59	Stand alone Hub Mics (2 per room)	$1,498	0	38	$0	$56,924	$0	$17,891
60	Surface Hub	$10,819	1	0	$10,819	$0	$3,284	$0
61	Surface Hubs 50"	$10,002	0	6	$0	$60,012	$0	$18,862
62	Surface Hub 85"	$21,539	1	0	$21,539	$0	$6,537	$0
63	Surface Hub 85"	$24,693	0	4	$0	$98,772	$0	$31,044
64	Surface Hub Mics	$10,819	1	0	$10,819	$0	$3,284	$0
65	Surface Hub Replacements	$30,105	11	0	$331,150	$0	$100,504	$0
66	Surface Hub Replacements	$35,327	1	0	$35,327	$0	$10,722	$0
67	Surface Hub Stand	$2,676	1	0	$2,676	$0	$812	$0
68	Surface Hub Stand	$2,699	9	0	$24,291	$0	$7,372	$0
69	Surface Hubs and Stands	$33,385	1	0	$33,385	$0	$10,132	$0
70	Accessories				$0	$374,391	$0	$117,671
71	Software, labor, contractor and overhead and other costs				$417,365	$142,930	$126,670	$44,923
72	**Total Gas Allocation**				$1,115,559	$1,184,527	**$338,572**	**$372,297**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 2 of 16
Witness: SHBaker
Date: December 2025

ARP-Cyber Security

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
1	Active Fiber Cable	$511	2	0	$1,021	$0	$474	$0
2	Badge Printer Replacement	$1,953	4	0	$7,810	$0	$3,623	$0
3	Hardware Replacement	$3,186	1	0	$3,186	$0	$1,478	$0
4	Multimode SR	$302	104	0	$31,393	$0	$14,563	$0
5	Networks	$1,193	46	0	$54,886	$0	$25,462	$0
6	Networks	$143	46	0	$6,565	$0	$3,045	$0
7	Networks	$200	46	0	$9,208	$0	$4,271	$0
8	Networks	$4,722	2	0	$9,445	$0	$4,381	$0
9	Networks	$164	46	0	$7,550	$0	$3,503	$0
10	Palo Alto Firewalls 820 Replacement PA-455	$3,703	46	0	$170,354	$0	$79,027	$0
11	QRadar	$18,201	1	0	$18,201	$0	$8,444	$0
12	Prior Period Adjustment for Palo Alto Firewalls replaced in 2024				$0	($2,032)	$0	($980)
13	Software, labor, contractor and overhead and other costs				$125,537	$177,071	$58,237	$85,402
14	**Total Gas Allocation**				$445,156	$175,039	**$206,508**	**$84,421**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 3 of 16
Witness: SHBaker
Date: December 2025

ARP-Cyber-Common

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Cisco FTD-2110 to FTD-3105	$16,000	0	6	$0	$96,000	$80,000	$38,096
2	Cisco ASA 5516-X to FPR-1120	$3,000	4	0	$12,000	$0	$2,000	$952
3	Cisco ASA 5545-X to FPR-1140	$4,000	28	0	$112,000	$0	$18,667	$8,889
4	Cisco ASA 5555-X to FPR-1150	$8,000	4	0	$32,000	$0	$5,333	$2,540
5	Cisco ISE Model number SNS-3695-K9 to SNS-3795-K9	$90,000	0	2	$0	$180,000	$150,000	$71,430
6	F5 BIG-IP i5800 to F5-BIG-DNS-r5800	$101,000	7	0	$707,000	$0	$117,833	$56,112
7	F5 BIG-IP i4800 to F5-BIG-DNS-r4800	$60,000	1	0	$60,000	$0	$10,000	$4,762
8	F5 BIG-IP i4600 to F5-BIG-DNS-r4600	$50,000	2	0	$100,000	$0	$16,667	$7,937
9	F5 BIG-IP i2800 to F5-BIG-DNS-r2800	$40,000	2	2	$80,000	$80,000	$80,000	$38,096
10	Palo Alto Firewall PA-3120Replacement PA-3400	$35,000	7	0	$245,000	$0	$40,833	$19,445
11	Palo Alto Firewall PA-5260Replacement PA-5410	$62,000	4	16	$248,000	$992,000	$868,000	$413,342
12	Software, labor, contractor and overhead and other costs				$123,036	$103,918	$107,104	$51,003
13	**Total Gas Allocation**				$1,719,036	$1,451,918	**$1,496,437**	**$712,603**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
14	Qradar Core Appliance	$218,530	0	1	$0	$218,530	$0	$105,397
15	Software, labor, contractor and overhead and other costs				$0	$143,315	$0	$69,121
16	**Total Gas Allocation**				$0	$361,845	**$0**	**$174,518**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 4 of 16
Witness: SHBaker
Date: December 2025

ARP-Cyber-Gas

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Cisco FTD-2110 to FTD-3105	$16,000	0	14	$0	$224,000	$186,667	$186,667
2	Cisco Fiber SFP Modules	$600	0	112	$0	$67,200	$56,000	$56,000
3	Palo Alto Firewalls 220/820 Replacement PA-455	$9,500	6	16	$57,000	$152,000	$136,167	$136,167
4	Palo Alto Firewalls 3120 Replacement PA-3400	$35,000	2	0	$70,000	$0	$11,667	$11,667
5	Software, labor, contractor and overhead and other costs				$15,262	$52,764	$46,513	$46,513
6	**Total Gas Allocation**				$142,262	$495,964	**$437,013**	**$437,013**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
7	Palo Alto Power Adaptor	$125	0	4	$0	$500	$0	$500
8	Palo Alto Firewalls 220/820 Replacement PA-455	$9,500	0	1	$0	$9,500	$0	$9,500
9	Palo Alto Firewalls 3120 Replacement PA-3400	$35,000	0	4	$0	$140,000	$0	$140,000
10	Software, labor, contractor and overhead and other costs				$0	$27,998	$0	$27,998
11	**Total Gas Allocation**				$0	$177,998	$0	$177,998

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 5 of 16
Witness: SHBaker
Date: December 2025

ARP-Field Device Asset Mgmt

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
	Replacmements							
1	Field Devices CF33 w/acce	$4,883	1289	922	$6,294,264	$4,502,181	$4,800,861	$1,620,771
2	Field Devices CF55 w/acces	$4,003	49	50	$196,160	$200,163	$199,496	$67,350
	New Purchases							
3	Field Devices and Accessories				$890,000	$890,000	$890,000	$300,464
4	Software, labor, contractor and overhead and other costs				$196,686	$142,884	$151,851	$51,265
5	**Total Gas Allocation**				$7,577,109	$5,735,227	**$6,042,207**	**$2,039,849**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
	Replacements							
6	Field Devices CF33 w/acce	$4,909	552	0	$2,709,520	$0	$822,339	$0
7	Field Devices CF33 w/acce	$3,860	0	327	$0	$1,262,240	$0	$396,722
8	Field Devices CF55 w/acces	$3,652	80	0	$292,161	$0	$88,671	$0
9	Field Devices CF55 w/acces	$4,003	0	210	$0	$840,685	$0	$264,227
10	Field Devices Getac A140	$4,621	30	0	$138,616	$0	$42,070	$0
11	CF33 Accessories				$0	$66,033	$0	$20,754
	New Purchases							
12	Field Devices CF33	$4,909	109	0	$535,032	$0	$162,382	$0
13	Field Devices CF33	$3,860	0	50	$0	$193,003	$0	$60,661
14	Field Devices FZ55	$3,652	20	0	$73,040	$0	$22,168	$0
15	Field Devices FZ55	$4,003	0	11	$0	$44,036	$0	$13,840
16	Field Devices Getac A140	$4,621	20	0	$92,411	$0	$28,047	$0
17	Accessories				$1,201	$29,729	$365	$9,344
18	Software, labor, contractor and overhead and other costs				$111,010	$21,311	$33,692	$6,698
19	**Total Gas Allocation**				$3,952,991	$2,457,036	**$1,199,733**	**$772,246**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 6 of 16
Witness: SHBaker
Date: December 2025

ARP-Infoblox

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
1	TCPWave IPAM Virtual Appliance	$34,912	0	2	$0	$69,824	$0	$33,676
2	TCPWave Remote Virtual Appliances (DNS/DHCP/Cloud)	$17,455	0	11	$0	$192,004	$0	$92,603
3	TCPWave TW450 IPAM Hardware Appliance	$45,888	0	1	$0	$45,888	$0	$22,132
4	TCPWave TW450 Remote Hardware Appliance	$39,902	0	2	$0	$79,804	$0	$38,489
5	Software, labor, contractor and overhead and other costs				$0	$80,777	$0	$38,959
6	**Total Gas Allocation**				$0	$468,296	**$0**	**$225,859**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 7 of 16
Witness: SHBaker
Date: December 2025

ARP-Local Area Network

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
1	Cisco C9120AXI-B	$1,839	395	0	$726,591	$0	$337,065	$0
2	Cisco C9130AXI-B	$3,037	161	0	$488,920	$0	$226,810	$0
3	Cisco N9K-C9364C	$45,253	3	0	$135,759	$0	$62,979	$0
4	Fiber Optic Cables	$2,374	5	0	$11,870	$0	$5,506	$0
5	Juniper EX4100-48MP	$8,573	23	0	$197,176	$0	$91,470	$0
6	Juniper EX4400-48F	$20,419	1	0	$20,419	$0	$9,472	$0
7	Juniper Power Supply JPSU-920-AC-AFO	$386	55	0	$21,205	$0	$9,837	$0
8	MX204-HW-BASE	$44,409	3	0	$133,227	$0	$61,804	$0
9	Prior Period Adjustments for Wireless Access Points and Switches				$0	($132,552)	$0	($63,930)
10	Software, labor, contractor and overhead and other costs				$1,311,162	$730,012	$608,248	$352,085
11	**Total Gas Allocation**				$3,046,329	$597,460	**$1,413,192**	**$288,155**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 8 of 16
Witness: SHBaker
Date: December 2025

ARP-Network-Common

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Cisco 8500	$34,129	0	7	$0	$238,903	$199,086	$94,805
2	Cisco APIC-CLUSTER-M3	$22,780	0	9	$0	$205,020	$170,850	$81,359
3	Cisco N9K-C9364C	$20,932	0	4	$0	$83,729	$69,774	$33,226
4	Cisco SE-CL-L3	$58,194	0	4	$0	$232,775	$193,979	$92,373
5	Datacom Line Tap	$3,887	5	5	$19,435	$19,435	$19,435	$9,255
6	Hirschmann BRS-32 Field Switch 942170999-21510232575	$3,939	0	10	$0	$39,390	$32,825	$15,631
7	Hirschmann RJ45 SFP	$447	0	10	$0	$4,470	$3,725	$1,774
8	Hirschmann Fiber Optic	$198	0	10	$0	$1,980	$1,650	$786
9	Juniper EX4100-48MP	$3,396	6	0	$20,378	$0	$3,396	$1,617
10	Juniper EX4600-40F	$8,865	25	28	$221,625	$248,220	$243,788	$116,092
11	Juniper EX4650-48Y	$12,625	35	22	$441,875	$277,750	$305,104	$145,291
12	Juniper QFX5120-48T	$12,376	5	5	$61,880	$61,880	$61,880	$29,467
13	Software, labor, contractor and overhead and other costs				$68,475	$101,641	$96,113	$45,769
14	**Total Gas Allocation**				$833,668	$1,515,192	**$1,401,605**	**$667,444**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
15	Software, labor, contractor and overhead and other costs				$0	$213,599	$0	$103,019
16	**Total Gas Allocation**				$0	$213,599	**$0**	**$103,019**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 9 of 16
Witness: SHBaker
Date: December 2025

ARP-Network-Gas

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Cisco IR8340	$17,800	0	3	$0	$53,400	$44,500	$44,500
2	Datacom Line Tap	$3,887	5	5	$19,435	$19,435	$19,435	$19,435
3	Hirschmann BRS-32 Field Switch 942170999-21510232575	$3,939	0	36	$0	$141,804	$118,170	$118,170
4	Hirschmann RJ45 SFP	$447	0	100	$0	$44,700	$37,250	$37,250
5	Hirschmann Fiber Optic	$198	0	100	$0	$19,800	$16,500	$16,500
6	Juniper EX4600-40F	$8,865	0	4	$0	$35,460	$29,550	$29,550
7	Software, labor, contractor and overhead and other costs				$2,621	$30,282	$25,672	$25,672
8	**Total Gas Allocation**				$22,056	$344,881	**$291,077**	**$291,077**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
9	Juniper Power Supply JPSU-920-AC-AFO	$455	0	5	$0	$2,275	$0	$2,275
10	SFP Optics	$100	0	3586	$0	$358,600	$0	$358,600
11	Software, labor, contractor and overhead and other costs				$0	$58,273	$0	$58,273
12	**Total Gas Allocation**				$0	$419,148	**$0**	**$419,148**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 10 of 16
Witness: SHBaker
Date: December 2025

ARP-OT Support-Common

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Hypervisors Nutanix DC	$125,000	12	11	$1,500,000	$1,375,000	$1,395,833	$471,233
2	Physical Servers	$16,000	0	2	$0	$32,000	$26,667	$9,003
3	Software, labor, contractor and overhead and other costs				$155,506	$154,948	$155,041	$52,342
4	**Total Gas Allocation**				$1,655,506	$1,561,948	**$1,577,541**	**$532,578**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
5	Hypervisors Nutanix DC	$130,462	0	12	$0	$1,565,544	$0	$492,050
6	Hypervisors Nutanix Remote	$32,724	0	3	$0	$98,173	$0	$30,856
7	Software, labor, contractor and overhead and other costs				$0	$170,016	$0	$53,436
8	**Total Gas Allocation**				$0	$1,833,733	**$0**	**$576,342**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 11 of 16
Witness: SHBaker
Date: December 2025

ARP-OT Support-Gas

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Hypervisors Field	$55,000	18	0	$990,000	$0	$165,000	$165,000
2	Industrial Panel PCs-Human Machine Interface (HMI)	$6,500	2	34	$13,000	$221,000	$186,333	$186,333
3	Software, labor, contractor and overhead and other costs				$162,195	$119,961	$127,000	$127,000
4	**Total Gas Allocation**				$1,165,195	$340,961	**$478,333**	**$478,333**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
5	Cisco C8500	$36,677	2	0	$73,353	$0	$73,353	$0
6	DataCom Tap	$2,064	5	0	$10,322	$0	$10,322	$0
7	F5 Hardware	$5,881	10	0	$58,813	$0	$58,813	$0
8	Firewalls	$11,617	28	0	$325,287	$0	$325,287	$0
9	Firewalls	$53,074	2	0	$106,148	$0	$106,148	$0
10	Generalized Predictive Control (GPC) Clocks	$1,427	2	0	$2,853	$0	$2,853	$0
11	Hyper-Convered Solution	$34,366	4	0	$137,463	$0	$137,463	$0
12	Hyper-Convered Solution	$24,214	0	3	$0	$72,641	$0	$72,641
13	Juniper Switches GRM - 2024 ARP GRM - NTXN214	$12,953	3	0	$38,860	$0	$38,860	$0
14	Juniper Switches PRM - 2024 ARP PRM - NTXN240	$12,665	3	0	$37,995	$0	$37,995	$0
15	Juniper Switches grm - NWQV118	$6,991	6	0	$41,944	$0	$41,944	$0
16	Juniper Switches prm - NWQV081	$6,991	6	0	$41,944	$0	$41,944	$0
17	Master Terminal Unit (MTU)	$2,872	35	0	$100,507	$0	$100,507	$0
18	Rugged Router	$136	1	0	$136	$0	$136	$0
19	VxRail Network Adapters	$196	20	0	$3,929	$0	$3,929	$0
20	Wyse Thin Clients	$525	10	0	$5,250	$0	$5,250	$0
21	Software, labor, contractor and overhead and other costs				$140,741	$80,847	$140,741	$80,847
22	**Total Gas Allocation**				$1,125,545	$153,488	**$1,125,545**	**$153,488**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 12 of 16
Witness: SHBaker
Date: December 2025

ARP-Physical Security

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Cabling/Misc Equipment	$10,000	13	13	$130,000	$130,000	$130,000	$43,888
2	Cameras	$3,500	163	0	$570,500	$0	$95,083	$32,100
3	Cameras	$3,575	0	160	$0	$572,000	$476,667	$160,923
4	Lift Charge	$5,000	13	13	$65,000	$65,000	$65,000	$21,944
5	Logistics & Operations	$4,000	13	13	$52,000	$52,000	$52,000	$17,555
6	Network Video Recorder (NVR)/Monitor	$37,000	13	13	$481,000	$481,000	$481,000	$162,386
7	Software, labor, contractor and overhead and other costs				$814,320	$814,320	$814,320	$274,914
8	**Total Gas Allocation**				$2,112,820	$2,114,320	$2,114,070	$713,710

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
9	3rd Party Vendor	$41,325	2	0	$82,650	$0	$25,084	$0
10	3rd Party Vendor	$34,932	0	3	$0	$104,796	$0	$32,937
11	Cabling/Misc Equipment	$16,603	10	0	$166,030	$0	$50,390	$0
12	Cabling/Misc Equipment	$9,341	0	11	$0	$102,751	$0	$32,295
13	Cameras	$2,034	470	0	$955,980	$0	$290,140	$0
14	Cameras	$2,892	0	227	$0	$656,484	$0	$206,333
15	Card Access Secure Identity Object and Smart Card Panel (SIO & SCP)	$1,471	94	0	$138,274	$0	$41,966	$0
16	Card Access Secure Identity Object and Smart Card Panel (SIO & SCP)	$617	0	100	$0	$61,700	$0	$19,392
17	Intercom	$1,511	0	10	$0	$15,110	$0	$4,749
18	Lift Charge	$5,017	6	0	$30,102	$0	$9,136	$0
19	Lift Charge	$4,440	0	11	$0	$48,840	$0	$15,350
20	Logistics & Operations	$4,548	6	0	$27,288	$0	$8,282	$0
21	Network Video Recorder (NVR)/Monitor	$41,747	11	0	$459,217	$0	$139,372	$0
22	Network Video Recorder (NVR)/Monitor	$37,135	0	11	$0	$408,485	$0	$128,387
23	Accessories				$0	$2,905	$0	$913
24	Software, labor, contractor and overhead and other costs				$422,444	$1,003,825	$128,212	$315,502
25	**Total Gas Allocation**				$2,281,985	$2,404,896	**$692,582**	**$755,859**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 13 of 16
Witness: SHBaker
Date: December 2025

ARP-Printer Asset Management

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	IM C2500	$5,263	5	5	$26,315	$26,315	$26,315	$8,884
2	IM C300	$1,974	6	9	$11,844	$17,766	$16,779	$5,665
3	IM C3010	$5,743	6	54	$34,458	$310,122	$264,178	$89,186
4	IM C3510	$6,344	0	11	$0	$69,784	$58,153	$19,633
5	IM C6010	$7,450	2	12	$14,900	$89,400	$76,983	$25,990
6	IM C8000	$15,744	0	1	$0	$15,744	$13,120	$4,429
7	MPC W2201	$8,204	7	14	$57,431	$114,862	$105,290	$35,546
8	MP W6700 Plotter	$8,028	0	1	$0	$8,028	$6,690	$2,259
9	Ricoh PRO C5300 Flint	$34,426	1	0	$34,426	$0	$5,738	$1,937
10	SPC 8200	$6,807	0	1	$0	$6,807	$5,673	$1,915
11	Accessories				$569	$599	$594	$201
12	Software, labor, contractor and overhead and other costs				$4,851	$16,023	$14,161	$4,781
13	**Total Gas Allocation**				$184,794	$675,450	**$593,674**	**$200,424**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
14	Fax Board	$1,158	0	1	$0	$1,158	$0	$364
15	IM C2500	$5,235	29	23	$151,825	$120,413	$46,079	$37,846
16	IM C300	$1,767	84	0	$148,428	$0	$45,048	$0
17	IM C300	$1,974	0	84	$0	$165,816	$0	$52,116
18	IM C3010	$5,536	12	125	$66,432	$692,000	$20,162	$217,496
19	IM C3510	$6,137	60	23	$368,220	$141,151	$111,755	$44,364
20	IM C6010	$7,243	21	3	$152,103	$21,729	$46,163	$6,829
21	MPC W2201	$8,204	13	0	$106,652	$0	$32,369	$0
22	MPC W2201	$8,404	0	50	$0	$420,200	$0	$132,069
23	Software, labor, contractor and overhead and other costs				$87,461	$49,162	$26,544	$15,451
24	**Total Gas Allocation**				$1,081,120	$1,611,629	**$328,120**	**$506,535**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 14 of 16
Witness: SHBaker
Date: December 2025

ARP-Radio

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	800 Mhz mobile radios	$2,114	450	0	$951,377	$0	$158,563	$75,508
2	800 Mhz mobile radios	$2,500	0	450	$0	$1,125,000	$937,500	$446,438
3	Bi-directional Amplifier (Large -Commercial) bundle	$1,411	8	8	$11,287	$11,287	$11,287	$5,375
4	Cellular Modems	$1,920	20	20	$38,400	$38,400	$38,400	$18,286
5	Conventional base station repeaters hardware	$9,943	2	0	$19,886	$0	$3,314	$1,578
6	Havis Boxes (hardware)	$2,256	150	150	$338,456	$338,456	$338,456	$161,173
7	Tower Site Lighting Alarm Boxes Refresh	$2,500	0	5	$0	$12,500	$10,417	$4,960
8	Accessories				$0	$112,500	$93,750	$44,644
9	Software, labor, contractor and overhead and other costs				$97,633	$100,592	$100,099	$47,667
10	**Total Gas Allocation**				$1,457,038	$1,738,734	**$1,691,785**	**$805,628**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
11	800 Mhz control stations w/accessories	$2,180	250	0	$544,953	$0	$252,803	$0
12	800 Mhz mobile radios	$1,993	100	0	$199,299	$0	$92,455	$0
13	800 Mhz mobile radios	$1,907	0	450	$0	$858,150	$0	$413,886
14	800 Mhz portable radios	$2,339	5	0	$11,694	$0	$5,425	$0
15	800 Mhz portable radios	$1,626	0	40	$0	$65,040	$0	$31,369
16	800 MHz Radio Programming Accessories	$296	10	0	$2,961	$0	$1,373	$0
17	Albion Tool conventional repeater	$3,698	1	0	$3,698	$0	$1,715	$0
18	Battery conditioners refresh	$2,035	2	0	$4,069	$0	$1,888	$0
19	Battle Creek Bi-directional amplifier w/accessories	$14,352	1	0	$14,352	$0	$6,658	$0
20	Bi-directional Amplifier Hardware (Small System) - bundle	$1,396	0	12	$0	$16,752	$0	$8,079
21	Bi-directional Amplifier (Large -Commercial) bundle	$6,424	0	8	$0	$51,392	$0	$24,786
22	Cadillac BDA	$31,593	1	0	$31,593	$0	$14,656	$0
23	Cell Scanners	$1,071	4	0	$4,282	$0	$1,987	$0
24	Covert Bi-directional amplifier w/accessories (Office)	$12,888	1	0	$12,888	$0	$5,979	$0
25	Covert Bi-directional amplifier w/accessories (Warehouse)	$1,606	1	0	$1,606	$0	$745	$0
26	Drone Refresh	$6,621	1	0	$6,621	$0	$3,071	$0
27	Grand Rapids Satellite Link Refresh	$5,141	1	0	$5,141	$0	$2,385	$0
28	Havis Boxes - 18"	$1,972	0	30	$0	$59,160	$0	$28,533
29	Havis Boxes - hump mount	$877	0	63	$0	$55,251	$0	$26,648
30	Havis Boxes (hardware)	$1,946	17	0	$33,077	$0	$15,344	$0
31	Jackson Satellite Link Refresh	$5,141	1	0	$5,141	$0	$2,385	$0
32	JSC Bi-directional amplifier w/accessories	$42,586	1	0	$42,586	$0	$19,755	$0
33	Midland Bi-directional amplifier w/accessories	$18,399	1	0	$18,399	$0	$8,535	$0
34	North Kent Bi-directional amplifier w/accessories	$16,314	1	0	$16,314	$0	$7,568	$0
35	Owosso Bi-directional amplifier w/accessories	$24,609	1	0	$24,609	$0	$11,416	$0
36	Parnall BDA	$2,282	1	0	$2,282	$0	$1,058	$0
37	Tawas Bi-directional amplifier w/accessories	$12,258	1	0	$12,258	$0	$5,686	$0
38	Watt Meter Refresh	$1,376	7	0	$9,635	$0	$4,469	$0
39	Zilwaukee Lighting Refresh	$3,210	1	0	$3,210	$0	$1,489	$0
40	Accessories				$0	$307,055	$0	$148,093
41	Software, labor, contractor and overhead and other costs				$153,953	$202,116	$71,419	$97,481
42	**Total Gas Allocation**				$1,164,617	$1,614,916	**$540,266**	**$778,874**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 15 of 16
Witness: SHBaker
Date: December 2025

ARP-Server and Storage

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
1	Nutanix VDI xc640 Nodes	$137,109	0	8	$0	$1,096,874	$914,062	$308,587
2	Labor, contractor and overhead and other costs				$0	$318,800	$265,667	$89,689
3	**Total Gas Allocation**				$0	$1,415,674	**$1,179,728**	**$398,276**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
4	NetApp Expansion	$62,629	0	2	$0	$125,258	$0	$39,369
5	Nutanix xc740xd	$32,038	20	0	$640,765	$0	$194,472	$0
6	Small Form-Factor Pluggable	$55	40	0	$2,200	$0	$668	$0
7	Labor, contractor and overhead and other costs				$57,728	$248,522	$17,520	$78,110
8	**Total Gas Allocation**				$700,693	$373,780	$212,660	$117,479

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Programs
Projected Gas and Common Capital Expenditures
For the Projected Year 2026 and Test Year Ending October 31, 2027
For the Historical Year 2024 and Projected Year 2025

Case No.: U-21981
Exhibit No.: A-24 (SHB-9)
Page: 16 of 16
Witness: SHBaker
Date: December 2025

ARP-Workstation Asset Mgmt

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Units	**Avg. Unit Cost**	**Total 2026 Units**	**Total 2027 Units**	**Total 2026 Dollars**	**Total 2027 Dollars**	**Total Test Year Dollars**	**Gas Allocation Dollars**
	Replacements							
1	16" Laptop	$3,037	274	191	$832,111	$580,048	$622,058	$210,007
2	Desktops	$1,378	93	480	$128,154	$661,440	$572,559	$193,296
3	HP Desktop Bundled	$3,835	40	73	$153,403	$279,961	$258,868	$87,394
4	Laptop	$1,908	1775	1406	$3,386,700	$2,682,648	$2,799,990	$945,277
5	Monitors 24"	$233	0	2159	$0	$503,479	$419,566	$141,645
6	Rack Mount Device	$8,692	14	0	$121,688	$0	$20,281	$6,847
7	Tablets	$2,644	0	9	$0	$23,799	$19,833	$6,695
8	Teams Monitors	$323	0	2159	$0	$698,005	$581,671	$196,372
9	Accessories				$231,103	$211,395	$214,886	$72,545
	New Purchases							
10	Workstations, Monitors, and Accessories				$0	$1,000,000	$833,333	$281,333
11	Software, labor, contractor and overhead and other costs				$279,273	$274,193	$275,040	$92,853
12	**Total Gas Allocation**				$5,132,431	$6,914,967	**$6,618,084**	**$2,234,265**

	Units	**Avg. Unit Cost**	**Total 2024 Units**	**Total 2025 Units**	**Total 2024 Dollars**	**Total 2025 Dollars**	**2024 Gas Allocation Dollars**	**2025 Gas Allocation Dollars**
	Replacements							
13	Desktops	$1,540	128	0	$197,098	$0	$59,819	$0
14	Desktops	$1,484	0	100	$0	$148,400	$0	$46,642
15	HP Desktop Bundled	$4,505	0	82	$0	$369,410	$0	$116,106
16	HP Desktops OT	$6,081	65	0	$395,246	$0	$119,957	$0
17	HP Laptop bundled	$3,131	512	0	$1,603,308	$0	$486,604	$0
18	HP Laptop bundled	$3,248	0	615	$0	$1,997,723	$0	$627,884
19	Laptop	$1,843	912	0	$1,681,236	$0	$510,255	$0
20	Laptop	$1,813	0	1900	$0	$3,443,940	$0	$1,082,430
21	Macs	$2,828	0	34	$0	$96,142	$0	$30,218
22	Monitors 24"	$233	0	100	$0	$23,320	$0	$7,329
23	Rack Mount Device	$8,480	51	0	$432,480	$0	$131,258	$0
24	SFF Desktop	$1,562	115	0	$179,592	$0	$54,506	$0
25	SFF Desktop	$1,385	0	15	$0	$20,776	$0	$6,530
26	Surface Pro Laptops	$3,342	17	0	$56,806	$0	$17,241	$0
27	Surface Pro Laptops	$2,257	0	37	$0	$83,508	$0	$26,247
28	Tablets	$2,187	39	0	$85,290	$0	$25,886	$0
29	Teams Monitors	$323	0	105	$0	$33,947	$0	$10,669
30	Accessories				$148,563	$424,677	$45,089	$133,476
	New Purchases							
31	24" Monitors	$233	0	263	$0	$61,332	$0	$19,277
32	Desktop (Tower)	$1,540	3	0	$4,619	$0	$1,402	$0
33	HP Desktop	$4,505	4	0	$18,020	$0	$5,469	$0
34	HP laptop (16")	$3,131	100	0	$313,146	$0	$95,040	$0
35	HP laptop (16")	$3,248	0	94	$0	$305,343	$0	$95,969
36	Laptop (14")	$1,843	204	0	$376,066	$0	$114,136	$0
37	Laptop (14")	$1,813	0	300	$0	$543,780	$0	$170,910
38	SFF Desktop	$1,562	10	0	$15,617	$0	$4,740	$0
39	SFF Desktop	$1,385	0	5	$0	$6,925	$0	$2,177
40	Surface Pro Tablets	$2,187	2	0	$4,374	$0	$1,327	$0
41	Surface Pro Tablets	$1,942	0	10	$0	$19,424	$0	$6,105
42	Teams Monitors	$323	331	263	$107,012	$85,028	$32,478	$26,724
43	Accessories				$115,420	$126,380	$35,030	$39,721
44	Software, labor, contractor and overhead and other costs				$259,099	$92,407	$78,636	$29,043
45	**Total Gas Allocation**				$5,992,992	$7,882,461	**$1,818,873**	**$2,477,458**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Program-Field Device Asset Management
New Purchases Historical Acutal 2021 - 2024

Case No.: U-21981
Exhibit No.: A-25 (SHB-10)
Page: 1 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Year	(b) Total Company New Purchases	(c) Reference*
1	2021	$ 1,207,651	Electric: U-21224, Exhibit No. A-173 (JMW-8), page 8, column f, line 48 and 49 plus 21% of lines 56 - 57 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees. Gas: U-21308, Exhibit No. A-23 (SHB-8), page 8, column e, lines 66 and 68 plus 21% of lines 56 - 57 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees.
2	2022	$ 778,339	Electric: U-21389, Exhibit No. A-182 (HNW-8), page 8, column e, lines 64 and 66 plus 35% of lines 72 - 73 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees. Gas: U-21490, Exhibit No. A-22 (SHB-7), page 9, column e, lines 55 and 57 plus 35% of lines 72 - 73 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees.
3	2023	$ 880,134	Electric: U-21585, Exhibit No. A-90 (SK-8), page 9, column e, lines 52-54 plus 73% of lines 59 - 60 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees. Gas: U-21806, Exhibit No. A-22 (SHB-7), page 12, column e, lines 52 - 54 plush 73% of line 59 - 60 for ARP-FDAM new purchases portion of accessories, shipping and handling, and other fees.
4	2024	$ 701,684	Electric: U-21870, Exhibit No. A-22 (SHB-7), page 5, column e, lines 12, 14, 16, and 18. Gas: U-21981, Exhibit No. A-24 (SHB-9), page 5, column e, lines 13, 15, 17, and 18.
5	Total Company Four-year Historical Average	$ 891,952	
6	Gas Allocation Four-year Historical Average	$ 301,123	

*Note: In 2021, 2022, and 2023 Field Device new purchases were a part of ARP-Workstation Asset Management and not ARP-FDAM.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Asset Refresh Program-Workstation Asset Management
New Purchases Historical Acutal 2021 - 2024

Case No.: U-21981
Exhibit No.: A-25 (SHB-10)
Page: 2 of 2
Witness: SHBaker
Date: December 2025

Line No.	(a) Year	(b) Total Company New Purchases	(c) Reference*
1	2021	$ 4,583,866	Electric: U-21224, Exhibit No. A-173 (JMW-8), page 8, column f, lines 40 - 42, 44, 47, 50 - 51, and 53 - 57 plus 79% of lines 56 - 57 for ARP-WAM new purchases portion of accessories, shipping and handling, and other fees. Gas: U-21308, Exhibit No. A-23 (SHB-8), page 8, column e, lines 55 - 56, 58, 61, 63-64, 70 - 71, 73, and 75 plus 79% of lines 77 - 78 for ARP-WAM new purchases portion of accessories, shipping and handling, and other fees.
2	2022	$ 1,414,635	Electric: U-21389, Exhibit No. A-182 (HNW-8), page 8, column e, lines 48, 50, 52, 54, 56, 59, 62, 68, 70, 72, and 73 plus 65% of lines 72 - 73 for ARP-WAM new purchases portion of accessories, shipping and handling, and other fees. Gas: U-21490, Exhibit No. A-22 (SHB-7), page 9, column e, lines 44, 46 - 47, 49 - 51, 53, and 58 - 59 plus 65% of lines 60 - 61 for ARP-WAM new purchases portion of accessories, shipping and handling, and other fees.
3	2023	$ 318,694	Electric: U-21870, Exhibit No. A-22 (SHB-7), page 5, column e, lines 12, 14, 16, and 18. Gas: U-21981, Exhibit No. A-24 (SHB-9), page 5, column e, lines 13, 15, 17, and 18.
4	2024	$ 954,274	Electric: U-21870, Exhibit No. A-22 (SHB-7), page 15, columns e, lines 28 -34, and 36. Gas: U-21981, Exhibit No. A-24 (SHB-9), page 16, column e, lines 31, 32, 34, 35, 37, 39, 42
5	Four-year Historical Average	$ 1,817,867	
6	Gas Allocation Four-year Historical Average	$ 613,712	

*Note: In 2021, 2022, and 2023 Field Device new purchases were a part of ARP-Workstation Asset Management and not ARP-FDAM.

EXHIBIT A-26 (SHB-11)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Projected Test Year Versus Actual Three-Year Historical Average Actual Enhancement Capital Expenditures and O&M Expense Summary and Analysis
Information Technology
For Years 2022 Through 2024 and Projected 2026, 2027, and Test Year
Gas Allocation

Case No.: U-21981
Exhibit No.: A-27 (SHB-12)
Page: 1 of 1
Witness: SHBaker
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
		Capital							O&M						
Line No.	Enhancement Project	2022 Actuals	2023 Actuals	2024 Actuals	Gas Allocation Three-Year Historical Average 2022 - 2024	2026 Projected	2027 Projected	Projected Test Year	2022 Actuals	2023 Actuals	2024 Actuals	Gas Allocation Three-Year Historical Average 2022 - 2024	2026 Projected	2027 Projected	Projected Test Year
1	**Product Family Enhancements-Application Platforms Services-Capital**														
2	Enhancements-IT-Capital (50% of total historical amount)	306,979	26,970	8,593					11,676	13	10				
3	Product Family Enhancements-IT/Digital Foundation-Capital (50% of total historical amount)	-	42,987	-					-	8,370	-				
4	Product Family Enhancements-Application Platforms Services-Capital	-	-	118,189					-	-	2,941				
5	**Product Family Enhancements-Application Platforms Services-Capital**	**306,979**	**69,957**	**126,783**	**167,906**	**317,503**	**317,503**	**317,503**	**11,676**	**8,383**	**2,951**	**7,670**	**69,560**	**69,560**	**69,560**
6	**Product Family Enhancements-Application Platforms Services-O&M**														
7	Enhancements-IT-O&M (50% of total historical amount)	-	-	-					60,392	14,019	684				
8	Product Family Enhancements-IT/Digital Foundation-O&M (50% of total historical amount)	-	-	-					-	7,581	-				
9	Product Family Enhancements-Application Platforms Services-O&M	-	-	-					-	131	116,502				
10	**Total Product Family Enhancements-Application Platforms Services-O&M**	**-**	**-**	**-**	**-**	**-**	**-**		**60,392**	**21,731**	**117,186**	**66,436**	**62,818**	**62,818**	**62,818**
11	**Product Family Enhancements-Corporate-Capital**														
12	Enhancements-Corporate Services-Capital	685,019	-	-											
13	Product Family Enhancements-IT/Digital Foundation-O&M (20% of total historical amount)	-	17,195	-					-	3,348	-				
14	Enhancements-IT-Capital (20% of total historical amount)	122,792	10,788	3,437					4,670	5	4				
15	Product Family Enhancements-Corporate-Capital	7,595	344,325	381,452					-	27,035	49,084				
16	**Total Product Family Enhancements-Corporate-Capital**	**815,405**	**372,307**	**384,890**	**524,201**	**376,424**	**376,424**	**376,424**	**4,670**	**30,388**	**49,088**	**28,049**	**92,121**	**92,121**	**92,121**
17	**Product Family Enhancements-Corporate-O&M**														
18	Enhancements-Corporate Services-O&M	-	-	-					138,892	15,294	-				
19	Enhancements-IT-O&M (20% of total historical amount)	-	-	-					24,157	5,608	274				
20	Product Family Enhancements-IT/Digital Foundation-O&M (20% of total historical amount)	-	-	-					-	3,032	-				
21	Product Family Enhancements-Corporate-O&M	-	-	-					-	81,546	149,376				
22	**Total Product Family Enhancements-Corporate-O&M**	**-**	**-**	**-**	**-**	**-**	**-**		**163,049**	**105,480**	**149,649**	**139,393**	**95,531**	**95,531**	**95,531**
23	**Product Family Enhancements-Customer-Capital**														
24	Enhancements - Customer Experience and Operations- Cap	10,114	225,419	171,111					1,616	26,557	15,385				
25	Enhancements-CX&O-Capital	922,864	287,338	-					576,975	51,868	-				
26	Product Family Enhancements-Customer-Capital	-	86,832	477,552					-	6,782	318,919				
27	**Total Product Family Enhancements-Customer-Capital**	**932,978**	**599,589**	**648,663**	**727,077**	**793,883**	**793,883**	**793,883**	**578,591**	**85,206**	**334,304**	**332,701**	**45,888**	**45,888**	**45,888**
28	**Product Family Enhancements-Customer-O&M**														
29	Enhancements-CX&O-O&M	-	-	-					200,584	56,171	53,355				
30	Product Family Enhancements-Customer-O&M	-	-	-					-	146,914	55,268				
31	**Total Product Family Enhancements-Customer-O&M**	**-**	**-**	**-**	**-**	**-**	**-**		**200,584**	**203,085**	**108,622**	**170,764**	**111,105**	**111,105**	**111,105**
32	**Product Family Enhancements-Electric & Gas Shared-Capital**														
33	Enhancements-TEOS-Capital	78,418	144,333	5,301					(8,707)	14,669	583				
34	Product Family Enhancements-Electric & Gas Shared-Capital	-	36,331	466,918					-	-	146,083				
35	**Total Product Family Enhancements-Electric & Gas Shared-Capital**	**78,418**	**180,664**	**472,220**	**243,767**	**349,978**	**349,978**	**349,978**	**(8,707)**	**14,669**	**146,667**	**50,876**	**57,459**	**57,459**	**57,459**
26	**Product Family Enhancements-Electric & Gas Shared-O&M**														
37	Enhancements-TEOS-O&M	-	-	-					158,260	48,323	-				
36	Product Family Enhancements-Electric & Gas Shared-O&M	-	-	-					-	10,955	28,999				
37	**Total Product Family Enhancements-Electric & Gas Shared-O&M**	**-**	**-**	**-**	**-**	**-**	**-**		**158,260**	**59,278**	**28,999**	**82,179**	**79,872**	**79,872**	**79,872**
28	**Product Family Enhancements-Gas-Capital**														
29	Enhancements-Operations-Capital	497,890	159,817	104					50,180	9,688	1,179				
30	Product Family Enhancements-Gas-Capital	86,608	309,283	334,037					-	-	106,903				
31	**Total Product Family Enhancements-Gas-Capital**	**584,498**	**469,101**	**334,141**	**462,580**	**462,580**	**462,580**	**462,580**	**50,180**	**9,688**	**108,083**	**55,983**	**95,993**	**95,993**	**95,993**
32	**Product Family Enhancements-Gas-O&M**														
33	Enhancements-Operations-O&M	-	-	-					226,486	42,905	-				
34	Product Family Enhancements-Gas-O&M	-	-	-					-	280,258	388,621				
35	**Total Product Family Enhancements-Gas-O&M**	**-**	**-**	**-**	**-**	**-**	**-**		**226,486**	**323,163**	**388,621**	**312,757**	**442,447**	**442,447**	**442,447**
36	**Product Family Enhancements-Infrastructure Platforms Services-Capital**														
37	Enhancements-Cloud Automation	340,982	100,962	-					36,665	66,675	-				
38	Enhancements-IT-Capital (30% of total historical amount)	184,187	16,182	5,156					7,006	8	6				
39	Product Family Enhancements-IT/Digital Foundation-Capital (30% of total historical amount)	-	25,792	-					-	5,022	-				
40	Product Family Enhancements-Infrastructure Platforms Services-Capital			166,231							29,585				
41	**Total Product Family Enhancements-Infrastructure Platforms Services-Capital**	**525,169**	**142,937**	**171,388**	**279,831**	**198,886**	**198,886**	**198,886**	**43,670**	**71,705**	**29,591**	**48,322**	**74,393**	**74,393**	**74,393**
42	**Product Family Enhancements-Infrastructure Platforms Services-O&M**														
43	Enhancements-IT-O&M (30% of total historical amount)	-	-	-					36,235	8,411	410				
44	Product Family Enhancements-IT/Digital Foundation-O&M (30% of total historical amount)	-	-	-					-	4,549	-				
45	Product Family Enhancements-Infrastructure Platforms Services-O&M	-	-	-					-	-	54,150				
46	**Total Product Family Enhancements-Infrastructure Platforms Services-O&M**	**-**	**-**	**-**	**-**	**-**			**36,235**	**12,960**	**54,560**	**34,585**	**17,266**	**17,266**	**17,266**
48	**Enhancements-Security-Capital**														
49	Enhancements-Security-Capital	1,236,468	727,662	125,037					257,461	67,100	13,520				
50	**TotalEnhancements-Security-Capital**	**1,236,468**	**727,662**	**125,037**	**696,389**	**275,541**	**275,541**	**275,541**	**257,461**	**67,100**	**13,520**	**112,693**	**56,490**	**56,490**	**56,490**
51	**Enhancements-Security-O&M**														
52	Enhancements-Security-O&M	-	-	-					152,734	233,491	218,303				
53	**Total Enhancements-Security-O&M**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	152,734	233,491	218,303	**201,510**	**182,796**	**182,796**	**182,796**
54	**Total Enhancements**	**4,479,916**	**2,562,217**	**2,263,121**	**3,101,751**	**2,774,794**	**2,774,794**	**2,774,794**	**1,935,282**	**1,246,327**	**1,750,144**	**1,643,918**	**1,483,738**	**1,483,738**	**1,483,738**

EXHIBIT A-28 (SHB-13)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

EXHIBIT A-29 (SHB-14)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

TREVOR M. BLATTNER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Trevor M. Blattner, and my business address is 4000 Clay Ave SW, Grand Rapids, MI 49548.

Q. By whom are you employed?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company").

Q. What is your position with Consumers Energy?

A. I am the Senior Strategy Manager of Gas Strategy in the Gas Delivery organization, a position I have held since 2024.

Q. What are your responsibilities as Senior Strategy Manager of Gas Decarbonization?

A. As Senior Strategy Manager of Gas Decarbonization, I am responsible for development and execution of the long-term strategy for the natural gas business with a focus on the Company's net zero customer emissions targets. I research, evaluate, test, and scale emerging technologies and business models that enable sustainable and affordable energy solutions for customers.

Q. What is your educational background?

A. I graduated from Saginaw Valley State University with a Bachelor of Science in Mechanical Engineering in 2015. Additionally, in 2023, I earned a Master of Business Administration from Grand Valley State University.

Q. Do you have any professional certifications?

A. Yes, I have received an Engineer-in-Training ("EIT") certification by the National Council of Examiners for Engineering and Surveying in 2015.

Q. What is your work experience?

A. Prior to my current role, I held the position of Senior Product Manager at the Company, responsible for the research, development, and commercialization of customer demand-side

management and renewable programs for three years. Prior, I held senior engineering roles, responsible for the operations, reliability, and long-term capital planning of electric generation assets.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. No.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide an overview of the Company's natural gas transmission, distribution, storage, and compression systems, and an updated version of the Company's 10-year plan called the Natural Gas Delivery Plan ("NGDP"), Exhibit A-30 (TMB-1).

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-30 (TMB-1) Natural Gas Delivery Plan.

Q. Were these exhibits prepared by you or under your direction and supervision?

A. Yes.

Q. What is the purpose of the NGDP?

A. The NGDP was developed to provide a transparent investment plan for the next decade for the Company's natural gas assets. This investment plan framework considers safe and reliable gas supply, how the Company plans to evolve its assets in accordance with the Gas Pipeline industry standard American Petroleum Institute Recommended Practice ("API RP") 1173 Pipeline Safety Management Systems framework, and to develop a strategic framework in response to decarbonization goals of the Company's natural gas customers and future carbon policy relevant to the utility. The Company's most recent update to the

NGDP is included in this rate case as Exhibit A-30 (TMB-1). This Plan demonstrates the Company's investment prudency for the safety, reliability, deliverability, and system integrity of the natural gas system.

Q. Does this version of the NGDP address the guidance provided in the Commission's September 30, 2025 Order in Case No. U-21806?

A. No, the Company will file an updated NGDP by December 31, 2026, based on the guidance provided in the September 30, 2025 Order.

Q. Can you describe Consumers Energy's natural gas system?

A. Yes. Consumers Energy's natural gas system contains 2,342 miles of transmission pipelines, more than 28,433 miles of distribution mains, and approximately 1.8 million services. The Company operates seven compressor stations on the transmission system, one compressor station on the distribution system, and has 15 underground storage fields. Consumers Energy receives natural gas supply into its transmission system with varying maximum allowable operating pressures. Consumers Energy's transmission system provides reliable supply to its customers by using compressor stations to bring natural gas onto its transmission system and to leverage storage to balance supply with customer demand. The transmission system supplies natural gas to city gates, which deliver gas to the distribution system. The Company's distribution system moves gas from city gates through pressure regulation stations into neighborhoods and commercial and industrial districts to customer homes and businesses.

Q. What external factors did the Company consider in developing the NGDP?

A. The Company considered several key factors that influence the direction of the NGDP:

1. **Safety** – Ensuring the safety of employees, customers, and the public is priority. The Company proactively identifies and mitigates risks with natural gas infrastructure.

2. **Regulatory Landscape** – Evolving state and federal regulations, driven by major incidents and increased focus on carbon and methane emissions, continue to shape compliance requirements.

3. **Supply and Demand Dynamics** – The NGDP addresses changing patterns in natural gas supply and demand, aiming to reduce price volatility while meeting current and future customer needs.

4. **Environmental Considerations** – Recognizing the environmental impact of natural gas systems, particularly greenhouse gas emissions, the Company is committed to emission reduction strategies aligned with customer expectations and policy goals.

Q. What are the primary objectives of the NGDP?

A. The NGDP is structured around five objectives that guide the Company's investment and operational strategy for the natural gas system.

1. **Safe** – The safety of employees, customers, the public, and the system is the Company's top priority. It is critical that the Company protects not only customers, but the communities we serve. The focus on safety is embodied with the Company's Triple Zero Vision of zero system incidents, zero non-compliances, and zero injuries. The Triple Zero Vision is supported by the focus areas below and demonstrated throughout the NGDP.

   - Reduce system risk to ensure community and customer safety.
   - Process enhancements to improve gas system safety including best practices in GSMS (API RP 1173), and records management.
   - Advanced 24/7 monitoring of the system for real-time awareness of system performance, physical threats, and cybersecurity threats.
   - Modernizing the natural gas system, including the remediation of distribution and transmission assets, and replacing higher-risk vintage distribution mains and services.
   - Using remote control, real-time data monitoring, and probabilistic risk modeling to predictably identify safety concerns across all asset classes.
   - Building operational excellence through a skilled workforce and consistent adherence to procedures, ensuring safe and compliant execution of work across all areas of the gas system.

2. **Reliable** – The Company is committed to maintain a reliable and resilient system through dependable assets, measured through metrics such as gas flow deliverability and total system resilience. The Company issues a resilient storage and market supply plan for peak demand days and proactively balances peak customer demand primarily with storage and use of Energy Waste Reduction ("EWR").

3. **Affordable** – Meeting customer needs and providing affordable energy prices is foundational to the Company's Strategy. Consumers Energy analyzes average customer bills (total cost and cost per one-thousand cubic feet ("Mcf")) to ensure monthly costs are under the Midwest average.

4. **Clean** – The Company continues to lead greenhouse gas emission reduction across its natural gas operations and customer end uses, in support of Michigan's MI Healthy Climate Plan. The Company is executing on this commitment with the following objectives:

   - **80% Reduction in Methane Emissions**: In 2019, the Company committed to reducing methane emissions from the natural gas delivery system by 80% by 2030. This initiative is being pursued through targeted infrastructure upgrades, enhanced leak detection and repair, and best operational practices.

   - **Net Zero Customer Emissions by 2050**: Focused on enabling customers with cost-effective options to reduce emissions associated with natural gas use.

5. **Equitable –** The Company is committed to ensuring that no customer is left behind. Through active engagement with diverse communities and equitable investment across all census tracts, the Company works to ensure that all customers have access to safe, reliable, and affordable energy.

Please refer to the NGDP, Exhibit A-30 (TMB-1), for further elaboration on the Company's efforts to improve its performance in these areas along with the testimony and exhibits of Company witness Lincoln D. Warriner for distribution capital; Company witness Timothy K. Joyce for compression and storage capital; Company witness Kristine A. Pascarello for material condition distribution capital, advanced methane detection, and engineering operations and maintenance; Company witness Michael P. Griffin for transmission capital and pipeline integrity; and Company witness James P. Pnacek for operating and maintenance expenses for the Company's Gas Operations.

Q. Does the NGDP discuss operational capabilities needed for successful execution of the NGDP?

A. Yes. As Consumers Energy moves forward with the NGDP, there is an intentional focus on operational capabilities– the team, process, and technologies that enable faster progress and drive successful execution of the plan. These are essential to achieve the Company's 10-year goals and business outcomes. The NGDP identifies four critical capability areas:

- Team: Ensuring the right people, with the right skills and culture, are in place to support execution;
- CE Way: Leveraging structured governance, standardized processes, and operating models like the Gas Safety Management System;
- Digital: Investing in advanced monitoring, analytics, and predictive tools to maintain asset safety and performance; and
- Regulatory & Policy: Aligning with evolving regulations and engaging stakeholders to support long-term success.

Q. Do the projects outlined in the NGDP align with the objectives of Safe, Reliable, Affordable, Clean, and Equitable service?

A. Yes. As described in the NGDP, Exhibit A-30 (TMB-1), the projects identified are designed to advance the Company's five objectives. By fully funding the capital, operations and maintenance costs, the Company will be positioned to deliver outcomes that are safe, reliable, affordable, clean, and equitable through the next 10 years.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBIT

OF

TREVOR BLATTNER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Consumers Energy
Count on Us®

Natural Gas Delivery Plan

2026 – 2035

Version 7

Date: December 1, 2025

Document Owner: Executive Director – Gas Strategy & Projects

Table of Contents

Contents

Table of Figures 5
List of Tables 6
Acronyms 7
Revision History 9
I. EXECUTIVE SUMMARY 10
A. Introduction 10
B. Consumers Energy Natural Gas System 11
C. Pipeline Supply 13
D. Operational Accelerators 13
E. Climate Goals 13
II. CONSUMERS ENERGY NATURAL GAS DELIVERY PLAN 14
A. Vision Statement 14
B. Objectives 14
C. 10-year Outcomes 18
III. CONSUMERS ENERGY NATURAL GAS SUPPLY 19
A. Overview of Natural Gas Market 19
B. Consumers Energy's Natural Gas Supply Plan 19
C. Potential Electric Generation Load Growth 20
IV. ASSET CLASSES 21
A. Storage Asset Plan 21
1. Storage Asset Class 10-Year Focus 22
2. Storage Asset Management Plan 22
3. Storage Well Integrity Program 23
4. Storage Fields Asset Plan 26
5. Storage Asset Financials 27
B. Compression Asset Plan 28
1. Compression Asset Class – 10-Year Focus 29
2. Compression Asset Management Plan 29
3. Compression Asset Financials 31
C. Transmission Asset Plan 32

1. Transmission Asset Class 10-Year Focus 33
2. Transmission Asset Plan 33
3. Transmission Asset Plan Financials 36

D. Distribution Asset Class 36
1. Distribution Asset Class – 10-Year Focus 37
2. Distribution Asset Management 39
3. Distribution Services and Vintage Service Replacement Program 41
4. Maintain Pace of Vintage Material Remediation 42
5. Future Infrastructure Risk Reduction Program Considerations 42
6. Regulator Stations, Odorizers and Stands 43
7. Leak Detection 44
8. System Augmentation for Reliability 46
9. Customer Metering 48
10. New Business 49
11. Asset Relocation Civic Improvement 50
12. Distribution Asset Financials 50
13. Gas Damage Prevention Strategy 51

V. OPERATIONAL ACCELERATORS 52
A. Team – Talent and Workforce 52
1. Internal Resources 52
2. Diversity, Equity, and Inclusion in the Full Talent Lifecycle 53

B. CE Way – Operating System 53
1. THE CE WAY 53
a. Gas Safety Management System 54

C. Digital 54
1. Digital Investments 55

D. Regulatory and Policy 59

VI. GAS SYSTEM DECARBONIZATION 60
A. Methane Net Zero Goal 60
B. Net Zero Carbon Emissions Goal by 2050 61
C. Energy Waste Reduction 63
D. Emerging Technologies 64

VII. FINANCIAL SUMMARY 65

A. 10-yr Capital Plan 65
B. 10-yr O&M Plan 66
VIII. Closing 66
Appendix A – Industry Standards Summary 67
Appendix B – System Figures & Facts 68
Appendix C – Decarbonization Modeling 69
Appendix D – MAOP Distribution Program & Project List 73
Appendix E – Storage Field Assets and Capabilities 74
Appendix F – Summary of Compressor Stations and Capabilities 75
Appendix G – Energy Waste Reduction Offerings 76

Table of Figures

Figure 1: Typical Natural Gas System Layout

Figure 2: Average Monthly Residential Customer Bill History and Forecast

Figure 3: Natural Gas Delivery Plan Objectives and Outcomes

Figure 4: Annual Average Gas Cost Recovery Billing Factor Price for Consumers Energy and Other Michigan Local Distribution Companies

Figure 5: Map of Storage Fields and Compressor Stations

Figure 6: Storage Well Integrity Program Overview

Figure 7: Storage Capital Investment Plan

Figure 8: Compression Capital Investment Plan

Figure 9: Transmission Pipeline by Decade of Installation

Figure 10: City Gate Attribute Modernization Plan

Figure 11: Current RCV Installation Rate

Figure 12: Transmission Capital Investment Plan

Figure 13: Distribution Main by Materials and Installation Date (includes Transmission Operated as Distribution)

Figure 14: Standard Pressure System (in miles)

Figure 15: Vintage Miles of Main Remaining by Material Type

Figure 16: Retired and Remaining Vintage Miles for All Programs

Figure 17: Remediation Plan for Vintage Services

Figure 18: Distribution of Regulator Station in Service Dates

Figure 19: Distribution of Regulator Stands Age Distribution

Figure 20: Planned Maximum Allowable Operating Pressure Distribution Miles Reconfirmed

Figure 21: New Business (Number of Service Connections)

Figure 22: Distribution Capital Investment Plan

Figure 23: Probabilistic Risk Model Upgrade Roadmap

Figure 24: Net Zero Methane Goal: Emission Reduction and Renewable Natural Gas Offset

Figure 25: 2025 – 2034 Capital Plan

Figure 26: 2025 – 2034 O&M Plan

Figure 27: Decarbonization Scenarios

Figure 28: Potential Electric Peak Load Impacts by Scenario

Figure 29: Potential Primary Energy Sources by Decarbonization Scenario

List of Tables

Table 1: Overview of the Four Types of Compressor Stations

Table 2: Leak Classification at Consumers Energy

Table 3: Natural Gas Investments and Savings Compared to Targets

Table 4: Natural Gas System Summary Statistics

Table 5: Maximum Allowable Pressure Distribution Program and Project List

Table 6: Storage Field Summary Statistics

Table 7: 2025 Compression Summary

Table 8: Natural Gas Customer Energy Waste Reduction Program Summary

Acronyms

AGA – American Gas Association

AMI – Advanced Metering Infrastructure

AMD – Advanced Meter Detection

AMR – Automated Meter Reading

API – American Petroleum Institute

ASCE – American Society of Civil Engineers

Bcf – Billion Cubic Feet

CI – Carbon Intensity

C&I – Commercial and Industrial

CARE Program - Consumers Affordable Resource for Energy

CCUS – Carbon Capture, Utilization and Storage

CE – Consumers Energy

CG – City Gate

CIP – Critical Infrastructure Protection

CO2e – The number of metric tons of CO2 emissions with the same global warming potential as one metric ton of another greenhouse gas

C&W – Coated and Wrapped

DIMP – Distribution Integrity Management Program

DOT – Department of Transportation

DR – Demand Response

ECAP – Enterprise Corrective Action Program

EEJ – Environmental Equity Justice

EGLE – Environment, Great Lakes, and Energy

EIRP – Enhanced Infrastructure Replacement Program

EPA – Environmental Protection Agency

EPRI – Electric Power Research Institute

ETR – Estimated Time of Restoration

EWR – Energy Waste Reduction

GCM - Gas Meter Communication

GCR – Gas Cost Recovery

GIS – Geographic Information System

GREET – Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation

GSMS – Gas Safety Management System

HCA – High-Consequence Area

HP – High Pressure

hp – Horsepower

LCRI – Low Carbon Resource Initiative

LDCs – Local Distribution Companies

LFERW – Low Frequency Electric Resistance Welded

LiDAR - Light Detection and Ranging

MAOP - Maximum Allowable Operating Pressure

MCA – Moderate Consequence Area

Mcf – One-thousand Cubic Feet

MISO - Midcontinent Independent System Operator

MIT– Mechanical Integrity Testing

MJ - Megajoule

MMBtu – Million British Thermal Units

MMCFD – Million Cubic Feet per Day

MP – Medium Pressure

MPSC – Michigan Public Service Commission

NERC – North American Electric Reliability Corporation

NGDP – Natural Gas Delivery Plan

NPA – Non-pipe Alternative

NPDES - National Pollutant Discharge Elimination System

NOx – nitrogen oxides

O&M – Operations and Maintenance

PHMSA – Pipeline & Hazardous Materials Safety Administration

PIPES – Pipeline Inspection, Protection, Enforcement, and Safety Act

PIG – Pipeline Inspection Gauge

P&M – Preventative and Mitigative

psi – Pounds Per Square Inch

psig – Pounds Per Square Inch Gauge

PSMS – Pipeline Safety Management System

RACT – Reasonable Available Control Technology

RCV – Remote-Control Valve

RM - Regulated Diaphragm

RNG – Renewable Natural Gas

RP – Recommended Practice

RTU – Remote Terminal Units

SEA – Statewide Energy Assessment, an MPSC report dated September 11, 2019 (Case No. U-20464)

SCADA – Supervisory Control and Data Acquisition

SCC – Stress Corrosion Cracking

SMB – Small Business, as described in the Company's gas demand response pilot

SNG - Synthetic Natural Gas

SP – Standard Pressure, also referred to as utilization pressure

SMYS – Specified Minimum Yield Strength

TC – Top Connect Meter

TCF – Trillion Cubic Feet

TED-I – Transmission Enhancements for Deliverability and Integrity

TOD – Transmission Operated by Distribution

TP – Transmission Pressure

T&S – Transmission and Storage

USM – Ultrasonic meters

VSR – Vintage Service Replacement

WC – Inches of Water Column

Revision History

Version	Approval Date	Revision Description
1	12/16/2019	Initial Document
2	12/11/2020	Second Version
3	12/01/2021	Third Version
4	12/01/2022	Forth Version
5	12/01/2023	Fifth Version
6	12/01/2024	Sixth Version
7	12/01/2025	Seventh Version

I. EXECUTIVE SUMMARY

A. Introduction

Consumers Energy Company's ("Consumers Energy" or the "Company") natural gas system serves Michigan safely, reliably, and affordably, providing energy for residential and business space heating, water heating, meal preparation, grain drying, industrial processes, and electricity generation.

This annually updated Natural Gas Delivery Plan ("NGDP" or "The Plan") maps the Company's vision to safely serve customers with natural gas for the next 10 years, while the Company's Michigan Public Service Commission ("MPSC" or the "Commission") approved Clean Energy Plan, and the Reliability Roadmap, chart the path for its electric supply and distribution business.

Natural gas is fundamental for keeping customers warm in Michigan's cold weather climate and delivering reliable and affordable energy for powering Michigan's electric grid, operating businesses and industrial processes. The Plan is founded on the Company's commitment to providing safe, reliable, affordable, clean, and equitable natural gas for Michigan.

The Plan reflects the MPSC's previous orders in which Consumers Energy received insights on the natural gas system through the 2019 Statewide Energy Assessment ("SEA"), and from the outcome of the Company's previous gas rate case, Case No. U-21490. The outcomes from Case No. U-21806 will be reflected in the 2026 iteration of the NGDP.

In this 2025 update of The Plan, Consumers Energy weighed input from peer gas utilities, industry experts, MPSC Staff, and other key external stakeholders to best understand how to serve customers and the state of Michigan.

The Plan outlines the next decade of investments in natural gas infrastructure, planning for natural gas supply and demand, and operational changes in accordance with the industry best practice of a Pipeline Safety Management System ("PSMS") protocol from the American Petroleum Institute ("API") Recommended Practice ("RP") 1173, or as Consumers Energy identifies it, as an expanded Gas Safety Management System ("GSMS")[1]. Based on these industry best practices, The Plan demonstrates how Consumers Energy will deliver safe, reliable, affordable, clean, and equitable natural gas to customers.

[1] Appendix A –Industry Standards Summary

B. Consumers Energy Natural Gas System

The Company's natural gas system serves approximately 1.8 million customers across Michigan's lower peninsula and is comprised of four Asset Classes: Storage, Compression, Transmission, and Distribution. To serve our customers the system must be safe, reliable, affordable, clean, and equitable with the flexibility to expand in response to evolving customer needs and adapt to changing regulatory requirements.

Storage

Storage assets are critical for both customer affordability and system resiliency. To achieve affordability and resiliency, the Plan includes storage well inspections, rehabilitation, remote monitoring, and strategic new well drilling techniques to optimize field performance. The result is improved system efficiency, reduced infrastructure risk, and stable-to-lower costs.

Compression

Gas compression assets inject gas into and withdraw gas from storage fields, inject gas onto the Company's system from interstate pipelines, and boost transmission and distribution gas pressures seasonally. The Plan outlines how the compression fleet is optimized, which includes the addition of certain equipment for reliability, improved efficiency, and retirement of obsolete compression assets.

Transmission

Gas transmission pipelines are the 'expressways' of the gas system, transmitting large quantities of gas at high pressures in large diameter pipes ranging from 4 inches to 36 inches. The Company's goal is to serve the capacity needs of our Michigan customers as well as optimize the transmission system in terms of age, materials, and technology to ensure public safety.

Distribution

The distribution system includes some of the Company's oldest facilities with assets situated closest to customers. Therefore, replacing aging infrastructure to reduce risk and expanding remote monitoring in this area is a critical focus.[2]

Natural gas follows the following flow through the Company's system:

1. **Transmission System**
   a. Acts as the high-pressure backbone of the network, transporting large volumes of gas across the state.

   b. Moves gas to and from underground storage fields and delivers it to city gate stations for distribution.

2. **Compressor Stations**
   a. Located along transmission routes and at storage facilities.

[2] U.S. Department of Transportation, Gas Distribution System Annual Report for Calendar Year 2024, submitted 03/12/2025.

b. Pressurizes and conditions gas to ensure safe and efficient transport and storage operations.

3. **Underground Storage Fields**
   a. Gas is injected during low-demand periods (typically summer) and withdrawn during high-demand periods (typically winter).

   b. Supports customer affordability, system reliability and peak-day demand management.

4. **City Gate Stations**
   a. Reduce pressure and odorize the gas before it enters the distribution system.

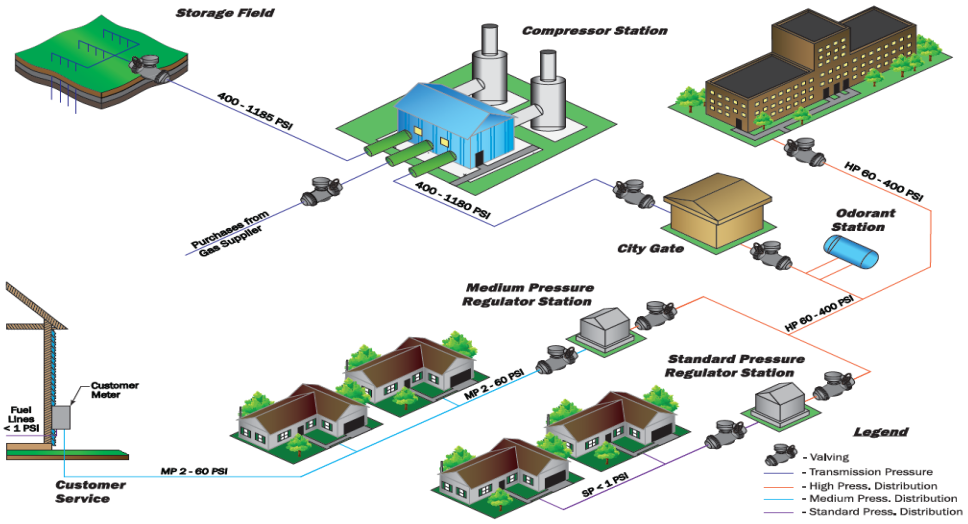
   b. Serve as the transition point from transmission to distribution.

5. **Distribution System**
   a. Delivers natural gas to residential, commercial, and industrial customers.

   b. Includes Transmission Operated by Distribution ("TOD") pipelines, which are classified as transmission for regulatory purposes but functionally serve distribution needs.

An illustration of a typical natural gas system layout is shown in Figure 1 with system statistics listed in Appendix B.

Figure 1: Typical Natural Gas System Layout



C. Pipeline Supply

Consumers Energy's system accesses seven interstate pipelines and one major intrastate pipeline. This interconnectivity provides diverse access to supply from Appalachia, the Rockies, Canada, the Gulf Coast, and Mid-Continent production basins.

Interstate pipeline supply into Consumers Energy's system generally ranges from 600 million cubic feet per day ("MMCFD") to 1,400 MMCFD. Pipeline supply flows year-round to meet customer demand and is used to fill storage in the summer season.

D. Operational Accelerators

Operational Accelerators are the team, processes, and technologies that enable faster progress and drive the successful execution of the NGDP. These elements are essential to achieving our 10-year outcomes. The Plan identifies four critical capability areas.

Team

Consumers Energy is committed to having the right people, with the right skills and culture, in the right place at the right time. This includes creating positive employee experiences, attracting and retaining top talent, aligning skills with job needs, and fostering a diverse, equitable, and inclusive workforce.

CE Way

Work is executed efficiently and effectively through structured governance, standardized processes, clear roles and responsibilities, and innovative planning methods. Our primary operating models include the CE Way and the Gas Safety Management System, which are discussed further in the Operational Accelerators section.

Digital

Digital capabilities are essential to keeping our assets safe, secure, and well-maintained, as well as keeping processes efficient. Key technologies include advanced monitoring systems, drone technologies, artificial intelligence, data analytics, physical and cybersecurity upgrades, mobile work management tools, and the development of predictive maintenance and system condition tools. Planned investments in these areas are detailed in the Digital section.

Regulatory & Policy

Strategic alignment with evolving regulatory requirements and energy policy is critical to long-term success. This includes proactive engagement with stakeholders, contributing to policy discussions, and ensuring compliance with state and federal mandates.

E. Climate Goals

The Company is committed to reducing fugitive methane emissions across its natural gas delivery system and to enhance its understanding of emissions associated with upstream suppliers and end-use customers. This commitment supports the Company's Scope 1 net zero methane emissions goal by 2030 and Scope 3 customer net zero carbon emissions goal by 2050.

II. CONSUMERS ENERGY NATURAL GAS DELIVERY PLAN

A. Vision Statement

Customers are at the heart of Consumers Energy's purpose and service. They are the reason for the Company's daily operations and commitments. Consumers Energy's vision is to provide safe, reliable, affordable, clean, and equitable energy to customers who count on us. The Natural Gas Delivery Plan demonstrates how the gas system achieves excellence across the Triple Bottom Line – People, Plant and Prosperity for Michigan.

B. Objectives

The Plan has five objectives to guide future investment decisions across all asset classes of storage, compression, transmission, and distribution. These objectives are: Safe, Reliable, Affordable, Clean and Equitable.

The Plan reflects analysis of the natural gas system, the natural gas commodity market, trends and practices across the industry, stakeholder feedback and customer insights.

Safe

The safety of employees, customers, the public, and the system is the Company's top priority. It is critical that the Company protects not only customers, but the communities we serve. The focus on safety is embodied with the Company's Triple Zero Vision of zero system incidents, zero non-compliances, and zero injuries. The Triple Zero Vision is supported by the focus areas below and demonstrated throughout the NGDP.

- Reduce system risks ensuring community and customer safety.
- Process enhancements to improve gas system safety including best practices in GSMS (API RP 1173), and records management.
- Advanced 24/7 monitoring of the system for real-time awareness of system performance, physical threats, and cybersecurity threats.
- Modernizing the natural gas system, including the remediation of distribution and transmission assets, and replacing higher-risk vintage distribution mains and services.
- Using remote control, real-time data monitoring, and probabilistic risk modeling to predictably identify safety concerns across all asset classes.
- Building operational excellence through a skilled workforce and consistent adherence to procedures, ensuring safe and compliant execution of work across all areas of the gas system.

Reliable

Consumers Energy maintains a reliable system through dependable assets, measured through metrics such as gas flow deliverability and total system resilience. The Company issues a resilient storage and market supply plan for peak demand days and proactively balances peak customer demand primarily with storage and use of Energy Waste Reduction ("EWR").

Considering the 2019 Ray Compressor Station fire incident, the SEA, and the need to ensure energy delivery resiliency and system reliability, the Company assesses the system's ability to adapt to winter peak day single failures, and the agility needed to

respond to potential changes in the natural gas market environment and connected systems.

The American Gas Foundation[3] provides definitions for both resilience and reliability as follows:

- **Resilience** is defined as ***a system's ability to prevent, withstand, adapt to, and quickly recover from a high-impact, low-likelihood event such as a major disruption in a transmission pipeline.***
- **Reliability** is defined as ***a system's ability to maintain energy delivery under standard operating conditions, such as the normal fluctuations in demand and supply.***

The Company agrees with those definitions and considers both resilience and reliability critical to the Company and its customers. Accordingly, an underground pipeline network is highly resilient and reliable in delivering energy without interruption. This is particularly true considering potential climate change risk, as part of our publicly available Climate Change Risk, Vulnerability and Resiliency Report[4].

Affordable

Meeting customer needs and providing affordable energy prices is the foundation of our Strategy. Consumers Energy analyzes average customer bills (total cost and cost per one-thousand cubic feet ("Mcf") to ensure costs are under the Midwest average.

At the end of Quarter 3 2025, the Company's gas bills were 6% below the Midwest average driven in part by the Company's underground storage fields. To maintain affordability, natural gas is purchased in the summer when prices are typically lower and stored underground. When winter months arrive, natural gas prices are typically higher, therefore Consumers Energy withdraws natural gas from storage fields and delivers it to customers at the lower priced rate purchases from the summer. Additional ways the Company helps support customer affordability include:

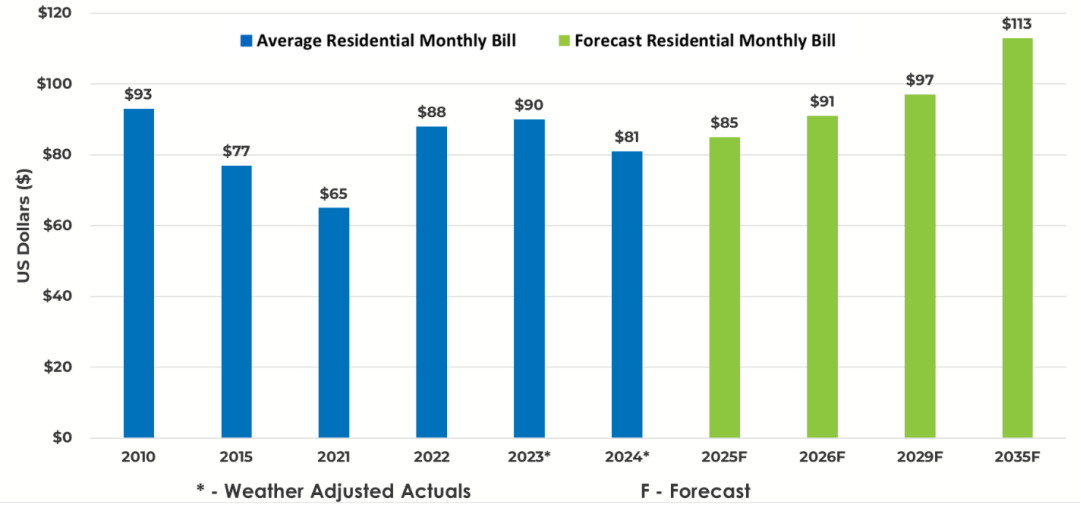
- Energy-efficient products and resources, including winterization kits for homes and businesses, along with information about customer assistance programs to help manage energy costs.
- Tariff options for commercial and industrial ("C&I") customers that help reduce transportation costs during peak demand periods.
- The Company is committed to supporting low-income customers through its Consumers Affordable Resource for Energy ("CARE") Program, which provides financial assistance and resources to help manage energy costs.
- Consistent and continuous internal process improvements emphasizing cost controls and unit cost reduction leveraging digital and the Company's CE Way methodologies.

Figure 2 shows customer bill history (***in blue***) and the current average monthly residential bill projection for 2035 (***in green***).

[3] American Gas Foundation. Building-a-Resilient-Energy-Future-Full-Report_FINAL_1.13.21.pdf (gasfoundation.org)

[4] *Climate Change Risk, Vulnerability and Resiliency Report*

Figure 2: Average Monthly Residential Customer Bill History and Forecast



Clean

Consumers Energy is committed to Michigan, its natural resources, and a sustainable climate for generations to come.

In support of Michigan's Healthy Climate Plan 2050 carbon neutrality goal, as well as other national and international efforts, the Company is evaluating changes to the natural gas business to reduce, offset, and replace methane emissions, including customer end-use. The primary "clean" outcome is to achieve net-zero methane emissions by 2030, which is a first step and important component of the decarbonization plan.

Additionally, the Company committed in 2022 to expand on its clean energy goals to include all emissions, including upstream suppliers and downstream customers, that are part of the entire gas delivery system to be carbon neutral by 2050, which includes an interim goal of 25% reduction in customer emissions by 2035. MI Clean Air Program provides customers with voluntary carbon offset products including forestry offsets and renewable natural gas ("RNG"). In 2024, Consumers Energy was awarded a state grant to investigate how network geothermal technology can benefit customers as well.

Equitable

Consumers Energy is committed to ensuring that no customer is left behind. Through active engagement with diverse communities and equitable investment across all census tracts, the Company works to ensure that all customers have access to safe, reliable, and affordable energy.

Energy and Environmental Justice

The Company developed an Environmental Equity Justice ("EEJ") Strategy Playbook to assist in guiding internal and external initiatives strengthening stakeholder engagement.

In 2025, Consumers Energy made consistent progress in replacing vintage pipeline materials and services across all census tracts within its natural gas service territory. The Michigan Department of Environment, Great Lakes, and Energy ("EGLE") defines EEJ communities using the MiEJScreen tool. Communities with a composite score of 80 or higher are generally designated as EEJ communities.

Also in 2025, Consumers Energy launched a targeted community engagement strategy with four EEJ communities identified by the MiEJScreen, within its combination service territory. This initiative focused on increasing access to information and resources while actively gathering customer feedback to inform future efforts. Concurrently, enhancements to internal data analysis and application tools enabled more strategic outreach to customers facing affordability challenges.

By deepening our understanding of the experience and priorities of our natural gas customers, we are building trust and delivering tailored solutions that reflect our commitment to serving all customers.

In 2026, Consumers Energy will expand its equitable engagement efforts to improve access to programs that help address systemic barriers. Affordability, for many EEJ households, goes beyond managing costs—it's about survival during Michigan's harsh winters. We are addressing this challenge through targeted programs and partnerships that promote energy efficiency and reduce financial strain.

Despite the availability of support programs, only an estimated 17% of eligible customers are currently enrolled. Increasing awareness and participation is a top priority. To support this goal, Consumers Energy launched the ***'My Personalized Offerings'*** tool, which provides customers with tailored recommendations based on their individual needs. Available programs include:

- **Home Energy Analysis:** Free in-home assessment with personalized energy-saving recommendations and upgrades.
- **Helping Neighbors Program:** Offering insulation, weatherization, smart thermostats, and energy efficiency upgrades that lower bills long-term.
- **CARE Program:** Providing predictable monthly payments and direct bill support for income-qualified customers.
- **Low Income Home Energy Assistance Program** (**LIHEAP)** and **Michigan Energy Assistance Program** (MEAP): Connecting customers to federal and state resources that prevent shutoffs and provide crisis support, while reducing the stigma of asking for help.
- **Community Partnerships:** Collaborates with local nonprofits, schools, and faith-based organizations to increase awareness and access to available resources.

Energy is essential and we believe everyone deserves fair and affordable access to the energy they need, regardless of where they live or their income level. Our EEJ efforts focus on identifying and removing barriers so that all communities can benefit from safe, reliable, affordable, clean, and equitable energy.

C. 10-year Outcomes

The investments described in this Plan are necessitated by federal and state regulatory requirements and are designed to ensure safety, reliability, and environment performance, while keeping customer bills affordable and predictable. The 10-year investment plans are guided by long-term outcomes for each asset class and key initiatives.

Figure 3: Natural Gas Delivery Plan Objectives and Outcomes

Objective	High Level Outcomes	Target year
Safe	Implement probabilistic risk model for all asset classes	2030
	Achieve at or greater 4.0 GSMS maturity level	2030
	Install 100% transmission remote control valves	2035
Reliable	Rehabilitate all storage wells to "like new" condition	2027
	Zero vintage materials (pipelines & services)	2035
	Modernize 100% of city gates	2035
	Modernize 100% of regulator stations	2035
Affordable	Residential bills are below the Midwest average	Annual
	Increase Energy Waste Reduction 1% year over year	Annual
Clean & Equitable	Scope 1: net-zero methane emissions from delivery system	2030
	Scope 3: net-zero customer carbon emissions	2050

III. CONSUMERS ENERGY NATURAL GAS SUPPLY

A. Overview of Natural Gas Market

Advancements in unconventional drilling production methods alongside increased mid-stream investment has turned the U.S. into a net exporter of natural gas.

The U.S. natural gas market is growing, adapting to changing producer priorities and global influences, as export demand matures. Over the long-term, natural gas prices are projected to remain affordable as U.S. natural gas production is capable of efficiently meeting demand growth due to favorable U.S. oil and natural gas shale production economics, market transparency, and a resilient interconnected interstate natural gas transportation system.

Michigan has benefited from growth in shale production. The largest U.S. shale production basin is in the nearby Marcellus and Utica Appalachian formations primarily in Ohio, Pennsylvania, and West Virginia[5]. Appalachian production accounted for approximately one third of the U.S. production in 2025 and has applied downward pressure to regional natural gas prices as local supply volumes have increased over time in concert with Michigan's U.S. leading natural gas storage capacity.

The Company's natural gas system has access to seven interstate pipelines and the most prolific natural gas production basins in the country, Canadian supply, a major intrastate pipeline interconnect and Michigan production.

Consumers Energy's leading storage facilities, flexible interconnected system, and access to low-cost regional supply provide a competitive advantage below benchmark commodity prices.

B. Consumers Energy's Natural Gas Supply Plan

The Company's Gas Cost Recovery ("GCR") supply plans are detailed in a separate regulatory filing, updated annually and include procurement details on the advantages the Company's system provides to customers.

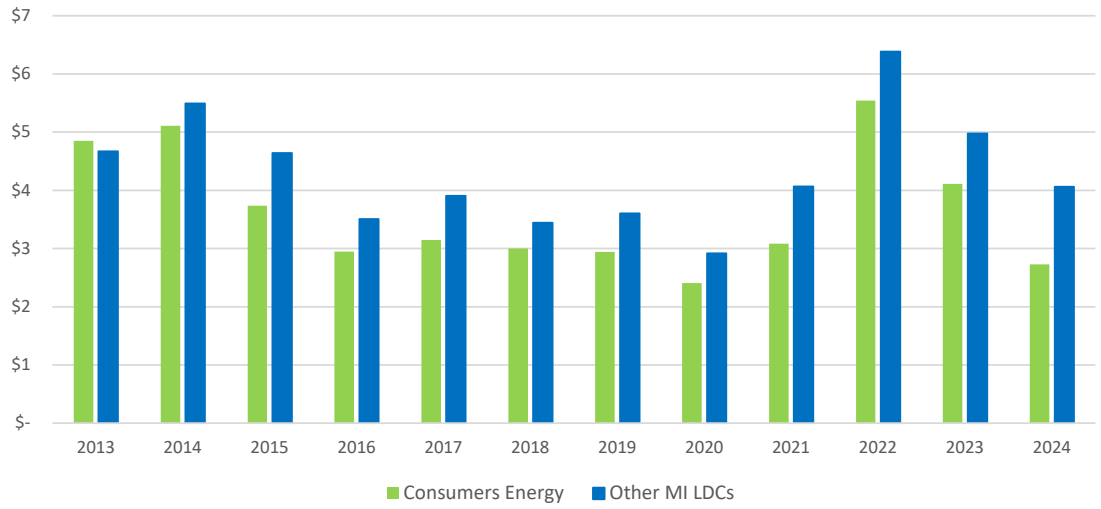
- Foundationally, the GCR Plan takes advantage of ample and affordable regional supply locking in historically lower summer natural gas prices using storage investments to minimize winter procurement when prices are typically higher.
- Typically, the Company procures about 75% of its GCR supply requirements in the summer months for injection into storage fields to meet winter GCR customer demand. Winter GCR sales constitute about 75% of total GCR annual sales. On the coldest days, storage can provide up to 80% of total customer demand, with the balance of demand served by the fixed (ratable) flowing pipeline supply.
- Storage provides price stability, lowers supply related risks, and generally lowers commodity costs in the winter months. It also provides system flexibility and resilience to enable reliable and timely delivery services by efficiently balancing variable customer load throughout the day.

[5] U.S Dept. of Energy – Energy Information Administration, (2025, July, 29). Eastern U.S. natural gas increasingly meets LNG-fueled demand growth in AEO2025 - U.S. Energy Information Administration (EIA). Eastern U.S. natural gas increasingly meets LNG-fueled demand growth in AEO2025 - U.S. Energy Information Administration (EIA), Accessed Oct. 27, 2025.

The Company's system investments and commodity supply plan minimize natural gas price volatility, supply risk, and fixed supply costs for customers. This has resulted in GCR customer commodity costs often lower on average than other Michigan regulated gas utilities over the past decade.

Figure 4 shows the Company's annual average GCR price when compared to the average of the other Michigan Local Distribution Companies ("LDC") through 2024.

Figure 4: Average GCR Billing Factor Price for Consumers Energy and Other Michigan LDCs[6]



C. Potential Electric Generation Load Growth

Analysis indicates growing interest in natural gas as a fuel for electric generation facilities across the industry[7]. The Midcontinent Independent System Operator, Inc ("MISO") Generator Interconnection Queue, when filtering on the state of Michigan, shows 12 'Active' applications for new natural gas power generation facilities in the state, representing over 7GW of new generation.[8] Potentially integrating one or more new large natural gas-fired electric generation facilities into the Consumers Energy natural gas system would necessitate natural gas system infrastructure upgrades. Enhancements may be required across all asset types to ensure reliable and resilient service for both existing customers and new generation facilities. The Company will actively monitor the external environment to understand this type of potential future load growth.

[6] https://www.michigan.gov/documents/mpsc/gasrates_592543_7.pdf

[7] U.S. Department of Energy, Energy Information Administration, 2025 June 11, *In Brief Analysis – Electric generators plan for more natural gas-fired capacity after few additions in 2024*, Electric generators plan more natural gas-fired capacity after few additions in 2024 - U.S. Energy Information Administration (EIA) Accessed 2025 September 25

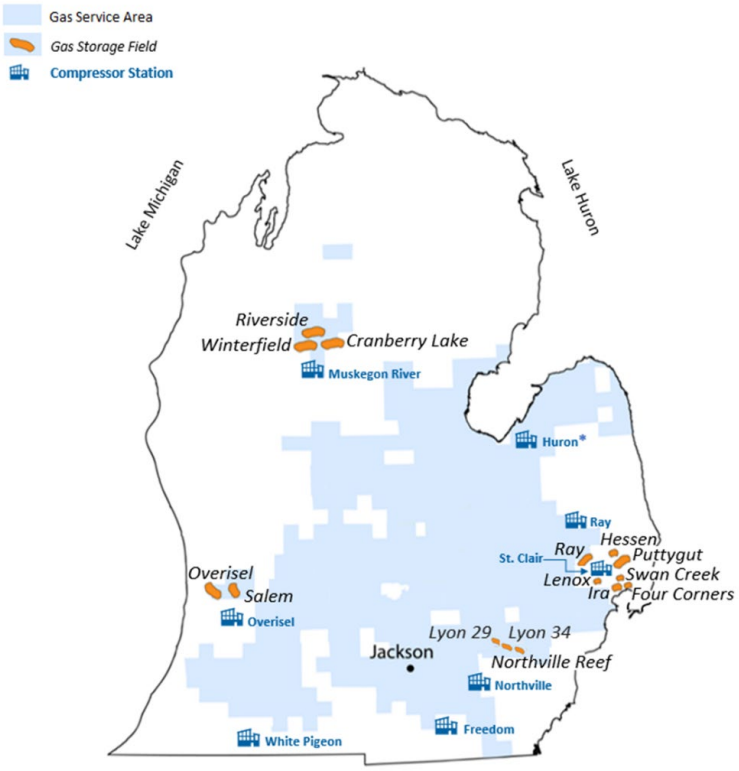
[8] Midcontinent Independent System Operator, Inc., Interconnection Queue GI Interactive Queue. Accessed 2025 September 25

IV. ASSET CLASSES

A. Storage Asset Plan

As a northern peninsula state, Michigan is geographically disadvantaged but geologically advantaged from a natural gas perspective. Consumers Energy has 15 underground natural gas storage fields[9] tapping into depleted hydrocarbon reservoirs deep underground through approximately 783 wells that tie into the Company's natural gas system. Figure 5 illustrates the location of the storage fields in relation to the compression assets.

Figure 5: Map of Storage Fields and Compressor Stations



The Company's storage assets are used to meet Michigan's winter energy needs as a safe, reliable, resilient, and low-cost alternative to traditional firm interstate transportation capacity. This storage capacity provides customer value by enabling the Company to purchase gas at lower prices in the summer and provides the capability to purchase gas in ways that provide economic benefits while ensuring supply adequacy during periods of high demand.

Storage fields also play an important role during extreme weather situations and emergent operational changes by providing quick access to high volumes of gas that are geographically close to Michigan's demand centers at summer versus peak use pricing. Michigan's winter demand peaks are due to residential heating and therefore are significantly affected by weather conditions. These demand peaks often coincide with increased electric generation demand.

[9] 15 underground storage fields include Riverside

Efficient connection of gas storage to customer load also provides advantage during the extremely cold winters. The potential growth of gas-fired generation to offset the retirements of coal-fired generation in Michigan adds to the variation and peak gas needs during a peak day.

All the Company's gas storage fields are accessed through vertical or horizontal wells and are connected to compressor stations by storage pipelines. Improvements in field performance depend on the performance of the entire integrated facility on its way to the transmission system.

The Company's efforts to optimize overall field performance through multiple efforts (i.e. new wells, well rehabilitation, strategic plugging, etc.) are leading to better performing fields that allow for a more resilient overall system. Since 2018, the Company reduced the number of storage wells, becoming more efficient and safer, while maintaining consistent levels of deliverability.

The storage fields provide approximately 154 Bcf of cyclic design capacity known as Working Gas. In addition to the natural gas cycled annually for customer use, a base level remains in place to ensure the field is adequately pressurized.

1. Storage Asset Class 10-Year Focus

- Optimize aging storage asset infrastructure to lower operating costs, maintain deliverability, and decrease emissions points.
- Optimize storage asset risk, in alignment with Pipeline and Hazardous Materials Safety Administration ("PHMSA") requirements through remediation, plugging and decommissioning underperforming wells.
- Increase cycling of peaker fields for cold weather events.
- Invest in digital solutions for increased storage well monitoring.
- Evaluate options for increasing cyclic volumes in existing fields or areas for new gas storage reservoirs to support potential future load growth.

2. Storage Asset Management Plan

The Company's gas storage fields are segmented into baseload, intermediate, and peaking fields to serve different needs depending on daily, monthly, and seasonal demand deliverability requirements. Deliberate use of these fields based on their capability reduces winter purchases that would otherwise be needed to cover high demand times and increases the utilization of the gas in storage.

Storage fields in the system are used in three ways:

- **Baseload** storage fields run daily during the winter to meet base level demand and provide more efficient supply paths to the natural gas system further away from pipeline supply interconnects.
- **Intermediate** storage fields run during longer periods of higher demand and can be used as baseload or peaking storage supply, depending on system conditions.
- **Peaker storage fields** run during extreme hours and days when demand changes quickly. These fields can be used during the highest demand times during the coldest winter days.

Deliverability is the flow rate of gas per time (usually daily) that a specific storage field or well can provide. Fields designated as peakers, such as Lyon 29, typically have high, per-

well, delivery rate, but fewer overall wells, while baseload fields, such as Winterfield, tend to have higher well counts but lower overall deliverability on a per-well basis.

Fields designated as intermediate fields also have relatively high deliverability characteristics as well as significant cyclic capacity that makes them suitable for both peaking and baseload operations.

Consumers Energy's historical storage usage follows a similar annual pattern: generally steady injection from April to October and withdrawal from November to March.

Injection and withdrawal plans consider the individual field capability and inventory as well as capability of the natural gas system and customer demand. Some fields take longer to fill or empty depending on their geology, inventory, and the use of compression. Their capability for accepting gas decreases as they are filled, and as field inventory decreases, the ability to provide supply decreases.

During the withdrawal season, baseload fields generally provide natural gas throughout the winter, followed by intermediate fields, such as Ray, and peaking fields when the temperatures drop and customer demand increases.

Unlike pipeline supply, when temperatures rise, storage fields can be shut in for hours or days to adapt to customer load. The shut-in capacity available on any day can very quickly be used to provide system resilience in the event of unplanned outages on the system impacting supply.

Peaking fields support system reliability and cost efficiency in several ways:

- **High-Demand Support**: These fields are activated during peak or near-peak demand days to supply additional gas. If this deliverability is not used, then it reduces the pipeline supply requirements in the next month. The Ray field, due to its unique characteristics, can serve as a peaking resource when inventory levels and conditioning equipment permit.
- **Winter Supply Optimization**: Peaking fields help reduce reliance on interstate pipeline supply during the winter season and offer reserve capacity during off-peak periods to enhance system resiliency. When peaker deliverability reduces pipeline supply requirements it causes an increase in the use of the base fields thereby increasing the cycling of base fields.
- **Diversification and Cost Management**: Utilizing multiple peaking fields reduces dependence on the Ray field and avoids higher fixed costs tied to interstate firm capacity and third-party storage. Cycling our fields reduces the amount of gas that needs to be purchased and helps manage costs for our customers. To further reduce reliance on Ray, the Northville Gas Conditioning project is underway to improve gas quality from these fields when needed.

3. Storage Well Integrity Program

The key risk in storage field operations is degradation of wells, allowing gas stored in the reservoir below to escape and leak into the surrounding area.

Storage well maintenance involves inspections ("logging"), repair, rehabilitation, and decommissioning for wells that provide less value to the customer. In addition, new wells with horizontal drilling technology can be added to the system to enhance access to the storage field and replace decommissioned wells.

Well Inspections

Consumers Energy inspects wells to determine their current state and to assess risk. The ***Storage Asset Plan*** complies with Federal Pipeline Safety regulatory requirements, and the applicable sections of API RP 1171.

These procedures govern operations, maintenance, integrity demonstration and verification, monitoring, threat and hazard identification, assessment, remediation, site security, emergency response and preparedness, and recordkeeping requirements for all existing underground natural gas storage facilities.

Integrity baseline assessments of underground storage wells began in 2017 to meet the PHMSA compliance date of March 2027 for baseline risk assessment of all storage wells.

Well Rehabilitation

Consumers Energy launched a 10-year Well Rehabilitation Program in 2017, with completion targeted for 2026. The program restores wells across the storage portfolio to “like-new” condition and aligns with PHMSA’s baseline risk assessment requirements.

Key benefits include Enhanced Safety and Efficiency: Reduces long-term storage risks related to corrosion, gas migration, leaks, and well integrity; and Improved Deliverability: Restored wells support reliable system performance by increasing gas flow capacity.

Well Reassessment / Preventative and Mitigative Measures Program

A well-specific Preventative & Mitigative (“P&M”) Measures Program is in development for each well that completes the Well Rehabilitation Program.

The current plan provides a 21-year outlook for well work that will continue to verify and monitor well integrity. This P&M Program began in 2024, as outlined by the seven-year assessment cycle prescribed by federal underground storage requirements.

Items included in the P&M Program include specific activities depending on well type: facility, observation, and Class II disposal wells. Maintenance includes items such as logging frequency, fill depth checks, slickline cleanout of paraffin for wells with known paraffin issues, mechanical integrity testing ("MIT") on wells with tubing and packer systems, and fluid checks on wells with known water levels.

The benefits of the Program include system risk reduction and safe storage operations as well as providing reliability availability and deliverability of the storage wells to provide natural gas to the system throughout the winter.

New Well Drilling Program

The purpose of the New Well Drilling Program is to identify the best locations to drill new wells within the storage assets. Important considerations include: the sequencing of well logging, remediation, new drilling, and plugging to ensure continued deliverability.

Consumers Energy is taking a holistic system view that these activities follow a logical sequence. For example, new well drilling should precede well plugging and

decommissioning if practical, to ensure short-term flow is not significantly compromised. Options to accelerate drilling should be considered, when possible, to ensure remediation, new well drilling, and plugging follow an optimal schedule.

- Drilling new wells includes centralizing multiple wells to one location. This reduces overall operational maintenance and could reduce overall storage pipeline lengths supporting affordability.
- Using seismic mapping and reviewing existing well information to place the well within the best part of the reservoir supports reliability by increasing deliverability while minimizing liquid production.
- Using safe drilling operations that provide a clean well for injection and withdrawal which support the Company's safety and reliability objectives.
- Mitigating risk with new wells allows for drilling to current standards and potentially allowing for plugging of aging wells that may present higher risk.

Well Re-Entry

A subset to the New Well Drilling Program has been initiated and focused on re-entering existing horizontal or deviated wells and drilling new drain holes. Re-entry work is less expensive than a full new well as the casing and pipeline are already installed.

Re-entering an existing well further helps to improve reliability and safety with field and well deliverability, especially for wells that were drilled off structure or too deep within the reservoir. The additional rate can be used to either improve the field's overall deliverability or allow for plugging of nearby vertical wells if they have integrity concerns.

Additional benefits to the Program include using part of an existing well in good integrity to plug back the original horizontal well and drilling additional drain holes to increase deliverability.

Well Plugging

Well plugging is performed on certain wells, balancing risk with reliability and customer value.

- Plugging poor-performing, high-risk wells decreases maintenance expenses and reduces risk.
- After a well is plugged, the Company reduces its land footprint by restoring the area.
- Plugging a well reduces methane emissions by reducing maintenance related venting, and fugitive emissions associated with system piping and wellhead components.

Plugged Well Monitoring

In 2022, Consumers Energy contracted a third party to review all plugged wells within the Company's gas storage boundaries. The work included creating wellbore diagrams and classifying the plugging as ***questionable***, ***adequate***, or ***exceptional***. This classification was used to develop monitoring plans for both the Company's plugged wells, and third party plugged wells.

The plugged well monitoring plan will have a frequency based on the plugging classification. The wells classified as ***questionable*** will be field monitored more frequently than the wells classified as adequately plugged. The ***exceptionally*** plugged classified category will be field monitored the least frequently. Newly plugged wells will be classified, and a baseline field monitor will be completed within three years of plugging completion.

The plugged well monitoring plan for third party wells includes field monitoring for any potential gas leakage every five years for questionably plugged wells that don't have a bottom cement plug through the storage zone. These wells are drilled through the storage zone and are located within a quarter mile radius of a Consumers Energy well. Monitoring is limited due to landowner or well owner cooperation.

This work will be recurring with a frequency based on the plugging classification and the evidence of gas leakage.

Storage Lateral Pipeline Replacement

The purpose of the Storage Lateral Pipeline Replacement Program is to replace and upgrade storage laterals based on age, condition, risk, and association with the other gas storage programs. Primary improvements anticipated from the program include:

- Installation of launcher and receiver barrels that allow for pipeline inspections.
- Potentially changing the pipeline length and size based on the new well drilling and well plugging programs for storage field deliverability improvements.

These changes will help reduce risk while creating a more efficient path for gas flow to the larger natural gas system.

Northville Lyon 29/34 Liquid Removal Project

The primary focus of the Lyon 29/34 facility is to deliver transmission quality gas to the pipeline system and act as a metering station for the metro Detroit area.

During 2018, 2019, and 2020 there were multiple occasions of gas purity issues occurring during the gas withdrawal season associated with water content.

The Lyon 29/34 facility upgrade project will help improve gas purity, measurement accuracy, and pipeline reliability by reducing corrosive components from the gas stream and improve site performance by installing gas purification equipment.

Favorable Natural Gas Market Environment

A favorable natural gas market environment and the growing demand for natural gas could lead to opportunities for growth in gas storage. Future work associated with the demand growth may include evaluations for increasing storage volumes in existing fields or evaluating areas for new gas storage reservoirs. The Gas Storage Engineering team will continue to engage with stakeholders regarding load growth and the impact to gas storage to ensure the path forward is well understood.

4. Storage Fields Asset Plan

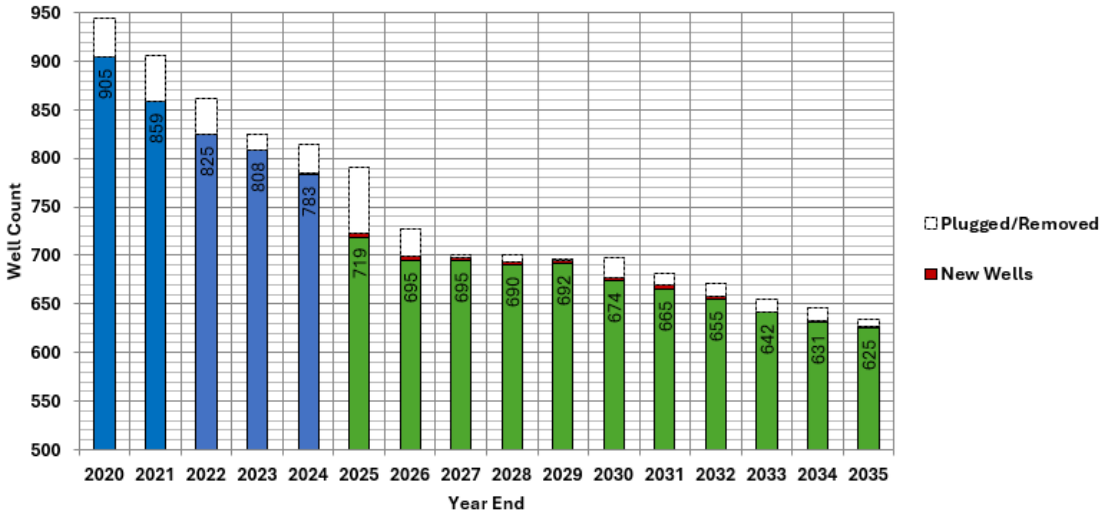
In alignment with the Storage Well Integrity Program and based on scenario modeling completed in 2018, the Company assessed the potential retirement of four low-cyclic

fields to consolidate the storage system: Swan Creek, Four Corners, Lyon 34, and Riverside. Collectively, these fields provide less than 1.5% of the Company's gas supply throughout the winter.

Model results indicated three fields still provide value to customers and showed that Riverside may be a viable candidate for sale or retirement. Based on these results the Riverside field is in the process of being sold with a completion target date of December 2025. Divestment of the Riverside storage field will reduce system risk and O&M expenses associated with operation of these storage assets with minimal impact to overall system capacity and deliverability.

Figure 6 identifies that the combined approach of the Storage Well Integrity Program and the sale of the Riverside storage field would reduce the overall number of wells, which will result in lower risk, lower operating costs, and lower methane emissions, while ensuring system resiliency, deliverability of gas flow per well, and potentially improving gas quality resulting in less risk to compressor station operations and downstream facilities.

Figure 6: Storage Well Integrity Program Overview



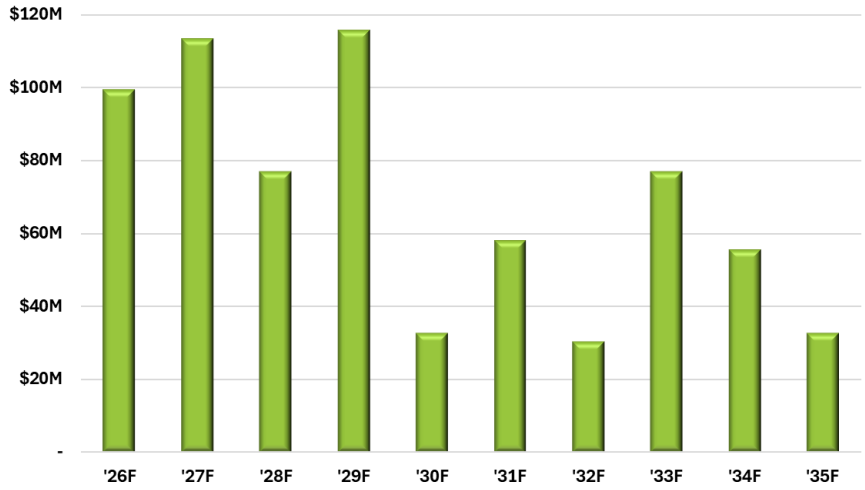
This reduction in the overall number of wells will have a minimal reduction in working gas capacity from an approximate current amount of 154 Bcf to a forecasted amount of 152 Bcf in 2026.

5. Storage Asset Financials

Figure 7 shows the spending needed to execute the Storage Well Integrity Program and other investments in the storage asset class.

This investment plan aligns with Company objectives by reducing asset risk (safe), increasing the deliverability of each remaining well and positively affecting the natural gas system's resilience (reliable), reducing the overall well count (affordable), and reducing the emissions points in this system (clean).

Figure 7: Storage Capital Investment Plan



B. Compression Asset Plan

Consumers Energy operates eight compressor stations that pressurize and condition natural gas for safe transport through transmission and distribution systems, and for injection into or withdrawal from underground storage. The compression fleet is categorized by function into storage, transmission, and distribution stations, as outlined in Table 1.

Table 1: Overview of the Four Types of Compressor Stations

	Storage	Transmission	Transmission & Storage	Distribution
Purpose	Pressurize and condition natural gas injection into or withdrawal from underground storage	Receive and transport gas throughout the gas delivery system. Condition gas as needed to meet customer needs	Act as storage units that also provide transmission compression	Boost gas pressure through the distribution system when agricultural processes increase demand
Compressor Station	Ray Muskegon River St. Clair	White Pigeon Freedom	Overisel Northville	Huron

1. Compression Asset Class – 10-Year Focus

- Reduce system risk and methane emissions through retirement and decommissioning of vintage compression units and equipment.
- Improve fleet reliability through increased system health monitoring, automation to maintain asset performance, and preventative maintenance.
- Advance system resilience and maintain gas compression facility deliverability through alternative flow path validation and creation, as well as implementation of robust design enhancements to existing equipment to protect major natural gas supplies from interruption. Use system supply requirements, station assessments, and the Total System Resilience process to inform investments.

2. Compression Asset Management Plan

In 2024, Consumers Energy's system-wide weighted average compressor utilization was 19%. Utilization is defined as the ratio of actual operating time to available operating time for each unit.

Utilization factors:

- Seasonal demand: Colder winters increase utilization due to higher storage withdrawals; warmer winters reduce it.
- System dynamics: Supplier delivery patterns, interstate pipeline pressures, asset availability, and external conditions all impact usage.
- System design: The Company's natural gas system is uniquely structured to prioritize seasonal and peak-day reliability, rather than continuous operation.

Key considerations:

- Compression assets primarily support storage injection and withdrawal, ensuring reliability and flexibility at city gate stations.
- Locational supply flexibility allows the Company to optimize affordability, though it may result in lower utilization of interstate pipeline-focused compression assets.

The Company plans to increase utilization through retirement of aging units and improving reliability and concentrating usage on remaining assets. Additionally, system resilience planning is utilized, ensuring compression supports both operational flexibility and maintenance needs.

With a unique peninsula geography and as the supplier of last resort, Consumers Energy must prepare for infrequent but extreme design conditions, which contributes to lower compressor utilization compared to industry peers. Peak utilization typically occurs during late winter (February–March) when storage inventory is withdrawn to meet demand.

Transmission compressor stations experience more stable daily and monthly peak demands, though utilization is influenced by factors such as interstate pipeline pressures, market conditions, and upstream facility outages.

Storage compressor stations exhibit greater variability in horsepower requirements due to their role in adapting to seasonal customer demand while supporting summer injection and winter withdrawal.

St. Clair and Ray Compressor Stations have lower horsepower utilization, reflecting their operational flexibility to respond to dynamic system conditions and customer needs.

Late-season cycling of base storage fields helps mitigate gas migration risks and enables inventory optimization, reducing reliance on costly and uncertain pipeline supply.

Peak day demands, including those driven by gas-fired generation, are primarily met by high-deliverability peaking storage at Northville, St. Clair, and Ray.

- Post-peak, horsepower ("hp") is required to refill Northville and St. Clair to support frequent cycling and maintain system resilience.
- White Pigeon has experienced lower utilization with current market conditions favoring supply through Freedom and Northville.

Maintaining supply flexibility and access to multiple delivery points supports affordability and enhances system resilience.

Based on scenario modeling, six long-term recommendations are identified to enhance system reliability, resilience, and utilization across its compression fleet:

1. **Preventative & Predictive Maintenance**: Accelerate implementation of preventative maintenance programs and gradually integrate predictive technologies. Consumers Energy will modernize its compression maintenance practices by shifting from reactive, break-fix cycles to proactive, analytics-driven approaches. Key actions include:
    - Accelerating preventative maintenance programs.
    - Introducing predictive technologies to reduce downtime.
    - Standardizing data entry and record-keeping across stations. Investing in digital infrastructure to enable fleet-wide performance monitoring.

2. **Asset Retirement:** Decommission retired and mothballed compressor units to streamline operations and reduce system risk. Seven retired units at Muskegon River and White Pigeon are scheduled for decommissioning. Additional units at Freedom, Ray, and St. Clair have successfully been decommissioned as part of system optimization efforts.

3. **Fleet Optimization:** Optimize compressor units at Muskegon River to meet volume and pressure requirements efficiently. Following the retirement of the Riverside storage field, Muskegon River remains critical for supporting Winterfield and Cranberry Lake storage operations. Optimization efforts include:
    - Replaced aging suction boosting units with a new turbine.
    - Retiring outdated equipment post-installation.
    - Rebuilding key units to extend operational life through 2033.

4. **Resiliency Planning:** Evaluate contingency options to mitigate outage risks and enhance station-level resilience. The Company is conducting comprehensive assessments of compression, storage, and transmission systems to identify failure points and improve system resilience. This includes:
    - Reviewing critical components (e.g. compressors, valves, control systems).
    - Evaluating bypass options (e.g. Ray Storage to transmission).
    - Standardizing station design based on hazard assessments.

5. **Portfolio Assessment:** Assess feasibility of retiring additional assets to concentrate investment on critical infrastructure and improve overall fleet performance.

Consumers Energy will annually evaluate compression assets for potential retirement to focus investment on high-priority units. This includes:

- Monitoring reliability and performance indicators.
- Aligning with system resilience and layout risk assessments.
- Developing business cases for retirements or upgrades.
- Adjusting fleet capacity to meet new customer and peak demand and improve utilization.

6. **Regulatory Compliance:** Ensure compressor station compliance with the proposed Michigan nitrogen oxides ("NOx") Reasonable Available Control Technology ("RACT") Rule. Overisel Station, located in an ozone non-attainment area, is undergoing modifications to meet proposed NOx emission limits. Four slow-speed engines will be equipped with combustion controls to ensure compliance. Muskegon River Station is executing a Closed Loop Cooling project in response to EGLE requirements to lower river water discharge temperatures. It will eliminate the use of surface water for cooling processes.

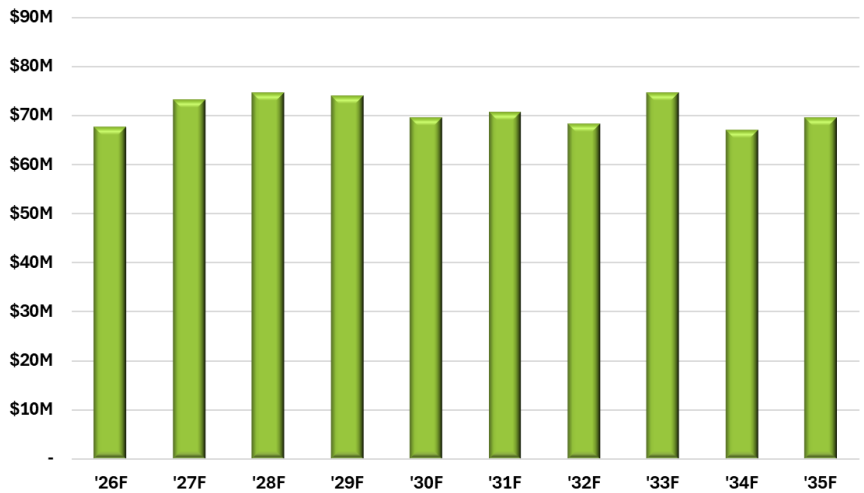
3. Compression Asset Financials

Consumers Energy's capital investment plan for compression assets, illustrated in Figure 8, is based on scenario modeling and ongoing system assessments. The plan will be updated regularly as business cases are developed to support necessary expenditures.

This investment strategy aligns with the Company's core objectives:

- **Safe**: Reduces asset risk through modernization and decommissioning.
- **Reliable:** Lowers random outage rate (ROR) and increases utilization.
- **Affordable:** Optimizes fleet performance and maintenance practices.
- **Clean:** Reduces equipment-related emissions.

Figure 8: Compression Capital Investment Plan



C. Transmission Asset Plan

The Company's transmission system serves as the 'expressway' of the gas system, transmitting large volumes of gas through pipelines ranging from 4 to 36 inches in diameter, operating at high pressures between 400 and 1,185 pounds per square inch ("psi").

Gas Transmission lines move gas:

- From interconnects
- To and from underground storage fields,
- To city gates for delivery to the distribution system.

The system includes TOD pipelines, which are classified as transmission for Department of Transportation ("DOT") Reporting, but functionally operate as part of the distribution network. The associated breakdown of transmission pipeline mileage is shown in Appendix B and is available in the Company's 2024 Transmission DOT Report filing.

The Company's strategic goal is to:

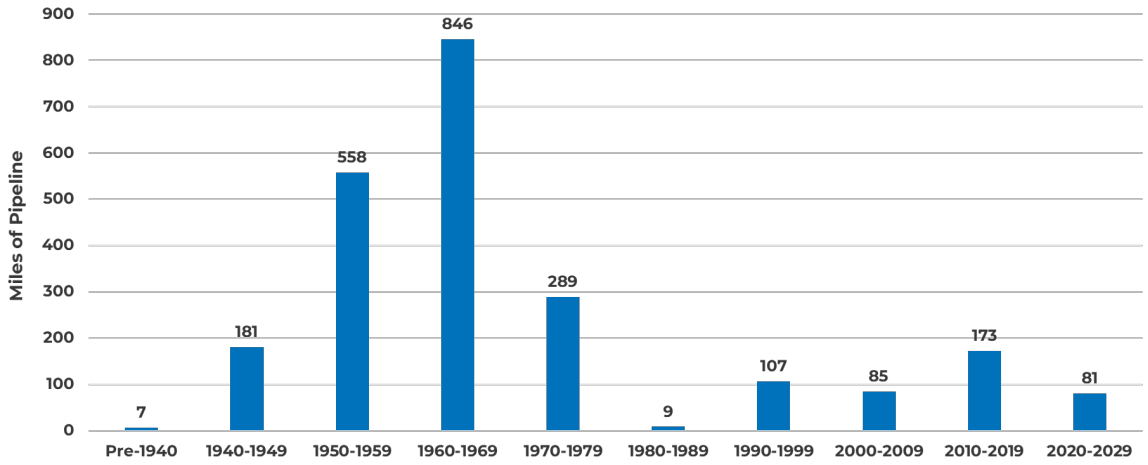
- Meet Michigan's capacity needs,
- Optimize the system based on age, materials, and technology,
- Ensure public safety through compliance with state and federal pipeline safety regulations.

Key initiatives include:

- Ongoing inspections to identify and mitigate system threats,
- Continued investment in pipeline upgrades and replacements,
- Deployment of remote-control valves ("RCV") to enable rapid isolation in the event of system integrity issues.

Transmission Pipeline by Decade of Installation is shown in Figure 9.

Figure 9: Transmission Pipeline by Decade of Installation



1. Transmission Asset Class 10-Year Focus

- Obtain the necessary technology for system response and needed flexibility with capacity throughput and diversity of flow paths for total system resiliency to reduce system risk and methane reductions caused by aging infrastructure. This is achieved through Supervisory Control and Data Acquisition ("SCADA") upgrades described in the ***Digital*** section.
- Increase the pipeline integrity scope to account for the additional remediation work for transmission piping to meet regulatory requirements for Maximum Allowable Operating Pressure ("MAOP") reconfirmation, as well as the incremental remediation as an outcome of inspecting TOD and storage lines.
- Attain 100% of RCVs installed on valves on the transmission system by 2035.
- Reduce the probability of high impact natural gas system failures.
- Eliminate MAOP exceedances by installing emergency shut down devices at facilities, install filtration equipment at facilities, and perform maintenance Pipeline Inspection Gauge ("pig") runs.
- Modernize 100% of city gates by 2035.

2. Transmission Asset Plan

Capital Remediation for Transmission Pipeline (i.e. "mainlines")

By the end of 2025, all transmission mainline miles will be inspected regardless of consequence area classification. This does not include transmission miles within the storage fields, compressor stations, TOD segments or transmission lines installed within the last 10 years.

Within the transmission mainline miles are high-consequence areas ("HCA") and moderate consequence areas ("MCA"). HCA and MCA classifications are inspected on a recurring basis, six and nine years, respectively.

In addition to the planned, on-cycle inspections, risk mitigation inspections for transmission lines displaying early signs of deteriorating conditions, such as Stress Corrosion Cracking ("SCC").

- SCC is a form of environmental cracking that requires three conditions to develop, susceptible material (steel), stresses on the pipeline that are higher than the threshold for SCC and an environment that supports cracking such as local soils and groundwater.
- Many factors can affect the initiation and propagation of SCC, but a pipeline's coating system provides the primary barrier with Cathodic protection providing a secondary barrier.
- The environmental factors that support SCC can develop under the right conditions when the coating on a pipe is compromised or dis-bonded.
- In 2015, Line 100A, one of the Company's transmission pipelines, ruptured due to SCC. Since that time, the Company has assessed pipelines that have the highest potential for SCC to occur, and there have been instances where SCC was found and remediated.

The Company decreased system risk and improved system reliability with the completion of the Mid-Michigan Pipeline project in 2024 replacing Line 100A, a 70-year-old pipeline that had shown signs of SCC and experienced a rupture in 2015.

Inspection for Transmission Operated by Distribution Pipelines

Within the total Company TOD miles, 101.69 miles reside within HCAs and will follow the inspection cadence discussed above.

For the remaining non-HCA TOD pipelines, the Company is performing risk mitigation assessments by extending the Low Stress Assessment process to inspect and remediate areas with low cathodic protection levels to ensure continued safe operation.

City Gates

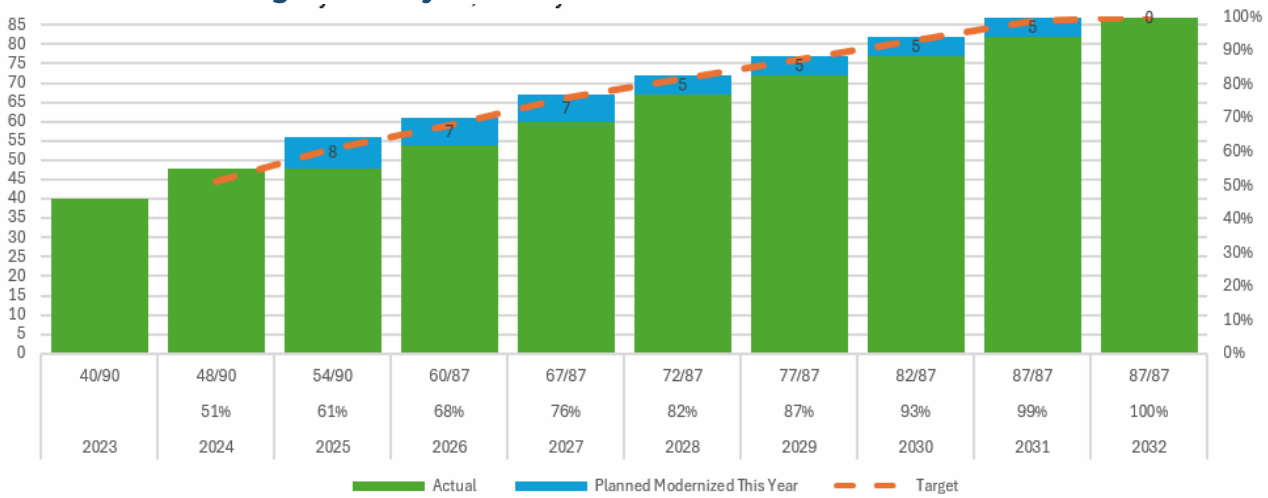
A city gate serves as a key facility within the natural gas system, functioning as both a distribution center and, in some cases, a fuel station. As of December 31, 2024, the Company operates 90 city gates where natural gas pressure is regulated and odorized to ensure safe delivery to homes and businesses. These facilities are equipped with over-pressure protection and SCADA monitoring systems to maintain operational safety and reliability.

City gates play a critical role by reducing transmission line pressure for distribution and, in some instances, enhancing gas quality before it enters the distribution network. Most city gates inject an odorant into the gas stream to enable leak detection through smell. While the typical lifespan of city gate equipment is around 50 years, age alone does not determine when a facility should be rebuilt.

The Company's 10-year plan will modernize all city gates by upgrading emergency shutoff systems, bath heaters, separation systems, and SCADA transducers. This plan targets the modernization of 5 to 10 gates annually, with a flexible approach that allows for partial upgrades based on specific station needs and customer affordability. Annual investment is expected to range from $1 to $13 million per gate, totaling $40 to $60 million per year.

Once modernization is complete, city gates will be rebuilt on a cycle that ensures the entire fleet is renewed within 50 years, or sooner if required by safety, customer demand, or performance standards.

Figure 10: City Gate Attribute Modernization Plant

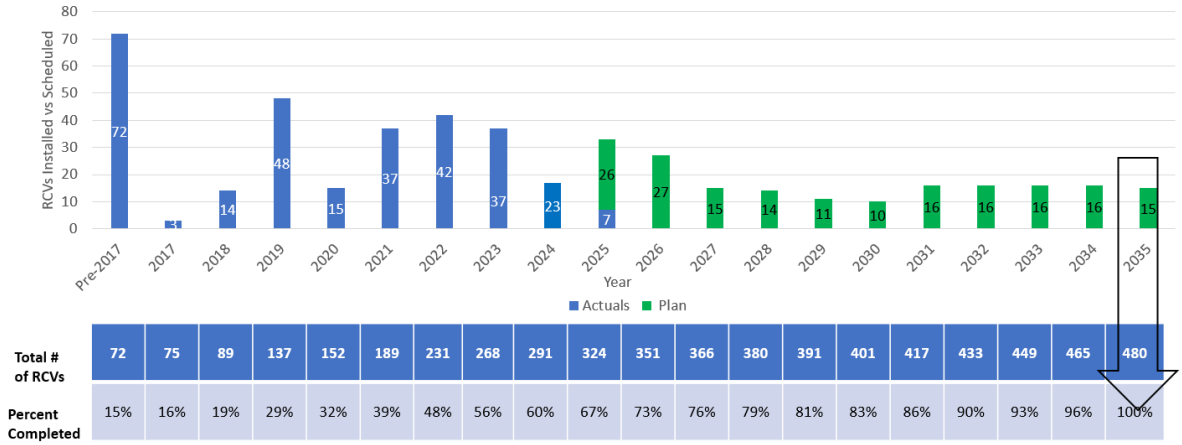


Remote Control Valves

RCVs are important safety components in the natural gas system, designed to reduce response time during transmission line damage or rupture events. Their ability to quickly stop gas flow is essential, making them standard for this type of operation. While RCVs do **not** prevent failures, they significantly reduce the duration of gas flows after a failure occurs. Initial installations began in 2017, focusing on HCAs and flexible system points.

Check valves will also be used on transmission tap lines when appropriate to aid RCVs in the isolation of a particular transmission segment. Check valve technology prevents the back feeding of gas in the event of an emergency. To enhance system safety, the Company is targeting 100% RCV coverage by 2035. Figure 11 outlines installation timelines, noting that final commissioning may occur the following year. The primary safety benefit is faster system isolation during emergencies or abnormal conditions. Currently, the Company has 481 valves on the transmission system, requiring approximately 190 additional RCVs to reach the 100% goal.

Figure 11: Current RCV Installation Rate



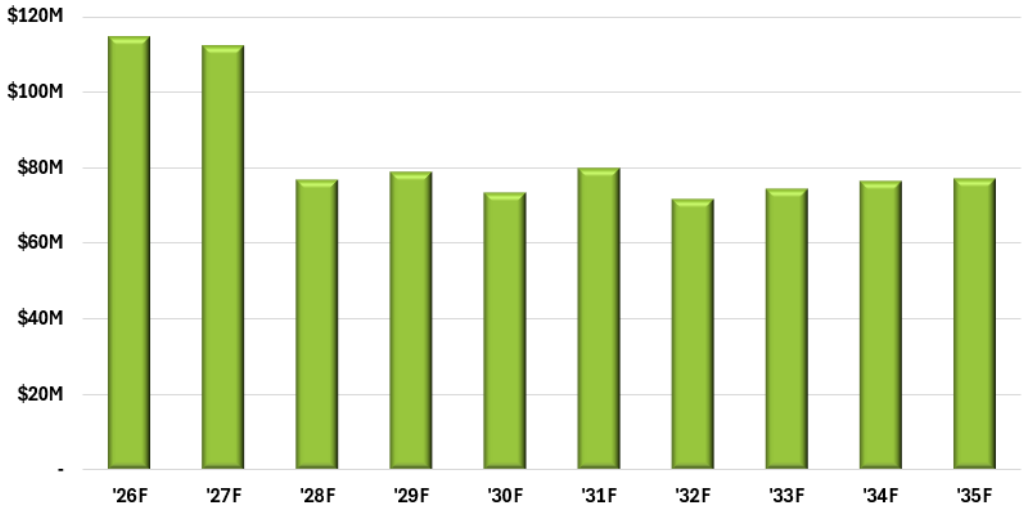
Other Transmission Investments

In addition to core transmission investments, the Company supports several programs that enhance safety, resiliency, reliability, and regulatory compliance. These include relocating assets due to civic or third-party conflicts, addressing depth-of-cover issues, and maintaining cathodic protection systems. Investments are also made to support field measurement accuracy, ensure valve operability, and comply with MAOP regulations driven by population changes. These efforts help maintain system integrity and ensure continued reliable service to customers.

3. Transmission Asset Plan Financials

Consumers Energy's transmission inspections, remediation work, city gate modernization, and RCV installations form the foundation of the capital investment plan shown in Figure 12. This investment plan supports objectives by reducing asset risk to enhance safety, ensuring reliable pipelines flow, improving system resilience for accessing affordable pipeline and storage gas supplies, enabling remote control for operational agility, and lowering emissions for a cleaner transmission.

Figure 12: Transmission Capital Investment Plan



D. Distribution Asset Class

Gas enters Consumers Energy's gas distribution system at city gate stations at pressures up to 400 psi where it is fed into neighborhoods, commercial areas, and industrial districts. Ultimately, it is delivered to most customers at service pressures below 1 psi.

As of 2024, the system includes approximately 28,433 miles of distribution pipeline, 514 miles of TOD pipeline, and 1.8 million service lines. The distribution mains are composed of approximately 56 percent plastic, 42 percent cathodically protected steel, and 2 percent cathodically unprotected steel and vintage materials.

Much of the oldest infrastructure is located closest to customers. Replacing aging assets and expanding remote monitoring capabilities are essential to reducing system risk. Vintage materials such as cast iron, bare steel, and copper, which were installed between

the 1890s and 1970s, are the highest risk components. These materials still account for 1,487 miles of pipeline and more than 105,000 associated services. Replacing these materials, including the standard pressure ("SP") system, will significantly improve safety and reliability by eliminating outdated and vulnerable parts of the network.

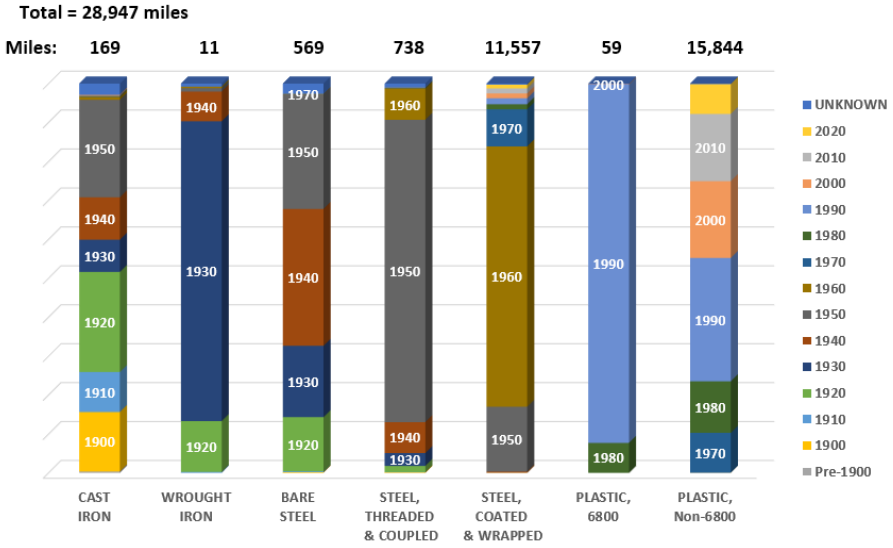
Other risks not explicitly linked to age are reviewed and addressed accordingly. For example, Aldyl A, a specific brand of polyethylene plastic pipe used for gas distribution from the 1960s to the 1980s has garnered attention in the industry as it was associated with incidents. Consumers Energy has no Aldyl A in its system.

1. Distribution Asset Class – 10-Year Focus

Consumers Energy is focused on reducing system risk and methane emissions while improving reliability and capacity by replacing aging infrastructure located closest to customers. This includes the remediation of vintage distribution mains, standard pressure mains, and vintage services to meet the Company's 2035 target. Annual mileage goals, which are adjusted based on affordability, labor availability, municipal coordination, and the remaining scope of work. Although leaks in the distribution system occur at lower pressures than those in transmission lines, they are located closer to the public, increasing risk. To enhance safety and monitoring, Consumers Energy is deploying advanced leak detection technologies and upgrading its SCADA system, as outlined in the Digital section. Finally, the Company is committed to performing work for distribution programs that must be updated due to new regulations, business growth, or technology obsolescence, to avoid non-compliance and ensure continued operational efficiency.

The Company's distribution system includes a variety of materials with installations dating back to the late 1800s (Figure 13)[10].

Figure 13: Distribution Main by Materials and Installation Date (includes TOD)



[10] United States DOT PHMSA reported figures (March 2024)

Cast and wrought iron pipelines are among the oldest in the Company's distribution system. The age contributes to corrosion and cracking due to the natural degradation of iron alloys, such as corrosion and brittleness, as well as outdated pipe joint designs.

Risk Factors Associated with Vintage Pipeline Materials

The following factors increase risk involved with a system that contains vintage materials:

- **Bare Steel Pipelines**: Also known as uncoated steel, these pipes are more susceptible to corrosion and cracking due to age and lack of protective coating. External corrosion occurs when bare steel is exposed directly to soil and moisture.
- **Seasonal Temperature Fluctuations:** Michigan's freeze-thaw cycles increase the risk of frost heave, which can cause or worsen cracks in pipelines.
- **Gas Migration in Frozen Ground:** Natural gas is lighter than air and travels through soil along the path of least resistance. Frozen ground acts as a vertical barrier, forcing gas to move horizontally until it finds an opening (such as a cracked foundation or utility line) that may lead into buildings.
- **Water Infiltration in Low-Pressure Systems:** Leaks in underground low-pressure pipelines can allow groundwater to enter through cracks or corroded sections. This can block gas flow to customers, especially in winter when the water may freeze, causing further blockages or damage.

High-Risk Materials Identified by PHMSA[11]

PHMSA classifies the highest risk materials in order of risk.

1. Cast iron
2. Bare steel
3. Threaded & coupled steel
4. Wrought iron

These at-risk materials total 1,487 miles of main or approximately 5.2% of all distribution pipeline miles. Of the remaining at-risk material miles, there are 1,277 miles located within the SP/MP system, and 210 miles are in the HP system. Remaining miles for the highest risk materials are shown in Figure 14.

Another distribution integrity risk is pipes operating at standard (utilization) low pressure. Gas must reach customers with enough flow rate and pressure to fuel equipment and appliances while staying below the maximum operating pressure for each segment within the system. The challenges of operating a standard pressure system are the dynamic flow and pressure changes due to varying customer demand within a narrow pressure operating range.

The standard pressure system operates at 8 - 12" water column ("WC") (about a ¼ pounds per square inch ("psig")). The pressure delivered to customers is the same pressure within the distribution pipeline from the upstream regulator station. The regulator station reduces the pressure to a level that allows the low-pressure gas to flow continuously to customers without the need for a second regulator located at the meter stand.

Since there is not a second regulator at every meter stand in a standard pressure system, an overpressure condition occurring on the distribution system can affect all customers served by the system if the regulator(s) at the regulator station that controls the pressure

[11] Pipeline Replacement Background | PHMSA (dot.gov)

for the system fails. This type of over-pressure incident occurred in 2018 in Merrimack Valley[12].

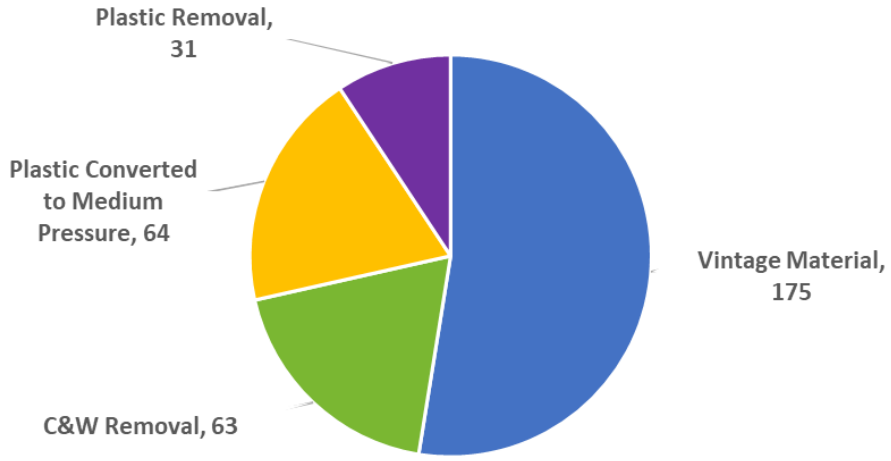
In addition to the risk of high-pressure incidents, a standard pressure system is also at risk of low-pressure incidents. This system struggles to operate at rated pressures on extreme cold weather days, respond to customer demand changes, etc. and requires accurate and timely pressure control to meet deliverability requirements.

Other factors that contribute to low gas pressure include standard-pressure portions of the system, with largely vintage materials, which are susceptible to fluid infiltration from the ground. This fluid can travel through the system, including to customer meters. In cold weather, this fluid can freeze and block the gas meter or regulator, stopping the flow of gas, affecting heating during winter.

The Company's vintage miles cover all but approximately 158 miles of the 333 remaining miles of the standard-pressure system. The 158 miles are made up of 63 miles of coated and wrapped steel and 95 miles of plastic pipe. A portion of the plastic pipe, 64 miles, is planned to be converted from standard pressure to medium pressure. The remaining 94 miles of plastic and the coated and wrapped steel will be removed/retired.

To improve customer safety and reliability and improve system efficiency due to higher operating pressures, the 94 miles of non-vintage standard low-pressure pipe will be added into the vintage remediation goals with the plan of eliminating the standard pressure system by 2030.

Figure 14: Standard Pressure System (in miles)



2. Distribution Asset Management

Overview of the Current Main and Service Remediation Program

The ***Pipeline Inspection, Protection, Enforcement, and Safety Act*** ("PIPES") of 2006, Public Law No: 109-468, mandated that PHMSA, within the U.S. Department of Transportation, prescribes standards for ***Distribution Pipeline Integrity Management Programs*** ("DIMP").

[12] Merrimack Valley NTSB Report: https://www.ntsb.gov/investigations/AccidentReports/Reports/PAR1902.pdf

Federal DIMP rules were subsequently established under Subpart P of the U.S. Code of Federal Regulations, Title 49, Part 192. The Company's current replacement program (part of Consumers Energy's DIMP to remediate at-risk cast iron, bare steel, and threaded and coupled steel) is the ***Enhanced Infrastructure Replacement Program*** ("EIRP").

The EIRP was launched in mid-2012, with the first full program year in 2013 to systematically replace vintage pipeline materials. While EIRP is the primary program focused on replacing vintage mains, other programs also contribute to the overall reduction of vintage infrastructure. Through all programs, the Company remediated 417 miles of cast iron, 460 miles of bare steel, 331 miles of threaded and coupled steel, 11 miles of wrought iron, 1 mile of X-Trube, 38 miles of Low Frequency Electric Resistance Welded ("LFERW"), for a total of 1,258 miles.

Figure 15 shows miles of historic Vintage Material remaining on the system as reported in the Distribution DOT annual report for each year.

Figure 15: Vintage Miles of Main Remaining by Material Type

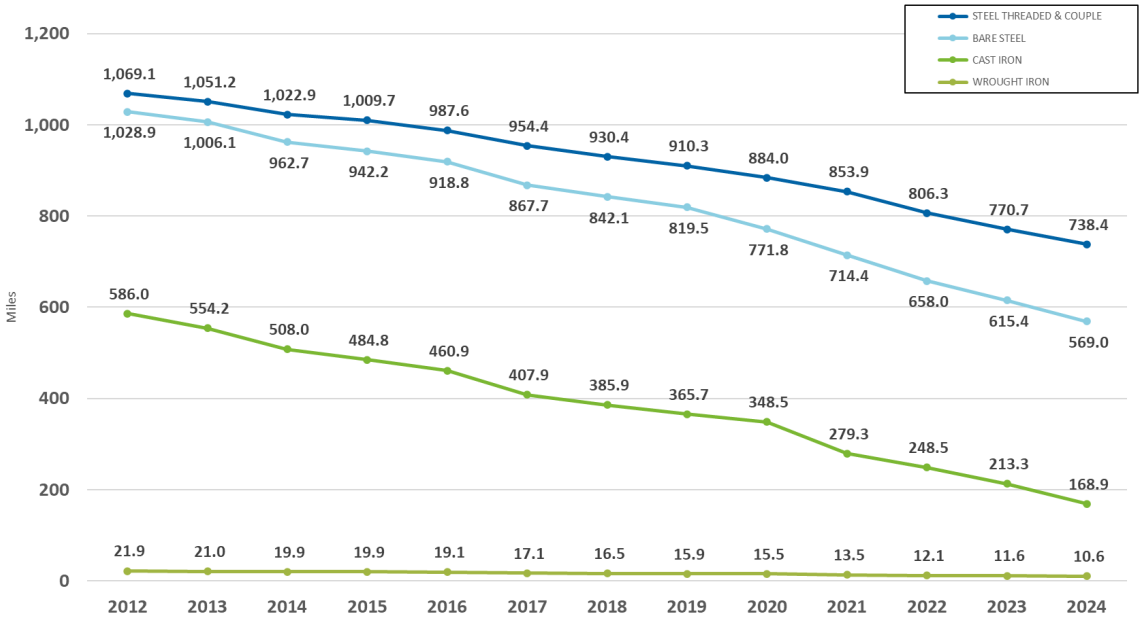
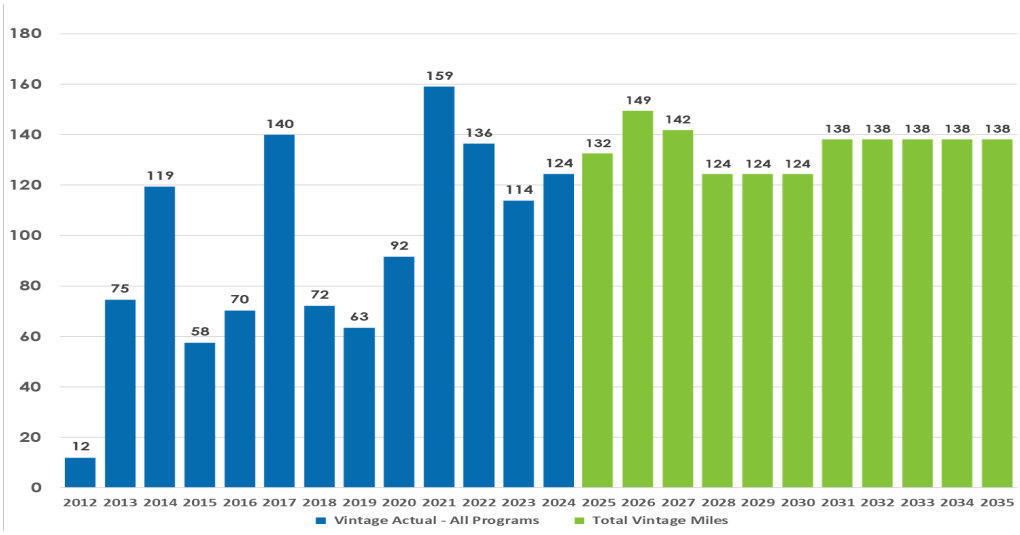


Figure 16 represents the historic 2012-2024 vintage miles retired by all programs and illustrates the plan for the 1,468 remaining miles to retire from 2025-2035.

Figure 16: Retired and Remaining Vintage Miles for All Programs



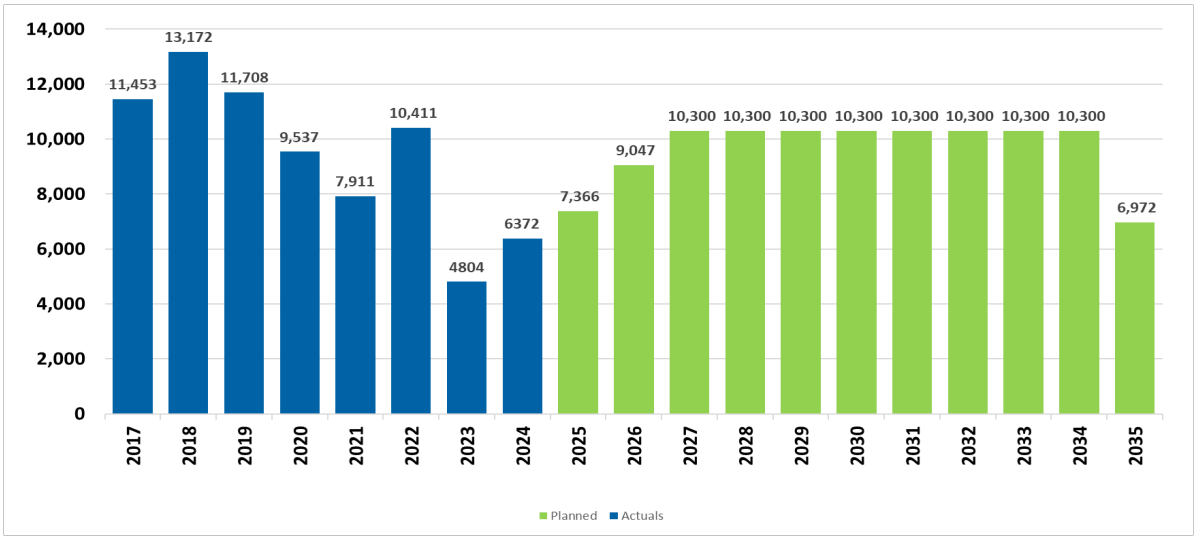
3. Distribution Services and Vintage Service Replacement Program

The distribution system includes approximately 1.8 million service lines that connect the distribution mains to customer homes and businesses. Service lines can contain at-risk materials and are evenly dispersed throughout the system.

As of 2024, the system contains approximately 90,065 copper services, or 5.6% of all services and, in a much smaller quantity, the system also contains 5,945 bare steel services and 9,775 services for which the material is unknown.

Consumers Energy launched a ***Vintage Service Replacement ("VSR") Program*** in 2017. Like vintage main replacement, the Company has streamlined planning across all vintage remediation programs and leveraged construction efficiencies to minimize customer impact to achieve completion by 2035.

Figure 17: Remediation Plan for Vintage Services



4. Maintain Pace of Vintage Material Remediation

The Company collaborated with external stakeholders and concluded that completing EIRP and VSR programs by 2035 best balanced customer safety and reliability with affordability.

Benefits to Customers to Remediate Vintage Material

- Setting a 2035 target proactively mitigates asset-related risks and safeguards customers and the public while maintaining a balanced approach to affordability.
- Minimizing impact on customers using the grid approach. This approach reduces mobilization and demobilization by performing all work identified within the same or nearby neighborhoods at one time.
- Remediating vintage materials reduces gas losses and methane emissions. Methane studies estimate that cast iron pipes leak nearly 23 times more methane into the atmosphere than plastic pipes, while unprotected steel leaks nearly 10 times more, highlighting the environmental benefits of modernization.
- Improving local coordination with municipalities to better align timing of Company-planned work with public works projects.
- Limiting customer safety and reliability risk by more rapidly eliminating higher-risk vintage main pipe and services from the system.
- Improving system efficiency by reducing standard pressure on the system.

5. Future Infrastructure Risk Reduction Program Considerations

Consumers Energy is identifying the next areas of high-risk after completion of the vintage material replacements. Currently under consideration are the following higher risk areas:

Services

The Company has approximately 10,000 vintage service stubs made of copper, bare steel, and X-Trube steel on the system. Service stubs are a result of historical maintenance where a service was not retired or replaced due to limited access to the main.

- Replace metallic services currently not cathodically protected, as the cost of replacing that service with plastic would be more economic than the cost to add cathodic protection.
- X-Trube services are of vintage from 1950-1960s. X-Trube is protective-coated thin wall steel pipe. This material has the highest leak rate. Consumers Energy has approximately 100,000 X-Trube services on the system.

Mains

- Replacement of metallic mains that are not cathodically protected, as the cost of replacement of that main with plastic would be more economical than the cost to add cathodic protection. Cathodic protection did not begin until 1970 but Coated and Wrapped (“C&W”) mains were installed on the system since the 1950s. These mains therefore were used up to 20 years without cathodic protection. C&W unprotected pipe within the date range above and currently cathodically unprotected pipe would be evaluated and criteria developed to determine the focus area.

- TOD main on Consumers Energy's system that is not replaced under EIRP or other programs will be evaluated for replacement to lower the Specified Minimum Yield Strength ("SMYS") below 20%, which addresses MAOP concerns and reduces operating costs.

6. Regulator Stations, Odorizers and Stands

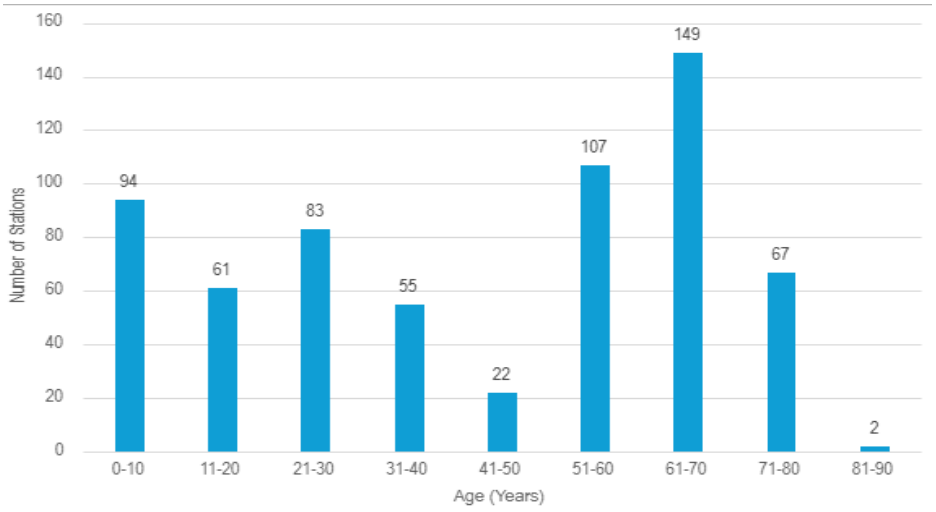
The Company operates and maintains 637 regulator stations, 1,206 regulator stands, and 99 odorizers as of 2024. These assets regulate natural gas pressure to ensure safe delivery to customers. Regulator stands include 1" regulator units that feed smaller distribution systems.

Regulator Stations

Regulator stations reduce pressure supplied from a higher-pressure system, including 2" and larger pipe that feeds a distribution region.

The 10-year goal for the regulator station fleet is to ensure 100% of all regulator stations are modernized. A modern regulator station ensures safe and reliable delivery of gas, integrates ergonomic design considerations for safe operations, includes appropriate filtration and heating equipment based on site requirements, and features overpressure protection and monitoring customized to the station's specific flow needs. Investments made into regulator stations improve safety and maintain the integrity of the asset. Approximately half of the regulator stations were installed before 1971 and are therefore over 50 years old, as shown in Figure 18.

Figure 18: Distribution of Regulator Stations Age Distribution



To achieve the Company's system modernization objectives, an acceleration in the rebuild and retirement of regulator stations is required. The proposed plan starts with 25 station projects annually, scaling up to 53 projects per year over the course of the Program. The projected annual investment for this initiative is approximately $49 million, reflecting the scope and scale necessary to meet modernization targets and ensure continued system reliability and safety.

SCADA upgrades are under development for these assets allowing for real-time awareness, additional data points to be monitored and adequate storage for that data. See the ***Digital*** section for additional discussion on SCADA monitoring.

Odorizers

Odorizers are assets that add odor to the downstream gas system, which is a critical safety element required by code.

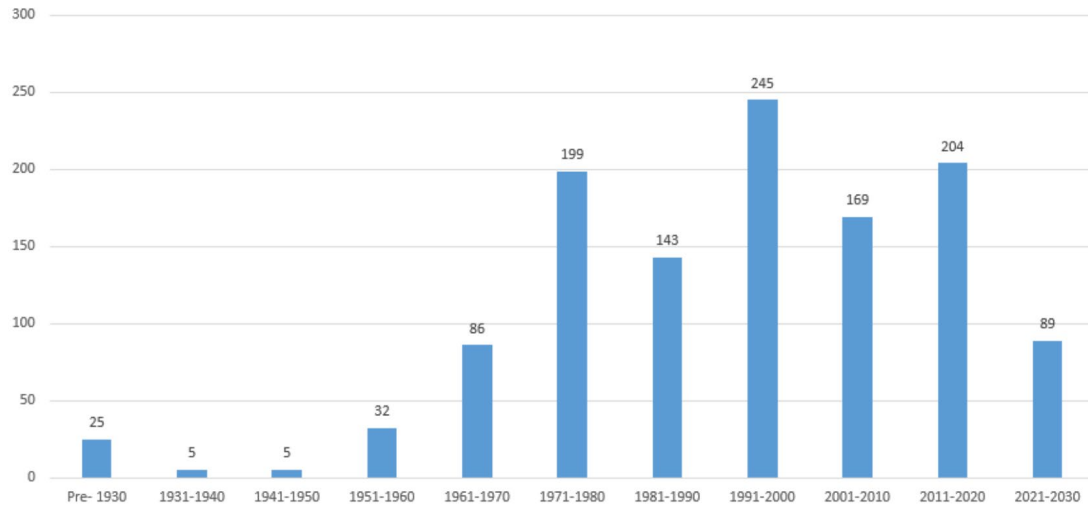
Odorizers are co-located at city gates and transmission valve sites, as required, to comply with State and Federal Pipeline Safety regulatory requirements. They deliver a potent smell to notify someone with a normal sense of smell of a gas leak.

Currently, all odorizer pumps in the system are within service life expectations, less than 30 years. The Plan allows for one odorizer station to be rebuilt per year independent of a city gate rebuild. This is a stable and reasonable trend that should continue for the next 10 years, maintaining all pump in-service dates less than 30 years.

Regulator Stands

Approximately 13% of the regulator stands were installed before 1971 as shown in Figure 19. Due to the age and condition of regulator stands, the Company plans to continue investments in these assets comparable to historical years.

Figure 19: Distribution of Regulator Stands Age Distribution



7. Leak Detection

Employee and public safety are top priority. Consumers Energy uses regular leak surveys to identify and remediate potentially hazardous gas leaks.

As discussed above, a potent odorant chemical is delivered to the system which allows customers and other third parties to identify natural gas leaks before they become hazardous. Once notified of a potential leak, a response is provided within 30 minutes, and a leak analysis is completed to determine the appropriate leak classification for repair scheduling.

Factors used in the analysis include natural gas concentration readings, distance of the leak from the outside of a building, and potential that natural gas could migrate into a building.

Leak repair scheduling is required per code—Michigan Gas Safety Code 192.703, 192.709, 192.711 and Michigan Rules 318 and 327.

Minimum requirements for distribution system leak survey programs outlined in 49 CFR 192.723 are:

- At least once each calendar year, at intervals not exceeding 15 months, a leak survey using leak detecting equipment must be performed in business districts at all locations. This provides an opportunity to locate gas leaks (e.g. natural gas, electric, and water system manholes and sidewalk/pavement cracks).
- Outside of business districts, leak surveys must be conducted at least every five years.
- For cathodically unprotected distribution lines, leak surveys must be conducted every three years.

Beginning 2027, the Company will implement these distribution system leak survey program frequency requirement changes.

- Outside of business districts, leak surveys will now be conducted at least every three years.
- Cathodically unprotected distribution lines, leak surveys will now be conducted annually.

In 2027, the Company will also begin utilizing mobile Advanced Methane Detection (“AMD”) technology for distribution system leak survey. Additionally, the Company will be transitioning to a geographic grid-based approach to leak survey scheduling.

Beginning in 2028, the Company plans to further increase the distribution system leak survey program frequency requirement.

- Outside of business districts, leak surveys will be conducted annually.

Table 2 provides an explanation of how the Company currently classifies leaks on the gas system.

Table 2: Leak Classification at Consumers Energy

Leak Classification and Evaluation of Leak Severity and Prioritization of Repairs	
Leak Classification	**Definition**
Immediate Action	• Repair immediately (temporary or permanent repair) OR • Take corrective action to reduce the hazardous condition to a level which the leak can be reclassified as a Scheduled Action
Scheduled Action	• Repair or investigate the leak within the specified timeframe: o Distribution – 6 months o Transmission and Storage ("T&S") – 4 months • A documented classification is required for each re-investigation. • Permanent repair must be completed within the specified timeframe. o Distribution – Within one year of the leak being found o T&S – As soon as feasible, based on re-investigation, ongoing review of system outages, and upcoming projects
Deferred Action	• Re-investigate the leak within one year of the date the leak was found. • A documented classification is required for each re-investigation. • If deferred again, re-investigate within a year from the new date.

As of September 2025, the Company has approximately 5,489 leaks and is forecasting total active leaks to be at or below 1,750 by the end of 2025. The Company is assessing the current leak backlog and how to best address all new leaks.

To balance the pace and prioritization of system needs with affordability, the Company will prioritize and remediate across all programs, such as the leak renewal and vintage material programs.

8. System Augmentation for Reliability

During periods of high customer demand in cold temperatures, areas are identified with a need to address low delivery pressure or service losses to customers.

System augmentation projects are designed and constructed to enhance capacity and maintain service to customers in these areas.

Examples of large augmentation projects currently planned for 2025 through 2027 include:

- Installation of approximately 1,700 feet of four-inch plastic medium pressure main on Rives Junction Road and 1,300 feet of two-inch medium pressure plastic main on Parnall Road in the Jackson area to construct a looped natural gas supply to reduce risks of low pressure as well as improve resilience on this main. The project is planned for construction during 2027.
- The Beaverton Shaffer Road Project involves the construction of 7,050 feet of 12-inch steel high pressure main that will be constructed parallel to existing six-inch high pressure main out of the Coleman Beaverton city gate station. This capacity

expansion will improve delivery pressure in an area of growing demand. This project is planned for construction during 2026.

- The I-94 crossing at 44th Street project will construct 2,540 feet of eight-inch-high pressure steel main from the Climax city gate outlet. This project is planned for construction in 2026.

Three projects in the Novi/Lyon Charter Township area are being evaluated for possible construction during 2026-2028 including the Grand River - Lannys to Meadowbrook medium pressure augmentation project, the Lannys & 11 Mile medium pressure augmentation project and the Grand River – Old Plank to South Hill medium pressure augmentation project. The scope of these projects includes construction of more than 17,000 feet of 8-inch and 12-inch medium pressure main.

MAOP Reconfirmation and Compliance Projects

Compliance with State and Federal Pipeline Safety regulatory requirements support the Company's goal of providing safe and reliable natural gas service to customers.

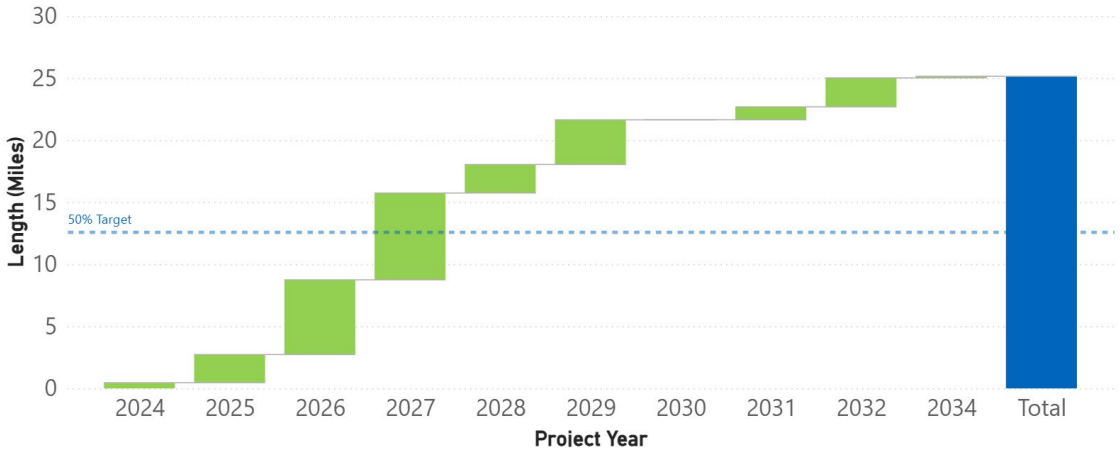
The Company is required to operate gas distribution line segments in a manner consistent with MAOPs. Recent code revisions require reconfirmation of pressure test records and remediation of TOD line segments where existing pressure test records are not adequate to meet PHMSA's expectations for traceable, verifiable, and complete documentation.

Compliance milestones related to MAOP reconfirmation projects include requirements to complete all required actions on 50% of the pipeline mileage subject to reconfirmation requirements by July 3, 2028, and complete all required MAOP reconfirmation requirements by July 2, 2035. A listing of currently planned MAOP projects is provided in Appendix D.

The largest reconfirmation project in this program is the Line 1002c replacement project, known as the Four Cities Pipeline Project. This project will replace 8 miles of 24" high pressure TOD pipeline through Oakland and Macomb counties. The total cost of this project is forecasted to be $265 million. Mainline construction is scheduled to begin in March 2026 and will be completed in the Fall of 2029, with restoration, retirement, and close-out to finalize in 2030.

In addition to the work being done by the Company to evaluate compliance with MAOP standards, it was determined that Line 1080, which serves customers to the west of Kalamazoo, must operate at a lower pressure to comply with federal requirements. Pipeline modifications are planned for construction during 2025.

Figure 20: Planned MAOP Distribution Miles Reconfirmed



9. Customer Metering

The Company routinely purchases meters, regulators, and related equipment for serving new business connections, the Routine Meter Exchange Program (an MPSC requirement), service renewal meter move-outs, and normal replacement of obsolete or broken meters.

From 2015 to 2019, the Company installed gas meter communication modules (“GCM”) manufactured by Itron on more than 1.8 million existing gas meters as part of the Advanced Metering Infrastructure (“AMI”) and Automated Meter Reading (“AMR”) projects. Gas smart meter technology using cellular communications, like the AMI solution deployed for electric customers, was not available.

In 2020, Itron customers, including Consumers Energy, received end-of-product-life notices for GCMs and diaphragm meters currently in use.

The Itron announcement regarding the end of life for their diaphragm meter product line impacts approximately 1.6 million installed regulated diaphragm (“RM”) customer meters. These meters have a different connection method compared to the top connect (“TC”) diaphragm meter and will require a meter stand rebuild to accept a TC meter. In view of this, the Company began proactively rebuilding RM meter stands in 2020, starting with multi-meter stands. Installation of TC meter stands will provide the opportunity for future gas smart meter technology upgrades with minimal field changes.

Due to the gas metering technology obsolescence announcements from Itron, the Company is investigating various scenarios, including projected costs and schedule, for conversion of all RM meter stands to TC meter stands. The conversion will require a new TC meter and regulator to be purchased to replace the RM meter.

While investigating various metering scenarios to address obsolescence, there is an emerging trend among natural gas utilities to use single path ultrasonic gas smart meters (“USM”) for customer metering.

Currently available USMs do not include a cellular communications option but that option is expected to be offered in 2026. The Company is planning a gas smart meter pilot in 2027 to test USM gas smart meters that offer benefits like:

- Remote shut-off capabilities
- Faster detection of high gas usage or leaks
- Pressure and temperature alarms with the ability to trigger a safety shut off

These upgrades will help improve safety, reliability, and convenience for customers. By preparing our system now, the Company will be ready to adopt smart meter technology with minimal disruption in the future.

10. New Business

The New Business Program consists of adding infrastructure in response to requests to serve new commercial, industrial, and residential customers.

Customers who request service share in the construction costs with the Company based on the appropriate tariffs approved by the MPSC. During 2024, customers contributed approximately $8.6 million to new business project costs.

The program includes the cost of installing mains, services, regulators, and the cost of meter stands to serve new customers. Between the years 2020 and 2024, the Company connected 35,636 new gas services to its gas distribution system.

The Company uses forecasting data from multiple sources to forecast and plan for new business growth. During September 2025, the Michigan Center for Data and Analytics published its Michigan Regional Long-Term Employment Projections, 2022-2032[13]. This report indicates that employment within the Michigan construction sector will remain stable over the 10-year period projected.

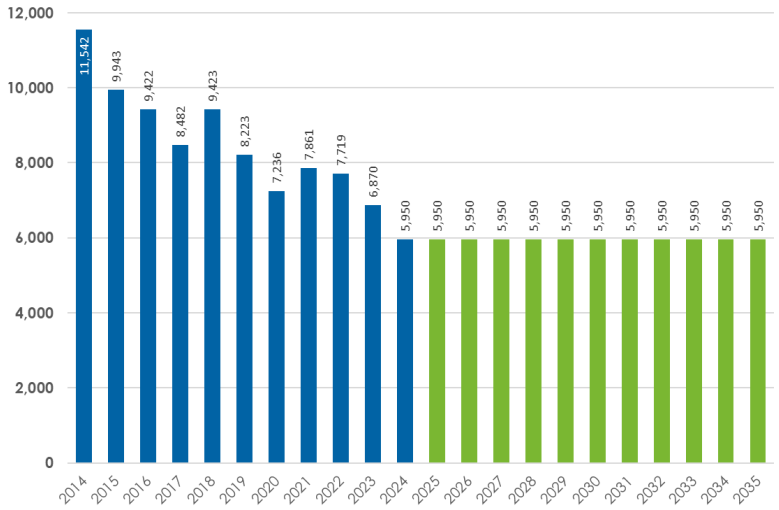
During the 2020 to 2050 period, the number of households in Michigan is forecast to increase by 432,815, or 10.9%. The pace of household growth will exceed the pace of population growth as single person households become a larger share of total households due to aging demographic characteristics. Growth rates in many of the counties served by the Company's gas utility should exceed the statewide average. For example, Macomb County, Livingston County, and Oakland County are all projected to experience population gains greater than 10%.

Based on recent analysis of housing market data, the Company believes that service connection volumes for 2020 through 2024 represent activity levels that are negatively impacted by numerous factors since the onset of the COVID-19 pandemic. This includes periods of construction labor constraints, inflated lumber prices, shortages in electrical transformer supply, and increasing mortgage interest rates. Even prior to 2020, it is generally accepted that the pace of new housing construction in Michigan has not kept pace with demand. As a result, current constraints on the supply of available housing make it difficult for new households to find affordable housing.

The Company's service installation experience during the first 8 months of 2025 is consistent with 2024 service installation results. Expectations of conservative levels of new service connections also align with economic indicator projections provided by S&P Global Market Intelligence in May 2025 (Michigan forecast).

[13] Source: https://milmi.org/DataSearch/Employment-Projections

Figure 21: New Business (Number of Service Connections)



The Large New Business Program includes new customer connection projects where the estimated infrastructure cost exceeds $500,000.

Projects are generally created under this Program when the requesting customer has signed a contract with the Company documenting the load requirements and revenue expectations.

In 2025, there is an approximate 200-foot extension of 8” high pressure steel main to serve a natural gas-fired electric generation facility expansion in the Lansing area, with an estimated annual usage of 2 Bcf.

11. Asset Relocation Civic Improvement

According to the 2023 Report Card for Michigan’s Infrastructure, published by the Michigan Section of the American Society of Civil Engineers (or “ASCE”), Michigan is making progress in reversing historical underinvestment in the state’s infrastructure.

Civic Improvement Relocation work supports transportation improvement projects and other public improvements such as bicycle trails and recreational facilities. These projects frequently involve replacement of vintage mains and services, avoid third-party damage to non-vintage facilities, and reduce the potential for leaks when infrastructure contractors are working around vintage main.

The annual replacement of vintage mains and services are documented as part of Attachment 9 ***Non-EIRP Distribution Main Replacement Project Metrics***, which is included in the Company’s enhanced infrastructure replacement annual reports.

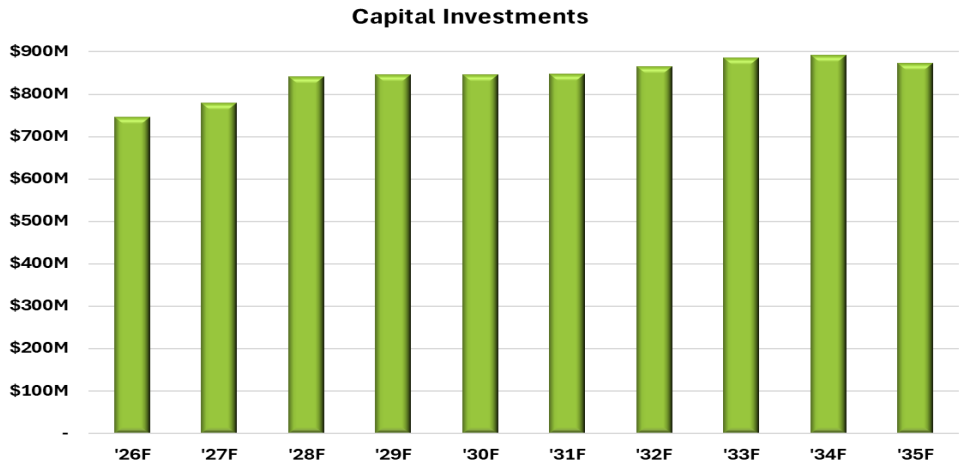
12. Distribution Asset Financials

Consumers Energy’s largest natural gas capital increase is due to vintage material remediation. The Company believes it can lower remediation costs through economies of scale and work management improvements.

With the extension of the EIRP and VSR programs to 2035, the Company expects the total main and services remediation to cost approximately $5.6 billion. The capital investment plan for the entire distribution asset class is shown in Figure 22.

Overall, this investment plan for the distribution asset class aligns with the objectives by reducing asset risk that is closest to the customer (safe), ensuring the system is able to deliver gas as required (reliable), balancing the pace of system improvements to preserve customer affordability (affordable), and reducing the amount of emissions in this system, which equates to more than one-third of the Company's methane emissions (clean).

Figure 22: Distribution Capital Investment Plan



13. Gas Damage Prevention Strategy

The Company's vision for damage prevention is to improve compliance with Public Act 174 through reducing and preventing excavation damages to the gas system in support of employee and public safety.

Damages are caused by home/business owners or excavators digging around Consumers Energy gas distribution assets. The primary causes of damages are due to:

- Inadequate excavation practices (failure to hand dig, failure to maintain marks, improper backfilling).
- Failure to call MISS DIG and working outside of valid ticket window.
- Locating practices not sufficient (mismarked facilities, record errors, system issues).

A series of field programs are deployed to support the third-party excavating community with industry best practices including:

- Proactive outreach program – risk-based outreach program to assist the excavating community proactively including coaching and training, locating assistance.
- Repeat damager program – step escalation program targeted to mitigate the highest risk excavators.
- No-call damager program – coaching and enforcement program to mitigate the highest risk excavators not properly using one call processes.

Consumers Energy works closely with regulatory partners to reduce the risk of dangerous excavations that could impact public safety. A key part of this strategy focuses on changing behaviors through building trust, strengthening relationships, and promoting accountability.

To support this, in 2023, the Company launched a dedicated gas distribution workforce. This team is focused solely on managing utility locate tickets, which has led to faster response times and better communication with excavators compared to past performance. The single-utility focus helps ensure tickets are handled more efficiently and accurately.

Another major goal is improving quality, especially in the accuracy of underground utility markings (staking). Enhanced communication with excavators is being achieved through improved positive response systems, which provide clearer updates on ticket status.

Consumers Energy tracks performance metrics like response timeliness and contractor damage causes to demonstrate the benefits of this dedicated approach.

In 2024, the dedicated workforce expanded to handle 30% of all locate tickets, and by Q1 2025, it reached 100% coverage across the service territory.

V. OPERATIONAL ACCELERATORS

Operational accelerators include the Team, CE Way, digital, regulatory and policy to enable achievement of the 10-year objectives and outcomes.

A. Team – Talent and Workforce

The Company is focused on ensuring Consumers Energy has the right people, with the right skills, at the right place and time.

1. Internal Resources

- Hire and retain skilled trade workers and engineers and create diverse, equitable and inclusive employee experience to ensure the Company is attracting and retaining the most qualified candidates.
- Preparing for the skills of today and tomorrow, Consumers Energy has developed a full-scale Gas City Training Village that trains coworkers through real-time, hands-on situations and continues relentless focus on making safety the top priority.
- Prioritize skilling the workforce to leverage data and digital technologies to meet customer needs.
- Match more than 1,400 coworkers' capabilities, and qualifications to inspect, maintain, and build our natural gas system. Matching the capabilities and qualifications to the requirements of the business to minimize the risk and costs of turnover. Maintain the competitiveness of the Company's approximately 400 dedicated Michigan workforce focused on our natural gas infrastructure.
- Attract, develop, and retain engineering talent through the Company's Entry Engineer Program and Engineering Intern Program. These programs build technical engineering and design capabilities, ultimately ensuring adequate pipeline for engineering talent specific to the Company's natural gas system.

2. Diversity, Equity, and Inclusion in the Full Talent Lifecycle

As one of Michigan's largest employers, Consumers Energy is building a world-class, inclusive workforce where diverse groups of people feel safe and welcome at work. The Company workforce strives to be wholly reflective of the communities it serves. To drive innovation and provide the best energy products, Consumers Energy is creating a pipeline to become an employer of choice for under-represented communities in high demand occupations. To ensure an adequate talent pipeline, multiple forums are used to attract, retain, and grow people. A few examples include:

- **Diversity of our gas workers**: To ensure every co-worker has an equitable opportunity to succeed, talent pipeline programs are built in diverse communities to increase equitable access to our skilled-trade positions.
- **Connecting youth with energy innovation:** Over 300 Consumers Energy employees volunteer their time as Talent Ambassadors with K-12 students throughout the communities it serves to discuss career pathing and other utility-related professional development opportunities.
- **Apprenticeship training programs:** Consumers Energy offers in-depth training programs designed to further the skills, knowledge, and ability of its existing workforce, including a certification program recognized by the Department of Labor as a certified apprenticeship.
- **Workforce development opportunities:** Development opportunities include community engagement, hardware manufacturing, hardware/software design, data analytics, installation, and operations. To attract talent from the communities served by this project, Consumers Energy will work to better understand workforce challenges in specific areas and find ways to address concerns for skilled labor and professional careers.

Regarding skilled labor, the project will involve the installation of new hardware throughout the service territory. Consumers Energy and its technology vendor, Utili-data, will work with labor organizations on new training material and field demonstration guides intended for metering technicians.

Regarding professional careers, Consumers Energy will work with institutes/schools within Michigan on coursework that addresses artificial intelligence predictive modeling for the distribution grid. As part of this process, Consumers Energy will explore the possibility of creating an internship program that places students that have completed the relevant coursework into data analytics, software design, or grid modernization teams.

B. CE Way – Operating System

The Company is committed to operational excellence. At Consumers Energy this means achieving a state of performance that enables the Company to deliver on its purpose. Through application of Lean Principles (The CE Way), work management enhancements, and the GSMS, the Company is positioned well to improve performance, customer experience, identify efficiencies in the business, and minimize risks.

1. THE CE WAY

Consumers Energy's purpose of 'CMS Energy: World Class Performance Delivering Hometown Service' means ensuring the Company delivers safely, reliably, affordably,

and with the highest quality. Examples of performance improvements can be seen across the organization because of the Company's Lean journey.

In 2016, Consumers Energy began its Lean journey, The CE Way, to provide the best value for customers through a culture of continuous improvement. This is the adoption of the Company's lessons learned in manufacturing and other industries applied to design, construction, and operations of utility assets to continuously improve safety, quality, cost, delivery, and morale.

In 2017, the Company launched the 4 Basic Plays (Visual Management, Operating Reviews, Problem Solving, and Standard Work) as a prioritized approach to begin implementing the CE Way. These basic plays establish a strong capability for delivering value to customers and achieving breakthrough performance. The CE Way Basic Plays are interdependent and achieve maximum effectiveness when implemented together.

The next step in our CE Way journey is to automate how we receive and use data embodying a CE Way + Digital approach. It is the Company's focus to establish the right processes, then overlay them with digital solutions to automate as many tasks as possible.

a. Gas Safety Management System

The Company is engaged in continuous improvement of the GSMS, identifying and mitigating risks related to the operation of the gas system.

GSMS is the Company's approach to conforming to the requirements of API RP 1173.

In support of continuous improvement, the governing policy for the GSMS was expanded in 2024 to encompass additional areas of the utility. The Company's leadership-approved policy states "Consumers Energy employees and contractors will comply with regulations, adhere to and continuously improve all Company natural gas, electric, and supply policies and procedures to improve overall system safety and reliability for Michigan and our co-workers."

To support the policy in action, GSMS maintains visibility of key performance indicators to leadership resulting in identification of improvement opportunities that enhance gas asset safety. Improvement opportunities are managed through the enterprise corrective action program developed as a part of GSMS.

C. Digital

Consumers Energy is leveraging digital technologies to optimize compression and storage assets, modernize distribution and transmission systems, and enhance operational performance. These efforts support predictive and condition-based maintenance, improve work management, and strengthen both physical and cybersecurity protections.

Key digital focus areas include:

- **Accelerated Delivery:** Adoption of agile frameworks to improve speed and responsiveness.
- **Cloud Adoption:** Transitioning to cloud-based solutions where appropriate.

- **Data-Driven Decisions:** Treating data as a strategic asset and expanding the use of advanced analytics.
- **Asset Management:** Implementing a consistent framework for managing infrastructure.
- **System Automation:** Deploying integrated control systems to automate operations.
- **Operational Efficiency:** Driving continuous improvement through automation.
- **Cybersecurity:** When making digital investments, appropriately identifying, managing, and mitigating any rise to sensitive data and critical infrastructure risk.
- **Platform Optimization:** Evaluating and enhancing existing strategic platforms to unlock new business and customer value.
- **Technology Evaluation:** Assessing emerging technologies to further improve capabilities, in alignment with API RP 1173 Section 11.2, which calls for periodic evaluation of innovations that may enhance pipeline safety

1. Digital Investments

The Plan includes digital investments in the following areas: asset management, work management, system automation and control, security and privacy, and advanced analytics.

Asset management

Investments include the ability to store, manage, and track Company gas assets as part of asset life cycle management and predictive maintenance practices.

- Projects include the transformation of the enterprise gas Geographic Information System ("GIS") system to the new industry standard Utility Pipeline Data Model, and implementation of the Utility Network extension to merge the transmission and distribution into one data model. This will allow:
    - A unified Gas GIS by combining Transmission and Distribution networks into their respective GIS data models.
    - Enhanced data quality control via gas rules managed at the system level.
    - Geospatial insights at a more granular asset level to improve system visibility and decision-making.
    - System connectivity definition by mapping how each component of the utility infrastructure is linked across the network.
    - System Tracing (Upstream, Downstream, Pressure Zones, Protective Device, etc.).
    - Future benefits such as GIS editing in the field, data capture via GPS/Bar Code scanning, and GIS-enabled design.

Single source geospatial location

Consumers Energy is migrating gas service records into GIS. Completing this effort will create a single source for distribution asset location, simplify processes, reduce opportunities for inconsistencies in data sources, enhance the ability to interrogate and improve the data, and increase public safety.

Extending the implementation of ProjectWise

Extending the implementation of ProjectWise for Gas Distribution assets facilitates a management of change process for gas engineering design and gas system configuration changes—increasing public and employee safety and regulatory compliance with complete and accurate records that are easily accessible and searchable.

Advanced Methane Detection

AMD using mobile technology helps prioritize and plan for the accelerated pace of vintage material remediation, perform risk-based surveying in the compliance leak surveying process, and measure emissions from distribution pipelines.

The Company currently uses asset-based compliance leak survey to perform compliance leak survey. It is a method whereby individual assets are surveyed based on the compliance due date regardless of where the asset is located within the gas system. Grid-based compliance leak survey is performed in square-mile sections. The survey will include all in-scope assets within a square-mile section at the same time. The cadence for returning to perform compliance leak survey in that area again is based on the asset makeup within that area. The frequency is determined by the compliance schedule of the asset makeup within that area.

Beyond compliance leak survey, AMD mobile is being used to perform a super emitter survey on the whole distribution system annually. This survey provides an added layer of protection for our customers by identifying and escalating remediation of the highest concentrated leaks on our system ahead of the compliance leak survey schedule.

Additional technology to detect and measure emissions from transmission, storage, and compression assets include products and services from aerial and stationary AMD technology providers. Aerial AMD provides gas-mapping Light Detection and Ranging (“LiDAR”) services, which pinpoint and measure emissions from the gas transmission and storage systems. Stationary AMD provides continuous methane monitoring that allows for the detection and measurement of emissions at stations, such as compressor stations on a 24/7 basis.

SCADA Historian

SCADA Historian secures data required for gas accounting, operational planning, and predictive maintenance. The Company will require live digitized records and performance of all assets to enable predictive calculations and a potential future state of machine learning. The SCADA historian is undergoing a replacement with a modern platform which will improve administrative applications and will streamline historic data accessibility, visualization, and analysis. The Historian Project supports the broader Gas SCADA Transformation Roadmap discussed in part d. The Historian

Project completion synchronizes with the Gas SCADA replacement project completion.

SCADA

SCADA is comprised of software and hardware components used to monitor, analyze, and control real-time data from field devices on the gas system. Field data from measuring devices (sensors, valves, meters, etc.) is collected using a Remote Terminal Units ("RTU") and then relayed to Gas Control where software is used to display for operators to analyze and interact with.

Gas Control SCADA Transformation Roadmap

The Company's system has outgrown the current gas SCADA software solution, Citect implemented in 2000. As the solution ages, increased effort is required to address obsolete application and database software architecture, and enhancements to the system are limited.

The current gas SCADA tool limits increased system health monitoring and preventative maintenance capabilities due to the inherent complexity. Replacement of the gas SCADA Citect software is planned for completion in 2026. Transitioning to a more advanced gas SCADA software system provides:

a. Integration with GIS for system control reliability.

b. Gas system visibility and transparency.

c. Deployment of RCVs integrated with the gas SCADA system.

d. The future ability to control and perform remote shut off to preserve safety and reliability of the gas system.

Security and privacy

Security and privacy investments secure key Company assets, including physical locations with card access.

Transitioning from a lock-and-key system at city gates to card access centralizes access control and enhances security. The system is capable of both single-factor authentication (card only) and two-factor authentication (card and code).

- Currently the Company deploys two-factor authentication in only the most sensitive physical areas (generally North American Electric Reliability Corporation ("NERC")/Critical Infrastructure Protection ("CIP") medium assets). Two-factor authentication is under investigation for gas facilities over time, as security and regulatory requirements mature.
- Card access management is a single, centralized system and process for the Company. Processes are in place to deactivate badges immediately upon notification of separation from the Company and automatically when not used for specific periods of time.
- Modernizing and standardizing the gas SCADA network at gas compressor stations and control rooms to mitigate cyber security vulnerabilities, and to allow compliance with API requirements to provide a secure gas system that meets customer needs.

- Implementation of security infrastructure to enable more visibility and protection of critical infrastructure, including but not limited to, perimeter fencing, security cameras, and two-way audio.

Advanced analytics

Advanced analytics investment includes data collection, standardization, and analytical model frameworks.

- The Company plans to apply advanced statistical and predictive modeling tools and techniques for deriving insights from gas system data. Such projects enable damage prevention predictive analytics and customer-level load profiling and predictive models with propensity ranking for future gas Demand Response ("DR") programs.
- Integrating operational gas system data into a consolidated data repository will strengthen operational reporting and analytical capabilities. For example, customer value modeling efforts revealed the need to invest in a repeatable capability for rapid system configuration modeling to run scenarios as future supply states and customer demand evolve.

Moving all maintenance plans to ***predictive*** instead of reactive schedules will help to better allocate resources while maintaining integrity of safety and reliability.

Probabilistic Risk Model

To manage system risk, the Company uses multiple indexed risk models for asset areas, which are used throughout the gas utility industry. These models have changing risk factor weightings annually that affect project planning and resource requirements.

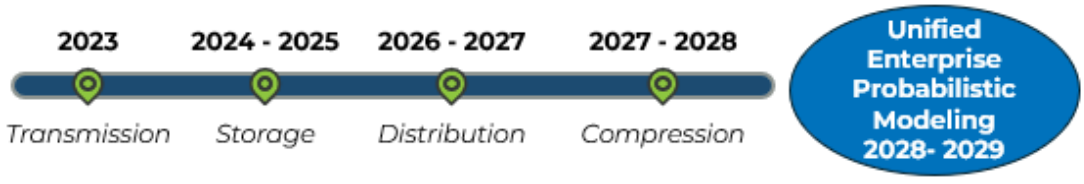
Gas pipeline systems have a complex set of inputs, and their performance is based on a series of possible outcomes controlled by a range of probabilities.

The Company's goal is to implement probabilistic risk models for transmission, compression, distribution, and storage by 2030.

The industry is shifting from relative index risk models toward probabilistic risk models. PHMSA defines probabilistic as ***a model with inputs that are quantities or probability distributions, with outputs that can be expressed as probability distributions.***

Model logic adheres to laws of probability. A probabilistic risk model helps better allocate resources by making decisions based on data associated with impact and probability. Figure 23 shows a roadmap for implementing Probabilistic Risk Modeling across the major asset classes by 2030.

Figure 23: Probabilistic Risk Model Upgrade Roadmap



This roadmap will not only account for the entire system but will also result in a Unified Model. The benefits of the unified model are as follows:

- A clear understanding of the existing and projected future performance of assets including reliability and integrity.
- The ability to show risk and investments to regulators and stakeholders.
- The capability to make intelligent decisions based on risk and reliability across the entire system.
- Assurance the investment profile is aligned with the Enterprise risk profile.

D. Regulatory and Policy

Alignment with evolving regulatory requirements and energy policy is essential to the successful execution of the Plan. Regulatory and policy engagement enable the Company to proactively manage compliance, influence legislative outcomes, and secure support for 2035 strategic goals.

Regulatory

Consumers Energy maintains rigorous compliance with state and federal regulations. Key regulatory focus areas include:

- **Compliance Assurance:** Maintain adherence to state and federal regulations.
- **Monitoring & Reporting:** Track regulatory changes and ensure timely reporting and documentation.
- **Risk Mitigation:** Identify regulatory risks early and develop mitigation strategies to avoid penalties or project delays.
- **Stakeholder Engagement:** Collaborate with regulators, industry groups, and legal experts to better understand the external environment and emerging requirements.

Policy

- **Proactive Advocacy**: Advocating for state and federal policies that support safety of infrastructure, system resilience, and decarbonization.
- **Strategic Partnerships:** Build partnerships with state and federal industry peers, community leaders, and advocacy groups to best understand emerging trends.
- **Policy Intelligence:** Monitor energy policy trends at the state and federal levels to inform 2035 strategic planning and ensure readiness for future policy changes.
- **Alignment with strategic objectives:** Ensure policy positions and advocacy efforts are aligned with the customer at the center and strategic objectives discussed above.

Consumers Energy's integrated approach to regulatory and policy engagement ensures that the Company remains agile, and forward-looking—positioned to deliver safe, reliable, affordable energy to Michigan customers through 2035 and beyond.

VI. GAS SYSTEM DECARBONIZATION

Consumers Energy is implementing industry-leading plans to reduce greenhouse gas emissions created by its natural gas operations. This includes modernizing its natural gas system to achieve net zero methane emissions from its operations by 2030.

In 2022, the Company committed to achieve net zero greenhouse gas emissions from the entire natural gas production and delivery system, including customers and suppliers, by 2050. To support this goal, the Company will engage customers to help meet their clean energy needs. This 2050 net zero goal supports Michigan's MI Healthy Climate Plan to achieve net zero carbon emissions by 2050. The U.S. Environmental Protection Agency ("EPA") defines greenhouse gas emissions in three categories:

- **Scope 1**: Direct emissions from sources that are owned or controlled. At our Company, there are emissions produced in the process of generating and supplying energy for customers, such as carbon emissions from burning methane or fugitive methane emissions from our natural gas delivery system. ***The Company's goal to reduce Scope 1 emissions is "methane net zero by 2030."***
- **Scope 2**: Indirect emissions associated with the purchase of energy for any end use. These emissions may arise from the energy we purchase and use at our facilities and comprise only a fraction of the emissions linked to our Company.
- **Scope 3**: Emissions are from sources not owned or directly controlled but related to our activities. These include all emissions traced to natural gas we purchase and activities by customers and suppliers, primarily from end uses like burning natural gas to heat homes and businesses. ***The Company's goal to reduce Scope 3 emissions is "net zero carbon emissions by 2050."***

A. Methane Net Zero Goal

Consumers Energy recognizes methane as a greenhouse gas emission, and that methane's impact as a greenhouse gas is notably more significant than that of carbon dioxide, with a short-term global warming potential that is approximately 80 times greater.

Since 2012, Consumers Energy has reduced methane emissions from its natural gas delivery system by nearly 30%.

The methane emission reduction plan seeks an 80% reduction, and net-zero, of methane emissions by 2030 through the following near-term measures:

- Distribution main leaks: replacing vintage pipe (cast iron and unprotected steel).
- Distribution services leaks: replacing vintage pipe (copper and bare steel).
- Storage: Wellhead component leaks (plug and abandon program).
- Compression blowdown venting procedures: reducing natural gas venting frequency/duration.
- Transmission blowdown procedures: increase temporary compression to reduce venting.

Procurement of carbon credits is expected to cover the remaining 20% methane emissions to achieve net zero for the natural gas delivery system.

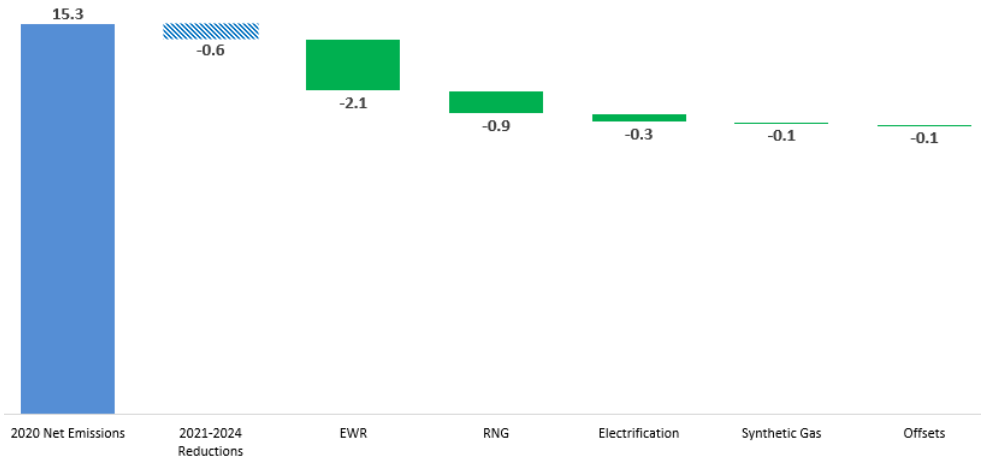
B. Net Zero Carbon Emissions Goal by 2050

To support Michigan's MI Healthy Climate Plan, in 2022, Consumers Energy committed to net zero Scope 3 emissions by 2050 with an interim target of 25% reduction by 2035. This includes all emissions traced to natural gas purchases and activities by customers and suppliers, like those associated with burning natural gas to heat homes and businesses.

Consumers Energy is committed to delivering natural gas in a way that supports a cleaner, more sustainable Michigan. As the Company advances toward net zero emissions by 2050, it remains closely connected to customers, listening to their needs and designing solutions that accelerate progress. The gas decarbonization strategy prioritizes safety, reliability, affordability, and equity. Through expanded energy efficiency programs, the exploration of low-carbon fuels and infrastructure modernization, Consumers Energy helps customers reduce their carbon footprint while maintaining dependable service. Appendix C highlights future gas decarbonization modeling performed in 2021. The Company will seek to update future decarbonization scenarios in 2026.

The plan to achieve this 25% reduction by 2035 is shown below in Figure 24, which illustrates that EWR, RNG, carbon offsets, and new emerging decarbonization technologies are all necessary pathways.

Figure 24: Scope 3 25% carbon emission reduction by 2035



MI Clean Air Program[14].

In 2022, the MI Clean Air Program was approved to provide a voluntary offering for customers to offset the emissions tied to natural gas consumption via the use of forestry carbon offsets sourced in Michigan. In March 2024, the Company received additional approval to expand the Program to include RNG as a clean fuel alternative for full-service natural gas customers.

Carbon Offsets

A carbon offset represents a verified reduction of greenhouse gas emissions occurring in one location to counterbalance emissions produced elsewhere. By

[14] *MI Clean Air Annual Report 2025:* MPSC Case No. U-21141: Consumers Energy Company's 2025 MI Clean Air Annual Report

purchasing offsets, emissions from natural gas can be neutralized, helping to mitigate the environmental impact of remaining emissions. Through this program, customers can choose to offset emissions associated with their own natural gas use. The Company sources high-quality offsets from in-state forestry projects in Michigan. By limiting deforestation and promoting sustainable land management, these projects help maintain clean air, preserve wildlife habitats, and enhance long-term carbon storage.

Renewable Natural Gas

Consumers Energy owns and operates RNG facilities to serve voluntary customers with a clean fuel alternative sourced from Michigan. RNG is a carbon negative, drop-in fuel that meets current pipeline quality standards to serve existing customer end uses. RNG is created by capturing methane from the decomposition of organic matter (e.g. food, animal waste, and wastewater), which would otherwise be vented into the atmosphere. This captured biogas is upgraded to meet pipeline quality standards, called RNG, and is chemically identical to fossil natural gas.

RNG Emissions Benefit

Emission benefits are quantified using the industry standard Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (“GREET”) model, resulting in a lifecycle Carbon Intensity (“CI”) score. A CI score is the total measure of greenhouse gas emissions associated with producing, distributing, and using a fuel, reflected in grams of Carbon Dioxide equivalents (“CO2e”) per megajoule (“MJ”) of energy.

After including all RNG process emissions from capturing methane, upgrading it, transporting it, and end use, the benefit of avoided methane emission to atmosphere is still significantly greater than the total of those lifecycle emissions. The lower the CI score, the more cost effective it is to reduce emissions. This is because with carbon negative fuel, only a small portion of RNG needs to be blended to achieve carbon neutrality. For this reason, animal manure based RNG is preferred because it has the lowest carbon intensity of any feedstock.

RNG also supports other environmental goals, including reduced nutrient run-off, improved water quality, organic waste management and diversion, groundwater protection, and displacement of fossil fuels.

RNG Production

RNG production, sourced from animal waste, is scheduled for commercial operation in 2026 and will supply the Company’s MI Clean Air Program. Consumers Energy seeks opportunities with farms to help bring clean fuel to the state of Michigan. Any farm can potentially contribute to Consumers Energy’s natural gas supply as RNG. RNG is an opportunity to reduce emissions and improve the environment in Michigan, while supporting local farms.

C. Energy Waste Reduction

Since 2009, Consumers Energy implemented a diverse and balanced portfolio of EWR programs achieving significant energy savings for all major sectors and customer classes, including small businesses and low-income customers in line with the Company's Clean Energy Plan.

Natural Gas EWR programs play a role in decarbonizing the gas system; reducing the amount of energy consumed; and reducing Scope 3 methane emissions.

Consumers Energy filed its 2024-2025 EWR Plan Filing in August of 2023, Case Number U-21321[15] and it was settled on February 8, 2024. The portfolio of EWR programs achieves 1% natural gas savings annually, which will accumulate to approximately 14.8 Bcf by 2026 and 26.5 Bcf by 2030. On August 1, 2025, Consumers Energy filed its proposed 2026-2029 EWR Plan with the MPSC under Case No. U-21680, outlining strategies to meet updated energy savings targets and program requirements.

Consumers Energy built the EWR portfolio by selecting program measures (equipment), customer participation, and customer incentives to cost effectively achieve legislative and Consumers Energy clean energy goals. Taken together, the portfolio of EWR programs outlined in this Plan continue Consumers Energy's history of offering a diverse portfolio of cost-effective, flexible, and inclusive program choices, incentive options, and educational opportunities for every customer class.

The table below outlines the Company's proposed 2026-2029 EWR Plan natural gas savings targets.

Table 3: Natural Gas Investments and Savings Compared to Targets[16]

	2026	2027	2028	2029
Planned Investment, Gas Programs	$86,765,558	$86,646,072	$87,847,272	$88,888,955
Annual Gas Savings, Statutory Target (%)	0.875%	0.875%	0.875%	0.875%
Annual Gas Savings, Statutory Target (Mcf)	2,508,104	2,506,875	2,517,733	2,512,329
Annual Gas Savings, Planned (%)	1.0%	1.0%	1.0%	1.0%
Annual Gas Savings, Planned (Mcf)	3,067,402	3,064,771	3,061,704	3,075,890

[15]The February 8, 2024 Case No. U-21321 Order Approving Settlement, available on the MPSC website: 8 Feb 2024 Order Approving Settlment Agreement in MPSC Case No. U-21321, authorizes gas EWR program investment of $95.5 million in 2024 and $95.1 million in 2025 to achieve 1% of sales gas targets each year.

[16] **Consumers Energy Company, Energy Waste Reduction Plan Filing for 2026-2029** Case No. U-21680, submitted to the Michigan Public Service Commission on Aug 1, 2025. Note: As of Sep 27, 2025, this filing is pending Commission approval.

D. Emerging Technologies

Potential emerging pathways to meet net zero emissions by 2050 include using hydrogen and synthetic fuels to produce energy, capturing and sequestering carbon emissions from natural gas combustion, and the consideration of non-pipe alternatives (NPAs), such as network geothermal districts, to heat homes and businesses.

Hydrogen

Hydrogen is an ideal clean energy fuel as it has the highest energy-to-weight ratio and releases no carbon when combusted. Hydrogen's zero carbon footprint along with its energy content characteristics make it an important pathway that targets hard-to-abate high heat processes such as industrial drying, compression, and long-haul transport. The Company's initial focus on Hydrogen is to monitor development throughout the industry. Currently, Consumers Energy has no plans to blend hydrogen or install any dedicated hydrogen pipelines.

NOTE: Hydrogen and natural gas are ***not*** completely interchangeable as a usable fuel at existing pressures and flow rates. However, given advantages tied to dispatch, storage, and carbon neutrality, hydrogen is being assessed by the energy industry to determine its potential as a clean energy pathway for the future natural gas system.

Synthetic Fuels

Clean synthetic fuels, often referred to as synthetic natural gas ("SNG"), are manufactured fuels designed to have no carbon footprint. SNG is produced by combining hydrogen with captured carbon dioxide to form methane, a process that allows the fuel to be fully compatible with existing natural gas infrastructure. With Michigan businesses selected as partners in the MachH2 hydrogen hub, which is committed to advancing the Midwest hydrogen value chain, the Company is evaluating opportunities to partner as both an energy supplier and off taker.

Globally, SNG is already in use, and zero emissions pathways can be achieved by combining green hydrogen with carbon dioxide captured from Company-owned RNG facilities. The result is a carbon-neutral methane that can be delivered through current pipelines without additional infrastructure investment. In 2025, the Company began investigation to understand the economics and feasibility of this technology in alignment with MachH2 hydrogen hub initiatives and in partnership with EPRI Low-Carbon Resource Initiative ("LCRI").

Network Geothermal

Network geothermal, also known as thermal energy networks, is a utility-scale heating and cooling system that uses the stable temperature of the earth to serve multiple customers through a shared underground thermal loop. The system consists of vertical or horizontal borefields where fluid circulates and exchanges heat with the ground. Each customer connected to the thermal loops uses a ground-source heat pump to extract heat in the winter or reject heat in the summer.

How it works:

- In winter, the heat pump transfers heat from the thermal loop into the building, replacing natural gas furnaces.

- In summer, the heat pump removes heat from the building and rejects it into the thermal loop, reducing electric air-conditioning demand.
- By linking multiple buildings (residential, commercial, or industrial), heating and cooling needs can balance each other, which improves system efficiency upwards of 600%.

In 2024, the Company received an MPSC grant to study the feasibility of network geothermal across its service territory. The initial objective is to understand customer preferences and identify how this technology can enhance reliability, affordability, and sustainability of their energy service.

Carbon Capture

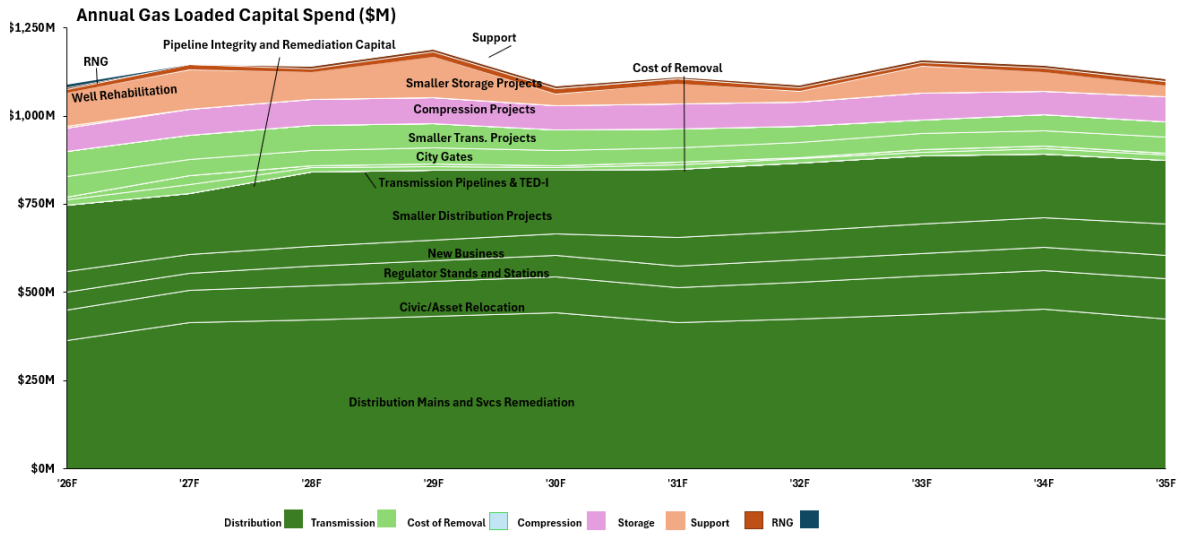
Carbon Capture, Utilization and Storage ("CCUS") remains a critical technology pathway in achieving a net zero emissions future. While the technology is still developing and its applications are not yet fully defined, Michigan's unique geology with deep saline formations offers high potential for large scale underground carbon sequestration.

VII. FINANCIAL SUMMARY

A. 10-yr Capital Plan

Overall, the total 10-year capital spend shows approximately $12 billion from 2026 to 2035, at an annual capital investment expenditure of approximately $1.2 billion per year. This level of capital investment is consistent with recent past years ensuring safe, reliable, and clean objectives are met at affordable customer bills.

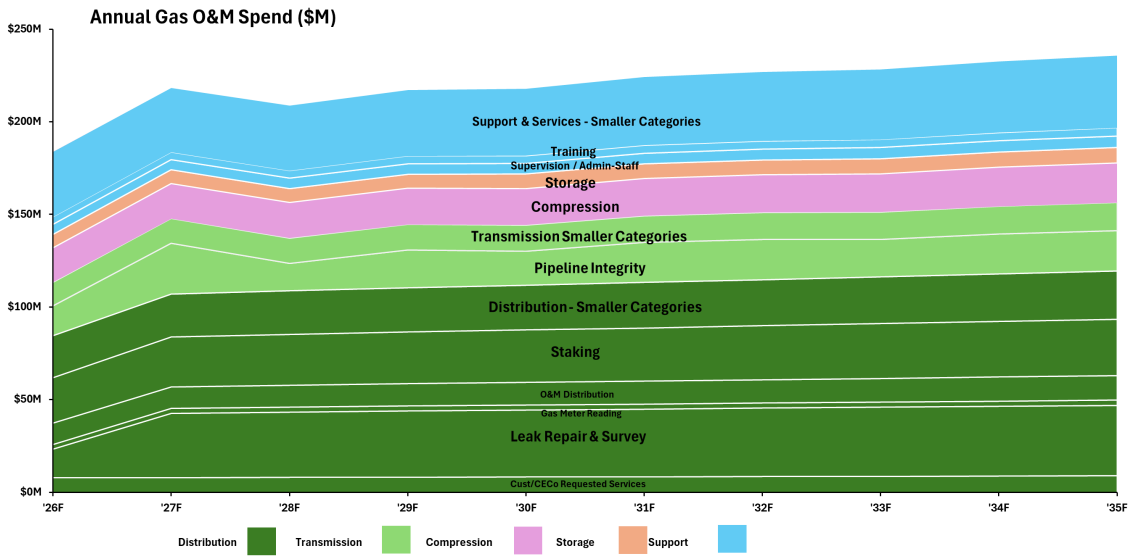
Figure 25: 2026 – 2035 Capital Plan



B. 10-yr O&M Plan

Figure 26 shows that this capital investment will also result in an increase of O&M cost over the next five years.

Figure 26: 2026 – 2035 O&M Plan



VIII. Closing

Consumers Energy developed this 10-year Gas Delivery Plan to ensure Michigan continues to receive safe, reliable, affordable, and clean natural gas. The Plan reflects the Company's commitment to:

- **Safety**: Lowering system risk through targeted asset investments.
- **Reliability:** Ensuring consistent and compliant supply through prudent planning.
- **Affordability:** Delivering stable, competitive, and predictable energy value.
- **Clean Energy:** Reducing greenhouse gas emissions across the gas delivery system.
- **Equity:** Promoting fair and inclusive access to energy benefits.

Consumers Energy regularly reviews the assumptions and data that inform this Plan and will adjust as needed. The Company remains committed to sharing its vision and progress with stakeholders across Michigan.

Appendix A – Industry Standards Summary

As a regulated gas utility company, Consumers Energy must adhere to all State and Federal Pipeline Safety regulatory requirements. As an example, the following is a high-level list ***(not fully inclusive***) of requirements and industry standards or practices:

Code of Federal Regulations

- 49 CFR Part 191 - Transportation of Natural and other Gas by Pipeline; Reports
- 49 CFR Part 192 - Transportation of Natural and other Gas by Pipeline; Minimum Federal Safety Standards
- 49 CFR Part 199 - Drug & Alcohol Testing

Michigan Gas Safety Standards

Michigan Technical Standards for Gas Service

American Petroleum Institute

- Standard 1164 – ***Pipeline Control Systems Cybersecurity***
- Recommended Practice 1171 - ***Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs***
- Recommended Practice 1173 – ***Pipeline Safety Management Systems***

Appendix B – System Figures & Facts

Table 4: Natural Gas System Summary Statistics

System Summary	
Transmission pipeline	2,342 Miles
Mainline pipelines	1,560 Miles
Pipeline within compression stations	22 Miles
Storage pipes	244 Miles
Transmission Operated as Distribution	514 Miles
Distribution Pipelines	28,433 Miles
Storage Fields	15 Fields (Includes Riverside)
Compressor Stations	8 Stations
Customers Served	Approximately 1.8 Million
Gas Storage Wells	783 Wells
Working Gas Storage Capacity	154 Bcf

Appendix C – Decarbonization Modeling

In 2021, Consumers Energy worked with industry leading consultants to better understand the most affordable and resilient state-wide economy decarbonization plan that achieves net zero carbon emissions by 2050.

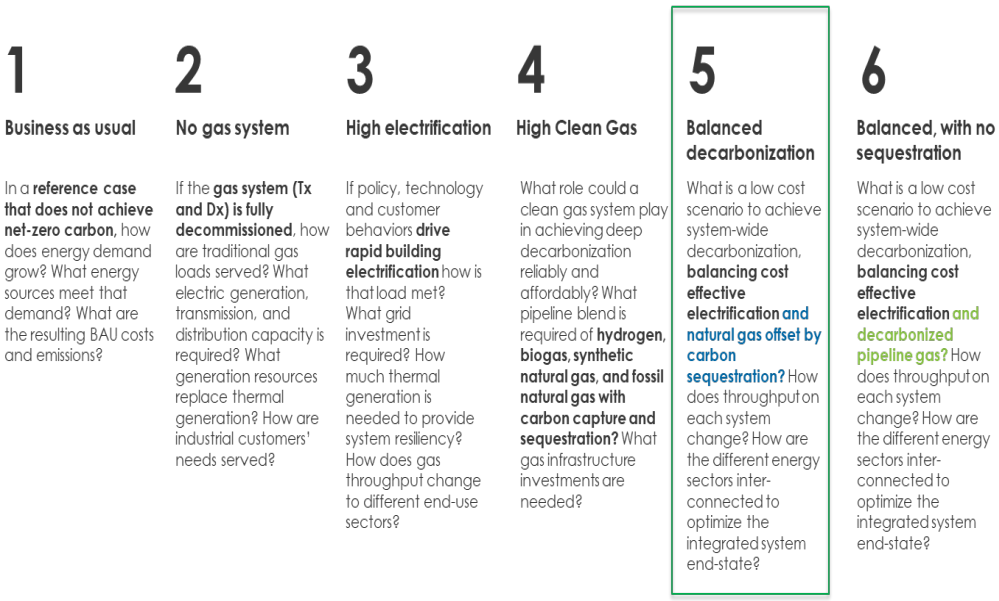
This analysis incorporates both the Company's electric and gas utilities with an 'energy agnostic' approach. It was determined that limiting the scope of analysis to the Consumers Energy service territory would improperly exclude constraining factors like electric vehicle demand on the grid and would not take advantage of geographic and logistical efficiencies throughout the State.

The modeling analysis used regional attributes to understand the most cost-effective energy supply to meet the energy demand of the State, including full electrification of the passenger vehicle sector, while simultaneously achieving net zero emissions by 2050.

The analysis was completed for six different scenarios, shown below in Figure 27. Important assumptions are noted here across three specific scenarios.

- **The business-as-usual scenario is used as a reference point** and assumes no progress in energy decarbonization.
- The **no gas system scenario was assessed to understand the cost of meeting energy demand** in the absence of the gas system, meaning all current uses of gas, including industrial processes and electric generation would require alternative energy supplies like hydrogen or electrification. This scenario also demonstrates the value the current gas system provides to the state's overall decarbonization costs.
- **The high electrification scenario assumes all end uses are electrified except for natural gas electric generators,** meaning the compression and transmission system would remain, while most gas distribution pipelines would be retired.

Figure 27: Decarbonization Scenarios



The key conclusion from modeling was that a balanced combination of multiple technologies is the most cost-effective means of achieving economy-wide decarbonization by 2050. The diversity in a balanced combination of multiple technologies not only increases resiliency, but also increases optionality across the system, lowering risk of not achieving carbon neutrality.

In all scenarios, electric load increases due primarily to electric vehicle deployment and some space heating electrification. As coal plants are retired, gas generation with carbon capture grows to meet increasing load.

Renewables are an important part of Michigan's energy supply, but controllable energy, like long duration energy storage, is needed for maintaining a reliable energy supply.

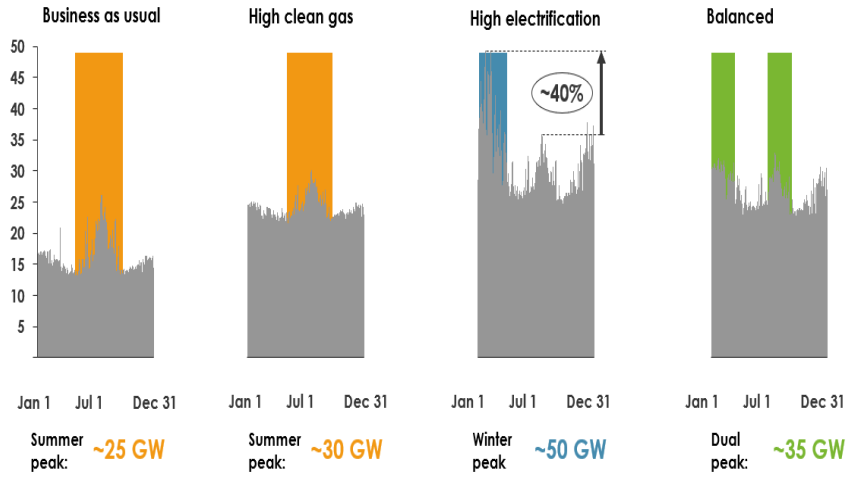
Other important conclusions show:

- The gas distribution system enables cost effective, reliable home heating in Michigan winters.
- The gas transmission system is needed to supply natural gas to electric generators.
- Carbon sequestration is needed to cost effectively achieve durable decarbonization, specifically to support electric generation, synthetic gas, and hydrogen production.
- Clean fuels such as RNG and hydrogen provide system resiliency, diversification, and energy for hard to electrify end uses.
- Electrification potential was constrained by costs associated with additional transmission and generation infrastructure necessary to meet winter peaking electric demand.

As shown below in Figure 28, analysis indicates that in a highly electrified decarbonized future scenario, building electrification can drive winter peaks as high as 40% higher than summer peaks. In this scenario, the most economic form of clean electric base load generation to support building electrification would come from natural gas generators fitted with carbon capture.

Hybridized electric + gas space heating, as represented within the 'balanced scenario' can mitigate a peak shift to winter, reducing the need for investment in electric generation and transmission by ~$20-$25B compared to a high electrification scenario.

Figure 28: Potential Electric Peak Load Impacts by Scenario



Additionally, ~20% less electric generation capacity is required in the 'balanced scenario' than in a high electrification scenario, which helps mitigate cost increases.

In each decarbonization scenario, there is a societal cost impact to Michigan with a 'balanced scenario' the lowest societal cost pathway to meet carbon neutrality by 2050. Total energy system costs include all costs associated with energy in Michigan, including feedstock and commodities; electricity generation, storage, and fuel production technologies; energy delivery infrastructure; carbon capture and sequestration; demand-side technologies (e.g. appliances and vehicles, EE investments, etc.).

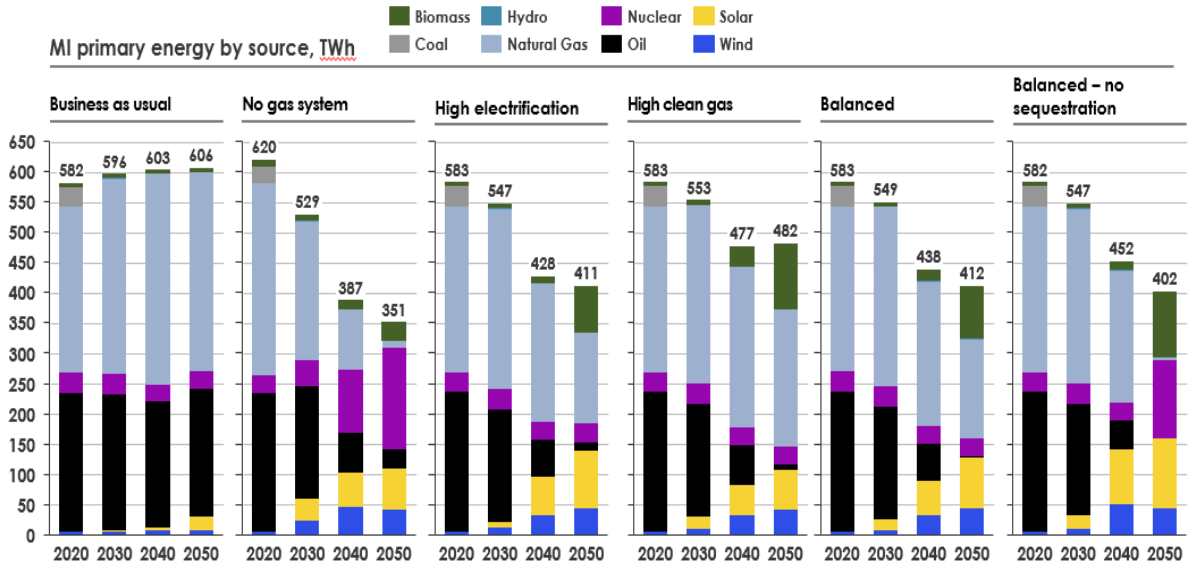
RNG ("biogas") is seen as a foundational technology that best prepares the Company for any likely decarbonized future scenario including high electrification, high clean gas, and a balanced approach. This is because RNG is cost effective in reducing carbon, mature technology, and requires no incremental investment in the existing infrastructure.

RNG resources are available today and require no modification to the existing infrastructure, making it more cost-effective than other approaches. For this reason, the Company offers RNG as a voluntary product to customers providing the State with progress towards our shared environmental goals over time.

In all likely scenarios (high electrification, high clean gas, balanced), modeling shows natural gas generation as the least-cost, carbon neutral energy supply able to meet demand. In the absence of a gas system or carbon-neutral natural gas generation, new nuclear generation would be necessary to support demand by 2050 as shown in Figure 29.

NOTE: ***This analysis is Michigan-wide and does not necessarily reflect the Company's expected energy supply.***

Figure 29: Potential Primary Energy Sources by Decarbonization Scenario



Appendix D – MAOP Distribution Program & Project List

Table 5: Distribution Program and Project List for MAOP

Line Segment	Estimated Capital Cost	Length (miles)	Expected Pipe Size	Construction Complete Year
Completed Projects				
Line 1009 Huron Park to I94	3,183,351	0.5	12"	2024
Line 1090n	261,429	0.012	8"	2024
Line 1087b Phase 1	178,966	0.358	2"	2024
Line 1020 Greenfield Rd	456,218	0.038	12"	2024
Projected Projects				
Line 1002f Macomb ITC Corridor	4,772,767	0.07	26"	2025
Line 1009/1009c I94 to Little Mack, 10 Mile to 11 Mile	4,730,341	1.53	12"	2025
Line 1022f Vermontville	562,091	0.038	8"	2025
Line 1087b East & West Segments	4,217,576	0.81	12"	2025
Line 1006 Ph 1 Groebel Dr to Mound Rd	4,100,137	0.31	24"	2026
Line 1026f Mt Hope	3,995,454	0.758	8"	2026
Line 1080 Dual Main	29,835,685	6.7	12"	2025
Line 1022	40,401,027	3.5	16"	2026
Line 1041 Lapeer Rd	25,362,252	3.4	12"	2027
Line 1002c	235,402,486	8.15	24"	2029
Line 1009c Ph 3 Little Mack - 10 mile to 9 mile, Macomb	6,144,037	1.3	12"	2026
Line 1093 Shattuck Rd	13,987,914	1.76	12"	2026
Line 1002	3,854,313	0.33	16"	2027
Line 1009c Ph 4 11 mile - Little Mack to RS22, Macomb	3,658,193	0.5	12"	2027
Line 1026i MSU PP	2,670,021	0.133	8"	2027
Line 1082 Lovers Lane	2,700,781	0.4	12"	2027
Line 1087f S Saginaw Rd	497,454	0.028	N/A	2027
Line 1006 Ph 2 11 Mile Mound to RR St.	13,419,357	0.75	24"	2027
Line 1019k	589,012	0.028	16"	2029
Line 1090l W Caro Rd	1,350,000	0.15	8"	2030
Line 1006 Ph 3 11 Mi/Deq to Dvd Givens	12,000,000	1	16"	2030
Line 1008	26,250,000	2.5	12"	2032
Line 1049d I-475 Crossing on Bristol Rd	298,000	0.028	12"	2033
Line 1091 S Van Dyke-S Outer Dr Bad Axe	7,758,316	0.7	8"/12"	2028
Line 1082 E Kilgore Rd and Portage St	4,200,000	0.041	12"	2033
Line 1082f	1,800,000	0.2	8"	2033

Appendix E – Storage Field Assets and Capabilities

Table 6: Storage Field Summary

Type	Storage Field Name	Working Gas Volume (Bcf)*	Base Gas Volume (Bcf)*	Total Gas Volume (Bcf)*	Number of Wells
Base	Winterfield	25.30	47.00	72.30	239
	Overisel	25.50	27.50	53.30	141
	Salem	11.60	18.90	30.50	71
	Cranberry	11.00	17.20	28.20	127
	Riverside	1.50	7.50	9.00	49
Intermediate	Hessen	13.50	3.48	16.98	24
	Puttygut	9.50	5.10	14.60	24
	Four Corners	2.39	1.39	3.78	6
	Swan Creek	0.42	0.23	0.65	1
	Ray	48.10	17.27	65.37	62
Peaker	Ira	2.00	4.25	6.25	15
	Lyon 29	1.23	0.95	2.18	3
	Lenox	1.20	2.03	3.23	11
	Lyon 34	0.70	0.66	1.36	5
	Northville Reef	0.50	0.72	1.22	5
***NOTE:** All gas volumes are in MMcf at 14.73 psi saturated pressure base.					

Appendix F – Summary of Compressor Stations and Capabilities

Table 7: 2025 Compression Summary

Station	Mothballed / Retired				Operable			
	Units	# Units	Unit hp	Total hp	Units	# Units	Unit hp	Total hp
Ray					CAT 3616	5	4,735	23,675
Muskegon River	HVC Turbine	2 1	3,286 10,500	6,571 10,500	TLA HBA Turbine (Suction Boost)	2 4 1	3,400 2,600 10,076	6,800 10,400 10,076
St. Clair					Waukesha T-4500	4 2	4,835 3,971	19,340 7,942
Overisel					TLA	4	2,700	10,800
Northville					TLA (Transmission) TLA (Storage)	2 2	2,700 2,700	5,400 5,400
White Pigeon	KVT W-330	2 2	2,000 3,600	4,000 7,200	W-330 CAT 3616 V-250 CAT 3608	2 3 2 1	3,600 4,735 2,000 2,370	7,200 14,205 4,000 2,370
Freedom					Waukesha	5	3,750	18,750
Huron					CAT 3512	1	1,035	1,035
System Total		**7**		**28,271**		**40**		**147,393**

Appendix G – Energy Waste Reduction Offerings

Table 8: 2024–2025 Program Summary

Residential EWR Portfolio		
Program Name	**Markets Served**	**Program Offerings**
Appliance Recycling	All residential electric customers	• Incentive and environmentally responsible, free pick up of older, inefficient refrigerators, freezers, and small appliances.
Assessments and Behavioral	All residential customers	• Walk-through or virtual home inspection, installation of free energy-saving measures, and customized post-assessment report with energy-saving tips and recommendations tailored to customer's fuel type (dual fuel, natural gas–only, or electric-only). • Personalized household reports, sent by mail and/or email, with individual energy usage tips and program recommendations.
Home Solutions	Residential customers in single-family homes	• · Distributor and point of purchase rebates for the purchase and installation of high-efficiency heating, cooling, insulation, windows, and hot water equipment. • Web-based Find-a-Contractor tool.
Income-Qualified	Residential low-income customers in single-family homes	• · Free walk-through or virtual home inspection/assessment with equipment installation. • Home weatherization funding assistance. • Collaboration with community partners to provide maximum and coordinated benefit to income-qualified customers.
Income-Qualified Multifamily	Residential low-income customers in multifamily housing	• · Direct, no-cost installation of energy-saving devices in individual tenant units and common areas. • Educational materials explaining the program's energy and money saving benefits. • Prescriptive and custom incentives (offered at a higher rate than those in the Market-Rate Multifamily program) for property owners to install energy-saving equipment in individual units and common areas.
New Home Construction	Residential builders	• · Incentives for builders who construct new homes to ENERGY STAR standards or achieve a minimum Home Energy Rating System (HERS) score. • Builder training on high performance building practices and how to promote the value of energy-efficient homes.
Think! Energy	Early elementary to high school students and community groups	• · In-class or virtual EWR presentations and educational content for teachers and community groups. • Free energy-saving take-home kit including low-cost energy-efficiency measures and educational content.

Table 8 (Cont.): 2024–2025 Program Summary

Business EWR Portfolio		
Program Name	**Markets Served**	**Program Offerings**
Prescriptive	Large business customers	• · Prescriptive downstream and midstream rebates ranging from 20% to 40% of the incremental cost of high-efficiency electric and natural gas equipment.
Custom Solutions	Large business customers	• · Analysis, performance-based incentives, and technical assistance for large commercial and industrial customers who install high-efficiency equipment or process improvements not covered through the Prescriptive program.
Energy Assessments	Small- and medium-sized business (SMB) customers	• · On-site energy assessments with limited direct installation measures and a report on the measures installed, product recommendations, and tips on how to save more energy. • Installation and direct distribution (via mailed kits) of free measures including showerheads, faucet aerators, pre-rinse sprayers, pipe wrap, and programmable and smart thermostats.
Small Business Store	SMB customers	• · Self-service, online marketplace that provides instant incentives for the purchase of qualifying energy-efficient products.
SMB Contractor Rebates	SMB customers	• Installation of common lighting and refrigeration measures by participating trade allies.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

MARC R. BLECKMAN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Marc R. Bleckman, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. By whom are you employed and in what capacity?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company") as the Executive Director of Financial Planning and Analysis.

Q. What are your current responsibilities?

A. My responsibilities include preparation of the monthly forecasts, annual budgets, and long-term financial plans for Consumers Energy and CMS Energy, the parent company of Consumers Energy. As a part of my role, I conduct financial analyses and studies required for making various strategic decisions such as equity issuance, sale of businesses, and new investments. I assist the Chief Financial Officer in preparing the presentations for Board of Directors meetings, quarterly earnings calls, investor meetings, and industry conferences. My responsibilities also include preparation of the Renewable Energy Plan ("RE Plan") forecast model.

Q. Please describe your educational background and describe any positions held prior to your current position.

A. I received a Master of Business Administration Degree with a Finance concentration from the Katz Graduate School at the University of Pittsburgh in 2002. Upon receiving this degree in May 2002, I joined Ford Motor Company as a Financial Analyst. During my seven years of employment at Ford, I worked in various finance roles throughout the company, including Assembly Operations, Powertrain Operations, Ford Motor Credit, and the General Auditor's Office. My responsibilities within these organizations included, but

were not limited to, forecasting of and variance reporting on, all Income Statement and Balance Sheet line items, as well as business process auditing. In July 2009, I left Ford Motor Company to join Consumers Energy as a Principal Financial Analyst in the Company's Risk, Strategy, and Financial Advisory Services group. My responsibilities in this role included, but were not limited to, supporting the financial analysis and forecasting of the Company's renewable energy development plans, as well as conducting the Company's Enterprise Risk Management Program. In September 2012, I took on the role of Manager of Earnings Analysis in the Company's Financial Planning and Analysis Group. I began leading the Company's Financial Planning and Analysis team in February 2016 and I am presently the Senior Executive Director of Financial Planning and Analysis.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes. I provided testimony in:

- Case No. U-16543, the Company's 2011 Application to Amend the RE Plan;
- Case No. U-16581, the Company's 2011 Application for biennial review of the RE Plan;
- Case No. U-17301, the Company's 2013 Application for biennial review of the RE Plan;
- Case No. U-17752, the Company's 2015 Application to Amend the RE Plan;
- Case No. U-17792, the Company's 2015 Application for biennial review of the RE Plan;
- Case No. U-18231, the Company's 2017 Application for biennial review of the RE Plan;
- Case No. U-20322, the Company's 2018 Gas Rate Case;
- Case No. U-20483, the Company's RE Plan reconciliation proceeding for 2018;
- Case No. U-20650, the Company's 2019 Gas Rate Case;

- Case No. U-20697, the Company's 2020 Electric Rate Case;
- Case No. U-20722, the Company's RE Plan reconciliation proceeding for 2019;
- Case No. U-20963, the Company's 2021 Electric Rate Case;
- Case No. U-20984, the Company's RE Plan amendment proceeding for 2021;
- Case No. U-21009, the Company's RE Plan reconciliation proceeding for 2020;
- Case No. U-21148, the Company's 2021 Gas Rate Case;
- Case No. U-21197, the Company's RE Plan reconciliation proceeding for 2021;
- Case No. U-21224, the Company's 2022 Electric Rate Case;
- Case No. U-21308, the Company's 2022 Gas Rate Case;
- Case No. U-21352, the Company's RE Plan reconciliation proceeding for 2022;
- Case No. U-21374, the Company's Application for approval of revised Voluntary Green Pricing programs and a RE Plan amendment;
- Case No. U-21389, the Company's 2023 Electric Rate Case;
- Case No. U-21490, the Company's 2023 Gas Rate Case;
- Case No. U-21549, the Company's RE Plan reconciliation proceeding for 2023;
- Case No. U-21585, the Company's 2024 Electric Rate Case;
- Case No. U-21816, the Company's RE Plan amendment proceeding for 2024;
- Case No. U-21806, the Company's 2024 Gas Rate Case;
- Case No. U-21829, the Company's RE Plan reconciliation proceeding for 2024;
- Case No. U-21870, the Company's 2025 Electric Rate Case; and
- Case No U-21979, the Company's ex parte application for Accounting Approval to accrue an Allowance for Funds Used During Construction on construction work in progress for projects within its RE Plan.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to present my recommendations regarding the capital structure and cost of capital which should be used in computing the overall rate of return for Consumers Energy.

Q. How is your direct testimony organized?

A. My direct testimony is organized as follows:

I. SUMMARY OF RECOMMENDATIONS

II. CAPITAL STRUCTURE AND COST RATES

A. Development of Capital Structure

B. Development of Cost Rates

III. EXHIBITS FOR CERTAIN FILING REQUIREMENTS – CREDIT RATINGS AND RECENT UTILITY BOND ISSUANCES

IV. PROJECTED CASH BALANCE

V. SHORT-TERM BORROWING FACILITIES

VI. SUMMARY AND CONCLUSIONS

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-14 (MRB-1)	Schedule D-1	Overall Rate of Return Summary;
Exhibit A-14 (MRB-2)	Schedule D-1a	Capital Structure Development;
Exhibit A-14 (MRB-3)	Schedule D-1b	Comparison of Development of Capital Structure;
Exhibit A-14 (MRB-4)	Schedule D-2	Cost of Long-Term Debt;
Exhibit A-14 (MRB-5)	Schedule D-3	Cost of Short-Term Debt;
Exhibit A-14 (MRB-6)	Schedule D-4	Cost of Preferred Stock;
Exhibit A-14 (MRB-7)	Schedule D-6	Short-Term Debt Utilization;

Exhibit A-31 (MRB-8)	Current and Historical Credit Ratings;
Exhibit A-32 (MRB-9)	Recent Utility Corporate Bond Issuances;
Exhibit A-33 (MRB-10)	Peer Company Commission Authorized Equity Ratios;
Exhibit A-34 (MRB-11)	State Regulatory Evaluations;
Exhibit A-35 (MRB-12)	Cumulative Annual Interest Savings;
Exhibit A-36 (MRB-13)	S&P February 4, 2025 Report;
Exhibit A-37 (MRB-14)	S&P Global August 7, 2024 Report – RRA State Regulatory Evaluations – Energy;
Exhibit A-38 (MRB-15)	UBS May 10, 2023 Report;
Exhibit A-39 (MRB-16)	S&P January 14, 2025 Report;
Exhibit A-40 (MRB-17)	S&P September 15, 2025 Credit Report;
Exhibit A-41 (MRB-18)	Moody's May 29, 2025 Credit Report;
Exhibit A-42 (MRB-19)	Fitch April 11, 2025 Credit Report; and
Exhibit A-43 (MRB-20)	Peer Company Revolver Capacity Analysis.

Q. Were these exhibits prepared by you or under your direction or supervision?

A. Yes.

I. SUMMARY OF RECOMMENDATIONS

Q. What capital structure are you recommending be utilized in the overall rate of return calculation?

A. I am recommending that the capital structure shown on page 1 of Exhibit A-14 (MRB-1), Schedule D-1, be used in this case. This represents the actual capital structure as of

December 31, 2024, adjusted for the projected changes in debt, equity, deferred income taxes, and Investment Tax Credit ("ITC") through the end of the test year ending on October 31, 2027. The development of the capital structure on a ratemaking basis is shown in columns (b) through (d). The equity ratio as a percentage of permanent capital is 50.75%. The equity ratio as a percentage of total capital is 43.33%.

Q. What Return on Equity ("ROE") are you assuming to determine the overall cost of capital for Consumers Energy?

A. I am assuming an ROE for Consumers Energy of 10.25%. This ROE is recommended by Company witness Ann E. Bulkley and supported in further detail in her direct testimony.

Q. What is the overall rate of return for Consumers Energy that you recommend be used in this case?

A. I am recommending an overall rate of return of 6.40% on an after-tax basis. This overall rate of return is the result of combining the capital structure and cost rates shown on Exhibit A-14 (MRB-1), Schedule D-1, page 1. The cost of the components and the weighted cost are shown in columns (e) through (i). The overall rate of return that I am recommending is the weighted cost of the various components of the capital structure.

II. CAPITAL STRUCTURE AND COST RATES

A. Development of Capital Structure

Q. What is capital structure?

A. Capital structure refers to the amounts and mix of a company's financing components which make up the funds used for its operations and capital investment. For the Company, this includes long-term debt, common equity, preferred equity (or preferred stock), short-term debt, ITC, and deferred income taxes.

Q. What is long-term debt and short-term debt?

A. Long-term debt consists of loans that have a due date (or maturity) that is more than one year from the date of issuance. For the Company, long-term debt consists exclusively of First Mortgage Bonds. Short-term debt represents borrowings that are short-term in nature (less than one year), and includes borrowings under the Company's credit facilities, including commercial paper and intercompany borrowings. The Company aims to finance its long-term capital (such as plant and property) with long-term debt and equity, and to finance short-term capital requirements (such as seasonal working capital needs) with short-term debt. This financing strategy is explained in more detail later in my direct testimony.

Q. What is common equity and preferred equity?

A. Equity is the net worth (assets minus liabilities) of a company. Common equity increases with net income (retained earnings) and with equity contributions from the Company's parent, CMS Energy. Common equity decreases when the Company makes dividend distributions to CMS Energy. Preferred equity is distinguished from common equity in that there is a fixed preferred dividend rate on preferred stock. Also, preferred equity has a higher ("preferred") claim to the Company's net assets in the event of insolvency.

Q. Do taxes play a part in the capital structure?

A. Yes. Deferred taxes and ITC represent reported book taxes that, due to special Internal Revenue Service deductions, measurements, or treatments, will not have to be paid until sometime in the future. This represents a temporary "zero cost" source of funding for the Company and is included as a component of the capital structure.

Q. How did you develop the long-term debt, preferred stock, common equity, short-term debt, deferred income tax, and ITC balances in the capital structure?

A. I started with the actual balances of long-term debt, preferred stock, common equity, short-term debt, deferred income taxes, and ITC as of December 31, 2024, as shown in Exhibit A-14 (MRB-2), Schedule D-1a, page 1, column (e). I then made the adjustments shown in column (f) to arrive at the average test year balance ending October 31, 2027, in column (g) that I am recommending be used in this case.

Q. Please explain the common equity adjustment of $3.405 billion.

A. I have projected that the 13-month common equity balance for the test year will be $3.405 billion higher than the December 31, 2024 balance. The common equity adjustment of $3.405 billion consists of two components. The first is an adjustment to reflect $497 million in projected retained earnings on a weighted average basis from January 2025 through October 2027. The second is an adjustment of $2.908 billion to reflect the projected equity infusions on a weighted average basis from January 2025 through October 2027.

Q. What are retained earnings?

A. Retained earnings are a company's net income from operations and other business activities retained by the company as additional equity capital. Retained earnings are, thus, a part of stockholders' equity.

Q. Please explain the retained earnings adjustment of $497 million.

A. Since I started with the December 31, 2024 balance for common equity, it was necessary to make an adjustment to reflect the increase in the common equity balance through retained earnings that will occur on a weighted average basis through October 31, 2027.

Q. Please explain how you projected the change in Consumers Energy's retained earnings from January 2025 through September 2025.

A. For the period of January 2025 through September 2025, I relied on actual changes in regulatory retained earnings. For the period of October 2025 through December 2025, I assumed the change in retained earnings would be equal to the actual change in retained earnings for the same months in 2024.

Q. Please explain how you projected the change in Consumers Energy's retained earnings from January 2026 through the test period ending October 2027.

A. Consumers Energy has a long-standing policy of using an 80% dividend payout ratio. I assumed Consumers Energy's retained earnings rate to be $16.783 million per month, or $201.4 million per year, from January 2026 through October 2027.

Q. Please explain how you arrived at Consumers Energy's retained earnings rate of $201.4 million per year.

A. Based on Consumers Energy's Securities and Exchange Commission Form 10-K for 2024, I determined that Consumers Energy's net income for the 12-month period ended December 31, 2024, was $1.007 billion. I used this amount as a proxy for the future net income and assumed a dividend payout ratio of 80%. Using these assumptions, I calculated an annual retained earnings amount of $201.4 million [$1,007 x (1-0.80)]. Exhibit A-14 (MRB-2), Schedule D-1a, page 3, shows the projected monthly retained earnings balance and calculates the 13-month average for the period ending October 31, 2027.

Q. What are equity infusions?

A. Equity infusions are cash investments made by CMS Energy into Consumers Energy, thereby increasing the Company's common equity balance.

Q. Why did you make a $2.908 billion adjustment for the new equity infusions in your recommended capital structure?

A. This is the amount needed to hold a 50.75% equity ratio for the test period in this case. CMS Energy made equity infusions totaling $920 million in 2025 and plans to make equity infusions of $800 million by February 2026, $500 million by June 2026, $675 million by February 2027, and $575 million by June 2027. Accordingly, I reflected this in the equity balance for the test year for this case on a weighted average basis. The impact of these equity infusions on the cumulative balance is shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 3. The 13-month average for the period ending October 31, 2027, is $2.908 billion. When the 13-month average for the equity infusions of $2.908 billion is combined with the 13-month average $497 million retained earnings adjustment, the increase to equity capital is the $3.405 billion shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 1.

Q. How is your testimony structured with regard to the proposed equity ratio?

A. My testimony describing the key factors and providing evidence that supports the proposed equity ratio of 50.75% is organized as follows:

i. Peer Authorized Equity Ratios are Higher and Trending Up

ii. Equity Ratio/ROE Impact on Credit Quality

iii. Rating Agencies' Assessment of the Regulatory Environment

iv. Credit Challenges Facing Regulated Utilities

i. Peer Authorized Equity Ratios are Higher and Trending Up

Q. How does the 50.75% equity ratio proposed in this case compare to other utilities?

A. To compare the 50.75% equity ratio proposed in this case to other utilities, I researched all rate case decisions of peer companies from 2021 through mid-October 2025 and determined the authorized or approved equity ratio for each. This is reflected on Exhibit A-33 (MRB-10). Peer companies for this analysis are defined as regulated subsidiaries of the Company's ROE proxy group reflected on Exhibit A-14 (AEB-1), Schedule D-5, page 2, and excludes orders received by in-state proxy DTE Energy Company as well as the Company. The average equity ratio for the peer group was 54.49%, 374 basis points higher than the 50.75% proposed for Consumers Energy in this case.

Q. Are the equity ratios reflected in your sample based on reported financial data or Commission-authorized equity ratios in regulatory proceedings?

A. The equity ratios were taken from Commission orders and public filings and represent actual regulatory equity ratios authorized or approved by different commissions across the country. It is clear from this analysis that, on average, regulatory commissions of the Company's peer group are granting equity ratios that are much higher than the 50.75% that is proposed by the Company in this instant case.

Q. Are the utilities included in Exhibit A-33 (MRB-10) companies at the parent holding company level or the regulated subsidiary level?

A. The utilities included in Exhibit A-33 (MRB-10) are at the regulated subsidiary level. This is important because Consumers Energy is a regulated subsidiary; therefore, the comparison to the average commission-authorized equity ratios also needs to be at that same level in order for the analysis to be a valid comparable benchmark in this case.

Q. Is it appropriate to use equity ratios at the parent holding company level in order to determine the average "peer group" equity ratio for the Company in this case?

A. No. Companies at the parent holding company level should not be considered "peers" for purposes of determining the average equity ratio for the Company's peer group. This would be a misleading comparison since equity ratios at the parent holding company level may be distorted by other, non-regulated balance sheet items. In addition, an analysis of equity ratios at the parent holding company level may also be skewed since the source for this data is most likely Securities and Exchange Commission reported financial statements, which are prepared under Generally Accepted Accounting Principles. There are major differences in how components of the capital structure are classified on a ratemaking basis and on a financial basis which would further distort the equity ratios calculated at the parent holding company level.

Q. Has the Commission addressed the fact that an analysis of equity ratios at the parent holding company level is not appropriate?

A. Yes. In its Order in Case No. U-20963, the Commission stated that "regulatory and financial data should not be combined" with such an analysis. Further, the Commission deemed that such an analysis is invalid assuming one "could not verify that its data contained equity ratios set by a regulatory commission in a rate case." It is clear from the Commission's Order that actual commission authorized equity ratios at the regulated subsidiary level as presented in Exhibit A-33 (MRB-10) is the preferred data source for an analysis comparing relative equity ratios of peers.

Q. What has been the trend in authorized equity ratios for regulated utilities?

A. Equity ratios for regulated utilities have increased over the last several years. This trend was highlighted in a February 2025 S&P Global RRA Regulatory Focus report. See Exhibit A-36 (MRB-13). As described in the Company's testimony in previous rate cases, negative cash flow and credit metric impacts occurred when federal tax changes took effect in 2018. In subsequent years, utility commissions adopted higher equity ratios as one way to combat those impacts. The S&P Global report describes this as follows:

> *The negative cash flow impact from federal tax changes that took effect in 2018 raised concerns regarding utility liquidity and credit metrics. In response, many utilities sought higher common equity ratios. Consequently, the average authorized equity ratios adopted by utility commissions in 2019 were modestly higher than those observed in 2018 and 2017.*

In describing the long-term trend in authorized equity ratios, the S&P Global report states:

> *From a longer-term perspective, equity ratios have generally increased over the past several years. In 2005, the average equity ratio approved in electric rate cases was 47.34%; for gas utilities, it was 48.40%. Following the 2008 financial crisis, many commissions began approving equity-richer capital structures. Authorized equity ratios for gas utilities have consistently been higher than those for electric utilities for most of the period since 2005.*

The report also finds that the average equity ratio authorized for gas utilities was 52.13% in 2024. It is clear from this report that authorized equity ratios for regulated utilities have increase over the long term, including the years following the 2018 U.S. tax reform.

Q. How does the trend in the Company's authorized equity ratio compare to other utilities?

A. While the authorized equity ratio for other utilities has increased, the Company's authorized equity ratio has decreased 205 basis points from 2019 (Case No. U-20322) to present, weakening credit quality and putting the Company's credit rating at risk. The

Company has presented data showing that peer authorized equity ratios are significantly higher and are trending up. While this data indicates that a higher equity ratio is warranted, the Company is proposing an equity ratio of 50.75% in this case. This is the minimum amount that, taken together with an ROE of 10.25%, reflects the appropriate level that the Commission should adopt to help preserve Consumers Energy's current credit rating.

ii. Equity Ratio / ROE Impact on Credit Quality

Q. How does the equity ratio approved in this case impact the Company's credit metrics and credit quality?

A. A key financial metric used by rating agencies is the ratio of Funds From Operations ("FFO") to Debt ("FFO-to-Debt ratio"). The calculation of this financial metric includes, in part, both the equity ratio and the authorized ROE of the Company; thus, there needs to be a balance between the Company's equity ratio and ROE that will ensure that this key financial metric does not degrade and cause significant credit deterioration. An equity ratio of 50.75% and an ROE of 10.25%, as recommended by the Company in this case, results in an FFO-to-Debt ratio that is sufficient in striking this balance.

Q. What is an FFO-to-Debt ratio?

A. An FFO-to-Debt ratio is a financial metric that compares a company's cash flow from operating activities to a company's leverage, or debt outstanding. It can also be described as a type of payback ratio, reflecting the Company's ability to repay its outstanding debt with operating cash flow. A higher FFO-to-Debt ratio, one which reflects a higher level of cash flow from operating activities to offset or otherwise reduce the risk associated with the Company's ability to pay its debts, is viewed favorably and indicative of a lower financial risk and a resulting higher relative credit rating. A higher credit rating, in turn, results in lower financing rates. This is comparable to a bank's credit evaluation for

someone requesting a personal loan. After reviewing personal income and outstanding debt, banks generally offer lower financing rates to individuals who have more cash flow to repay debt, indicating a relatively higher credit quality.

Q. Discuss the relationship between the Company's ROE, its equity ratio, and the Company's credit metrics.

A. As discussed earlier in my testimony, ROE and equity ratio are two inputs in determining the Company's ratio of FFO to Debt, and FFO-to-Debt ratios are used by credit agencies to determine the Company's financial health. Consequently, it is important to recognize that the Company's ROE and equity ratio cannot be evaluated in isolation, but should, instead, be viewed as interconnected components that determine the Company's overall financial health. An ROE of 10.25%, when taken together with an equity ratio of 50.75% results in an FFO-to-Debt ratio that the Company believes is acceptable in this instant case and is responsive to recent Commission orders. A lower authorized ROE would, therefore, necessitate a higher approved equity ratio to maintain the same level of financial health.

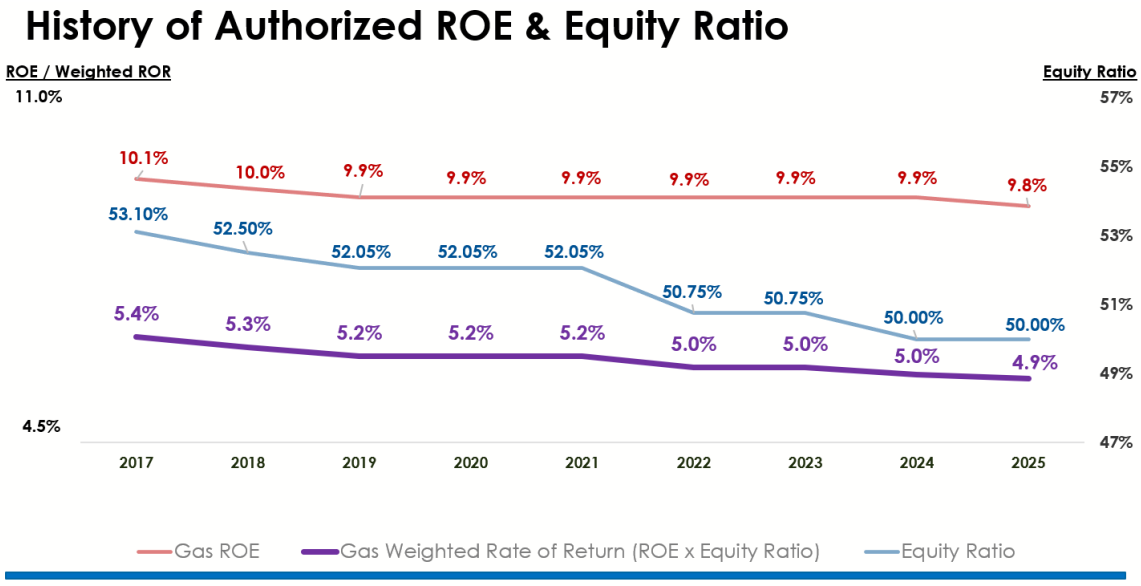
Q. How can the combined cost of a Company's equity ratio and ROE components be properly evaluated?

A. Multiplying the equity ratio by the ROE produces a weighted cost or "rate of return." This is shown on Exhibit A-14 (MRB-1), Schedule D-1, page 1. On line 6 of this exhibit, the equity ratio of 50.75% from column (c) is multiplied by the ROE of 10.25% from column (e) to produce a weighted cost of 5.20%, shown in column (f). This is the weighted cost of common equity, a component of the Company's overall rate of return. This rate of return is important to consider since it takes into account the equity ratio in combination

with the ROE. As discussed earlier in my testimony, the 50.75% equity ratio and 10.25% ROE is a combination that the Company believes is acceptable in this instant case.

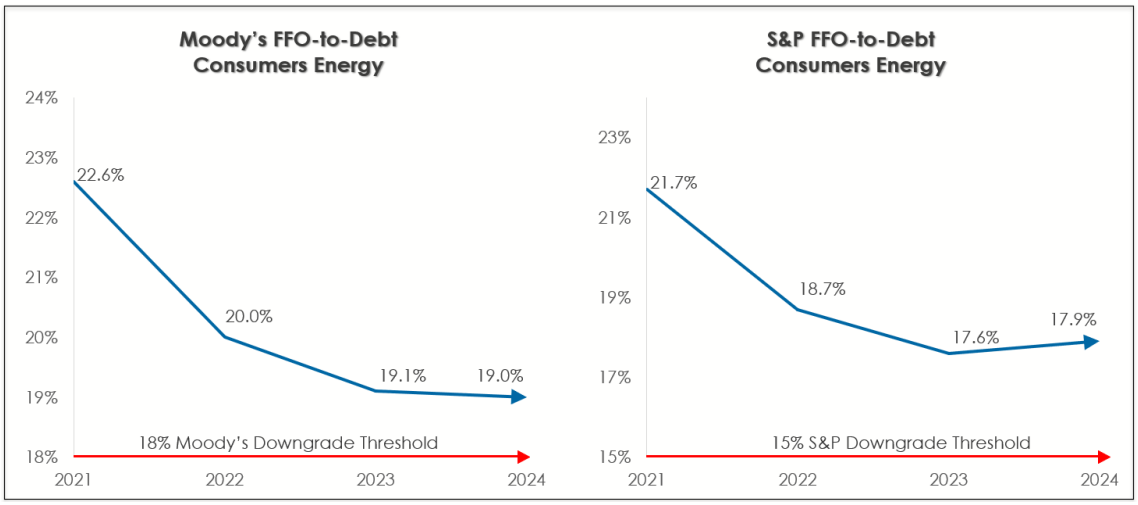
Q. What has been the recent trend of the Company's weighted rate of return?

A. Recent rate cases have resulted in a steadily declining rate of return. This is illustrated in the following chart which includes a history of gas authorized ROE, equity ratio, and resulting weighted rate of return.



Q. What has been the trend of the Company's credit metrics over the last few years?

A. The Company's FFO-to-Debt ratio as calculated by Standard and Poor's ("S&P") has been trending down in recent years from 21.7% in 2021 to 17.9% in 2024, a decrease of 380 basis points. In addition, the Company's FFO-to-Debt ratio as calculated by Moody's Investors Service ("Moody's") has also been trending down in recent years from 22.6% in 2021 to 19.0% in 2024, a decrease of 360 basis points. These credit metric results are shown in the following chart:



As explained earlier in my direct testimony, recent rate cases have resulted in a sharp decline in rate of return (ROE multiplied by equity ratio). A reduction in the Company's rate of return lowers the Company's cash flow and FFO-to-Debt ratio. The Company also needs to increase its long-term debt to achieve a lower equity ratio. This increase in debt also weakens the Company's FFO-to-Debt ratio. These negative credit metric impacts puts the Company's credit quality and credit ratings at risk.

Q. Are there additional credit metric considerations for the Company through the test year of this case?

A. Yes. The Company has multiple cost deferral mechanisms, both approved and pending in other cases. While the Company is in full support of these expense deferral mechanisms as a method to complete emergent and necessary customer work outside of traditional rate relief, the cash flow and credit metric impact must also be considered as the Company continues to fund more customer investment ahead of customer collections. During the deferral period, the Company would be absorbing the cash and expense burden to fund the programs while not collecting any of those costs from customers. This deferral has the effect of increasing long-term financing needs for the Company without creating cash flow

the way traditional capital does via non-cash depreciation expense in rates. The credit metric pressure resulting from these deferral mechanisms makes the authorized ROE and equity ratio a critical factor in maintaining the Company's good credit quality.

Q. What are the customer benefits of the Company maintaining a higher credit rating?

A. The Company provides a critical service that directly impacts customers' quality of life. The Company's ability to deliver long-term investments to the infrastructure that provide safe, reliable, and clean energy will depend on the financial strength of the Company, of which the Company's credit rating is a key indicator. As set forth in the testimony and exhibits of the Company's multiple capital witnesses, the Company is making significant capital investments to maintain and improve infrastructure to the benefit of customers. During this time, the Company will rely heavily on the capital markets to fund these investments. Generally, a higher credit rating results in lower financing rates. Therefore, it will be especially important for the Company to maintain strong credit ratings over this period. As shown in Exhibit A-35 (MRB-12), the Company has saved customers $120 million annually as a result of improved credit ratings and lowered interest costs.

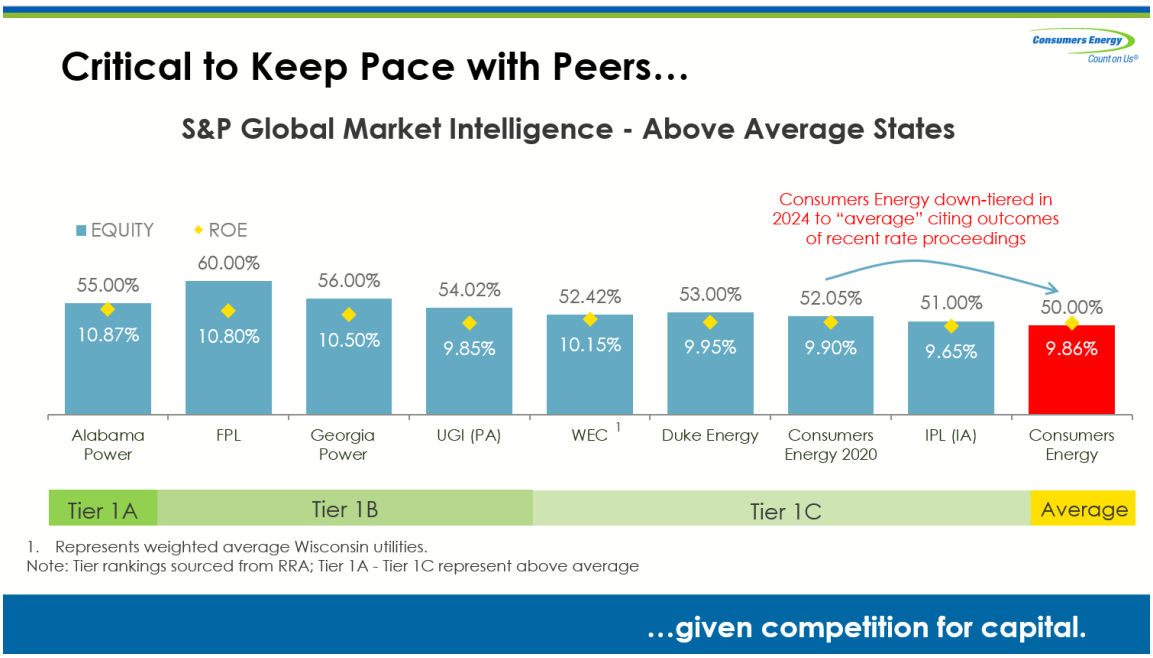
The common equity balance and equity ratio projected for the test year in this case also enable the Company to maintain strong credit ratings and better withstand any shocks in the financial markets. An example of this was in March 2023, when Silicon Valley Bank and Signature Bank collapsed, forcing the Federal government to step in and take over the banks. Silicon Valley Bank marked the biggest failure of a United States bank since the 2008 global financial crisis and led to significant market turmoil. Other large banks such as Credit Suisse and First Republic Bank also experienced significant financial pressure caused by the ensuing market panic. Strong credit ratings can help protect customers from

spikes in interest rates which increase the cost of capital, and/or inaccessibility to the capital markets which serve as a key source of financing for the Company's investments on behalf of customers. Strong credit ratings can also enable the Company to issue long-term debt ahead of upcoming maturities ("pre-fund") to take advantage of low interest rates and favorable issuance windows without jeopardizing the Company's financial ratios. When market conditions are favorable, refinancing higher interest rate debt at lower rates reduces the Company's overall cost of capital included in customer rates.

iii. Rating Agencies' Assessment of the Regulatory Environment

Q. How else does the equity ratio and ROE impact the Company's credit quality?

A. One component of rating agencies' evaluation of credit quality involves an assessment of the Company's regulatory environment. If the Commission demonstrates a pattern of consistent, constructive rate orders, it contributes favorably to the Company's credit quality and credit rating. The authorized equity ratio and ROE are two important components in the rating agencies' assessment of the regulatory environment. Refer to Exhibit A-37 (MRB-14), S&P's State Regulatory Evaluations – Energy. In August 2024, S&P lowered its ranking of Michigan's regulatory environment from "Above Average" to "Average." This is reflected in the following chart:



In downgrading its state regulatory rating, S&P referenced recent rate case decisions in Michigan including authorized ROEs which "compare less favorably" to prevailing industry averages and a "tightening in the regulatory climate." In recent rate case filings, the Company has included this chart, noting that the recent decline in the Company's weighted rate of return has led to the risk that the Company will no longer be ranked as a utility in an above-average tier jurisdiction. S&P's August 2024 report confirms that this risk has been realized.

Q. Is there evidence that analysts have also started to recognize a decline in the state of the Company's regulatory environment?

A. Yes. In updating its regulatory rankings for U.S. utilities in May 2023, UBS downgraded Michigan from Tier 1 to Tier 2. In describing the negative change, UBS specifically mentioned authorized ROEs ranking in the 3rd quintile as well as a lowering of their "subjective factor" for the Michigan regulatory jurisdiction, which is based on UBS's "knowledge of current commission actions." Refer to Exhibit A-38 (MRB-15). It is

apparent that rating agencies and analysts are taking note of the Company's regulatory outcomes and are viewing them unfavorably. A continuation or, even worse, a further degradation of the authorized equity ratio and ROE puts the Company at risk of dropping further in its regulatory environment rankings which could negatively impact the Company's credit quality and credit rating. Michigan's above average regulatory standing needs to be protected and bolstered rather than leveraged to justify further credit deterioration and over-leveraging of the Company.

iv. Credit Challenges Facing Regulated Utilities

Q. Have rating agencies commented on the credit quality of regulated utilities as a whole?

A. Yes. Refer to Exhibit A-39 (MRB-16). In a January 2025 report on North American regulated utilities, S&P highlighted lower ratings headroom as "a high percentage of companies are operating with only minimal financial cushion from our downgrade threshold." S&P also notes that, in 2024, downgrades among North America's investor-owned regulated utilities outpaced upgrades for the fifth consecutive year. With regard to the industry credit outlook for 2025, S&P identifies the following risks to utilities' credit quality:

- The portion of equity in the industry has been weak and consistently below expectations and thus pressuring the industry's financial measures. S&P states that "without significantly more common equity issuance, we expect the industry's financial measures will continue to weaken, albeit gradually, supporting our negative outlook";
- Tax legislation could weaken financial measures if the new Republican administration lowers the corporate tax rate, reduces tax credits, or eliminates their transferability; and
- Robust capital spending and challenging regulatory constructs will persist for 2025, further pressuring the industry's credit quality.

S&P also cites Michigan as one of the regulatory jurisdictions that they "continue to carefully monitor." As highlighted earlier in my testimony, there has been a sharp decline in the Company's authorized weighted rate of return following several years of consistent results. It is apparent from this S&P report that a supportive ROE and equity ratio is critical in maintaining a "financial cushion" to protect against downgrade in the event of unforeseen events like the market volatility and disruption that occurred during the onset of the COVID-19 pandemic in 2020 or the financial pressure caused by the dramatic increase in gas prices and interest rates in 2022 or the banking crisis of 2023. These events and rating agency comments highlight the importance for the Company to maintain strong financial metrics and to not manage toward the perceived low end of the credit metric bands. The Company's ability to continue to provide customers with safe, reliable, and clean energy and make the necessary capital investments is directly tied to the Company's ability to maintain its financial strength.

Q. Is an equity ratio of 50.75% and an ROE of 10.25% as proposed by the Company in this case the optimal outcome for the Company and its customers?

A. Yes. This equity ratio and ROE combination is well-measured for both the Company and its customers, while still mindful of the Commission's Order in Case No. U-21806. This results in a weighted rate of return of 5.20% (50.75% x 10.25%), which is 30 basis points higher than the weighted rate of return of 4.90% (50.00% x 9.80%) approved in Case No. U-21806. This capital structure results in a reasonable impact on customer rates while bringing the Company more in-line with the authorized weighted rate of return experienced toward the beginning of the COVID-19 pandemic and prior to the most recent credit rating downgrade. The weighted rate of return as proposed in this case strengthens the

Company's balance sheet and credit quality which will be critical in delivering the Reliability Roadmap investments while doing so in the midst of a sustained elevated interest rate environment.

Q. Please explain the long-term debt adjustment of $2.942 billion.

A. I have projected that the average debt balance for the test year ending October 31, 2027, will be $2.942 billion higher than the December 31, 2024 balance. This adjustment consists of the following components:

Long-Term Debt (in millions)			Oct. 31, 2027 Test Year
Month	Issuance	Retirement	Impact
May 2025	$1,125	$0	$1,125
May 2026	$775	($115)	$660
Aug. 2026	$675	$0	$675
May. 2027	$725	$0	$335
Aug. 2027	$700	$0	$162
Oct. 2027	$0	($100)	($8)
Subtotal			$2,949
Changes in Unamortized Fees			(7)
Total			**$2,942**

The development of the 13-month average long-term debt balance is shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 2.

Q. Please describe the planned debt issuances in May 2026, August 2026, May 2027, and August 2027.

A. Each of these planned debt issuances will be used for general corporate purposes of the Company including financing capital expenditures. The debt planned to be issued in May 2026 will also be used for the retirement of the Company's $115 million 5.24% bonds which mature in May 2026. The debt planned to be issued in August 2027 will also be used for the retirement of the Company's $100 million 3.68% bonds which mature in October 2027. These planned debt issuances have been determined based on the Company's financing plans after evaluating cash and liquidity requirements for the Company.

Q. What long-term debt was included in developing the 13-month average amount outstanding for the period ending October 31, 2027?

A. Exhibit A-14 (MRB-4), Schedule D-2, shows the long-term debt that was included in developing the 13-month average for the period ending October 31, 2027. The average amount outstanding on line 65, column (j), ties to the 13-month average balance shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 2.

Q. What is your projection regarding the level of short-term debt balance for the test year ending October 31, 2027?

A. I have projected an average short-term debt balance for the test year of $162 million. This balance is shown on Exhibit A-14 (MRB-1), Schedule D-1, page 1, line 10, column (b); Exhibit A-14 (MRB-2), Schedule D-1a, page 1, line 10, column (g); and Exhibit A-14 (MRB-5), Schedule D-3, page 1, line 1.

Q. What are the components of the average short-term debt balance?

A. Revolvers, commercial paper, and intercompany borrowing are short-term financing options available to the Company. Revolvers are revolving lines of credit that allow the Company to borrow and repay as long as the outstanding balances remain within the credit limits, or capacity. Commercial paper represents debt issuances under the Company's Commercial Paper Program that are short-term in nature, typically 1- to 90-day maturities. Intercompany borrowing represents short-term borrowings from CMS Energy. Intercompany borrowing is drawn under a promissory note with CMS Energy up to $500 million and carries an interest rate of 1-month Secured Overnight Financing Rate ("SOFR")[1] minus 10 basis points. The Company is the beneficiary of intercompany borrowing to meet short-term liquidity needs when it is available and when it is the most cost-effective alternative. It should be noted that the intercompany borrowing facility is not a dedicated financing option that is always available for the Company to use, but only when CMS Energy has surplus cash and effective borrowing rates must be lower than rates available to the Company under the Commercial Paper Program. The intercompany borrowing facility, therefore, is not considered part of the total liquidity capacity available to the Company.

Q. How was the short-term debt balance of $162 million developed?

A. Exhibit A-14 (MRB-7), Schedule D-6, shows the projected balances, by month, of short-term debt for the test year ending October 31, 2027. I have arrived at these projections after considering the projected total monthly cash flow requirements, planned

[1] SOFR, a benchmark interest rate used in calculating short-term variable interest rates throughout the world. SOFR replaced the London Interbank Offered Rate ("LIBOR") in 2023.

long-term debt (net) and equity issuances, and the amount of short-term financing available.

Q. Are the projections for short-term debt reflected on Exhibit A-14 (MRB-7), Schedule D-6, expected to be issued under the Company's revolvers, its Commercial Paper Program, or its intercompany borrowing agreement?

A. The Company borrows on its short-term financing facilities in order from least expensive to more expensive. The following is the prioritized order in which the Company utilizes its short-term financing facilities:

		Amount	**Credit Capacity**
1a. 1b.	Commercial Paper Intercompany Borrowing**	$500 million $500 million	$500 million*
2.	Scotiabank Revolver	$250 million	$250 million
3.	JPMorgan Revolver	$1.1 billion	$600 million*
	Total		$1.35 billion

*Takes away $500 million of the JPMorgan revolver's $1.1 billion capacity (leaving $600 million available).

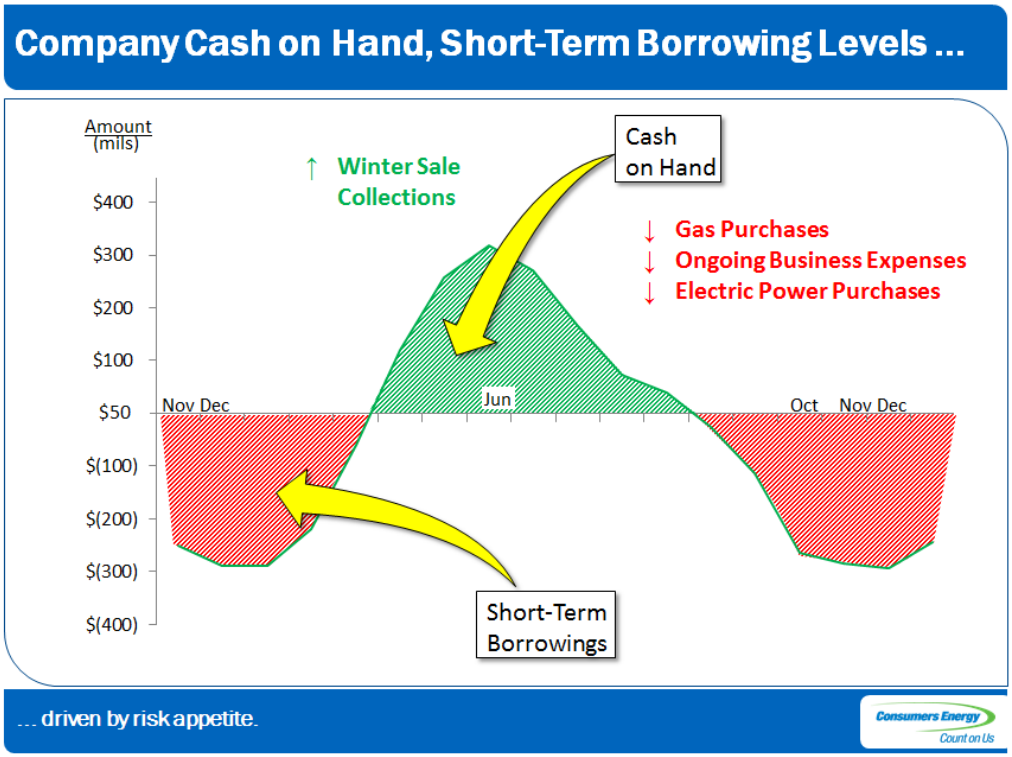
**Intercompany Borrowing or Commercial Paper is used first, depending on availability and which alternative is the most cost-effective at the time of borrowing.

All of the projected test year balances for short-term debt are assumed to be issued under the Company's Commercial Paper Program. This program, along with the intercompany borrowing facility, are the least expensive short-term financing options to the Company and are assumed to be used first when the need arises. The Company's $250 million Scotiabank revolving credit facility is the next least-costly, short-term financing option,

with the remaining $600 million revolver ($1.1 billion total capacity less $500 million drawn commercial paper) assumed to be used last.

Q. How does the timing and amount of short-term borrowings fit into the Company's overall liquidity and financing strategy?

A. The Company strives to match long-term investments with long-term financing and to finance short-term liquidity needs with its cash and short-term borrowing facilities. The timing and amount of short-term borrowings is directly related to the level of cash on hand. Due to the seasonal nature of utility cash inflows and outflows, the Company generally holds more cash in the spring and summer months and relies on short-term borrowing in the fall and winter months. Throughout the year, however, a minimum level of cash on hand is maintained. This is reflected in the following chart which depicts the typical cash and short-term borrowing levels through a given year:



Q. In order to reduce costs, would the Company consider maintaining a permanent layer of short-term debt?

A. No. Short-term financing markets can be volatile and, at times, access to those markets completely disappear, as was witnessed during the 2008 credit crisis, again in March 2020 as a result of pandemic-related market fear, and again in March 2023 during the banking industry turmoil described earlier in my testimony. Based on the experience and judgment of the Company's Treasury Department, as well as members of the Financial Planning and Analysis Department, the Company does not pursue a strategy that maintains a permanent balance of short-term debt. However, the Company does fund seasonal fluctuations in its working capital with short-term debt as previously illustrated. Based on historical trends of these seasonal fluctuations, the difference between the maximum working capital surplus and the maximum level of working capital deficiency (peak-to-valley) is approximately $300 million to $600 million. The Company is generally comfortable financing between $200 million and $400 million of this gap with short-term borrowings as doing so leaves adequate undrawn capacity in the event of financial market volatility or disruption. In addition, rating agencies assess the Company's liquidity as a component of their overall credit rating methodology. Reducing cash balances and relying consistently on short-term borrowings would weaken the Company's liquidity metrics. Finally, if the Company were to establish and maintain a permanent level of short-term debt, this should be taken into account in calculating the appropriate equity ratio in this case. If the short-term debt balance were included in the debt-to-equity ratio calculation, the required equity balance would need to increase in order to achieve the appropriate 50.75% equity ratio. Doing so would result in a higher overall cost of capital.

Q. How does the Company balance the benefit of carrying sufficient liquidity with the cost of maintaining its short-term credit capacity?

A. The Company's projected $1.35 billion total short-term credit capacity is reasonable and necessary to conduct daily operations and also to keep credit risk at a reasonable level. To maintain strong financial health, it is important for the Company to maintain adequate short-term financing capacity for normal business operations while retaining an adequate amount of additional liquidity for cases of extreme market fluctuations or other unforeseen circumstances. As shown in Exhibit A-14 (MRB-7), Schedule D-6, the Company projects up to $483 million of short-term borrowings, utilizing most of the $500 million capacity of the Commercial Paper Program. Access to the commercial paper market, however, requires an equivalent amount of revolving credit capacity as a "backstop"; therefore, of the Company's $1.35 billion of revolving credit facilities, $500 million is used to support commercial paper issuance. The remaining $850 million of revolver capacity is a vital backstop for capital expenditures and upcoming long-term debt maturities.

Q. Did the dramatic increase in natural gas prices in 2022 serve as an example of the importance of the Company holding sufficient short-term credit capacity?

A. Yes. The Company generally funds its natural gas purchases using short-term borrowing. Surging demand in the United States combined with national inventory levels below historical averages drove gas prices higher in 2022. In addition, Russia's invasion of Ukraine and the related energy market disruptions further increased gas prices. As a result, the Company had to purchase natural gas at significantly higher prices. In fact, the Company held over $1 billion in short-term debt in November and December 2022, as previously described. While the Company was able to secure a $1 billion term loan in

July 2022 to meet the excessive short-term borrowing requirements, access to this type of facility at reasonable interest rates is not guaranteed in the future, particularly during times of extreme capital market volatility or the inability to access those markets as described earlier in my direct testimony. The dramatic increase in gas prices in 2022 and the resulting elevated short-term borrowing levels highlights the importance of maintaining sufficient short-term credit capacity to ensure that the Company is able to adequately fund gas purchases, continue operations, and serve customers.

Q. Has the Company included the renewable liability balance in its projected short-term debt balance?

A. No. Consistent with the Company's Renewable Energy Plan in Case No. U-21816 filed in November 2024, a renewable liability balance is not expected through the test year of this case. As described earlier in my direct testimony, the capital structure in general rate cases is composed of financing components used to fund its operations and capital investment and includes debt, equity, and deferred income tax balances. Since it would be inappropriate to include an asset balance, the Company has thus excluded this component from the projected capital structure.

Q. Please explain the deferred income tax adjustment of $380 million.

A. The Company's Tax Department has projected that the average deferred income tax balance for the test year ending October 31, 2027, will be $380 million higher than the December 31, 2024 balance. This increase is based on projecting book versus tax differences that the Company expects to record from January 2025 through October 2027. These adjustments total $380 million on a 13-month average basis for the test year. The

development of the 13-month average deferred income tax balance is shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 4.

Q. How was the ITC balance determined?

A. The Company's Tax Department has projected that the average ITC balance for the test year ending October 31, 2027 will be $166 million, $44 million higher than the December 2024 balance of $122 million. The balance is based on forecasted balances of both existing and anticipated new ITC credits that the Company expects to record from January 2025 through October 2027. These adjustments total $44 million on a 13-month average basis for the test year.

Q. What balances did you use for ITC in the proposed capital structure?

A. I allocated the components for ITC based upon the allocation of long-term debt, preferred stock, and common equity in the recommended capital structure.

B. Development of Cost Rates

Q. Please explain the development of the total weighted cost of capital shown on Exhibit A-14 (MRB-1), Schedule D-1, page 1, line 19, column (g).

A. Column (d) represents the percentage of total capital provided by each of the components of the capital structure shown in column (a). These percentages were developed by dividing the amounts of capital shown in column (b) by the total ratemaking capitalization amount shown in line 19, column (b). Column (e) presents the costs, on a ratemaking basis, of each of the components in total ratemaking capitalization. Column (g) is the after-tax weighted cost of capital and is calculated by multiplying column (d) by column (e). The pre-tax weighted cost is shown in column (i) and is calculated by multiplying column (g) by the conversion factors in column (h).

i. Long-Term Debt Cost Rate

Q. What long-term debt annual cost rate did you use in this case?

A. I developed a 4.53% annual cost for long-term debt. The development of this annual cost rate is shown on Exhibit A-14 (MRB-4), Schedule D-2. Consistent with past Commission practice, the costs are determined on a net proceeds basis. I began with the debt issuances outstanding as of December 31, 2024. I then added the two debt issuances in May 2025. I then added the planned new debt issuances in May 2026, August 2026, May 2027, and August 2027. These new debt issuances are shown on Exhibit A-14 (MRB-4), Schedule D-2, lines 43 through 48.

Q. Why did you use cost on a net proceeds basis?

A. Not reflecting costs on a net proceeds basis would understate costs. The net proceeds methodology accounts for underwriters' compensation and finance expenses. The fees and expenses are shown as a reduction in proceeds from the issuance of new securities, thereby increasing the cost of the issuance over the stated coupon rate.

Q. Please explain the cost rate you assumed for the planned debt issuances in May 2026, August 2026, May 2027, and August 2027.

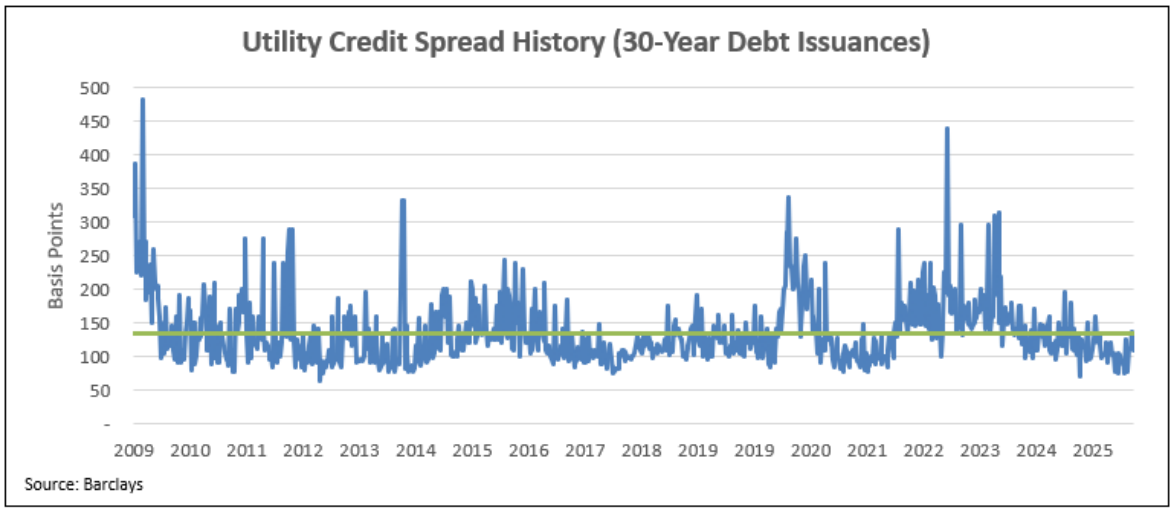
A. I assumed that all of the planned debt issuances will be 30-year bonds with a fixed coupon (interest) rate. To calculate the total interest rate (coupon) projection for these bonds, I started with the projected 30-year U.S. Treasury rate. For each of these planned debt issuances, I then added a 135 basis point credit spread. These interest rate calculations are shown on Exhibit A-14 (MRB-4), Schedule D-2.

Q. What is a credit spread?

A. A credit spread reflects the compensation investors receive for bearing credit risk of the investment in addition to the underlying Treasury rate. The total interest rate on a corporate bond is the summation of both the Treasury rate and the credit spread.

Q. How did you calculate the credit spread of 135 basis points?

A. Unlike U.S. Treasury rates, credit spreads for long-term bond issuances are not projected by financial forecasting companies. This is because spreads are very difficult to predict. Interest rate spreads are based on a number of factors, most notably the Company's credit rating and the market conditions at the time of the debt issuance, including both same-day and short-term supply/demand dynamics. In addition, credit spreads can be quite volatile in short periods of time. The volatility of credit spreads is illustrated on the following chart:



Given the lack of a reliable source for projected credit spreads, I applied the calculated average from the last 16 years. From 2009 to mid-October 2025, the average credit spread on a 30-year debt issuance for investment grade utilities was approximately 135 basis

points. This credit spread is very reasonable in relation to the historical spreads for 30-year debt issuances, as evidenced in the chart above.

Q. Are there any existing long-term debt issuances that have variable interest rates?

A. Yes. There are three debt issuances shown on Exhibit A-14 (MRB-4), Schedule D-2, which have variable interest rates. The Floating Rate First Mortgage Bonds ("FMB") issuances shown on line 27 and lines 30 through 31 have variable interest rates.

Q. What cost rates did you use for these variable rate issuances?

A. The interest rate for the Floating Rate FMB issuances is equal to SOFR less 4 basis points. Therefore, I took the projected three-month SOFR for the test year in this case (equal to 3.17%) and subtracted 4 basis points for an interest rate of 3.13%.

Q. Please explain Exhibit A-14 (MRB-4), Schedule D-2, line 59.

A. Exhibit A-14 (MRB-4), Schedule D-2, line 59, represents the amortization of losses on reacquired Consumers Energy debt (including call premium) for refinancings. This amortization needs to be added to the interest cost on the refinanced debt to determine Consumers Energy's true financing cost for the long-term debt. The Commission recognized recoverability of these costs in establishing the cost rate in Case No. U-16794.

Q. How did you calculate the amount shown on Exhibit A-14 (MRB-4), Schedule D-2, line 59?

A. The amount shown on line 59 represents the amortization of losses on reacquired debt with refunding (including call premiums). The projected amortization expense for the 12-month period ending October 2027 is $4,342,000.

ii. Short-Term Debt Cost Rate

Q. What short-term debt cost rate did you use in this case?

A. I used a short-term debt cost rate of 4.87%. This cost rate is shown on Exhibit A-14 (MRB-5), Schedule D-3, page 1, line 5.

Q. Please explain the cost of short-term debt.

A. I projected a cost of short-term debt of $7.9 million. The development of this cost is shown on Exhibit A-14 (MRB-5), Schedule D-3, page 2. The cost of short-term debt – revolver has four components:

1. **Interest on Borrowings** – Equal to the projected outstanding balance times the projected interest rate. The projected balance, all assumed to be commercial paper, is $162.2 million, calculated on Exhibit A-14 (MRB-7), Schedule D-6. Commercial paper issuances are short term in nature, typically 1- to 90-day maturities. Interest charged on these short-term borrowings are based on several different factors, including market conditions, investor demand, and the tenor (number of days borrowed) of the issuance. I approximated the interest on commercial paper borrowings using the projected SOFR rate for the test year of 3.17%. This was multiplied by the projected balance of $162.2 million. Exhibit A-14 (MRB-5), Schedule D-3, page 2, shows the projected cost of $5.1 million for borrowings under the Commercial Paper Program;

2. **Letter of Credit Fees** – Equal to the projected Letters of Credit outstanding times a rate set forth by the facility the Letters of Credit are issued under. Exhibit A-14 (MRB-5), Schedule D-3, page 2, shows the projected cost of $1.4 million for Letter of Credit Fees. The Letter of Credit Fees shown on Exhibit A-14 (MRB-5), Schedule D-3, page 2, pertain to normal business Letters of Credit to cover ongoing items such as fuel purchases or margin support and also Letters of Credit to cover Midcontinent Independent System Operator, Inc. ("MISO") margin obligations;

3. **Unused (Commitment) Fees** – This cost consists of Annual Revolver Commitment Fees, which the Company is required to pay quarterly to the banks on the "unused" portion of the JPMorgan revolver and the Scotiabank revolver, and other required annual fees under the Revolving Credit agreements. The Revolver Commitment Fees are associated with maintaining fund availability. It should be noted that borrowings under the Company's Commercial Paper Program reduce the "availability" (or the amount the Company is able to draw) of the JPMorgan revolver but do not reduce the "unused" portion of the revolver in calculating the unused (commitment) fees. Exhibit A-14 (MRB-5),

Schedule D-3, page 2, shows the projected cost of $0.8 million for commitment fees; and

4. **Amortization/Expense of Facility Fees** – At the inception of a revolving credit facility, the borrower is required to pay upfront fees and issuance costs to the lenders. These issuance and upfront costs are amortized over the life of the revolver. For the Commercial Paper Program, there are annual fees required to maintain the facility. Exhibit A-14 (MRB-5), Schedule D-3, page 2, shows the projected cost of $0.6 million for amortization of upfront revolver fees.

Q. Why is it important to allow for the recovery of commitment fees and amortization of facility fees in addition to the interest on short-term borrowings and interest on letters of credit?

A. These fees and costs are customary in revolving credit facilities and commercial paper agreements and are necessary to secure the financing and to keep the facilities available for the financing needs of the Company. The Company cannot avoid incurring these costs except by giving up the short-term borrowing facilities, which would not be a sound business decision. If these fees are not recovered through short-term debt cost, then they need to be recovered as part of long-term debt cost. Refer to my later direct testimony which, as directed by the Commission, explains and justifies the cost of the Company's short-term borrowing facilities. The cost of short-term debt – short-term credit facilities represent the cost to provide $1.35 billion of necessary liquidity to Consumers Energy.

iii. Preferred Stock Cost Rate

Q. What is the annual cost of preferred stock?

A. The annual cost of preferred stock is shown on Exhibit A-14 (MRB-6), Schedule D-4. This cost is 4.50%.

iv. Common Equity Cost Rate

Q. What rate did you use for the cost of common equity?

A. Based on my recommended equity ratio of 50.75%, I applied a cost rate of 10.25% for common equity. As explained earlier in my testimony, to the extent that the Commission authorizes a lower equity ratio than that proposed by the Company, a higher ROE is necessary to prevent the potential for adverse credit impacts. The Company's capital structure and ROE recommendations in this case reflect the appropriate levels that the Commission should adopt with that principle in mind in order to preserve Consumers Energy's current credit rating.

v. Other Cost Rates

Q. What cost rates did you use for the remaining components of the capital structure?

A. Consistent with MPSC ratemaking practice, deferred income taxes are included at zero cost. The cost rates for each of the three components of ITC correspond to the cost rates for long-term debt, preferred stock, and common equity.

III. EXHIBITS FOR CERTAIN FILING REQUIREMENTS – CREDIT RATINGS, AND RECENT UTILITY BOND ISSUANCES

Q. Please describe Exhibit A-31 (MRB-8).

A. Exhibit A-31 (MRB-8) is included per the rate case filing requirements. In its December 23, 2008 Order in Case No. U-15895, the Commission directed that utilities include an exhibit that provides current and historical credit ratings with associated outlooks for the previous five years for the utility and its parent company. Exhibit A-31 (MRB-8) shows Consumers Energy's and CMS Energy's current and historical credit ratings, along with associated credit outlooks, for the previous five years as published by S&P, Moody's, and Fitch Ratings, Inc. ("Fitch"). The credit ratings include senior secured

debt, commercial paper, senior unsecured debt, preferred stock, junior subordinated debt, hybrid preferred securities ratings, and preferred stock ratings.

Q. Please describe Exhibit A-32 (MRB-9).

A. In its December 23, 2008 Order in Case No. U-15895, the Commission directed that utilities include an exhibit that provides certain information related to bond issuances. Exhibit A-32 (MRB-9) shows recent public utility corporate bond issuances for a period of three months prior to and three months subsequent to, each of Consumers Energy's long-term public debt offerings issued during the 24 months prior to the date of the Application in this rate case. This summary includes the issue date, issuing company, type of offering (either secured or unsecured), amount of offering, coupon rate, S&P and Moody's credit ratings, maturity date, and spread on U.S. Treasury.

IV. PROJECTED CASH BALANCE

Q. Do you believe that the projected cash balance for the test year ending October 31, 2027, should be based on the 13 months ended June 30, 2025 (the working capital historical period)?

A. No. Using the 13 months ended June 2025 results in a cash balance of $45.7 million, which is higher than is normally expected and required for the Company in the test year of this case.

Q. What do you believe that the projected cash balance for the test year ending October 31, 2027 should be based on?

A. I believe that the projected cash balance for the test year in this case should equate to approximately 1% of test year gas revenues, which results in a cash balance of $25.6 million. This is reflective of normal levels of cash balance.

Q. In its Order in Case No. U-21806 (the Company's previous gas rate case), the Commission found that "the company sufficiently justified the use of its 1% benchmark as reasonable for setting its cash balance." The Commission also instructed the Company to "do the same in subsequent cases to demonstrate why its approach in determining its working capital cash balance remains appropriate and should continue to be approved." How do you respond to this order?

A. My testimony describing the key factors and providing evidence that supports the Company's projected test year cash balance of $25.6 million, or approximately 1% of test year gas revenues, is organized as follows:

i. The Company's Cash Projection Approach is Consistent and Balanced

ii. The Company's Cash Projection Approach Minimizes Liquidity Risk

iii. The Company's Actual Cash Balances Have Approximated 1% of Operating Revenues

iv. The Company's Cash Balances Are a Component of Rating Agencies' Assessment of Credit Quality

i. The Company's Cash Projection Approach is Consistent and Balanced

Q. In previous rate cases, has the Company been consistent in projecting the test year cash balance equal to approximately 1% of test year revenues?

A. Yes. The Company has utilized its approach in projecting the test year working capital cash balance consistently and in a balanced manner. In previous rate cases in which the historical period cash balance was lower than 1% of test year revenues, the Company made an adjustment to increase the projected cash balance to normal levels. In cases in which the historical period cash balance was higher than 1% of test year revenues, the Company

made an adjustment to decrease the projected cash balance to normal levels. In addition to this instant case, a negative cash adjustment was made in Case Nos. U-21148 and U-20963. While there are myriad factors that affect cash balances at any point in time (such as weather, storm costs, and gas prices) making actual cash balances higher or lower than expected, the Company consistently projects normal cash levels which equate to approximately 1% of test year revenues.

ii. The Company's Cash Projection Approach Minimizes Liquidity Risk

Q. Does the Company's projected cash balance for the test year in this case equating to approximately 1% of test year gas revenues reduce liquidity risk?

A. Yes. Having adequate cash on hand reduces the Company's reliance on short-term borrowing facilities for long periods of time. Short-term financing markets can be volatile and, at times, access to those markets completely disappear, as was witnessed during the 2008 credit crisis, again in March 2020 as a result of pandemic-related market fear, and again in March 2023 during the banking industry turmoil. As described earlier in my testimony, the Company does not pursue a strategy that maintains a permanent balance of short-term debt, however, the Company does fund seasonal fluctuations in its working capital with short-term debt. The Company's projected cash balance for the test year in this case is reflective of normal levels of cash that are expected and necessary for the Company to manage working capital requirements and manage financial risk.

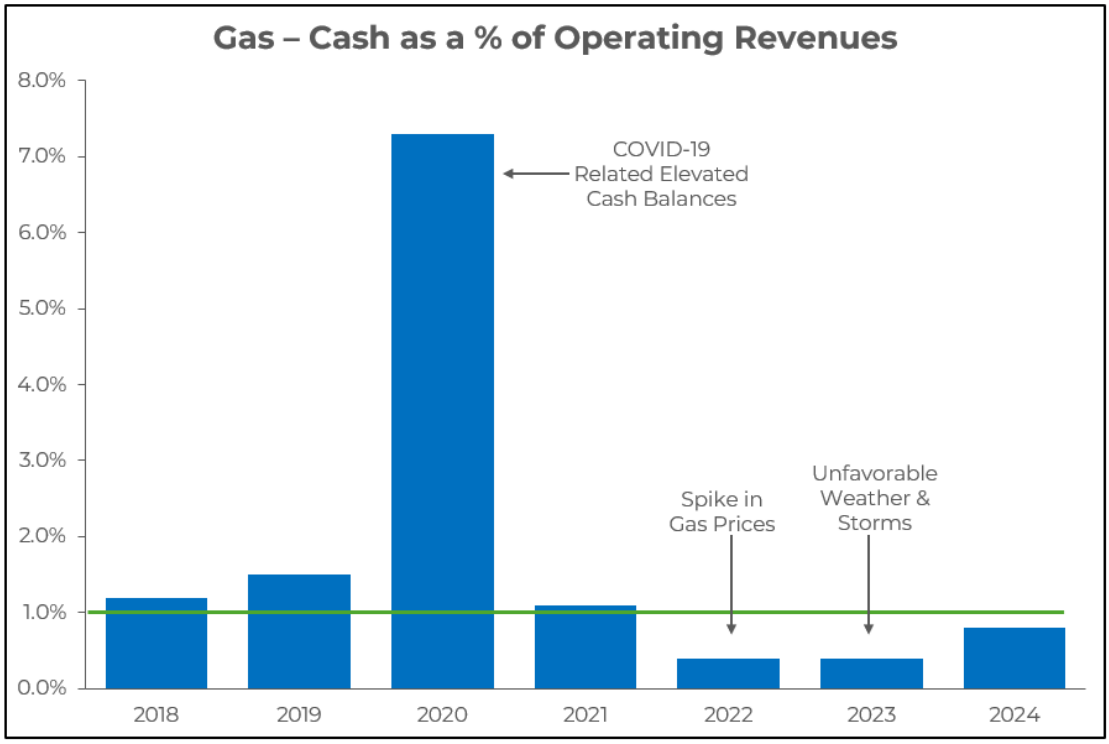
Q. In addition to managing financial risk, what are some benefits associated with the Company maintaining a cash balance equal to approximately 1% of test year revenues as projected by the Company?

A. In order to obtain an attractive interest rate for long-term bond financing and to minimize the refinancing risk, the Company at times issues new bonds a few months in advance of the actual maturity. Having adequate levels of cash on hand allows the Company additional flexibility in securing the lowest interest rate on its long-term debt issuances which benefits the Company and customers. In addition, given the Company's large capital expenditure program, the Company aims to maintain an overall liquidity that is sufficient to carry out not only the day-to-day operations but also have the flexibility to meet investing activities should there be a delay in accessing long-term capital from capital markets. For these reasons, the Company's projected cash balance included in working capital for the test year in this case is reasonable and is supportive of the Company's operating, investing, and financing activities.

iii. The Company's Actual Cash Balances Have Approximated 1% of Operating Revenues

Q. Has the Company shown that its actual cash balances have approximated 1% of operating revenues over the last several years?

A. Yes. Refer to the following chart which shows a history of the Company's actual cash balances as a percentage of operating revenues from 2016 to 2024:



The chart shows that the Company's actual cash balances have approximated 1% of operating revenues with the exception of 2020, 2022, and 2023. In 2020, as described earlier in my testimony, the Company temporarily held elevated cash balances related to the COVID-19 pandemic. In 2022, the spike in gas prices forced the Company to use cash on hand as well as short-term borrowings to fund these higher gas purchases resulting in lower-than-normal cash balances. In 2023, the Company experienced unfavorable weather as well as storm restoration activity well beyond the five-year historical average. Both of these conditions negatively affected the Company's operating cash flows and cash balances. For the years in which the Company's cash balances were unusually higher or lower than normally expected, the Company adjusted its rate case projected cash balance (higher or lower) to account for these deviations.

iv. The Company's Cash Balances Are a Component of Rating Agencies' Assessment of Credit Quality

Q. Does the Company's cash balance impact its credit rating and credit quality?

A. Yes. For example, S&P uses a quantitative measure in assessing liquidity in its evaluation of the Company's credit quality. With this measure, S&P looks at cash on hand and projected cash sources and uses in determining the Company's "liquidity cushion." In its ratings methodology document, S&P describes liquidity as "an important component of our financial risk assessment across the entire rating spectrum… In our view, unlike most other rating factors that we blend together in assessing an issuer's risk profile, a lack of liquidity could precipitate the default of an otherwise healthy entity." Another rating agency, Moody's, has commented on liquidity as saying "we consider liquidity a key element of our analysis of regulated electric and gas utilities." In assessing the Company's credit quality, Moody's performs a similar analysis of the Company's liquidity cushion and flexibility as S&P, estimating the Company's ability to meet near-term anticipated cash requirements using its available sources. The third major credit rating agency, Fitch, also has a liquidity measure which is calculated as the amount of readily available cash and credit capacity to service or meet debt maturities and interest obligations. This score indicates if the Company has adequate headroom with cash on hand to cover its operating and short-term liquidity requirements. It is apparent that all three major credit rating agencies consider the level of cash on hand to be an important component of their assessment of the Company's credit quality and credit rating. In summary, the Company has shown that its projection of the working capital cash balance equating to approximately 1% of test year gas revenues results in a level that is needed, reasonable, balanced, and adequately minimizes the Company's financial and credit risk.

V. SHORT-TERM BORROWING FACILITIES

Q. In its Order in Case No. U-21806 (the Company's previous gas rate case), the Commission instructed the Company in its next gas rate case to "address the Staff's noted concerns relating to its short-term debt facilities and cash on hand by providing additional information including an explanation and justification of the size and expense associated with its short-term borrowing facilities." How do you respond to this directive?

A. My testimony will show that the Company's short-term borrowing facilities are appropriately sized, comparable to other utilities, and are utilized in a manner that minimizes liquidity risk to the protection and benefit of the Company and customers.

Q. In its direct testimony in Case No. U-21806, Staff claimed that "the Company has not used several of its revolver facilities in years." Are the Company's short-term credit facilities also used in a way other than cash draws or borrowing?

A. Yes. As explained earlier in my direct testimony, the Company issues letters of credit to cover ongoing operating activities such as fuel purchases or margin support and also to cover MISO margin obligations. The Company's credit facilities provide a necessary and required backstop against these letters of credit. The use of letters of credit is normal and customary for utilities in conducting ongoing business operations. While not considered a cash draw, the Company is utilizing its credit facilities as issued letters of credit to reduce the credit capacity of those facilities.

Q. What are the risks associated with the Company borrowing more heavily on its short-term credit facilities, effectively reducing its credit capacity and total liquidity?

A. To maintain strong financial health, it is important for the Company to maintain adequate short-term financing capacity for normal business operations while retaining an adequate amount of additional liquidity for cases of extreme market fluctuations or other unforeseen circumstances. Just as it would be unwise for families to plan to max out their credit cards, maxing out or borrowing heavily on short-term credit facilities is not a sound liquidity strategy for the Company and customers. Short-term financing markets can be volatile and, at times, access to those markets completely disappear, as was witnessed during the 2008 credit crisis, again in March 2020 as a result of pandemic-related market fear, and again in March 2023 during the banking industry turmoil. Thus, borrowing more heavily on the Company's short-term borrowing facilities creates greater liquidity risk, not to mention the higher relative cost to draw on those facilities during periods of financial market disruption and interest rate spikes. As explained earlier in my direct testimony, the Company does not pursue a strategy that maintains a permanent balance of short-term debt, however the Company does fund seasonal fluctuations in its working capital with short-term debt. The Company's short-term credit capacity is reasonable and necessary to conduct daily operations and also to keep credit risk at a reasonable level.

Q. How does the cost of the Company's short-term credit facilities benefit the Company and its customers?

A. Short-term credit facilities play a critical roll in supporting the Company's financial strength and stability. Even when there are no outstanding borrowings, the cost of these facilities provides essential protection against unexpected short-term financing market

disruptions as described earlier in my direct testimony. This is no different than an individual bearing the cost of a home, auto, or life insurance policy which may not be utilized for periods of time but are nonetheless customary and necessary to maintain in case of unforeseen events. In addition, the Company's short-term credit facilities allow the Company to issue letters of credit which, as explained earlier in my direct testimony, are customary and necessary in conducting normal business operations. Thus, the cost of the Company's short-term credit facilities (even with little or no outstanding borrowings) benefits the Company and customers by providing enhanced financial strength and security and supporting business operations.

Q. Does short-term credit capacity impact the Company's credit quality?

A. Yes. The Company's short-term credit capacity, along with cash on hand, is a component of liquidity. Refer to my earlier testimony which explains how the Company's liquidity is a key factor in rating agencies' assessment of the Company's overall financial health. Based on guidance issued by all three major credit rating agencies, it is apparent that the Company's liquidity (which includes short-term credit capacity) is an important component of their assessment of the Company's credit quality and credit rating.

Q. Do the rating agencies consider the Company's liquidity including short-term credit capacity to be excessive?

A. No. Refer to Exhibit A-40 (MRB-17). In September 2025, S&P assessed the Company's liquidity, including its short-term credit capacity, as "Adequate," noting that their rating reflected the Company's "prudent risk management." Also refer to Moody's May 2025 credit rating reflected on Exhibit A-41 (MRB-18). In its credit evaluation, Moody's stated "we expect Consumers Energy's liquidity profile to be adequate over the next 12-18

months." Finally, refer to Exhibit A-42 (MRB-19), Fitch's April 2025 credit opinion. In its assessment, Fitch identified the Company's revolving credit facilities as supporting short-term liquidity needs and rated the Company's liquidity as "adequate." It is clear from these reports that the consensus among rating agencies is that the Company's short-term credit capacity is not considered excessive, but is rather "adequate" considering the Company's liquidity needs and provides a suitable cushion to protect against times of economic stress and financial market disruption. A greater reliance on the Company's short-term credit facilities would result in a reduction in that credit capacity, leading to a weakening of the Company's liquidity profile and credit quality.

Q. How does the dramatic increase in gas prices in 2022 highlight the importance of the Company's short-term credit capacity?

A. The spike in gas prices in 2022 forced the Company to use cash on hand as well as short-term borrowings to fund these higher gas purchases. In order to meet the increased short-term borrowing needs caused by significantly higher gas prices while avoiding maxing out its current short-term borrowing facilities, the Company secured a term loan allowing the Company to borrow up to $1 billion. This significantly reduced liquidity risk while ensuring continued short-term borrowing at reasonable interest rates. While the Company was able to secure a $1 billion term loan in July 2022 to meet the excessive short-term borrowing requirements, access to this type of facility at reasonable interest rates is never guaranteed in the future, particularly during times of extreme capital market volatility or the inability to access those markets. The dramatic increase in gas prices in 2022 and the resulting elevated short-term borrowing levels highlight the importance of

maintaining sufficient short-term credit capacity to ensure that the Company is able to adequately fund gas purchases, continue operations, and serve customers.

Q. Is the size of the Company's short-term credit facilities in line with that of other utilities?

A. Yes. Refer to Exhibit A-43 (MRB-20). At year-end 2024, peer companies maintained, on average, a ratio of revolving credit facilities to net Property Plant and Equipment of 5.4%. The Company's credit capacity of 5.3% is just below other companies in the utility industry.

Q. Have other utilities been increasing their short-term borrowing capacity?

A. Yes. Refer to Exhibit A-39 (MRB-16). In a January 2025 report on North American regulated utilities, S&P highlights rising capital expenditures over the past decade focused on safety, reliability, and investment in renewable generation. S&P predicts record capital spending in the industry in 2025. As utilities' capital spending has continued to rise, so too has companies' short-term liquidity needs. Recently, there have been multiple examples of other utilities increasing their short-term borrowing capacity. For example, in April 2025, Dominion Energy increased its short-term borrowing capacity by $1.1 billion from $6.9 billion to $8.0 billion, underscoring its commitment to maintaining a strong financial foundation for its operations and future growth initiatives. Also, in March 2025, Southern Company increased its short-term borrowing capacity by $1.0 billion from $7.9 billion to $8.9 billion. Finally, Duke Energy increased its credit facility from $9 billion to $10 billion in March 2025. In its announcement of the credit capacity upsizing, the company noted: "The expansion and extension of the credit facility underscore Duke Energy's commitment to maintaining robust financial health and

supporting its operational and strategic initiatives. This development is expected to provide the company with greater liquidity and an extended timeline to leverage financial resources effectively." It is clear that other utilities are increasing their short-term credit capacity in order to meet growing liquidity needs and enhance financial flexibility. An adequate amount of short-term borrowing capacity will also be critical for Consumers Energy as it executes its capital investment plan to support a more reliable, resilient, and increasingly clean energy system for its customers as outlined by the Company's capital witnesses in this case.

Q. Has the Company explained and justified its short-term borrowing facilities as directed by the Commission in Case No. U-21806?

A. Yes. My testimony has shown that the Company's short-term borrowing facilities are appropriately sized and are in line with peer utilities on average. As with other utilities, the Company's robust capital investment plan will require an adequate amount of credit capacity to meet growing short-term liquidity needs. My testimony has also shown that the Company's short-term credit capacity has a direct impact on credit quality and credit ratings, with all three major credit rating agencies assessing the Company's liquidity as "adequate." Finally, my testimony has shown that the Company's utilization of its short-term borrowing facilities is reasonable and prudent and benefits customers by effectively minimizing liquidity risk.

VI. SUMMARY AND CONCLUSIONS

Q. Please summarize your recommendations and conclusions.

A. Consumers Energy's capital structure should be based on the capital structure as of December 31, 2024, adjusted for the known and expected changes in long-term debt,

common equity, short-term debt, deferred income taxes, and ITC, as shown on Exhibit A-14 (MRB-1), Schedule D-1. The cost rates developed are fair and reasonable and commensurate with the risks for the period of time rates are expected to be in effect. As shown on Exhibit A-14 (MRB-1), Schedule D-1, I recommend an overall after-tax rate of return of 6.40%. Finally, the Company's projected cash balance for the test year in this case should be based on approximately 1% of test year gas revenues, which results in a balance of $25.6 million.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

MARC R. BLECKMAN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Schedule D-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Overall Rate of Return Summary
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-14 (MRB-1)
Schedule: D-1
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.	(a) Description	(b) Capital Structure Amount ($000,000) (1)	(c) Capital Structure Percent Permanent Capital (2)	(d) Capital Structure Percent of Total Capital	(e) Cost Rate %	(f) Weighted Cost Permanent Capital (7)	(g) Weighted Cost Total Cost % (8)	(h) Weighted Cost Conversion Factor	(i) Weighted Cost Pre-Tax Return (9)
1									
2	Long-Term Debt	$ 14,334	49.12%	41.94%	4.53% (3)	2.22%	1.90%	1.0000	1.90%
3									
4	Preferred Stock	37	0.13%	0.11%	4.50% (4)	0.01%	0.00%	1.3381	0.01%
5									
6	Common Shareholder's Equity	14,811	50.75%	43.33%	10.25% (5)	5.20%	4.44%	1.3381	5.94%
7									
8	Total Permanent Capital	$ 29,182	100.00%						
9									
10	Short-Term Debt	162		0.47%	4.87% (6)		0.02%	1.0000	0.02%
11									
12	Deferred Income Taxes	4,669		13.66%	0.00%		0.00%	1.0000	0.00%
13									
14	Investment Tax Credit								
15	Long-Term Debt	83		0.24%	4.53%		0.01%	1.0000	0.01%
16	Preferred Stock	0		0.00%	4.50%		0.00%	1.3381	0.00%
17	Common Equity	83		0.24%	10.25%		0.02%	1.3381	0.03%
18									
19	Total	$ 34,179		100.00%			6.40%		7.92%

(1) See Exhibit A-14 (MRB-2), Schedule D-1a, Page 1.
(2) Excludes Short-term Debt, Deferred Income Taxes, and Investment Tax Credit to calculate the rate of return for Investment Tax Credit purposes in accordance with Internal Revenue Service Income Tax Regulation Section 1.46-6.
(3) See Exhibit A-14(MRB-4), Schedule D-2.
(4) See Exhibit A-14 (MRB-6), Schedule D-4.
(5) See Exhibit A-14 (AEB-1), Schedule D-5.
(6) See Exhibit A-14 (MRB-5), Schedule D-3, Page 1.
(7) Column (c) x column (e).
(8) Column (d) x column (e).
(9) Column (g) x column (h).

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 1 of 4
Witness: MRBleckman
Date: December 2025

Line No.	(a) Description	(b) Historical Capital Structure 13-Month Avg. For Yr. Ended December 31, 2024 Amount Outstanding (000,000)	(c) % of Permanent Capital	(d) % of Total Capital	(e) Balances as of Dec. 31, 2024 (000,000)	(f) Test Year Adjustments (000,000)	(g) Recommended Capital Structure Amount Outstanding (000,000)	(h) % of Permanent Capital	(i) % of Total Capital
1									
2	Long-Term Debt	$ 11,136	50.46%	42.09%	$ 11,392	$ 2,942	$ 14,334	49.12%	41.94%
3									
4	Preferred Stock	37	0.17%	0.14%	37	-	37	0.13%	0.11%
5									
6	Common Equity	10,894	49.37%	41.17%	11,405	3,405	14,811	50.75%	43.33%
7									
8	Total Permanent Capital	$ 22,067	100.00%		$ 22,834	$ 6,347	$ 29,182	100.00%	
9									
10	Short-Term Debt	62		0.24%	116	46	162		0.47%
11									
12	Deferred Income Taxes	4,206		15.90%	4,289	380	4,669		13.66%
13									
14	Investment Tax Credit								
15	Long-Term Debt	63		0.24%	61	22	83		0.24%
16	Preferred Stock	0		0.00%	0	0	0		0.00%
17	Common Equity	61		0.23%	61	22	83		0.24%
18									
19	Total Investment Tax Credit	124		0.47%	122	44	166		0.49%
20									
21	Total Capitalization	$ 26,460		100.00%	$ 27,361	$ 6,818	$ 34,179		100.00%

Sources and Support, by Column:

(b) Consumers Energy General Ledger 13-month average balances as of December 31, 2024.
(c) Each line 2, 4, and 6 in column (b) is divided by line 8, column (b).
(d) Each line 2, 4, 6, 10, 12, 15, 16, 17, and 19 in column (b) is divided by line 21, column (b).
(e) Consumers Energy General Ledger balances as of December 31, 2024.
(f) Line 2 Debt maturities and debt issues, line 6 Adjustment for retained earnings and equity contributions, line 10 Adjustment to project short-term debt, line 12 Adjustment to project Deferred Income Taxes balance, lines 15-17 Adjustment to project Investment Tax Credit balance.
(g) Column (e) + column (f). Represents 13-month averages.
(h) Each line 2, 4, and 6 in column (g) is divided by line 8, column (g).
(i) Each line 2, 4, 6, 10, 12, 15, 16, 17, and 19 in column (g) is divided by line 21, column (g).

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Long-Term Debt Balance
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 2 of 4
Witness: MRBleckman
Date: December 2025

Line No.	(a) Long-Term Debt	(b) Actual Jan-24	(c) Actual Feb-24	(d) Actual Mar-24	(e) Actual Apr-24	(f) Actual May-24	(g) Actual Jun-24	(h) Actual Jul-24	(i) Actual Aug-24	(j) Actual Sep-24	(k) Actual Oct-24	(l) Actual Nov-24	(m) Actual Dec-24
1													
2	Beginning Balance	$ 10,507	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,807	$ 11,557	$ 11,557	$ 11,557
3	Add: Issuances	600	-	-	-	-	-	-	700	-	-	-	-
4	Less: Retirements	-	-	-	-	-	-	-	-	(250)	-	-	(52)
5	Subtotal	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,107	$ 11,807	$ 11,557	$ 11,557	$ 11,557	$ 11,505
6													
7	Less: Unamortized Fees	(115)	(114)	(113)	(113)	(112)	(112)	(111)	(116)	(116)	(115)	(114)	(113)
8													
9	Ending Balance	$ 10,992	$ 10,993	$ 10,994	$ 10,994	$ 10,995	$ 10,995	$ 10,996	$ 11,691	$ 11,441	$ 11,442	$ 11,443	$ 11,392
10													
11													
12													
13	Long-Term Debt	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
14													
15	Beginning Balance	$ 11,505	$ 11,505	$ 11,505	$ 11,505	$ 11,505	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630
16	Add: Issuances	-	-	-	-	1,125	-	-	-	-	-	-	-
17	Less: Retirements	-	-	-	-	-	-	-	-	-	-	-	-
18	Subtotal	$ 11,505	$ 11,505	$ 11,505	$ 11,505	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630
19													
20	Less: Unamortized Fees	(113)	(112)	(111)	(110)	(120)	(119)	(119)	(118)	(117)	(116)	(116)	(115)
21													
22	Ending Balance	$ 11,392	$ 11,393	$ 11,394	$ 11,395	$ 12,510	$ 12,511	$ 12,511	$ 12,512	$ 12,513	$ 12,514	$ 12,514	$ 12,515
23													
24													
25													
26	Long-Term Debt	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
27													
28	Beginning Balance	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 13,290	$ 13,290	$ 13,290	$ 13,965	$ 13,965	$ 13,965	$ 13,965
29	Add: Issuances	-	-	-	-	775	-	-	675	-	-	-	-
30	Less: Retirements	-	-	-	-	(115)	-	-	-	-	-	-	-
31	Subtotal	$ 12,630	$ 12,630	$ 12,630	$ 12,630	$ 13,290	$ 13,290	$ 13,290	$ 13,965	$ 13,965	$ 13,965	$ 13,965	$ 13,965
32													
33	Less: Unamortized Fees	(114)	(113)	(112)	(112)	(118)	(117)	(116)	(122)	(121)	(120)	(119)	(118)
34													
35	Ending Balance	$ 12,516	$ 12,517	$ 12,518	$ 12,518	$ 13,172	$ 13,173	$ 13,174	$ 13,843	$ 13,844	$ 13,845	$ 13,846	$ 13,847
36													
37													
38													
39	Long-Term Debt	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27		
40													
41	Beginning Balance	$ 13,965	$ 13,965	$ 13,965	$ 13,965	$ 13,965	$ 14,690	$ 14,690	$ 14,690	$ 15,390	$ 15,390		
42	Add: Issuances	-	-	-	-	725	-	-	700	-	-		
43	Less: Retirements	-	-	-	-	-	-	-	-	-	(100)		
44	Subtotal	$ 13,965	$ 13,965	$ 13,965	$ 13,965	$ 14,690	$ 14,690	$ 14,690	$ 15,390	$ 15,390	$ 15,290		
45													
46	Less: Unamortized Fees	(117)	(116)	(115)	(114)	(121)	(120)	(119)	(127)	(126)	(125)		
47													
48	Ending Balance	$ 13,848	$ 13,849	$ 13,850	$ 13,851	$ 14,569	$ 14,570	$ 14,571	$ 15,263	$ 15,264	$ 15,165		
49													
50	**Test Year 13-Month Average:**												
51	Subtotal										$ 14,454		
52	Less: Unamortized Fees										(120)		
53	Ending Balance										**$ 14,334**		

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Common Equity Balance
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 3 of 4
Witness: MRBleckman
Date: December 2025

Line No.	(a) Common Equity	(b) Actual Jan-24	(c) Actual Feb-24	(d) Actual Mar-24	(e) Actual Apr-24	(f) Actual May-24	(g) Actual Jun-24	(h) Actual Jul-24	(i) Actual Aug-24	(j) Actual Sep-24	(k) Actual Oct-24	(l) Actual Nov-24	(m) Actual Dec-24
1													
2	Beginning Balance	$10,779	$10,898	$10,712	$10,788	$10,790	$10,848	$10,872	$10,796	$10,885	$10,960	$10,759	$11,135
3	Ret. Earnings	119	(186)	76	2	58	24	(76)	89	75	(201)	76	155
4	Equity Infusion	-	-	-	-	-	-	-	-	-	-	300	115
5	Ending Balance	$ 10,898	$ 10,712	$ 10,788	$ 10,790	$ 10,848	$ 10,872	$ 10,796	$ 10,885	$ 10,960	$ 10,759	$ 11,135	$ 11,405
6													
7													
8													
9	Common Equity	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
10													
11	Beginning Balance	$11,405	$11,567	$11,579	$11,630	$11,484	$11,505	$11,672	$11,594	$11,985	$12,299	$12,098	$12,399
12	Ret. Earnings	162	(138)	51	(146)	21	167	(78)	116	44	(201)	76	155
13	Equity Infusion	-	150	-	-	-	-	-	275	270	-	225	-
14	Ending Balance	$ 11,567	$ 11,579	$ 11,630	$ 11,484	$ 11,505	$ 11,672	$ 11,594	$ 11,985	$ 12,299	$ 12,098	$ 12,399	$ 12,554
15													
16													
17													
18	Common Equity	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
19													
20	Beginning Balance	$12,554	$12,570	$13,387	$13,404	$13,421	$13,438	$13,954	$13,971	$13,988	$14,005	$14,022	$14,038
21	Ret. Earnings	17	17	17	17	17	17	17	17	17	17	17	17
22	Equity Infusion	-	800	-	-	-	500	-	-	-	-	-	-
23	Ending Balance	$ 12,570	$ 13,387	$ 13,404	$ 13,421	$ 13,438	$ 13,954	$ 13,971	$ 13,988	$ 14,005	$ 14,022	$ 14,038	$ 14,055
24													
25													
26													
27	Common Equity	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27		
28													
29	Beginning Balance	$14,055	$14,072	$14,764	$14,780	$14,797	$14,814	$15,406	$15,423	$15,439	$15,456		
30	Ret. Earnings	17	17	17	17	17	17	17	17	17	17		
31	Equity Infusion	-	675	-	-	-	575	-	-	-	-		
32	Ending Balance	$ 14,072	$ 14,764	$ 14,780	$ 14,797	$ 14,814	$ 15,406	$ 15,423	$ 15,439	$ 15,456	$ 15,473		
33													
34													
35	**Test Year 13-Month Average**										**$ 14,811**		

(n)	(o)	(p)	(q)	(r)	(s)	(t)
	Test Year Impact of Retained Earnings			Test Year Impact of Equity Infusions		
	2025	**2026**	**2027**	**2025**	**2026**	**2027**
Jan	$ 162	$ 246	$ 447	$ -	$ 920	$ 2,220
Feb	$ 24	$ 263	$ 464	$ 150	$ 1,720	$ 2,895
Mar	$ 75	$ 279	$ 481	$ 150	$ 1,720	$ 2,895
Apr	$ (71)	$ 296	$ 498	$ 150	$ 1,720	$ 2,895
May	$ (50)	$ 313	$ 514	$ 150	$ 1,720	$ 2,895
Jun	$ 117	$ 330	$ 531	$ 150	$ 2,220	$ 3,470
Jul	$ 39	$ 346	$ 548	$ 150	$ 2,220	$ 3,470
Aug	$ 155	$ 363	$ 565	$ 425	$ 2,220	$ 3,470
Sep	$ 199	$ 380	$ 581	$ 695	$ 2,220	$ 3,470
Oct	$ (2)	$ 397	$ 598	$ 695	$ 2,220	$ 3,470
Nov	$ 74	$ 414		$ 920	$ 2,220	
Dec	$ 229	$ 430		$ 920	$ 2,220	
13-Month Avg.			$ 497			$ 2,908

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Deferred Income Tax Balance
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 4 of 4
Witness: MRBleckman
Date: December 2025

Deferred Income Tax Ending Balance

Line No.	(a) **Actual Jan-24**	(b) **Actual Feb-24**	(c) **Actual Mar-24**	(d) **Actual Apr-24**	(e) **Actual May-24**	(f) **Actual Jun-24**	(g) **Actual Jul-24**	(h) **Actual Aug-24**	(i) **Actual Sep-24**	(j) **Actual Oct-24**	(k) **Actual Nov-24**	(l) **Actual Dec-24**
1	$ 4,116	$ 4,129	$ 4,142	$ 4,155	$ 4,169	$ 4,182	$ 4,195	$ 4,208	$ 4,221	$ 4,234	$ 4,247	$ 4,289
2												
3												
4												
5	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
6	$ 4,302	$ 4,314	$ 4,327	$ 4,340	$ 4,353	$ 4,366	$ 4,378	$ 4,391	$ 4,404	$ 4,417	$ 4,430	$ 4,442
7												
8												
9												
10	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
11	$ 4,457	$ 4,471	$ 4,486	$ 4,500	$ 4,515	$ 4,529	$ 4,543	$ 4,558	$ 4,572	$ 4,587	$ 4,601	$ 4,616
12												
13												
14												
15	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27		
16	$ 4,629	$ 4,642	$ 4,656	$ 4,669	$ 4,682	$ 4,696	$ 4,709	$ 4,723	$ 4,736	$ 4,749		
17												
18												
19	**Test Year 13-Month Average**									**$ 4,669**		

Schedule D-1b

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Development of Capital Structure
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-14 (MRB-3)
Schedule: D-1b
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.	(a) Description	(b) Financial Basis	(c) MPSC Ratemaking Basis
I.	LONG-TERM DEBT:		
a.	First Mortgage Bonds	Include	Include
b.	Trust Preferred Securities	Include	Include
c.	Other Subordinated LTD	Include	Include
d.	Unamortized Debt Premium	Include	Include
e.	Unamortized Debt Discount	Include	Include
f.	Unamortized Debt Expense	Include	Include
g.	Current Maturities	**Exclude**	**Include**
h.	Capitalized Leases	**Include**	**Exclude**
II.	SHORT-TERM DEBT	Include	Include
III.	PREFERRED STOCK EXPENSE		
a.	Preferred Stock	Include	Include
b.	Trust Preferred Securities	Exclude	Exclude
c.	Preferred Stock Expense	Include	Include
IV.	COMMON EQUITY		
a.	Common Stock Issued	Include	Include
b.	Premium on Common Stock	Include	Include
c.	Donations Received From Stockholders	Include	Include
d.	Common Stock Expense	Include	Include
e.	Gain on Reacquired Stock	Include	Include
f.	Miscellaneous Paid In Capital	Include	Include
g.	Mark-to-Market Accounting	**Include**	**Exclude**
h.	Appropriated Retained Earnings	Include	Include
I.	Unappropriated Retained Earnings	Include	Include
j.	FAS 90 (Abandoned Plant)	Include	Include
V.	DEFERRED ITC	**Exclude**	**Include**
VI.	DEFERRED TAXES	**Exclude**	**Include**
VII.	DEFERRED JDITC	**Exclude**	**Include**

Schedule D-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Long-Term Debt
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-14 (MRB-4)
Schedule: D-2
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.	(a) Description	(b) Original Issue Date	(c) Stated Maturity Date	(d) Interest Rate (%)	(d1) Interest Payments Per Year	(e) Amount of Offering ($000)	(f) Price to Public (%)	(g) Underwriting Expenses (%)	(g1) Underwriting Expenses ($000)	(g2) Financing Expenses (%)	(g3) Financing Expenses ($000)	(g4) (Premium) Discount ($000)	(h) Net Proceeds to the Company (%)	(i) Cost Based on Net Proceeds (%)	(j) Amount Outstanding ($000)	(k) Annual Cost ($000)
1																
2	**Mortgage Bonds**															
3	5.800%	11-Aug-05	15-Sep-35	5.800%	2	175,000	99.81%	0.875%	1,531.25	0.17%	299.97	337.75	98.761%	5.8879%	175,000	10,304
4	6.170%	01-Sep-10	01-Sep-40	6.170%	2	50,000	100.00%	0.906%	453.04	0.08%	38.99	0.00	99.016%	6.2430%	50,000	3,121
5	4.970%	15-Oct-10	15-Oct-40	4.970%	2	50,000	100.00%	0.500%	250.00	0.04%	19.58	0.00	99.461%	5.0049%	50,000	2,502
6	3.390%	17-Dec-12	15-Dec-27	3.390%	2	35,500	100.00%	0.501%	178.03	0.04%	13.76	0.00	99.460%	3.4364%	35,500	1,220
7	4.310%	17-Dec-12	15-Dec-42	4.310%	2	263,000	100.00%	0.501%	1,318.92	0.03%	68.78	0.00	99.472%	4.3416%	263,000	11,418
8	3.950%	17-May-13	15-May-43	3.950%	2	425,000	99.84%	0.875%	3,718.75	0.16%	675.43	667.25	98.809%	4.0187%	425,000	17,079
9	4.350%	18-Aug-14	31-Aug-64	4.350%	2	250,000	99.14%	0.875%	2,187.50	0.12%	309.64	2,157.50	98.138%	4.4430%	250,000	11,107
10	4.100%	06-Nov-15	15-Nov-45	4.100%	2	250,000	99.91%	0.875%	2,187.50	0.18%	447.46	217.50	98.859%	4.1669%	250,000	10,417
11	3.250%	10-Aug-16	15-Aug-46	3.250%	2	450,000	99.22%	0.875%	3,937.50	0.18%	821.46	3,501.00	98.164%	3.3474%	450,000	15,063
12	3.950%	22-Feb-17	15-Jul-47	3.950%	2	350,000	99.58%	0.875%	3,062.50	0.19%	669.34	1,463.00	98.516%	4.0350%	350,000	14,122
13	3.18% (Private Placement)	28-Sep-17	28-Sep-32	3.180%	2	40,000	100.00%	0.301%	120.48	0.03%	12.80	0.00	99.667%	3.2082%	40,000	1,283
14	3.52% (Private Placement)	28-Sep-17	28-Sep-37	3.520%	2	125,000	100.00%	0.402%	501.98	0.04%	53.33	0.00	99.556%	3.5512%	125,000	4,439
15	3.86% (Private Placement)	28-Sep-17	28-Sep-52	3.860%	2	20,000	100.00%	0.703%	140.56	0.07%	14.93	0.00	99.223%	3.9009%	20,000	780
16	3.18% (Private Placement)	15-Nov-17	15-Nov-32	3.180%	2	60,000	100.00%	0.301%	180.71	0.03%	18.60	0.00	99.668%	3.2081%	60,000	1,925
17	3.52% (Private Placement)	15-Nov-17	15-Nov-37	3.520%	2	210,000	100.00%	0.402%	843.33	0.04%	86.81	0.00	99.557%	3.5511%	210,000	7,457
18	3.86% (Private Placement)	15-Nov-17	15-Nov-52	3.860%	2	30,000	100.00%	0.703%	210.83	0.07%	21.70	0.00	99.225%	3.9008%	30,000	1,170
19	4.050%	14-May-18	15-May-48	4.050%	2	550,000	98.97%	0.875%	4,812.50	0.20%	1,106.61	5,659.50	97.895%	4.1737%	550,000	22,955
20	3.68% (Private Placement)	01-Oct-18	01-Oct-27	3.680%	2	100,000	100.00%	0.145%	145.00	0.01%	13.99	0.00	99.841%	3.7009%	92,308	3,416
21	4.01% (Private Placement)	01-Oct-18	01-Oct-38	4.010%	2	215,000	100.00%	0.323%	694.00	0.03%	56.32	0.00	99.651%	4.0356%	215,000	8,677
22	4.28% (Private Placement)	01-Oct-18	01-Oct-57	4.280%	2	185,000	100.00%	0.629%	1,164.00	0.05%	87.47	0.00	99.324%	4.3160%	185,000	7,985
23	3.800%	13-Nov-18	15-Nov-28	3.800%	2	300,000	99.75%	0.650%	1,950.00	0.10%	305.05	744.00	99.000%	3.9217%	300,000	11,765
24	4.350%	13-Nov-18	15-Apr-49	4.350%	2	550,000	99.62%	0.875%	4,812.50	0.18%	985.10	2,101.00	98.564%	4.4363%	550,000	24,400
25	3.750%	28-May-19	15-Feb-50	3.750%	2	300,000	98.83%	0.875%	2,625.00	0.21%	632.06	3,498.00	97.748%	3.8758%	300,000	11,627
26	3.100%	03-Sep-19	15-Aug-50	3.100%	2	550,000	99.29%	0.875%	4,812.50	0.10%	526.98	3,899.50	98.320%	3.1857%	550,000	17,521
27	Floating Rate FMB	19-Sep-19	15-Sep-69	3.130%	4	75,649	100.00%	1.000%	756.49	0.99%	751.55	0.00	98.007%	3.2102%	75,649	2,428
28	3.500%	26-Mar-20	01-Aug-51	3.500%	2	575,000	100.00%	0.875%	5,031.25	0.22%	1,261.45	0.00	98.906%	3.5580%	575,000	20,459
29	2.500%	13-May-20	01-May-60	2.500%	2	525,000	100.00%	0.875%	4,593.75	0.17%	905.40	0.00	98.953%	2.5419%	525,000	13,345
30	Floating Rate FMB	20-May-20	20-May-70	3.130%	4	134,349	100.00%	1.000%	1,343.49	0.29%	390.52	0.00	98.709%	3.1817%	134,349	4,275
31	Floating Rate FMB	07-Oct-20	07-Oct-70	3.130%	4	126,497	100.00%	1.000%	1,264.97	0.25%	315.63	0.00	98.750%	3.1800%	126,497	4,023
32	2.650%	12-Aug-21	15-Aug-52	2.650%	2	300,000	99.92%	0.875%	2,625.00	0.19%	569.00	252.00	98.851%	2.7050%	300,000	8,115
33	3.600%	11-Aug-22	15-Aug-32	3.600%	2	350,000	99.93%	0.650%	2,275.00	0.20%	700.00	262.50	99.075%	3.7114%	350,000	12,990
34	4.200%	11-Aug-22	01-Sep-52	4.200%	2	450,000	99.93%	0.875%	3,937.50	0.20%	900.00	319.50	98.854%	4.2679%	450,000	19,206
35	4.650%	10-Jan-23	01-Mar-28	4.650%	2	425,000	99.81%	0.600%	2,550.00	0.20%	850.00	790.50	99.014%	4.8680%	425,000	20,689
36	4.625%	23-Feb-23	15-May-33	4.625%	2	700,000	100.00%	0.650%	4,550.00	0.20%	1,400.00	0.00	99.150%	4.7300%	700,000	33,110
37	5.07% (Private Placement)	15-May-23	15-May-29	5.070%	2	50,000	100.00%	0.875%	437.50	0.20%	100.00	0.00	98.925%	5.2814%	50,000	2,641
38	5.17% (Private Placement)	15-May-23	15-May-32	5.170%	2	95,000	100.00%	0.875%	831.25	0.20%	190.00	0.00	98.925%	5.3219%	95,000	5,056
39	5.38% (Private Placement)	15-May-23	15-May-37	5.380%	2	140,000	100.00%	0.875%	1,225.00	0.20%	280.00	0.00	98.925%	5.4910%	140,000	7,687
40	4.900%	04-Aug-23	15-Feb-29	4.900%	2	500,000	99.95%	0.600%	3,000.00	0.12%	582.56	250.00	99.233%	5.0603%	500,000	25,301
41	4.600%	09-Jan-24	30-May-29	4.600%	2	600,000	99.77%	0.600%	3,600.00	0.10%	625.48	1,392.00	99.064%	4.7982%	600,000	28,789
42	4.700%	05-Aug-24	15-Jan-30	4.700%	2	700,000	99.78%	0.600%	4,200.00	0.11%	782.00	1,575.00	99.063%	4.8975%	700,000	34,283
43	4.500%	02-May-25	15-Jan-31	4.500%	2	500,000	99.97%	0.600%	3,000.00	0.16%	776.16	145.00	99.216%	4.6569%	500,000	23,284
44	5.050%	02-May-25	15-May-35	5.050%	2	625,000	99.63%	0.650%	4,062.50	0.21%	1,308.50	2,300.00	98.773%	5.2083%	625,000	32,552
45	New Debt Issue #1	01-May-26	01-May-56	6.150%	2	775,000	100.00%	0.875%	6,781.25	0.20%	1,550.00	0.00	98.925%	6.2296%	775,000	48,279
46	New Debt Issue #2	01-Aug-26	01-Aug-56	6.160%	2	675,000	100.00%	0.875%	5,906.25	0.20%	1,350.00	0.00	98.925%	6.2397%	675,000	42,118
47	New Debt Issue #3	01-May-27	01-May-57	6.190%	2	725,000	100.00%	0.875%	6,343.75	0.20%	1,450.00	0.00	98.925%	6.2699%	334,615	20,980
48	New Debt Issue #4	01-Aug-27	01-Aug-57	6.200%	2	700,000	100.00%	0.875%	6,125.00	0.20%	1,400.00	0.00	98.925%	6.2800%	161,538	10,145
49	Total Mortgage Bonds														$ 14,343,457	$ 641,511
50																
51	**Other Long-Term Debt**															
52	PCRB - MSF LORB - 19	01-Oct-19	01-Oct-49	3.350%	2	75,000	100.00%	0.592%	443.75	0.89%	669.74	0.00	98.515%	3.4296%	$ 75,000	$ 2,572
53	PCRB - MSF LORB - 21	07-Oct-21	01-Apr-35	0.875%	2	35,000	100.00%	0.600%	210.00	0.90%	315.00	0.00	98.500%	0.9941%	35,000	348
54															$ 110,000	$ 2,920
55																
56																
57	Total Long-Term Debt														$ 14,453,457	$ 644,431
58																
59	Amortization of Losses on Reacquired Debt with Refunding (including Call Premiums)															4,342
60																
61	Total Long-Term Debt Before Unamortized Expense and Premium													4.49%	$ 14,453,457	$ 648,773
62																
63	Unamortized Debt Discount, Expense and Premium														(119,769)	
64																
65	Total Long-Term Debt Balance														$ 14,333,687	
66																
67	Annual Cost													4.53%		
68																
69	**Calculations:**															
70	Column (i) = Yield formula based on inputs from column (b),column (c), column (d), column (d1), and column (h) calculated on an annualized basis.															
71	Column (j) = Represents the average amount of debt outstanding for the test year.															
72	Column (k) = column (i)*column (j).															
73	Lines 27, 30, and 31 Coupon Rate = Projected SOFR Rate of 3.17% minus 0.04%.															
74	Lines 20, 47, and 48 - As this is a partial year debt outstanding, pro-rata balance and pro-rata interest expense are used which would result															
75	in the same cost rate as an annual analysis, but provides a more accurate average debt balance for the Test Year. This would make															
76	the Total Debt balance line 65 tie to the debt balance shown on Exhibit A-14 (MRB-2), Schedule D-1a, page 2.															
77	Line 58 - Amortization of losses on reacquired debt projected for the test year ending October 31, 2027.															
78																
79	Projected SOFR Rate Test Year Avg.															
80																
81	Bloomberg (Nov. 3, 2025) 3.17%															

Ties to 13-Month Average in Exhibit A-_ (MRB-2), Schedule D-1a, pg. 2

Projected New Debt Issue Interest Rates	New Debt #1 May 2026	New Debt #2 Aug. 2026	New Debt #3 May 2027	New Debt #4 Aug. 2027
Projected 30-Yr Treasury Rate (Bloomberg)	4.80%	4.81%	4.84%	4.85%
Add: Historical 30-Year Bond Spread	1.35%	1.35%	1.35%	1.35%
	6.15%	**6.16%**	**6.19%**	**6.20%**

Schedule D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short-Term Debt
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-5)
Schedule: D-3
Page: 1 of 2
Witness: MRBleckman
Date: December 2025

Line No.		(a) **Average Borrowings**	(b) **Cost of Borrowings**	(c) **Cost Rate**
1	Short-Term Debt	$ 162.2	$ 7.9	4.87%

Sources:
Column (a): Exhibit A-14 (MRB-7), Schedule D-6.
Column (b): Exhibit A-14 (MRB-5), Schedule D-3, page 2.
Column (c) = column (b)/column (a).

Schedule D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short-Term Debt
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-5)
Schedule: D-3
Page: 2 of 2
Witness: MRBleckman
Date: December 2025

Summary

Line No.	Facility	Agreement Date	Expiration	Facility Amount	Test Year Assumption: Less: Avg. Borrowings (A)	Less: Letters of Credit (B)	Amount Unused[a] (C)	Upfront Fee Amort (D)
1	1. JPMorgan Revolver	Jun. 2018	Dec. 2027	$ 1,100.0	$ -	$ 9.8	$ 1,090.2	$ 0.5
2	2. Commercial Paper Facility	Sep. 2014	N/A	$ 500.0	$ 162.2	$ -	$ -	$ -
3	3. Scotiabank Revolver	Nov. 2018	Nov. 2025	$ 250.0	$ -	$ 112.2	$ 137.8	$ 0.1
4	4. LC Facility - SMBC	Mar. 2025	Mar. 2028	$ 50.0	$ -	$ 42.6	$ 7.4	$ -
5	5. LC Facility - BNP Bank	Aug. 2025	N/A	$ 50.0	$ -	$ 49.5	$ 0.5	$ -

Cost of Short-Term Debt

(A) Interest on Borrowings - Calculated on the projected drawn balance at SOFR plus the spread on borrowings.

Facility	SOFR[b]	Plus: Spread	Projected Rate	Avg. Borrowings	Cost
1. JPMorgan Revolver	3.17%	0.825%	4.00%	$ -	$ -
2. Commercial Paper Facility	3.17%	0.000%	3.17%	162.2	5.1
3. Scotiabank Revolver	3.17%	0.800%	3.97%	-	-
					$ 5.1

(B) Letter of Credit Fees - Calculated on the projected letters of credit outstanding at a rate equal to the spread.

Facility	Letter of Credit Type	Projected Rate	Letters of Credit	Cost
1. JPMorgan Revolver	Regular Operating	1.025%	$ 9.8	$ 0.1
2. Commercial Paper Facility	N/A	N/A	-	-
3. Scotiabank Revolver	MISO Margin & Other	0.800%	112.2	0.9
4. LC Facility - SMBC	MISO Margin	0.500%	42.6	0.2
5. LC Facility - BNP Bank	MISO Margin	0.500%	49.5	0.2
				$ 1.4

(C) Unused (Commitment) Fees - Calculated on the unused portion of the revolver at a rate stated in the facility agreement.

	Projected Rate	Amount Unused[a]	Cost
1. JPMorgan Revolver	0.065%	$ 1,090.2	$ 0.7
2. Commercial Paper Facility	N/A	-	-
3. Scotiabank Revolver	0.075%	$ 137.8	$ 0.1
			$ 0.8

(D) Amortization / Expense of Facility Fees - Fees paid upfront at the inception or amendment to the facility, amortized over the life of the facility.

	Annual Cost
1. JPMorgan Revolver	$ 0.5
2. Commercial Paper Facility	-
3. Scotiabank Revolver	0.1
	$ 0.6

Total Cost of Short-Term Debt **$ 7.9**

[a] Commercial Paper drawn balances go against, or are "backstopped," by the Company's JPMorgan Revolver. To the extent amounts are borrowed under the Commercial Paper Facility, the availability of the JPMorgan Revolver are reduced. These borrowings do not, however, reduce the "unused" portion of the revolver in calculating the unused (commitment) fees.

[b] Projected SOFR rate per Exhibit A-14 (MRB-4), Schedule D-2. Forecasted SOFR assumed to closely approximate commercial paper rate.

Schedule D-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Preferred Stock
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-14 (MRB-6)
Schedule: D-4
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.	(a) Description	(b) Annual Dividend	(c) Par Value	(d) Finance Expense	(e) (Premium) Discount	(f) Net Proceeds Received By Company	(g) Number Of Shares Outstanding	(h) Total Value Of Net Proceeds (000)	(i) Cost Rates	(j) Annual Cost (000)
	PREFERRED STOCK:									
1	$4.500 Series	$4.500	$100.00	$0.00	$0.00	$100.00	373,148	$37,315	4.50%	$1,679

Calculations:
Column (i) = (column (h)*column (b)/column (f))/column (h).
Column (j) = column (h)*column (i).

Schedule D-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Short-Term Debt Utilization
for the Projected Year Ending October 31, 2027
(in millions)

Case No.: U-21981
Exhibit No.: A-14 (MRB-7)
Schedule: D-6
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Ending Short-Term Debt

Line No.	(a) Actual Jan-24	(b) Actual Feb-24	(c) Actual Mar-24	(d) Actual Apr-24	(e) Actual May-24	(f) Actual Jun-24	(g) Actual Jul-24	(h) Actual Aug-24	(i) Actual Sep-24	(j) Actual Oct-24	(k) Actual Nov-24	(l) Actual Dec-24
1												
2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 65
3												
4												
5	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
6												
7	$ -	$ 161	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 344	$ 481
8												
9												
10	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
11												
12	$ 296	$ 128	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 288	$ 478	$ 483
13												
14												
15	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27		
16												
17	$ 312	$ 205	$ -	$ -	$ -	$ -	$ -	$ -	$ 71	$ 272		
18												
19	**Test Year 13-Month Avg**									**$ 162**		

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Current and Historical Credit Ratings
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-31 (MRB-8)
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.		Credit Ratings (a)	(b)	(c)	(d)	(e)	(f)
1			Standard & Poors Ratings at Year End				
2		**Current**	**2024**	**2023**	**2022**	**2021**	**2020**
3	**Consumers Energy Company**						
4	Senior Secured Debt	A	A	A	A	A	A
5	Commercial Paper	A-2	A-2	A-2	A-2	A-2	A-2
6	Senior Unsecured Debt	N/A	N/A	N/A	N/A	N/A	N/A
7	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
8	Preferred Stock	N/A	N/A	N/A	N/A	N/A	N/A
9	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
10							
11	**CMS Energy Corporation**						
12	Senior Secured Debt	N/A	N/A	N/A	N/A	N/A	N/A
13	Senior Unsecured Debt	BBB	BBB	BBB	BBB	BBB	BBB
14	Junior Subordinated Debt	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
15	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
16	Preferred Stock	BBB-	BBB-	BBB-	BBB-	BBB-	N/A
17	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
18							
19							
20			Moody's Ratings at Year End				
21		**Current**	**2024**	**2023**	**2022**	**2021**	**2020**
22	**Consumers Energy Company**						
23	Senior Secured Debt	A1	A1	A1	A1	A1	Aa3
24	Commercial Paper	P-2	P-2	P-2	P-2	P-2	P-1
25	Senior Unsecured Debt	N/A	N/A	N/A	N/A	N/A	N/A
26	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
27	Preferred Stock	Baa1	Baa1	Baa1	Baa1	Baa1	A3
28	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
29							
30	**CMS Energy Corporation**						
31	Senior Secured Debt	A3	A3	A3	A3	A3	A3
32	Senior Unsecured Debt	Baa2	Baa2	Baa2	Baa2	Baa2	Baa1
33	Junior Subordinated Debt	Baa3	Baa3	Baa3	Baa3	Baa3	Baa2
34	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
35	Preferred Stock	Ba1	Ba1	Ba1	Ba1	Ba1	N/A
36	Outlook	Stable	Stable	Stable	Stable	Stable	Negative
37							
38							
39			Fitch Ratings at Year End				
40		**Current**	**2024**	**2023**	**2022**	**2021**	**2020**
41	**Consumers Energy Company**						
42	Senior Secured Debt	A+	A+	A+	A+	A+	A+
43	Commercial Paper	F-2	F-2	F-2	F-2	F-2	F-2
44	Senior Unsecured Debt	A	A	A	A	A	A
45	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
46	Preferred Stock	BBB+	BBB+	BBB+	BBB+	BBB+	BBB+
47	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
48							
49	**CMS Energy Corporation**						
50	Senior Secured Debt	BBB+	BBB+	BBB+	BBB+	BBB+	BBB+
51	Senior Unsecured Debt	BBB	BBB	BBB	BBB	BBB	BBB
52	Junior Subordinated Debt	BB+	BB+	BB+	BB+	BB+	BB+
53	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
54	Preferred Stock	BB+	BB+	BB+	BB+	BB+	N/A
55	Outlook	Stable	Stable	Stable	Stable	Stable	Stable

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Recent Utility Corporate Bond Issuances

for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-32 (MRB-9)
Page: 1 of 5
Witness: MRBleckman
Date: December 2025

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)
1	09/05/23	SO	The Southern Co	Unsecured	600	5.500%	Baa2	BBB	03/15/29	+113
2	09/05/23	SO	The Southern Co	Unsecured	700	5.700%	Baa2	BBB	03/15/34	+148
3	09/05/23	DUK	Duke Energy Corp	Unsecured	600	5.750%	Baa2	BBB	09/15/33	+150
4	09/05/23	DUK	Duke Energy Corp	Unsecured	750	6.100%	Baa2	BBB	09/15/53	+173
5	09/05/23	BRKHEC	MidAmerican Energy Co	Secured	350	5.350%	Aa2	A+	01/15/34	+110
6	09/05/23	BRKHEC	MidAmerican Energy Co	Secured	1,000	5.850%	Aa2	A+	09/15/54	+147
7	09/05/23	WEC	WEC Energy Group Inc	Unsecured	600	5.600%	Baa1	BBB+	09/12/26	+93
8	09/06/23	BKH	Black Hills Corporation	Unsecured	450	6.150%	Baa2	BBB+	05/14/34	+195
9	09/06/23	IDA	Idaho Power Co	Secured	350	5.800%	A2	A-	04/01/54	+150
10	09/11/23	SO	Southern Company Gas Capital Corp	Unsecured	500	5.750%	Baa1	BBB+	09/15/33	+148
11	09/11/23	BRKHEC	Nevada Power Co	Secured	500	6.000%	A2	A+	03/15/54	+163
12	09/12/23	VST	Vistra Operations Co LLC	Secured	650	6.950%	Baa3	BBB-	10/15/33	+270
13	09/12/23	FE	Monongahela Power Co	Secured	400	5.850%	A3	A-	02/15/34	+160
14	09/12/23	NGGLN	Brooklyn Union Gas Company	Unsecured	400	6.388%	Baa2	BBB+	09/15/33	+212
15	09/13/23	CNP	CenterPoint Energy Houston Electric LLC	Secured	500	5.200%	A2	A	10/01/28	+85
16	09/13/23	BRKHEC	Sierra Pacific Power Co	Secured	400	5.900%	A2	A+	03/15/54	+160
17	09/18/23	LNT	Interstate Power and Light Co	Unsecured	300	5.700%	Baa1	A-	10/15/33	+145
18	09/18/23	ES	Public Service Co of New Hampshire	Secured	300	5.350%	A1	A+	10/01/33	+105
19	09/18/23	ES	NSTAR Electric Co	Unsecured	150	5.600%	A1	A	10/01/28	+115
20	09/26/23	CEG	Constellation Energy Generation LLC	Unsecured	500	6.125%	Baa2	BBB	01/15/34	+158
21	09/26/23	CEG	Constellation Energy Generation LLC	Unsecured	900	6.500%	Baa2	BBB	10/01/53	+180
22	09/26/23	EIX	Southern California Edison Co	Secured	550	5.650%	A2	A-	10/01/28	+105
23	10/02/23	PEG	Public Service Enterprise Group	Unsecured	600	5.875%	Baa2	BBB	10/15/28	+120
24	10/02/23	PEG	Public Service Enterprise Group	Unsecured	400	6.125%	Baa2	BBB	10/15/33	+150
25	10/04/23	D	Dominion Energy South Carolina Inc	Secured	500	6.250%	A2	A	10/15/53	+140
26	10/05/23	ATO	Atmos Energy	Unsecured	400	5.900%	A1	A-	11/15/33	+120
27	10/05/23	ATO	Atmos Energy	Unsecured	500	6.200%	A1	A-	11/15/53	+133
28	10/30/23	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	400	5.600%	A2	A-	11/13/26	+73
29	11/06/23	DUK	Duke Energy Florida LLC	Secured	600	5.875%	A1	A	11/15/33	+125
30	11/06/23	DUK	Duke Energy Florida LLC	Secured	700	6.200%	A1	A	11/15/53	+142
31	11/06/23	PCG	Pacific Gas and Electric Co	Secured	800	6.950%	Baa3	BBB-	03/15/34	+233
32	11/06/23	SO	Alabama Power Co	Unsecured	300	5.850%	A1	A-	11/15/33	+120
33	11/07/23	LNT	Alliant Energy Finance LLC	Unsecured	300	5.950%	Baa2	BBB+	03/30/29	+147
34	11/08/23	AEP	Kentucky Power Co	Unsecured	375	7.000%	Baa3	BBB	11/15/33	+250
35	11/08/23	ES	Eversource Energy	Unsecured	800	5.950%	Baa2	BBB+	02/01/29	+147
36	11/08/23	EVRG	Evergy Kansas Central Inc	Secured	300	5.900%	A2	A	11/15/33	+140
37	11/08/23	ONCRTX	Oncor Electric Delivery Co LLC	Secured	800	5.650%	A2	A+	11/15/33	+115
38	11/15/23	AEE	Ameren Corporation	Unsecured	600	5.700%	Baa1	BBB	12/01/26	+105
39	11/20/23	ED	Consolidated Edison Co of New York Inc	Unsecured	600	5.500%	A3	A-	03/15/34	+115
40	11/20/23	ED	Consolidated Edison Co of New York Inc	Unsecured	900	5.900%	A3	A-	11/15/53	+138
41	11/28/23	OGLETH	Oglethorpe Power Corp	Secured	400	6.200%	Baa1	BBB+	12/01/53	+175
42	12/04/23	EIX	Edison International	Pref/Hybrid	450	7.875%	Baa3	BB+	06/15/54	+366
43	12/06/23	AEP	American Electric Power Company	Unsecured	1,000	5.200%	Baa2	BBB+	01/15/29	+113
44	12/11/23	OGS	ONE Gas Inc	Unsecured	300	5.100%	A3	A-	4/1/2029	+87
45	12/11/23	VST	Vistra Operations Co LLC (Reopening)	Secured	400	6.950%	Baa3	BBB-	10/15/33	+240
46	12/18/23	AEE	Ameren Corporation	Unsecured	700	5.000%	Baa2	BBB	01/15/29	+110
47	01/02/24	DUK	Duke Energy Corp	Unsecured	550	4.850%	Baa2	BBB	1/5/2027	+75
48	01/02/24	DUK	Duke Energy Corp	Unsecured	550	4.850%	Baa2	BBB	1/5/2029	+95
49	01/02/24	D	Virginia Electric and Power Co	Unsecured	500	5.000%	A2	BBB+	01/15/34	+115
50	01/02/24	D	Virginia Electric and Power Co	Unsecured	500	5.350%	A2	BBB+	01/15/54	+127
51	01/02/24	PPL	PPL Electric Utilities Corp	Secured	650	4.850%	A1	A+	02/15/34	+92
52	**01/02/24**	**CMS**	**Consumers Energy Co**	**Secured**	**600**	**4.600%**	**A1**	**A**	**05/30/29**	**+73**
53	01/03/24	BRKHEC	PacifiCorp	Secured	500	5.100%	A2	A	02/15/29	+120
54	01/03/24	BRKHEC	PacifiCorp	Secured	700	5.300%	A2	A	02/15/31	+140
55	01/03/24	BRKHEC	PacifiCorp	Secured	1,100	5.450%	A2	A	02/15/34	+155
56	01/03/24	BRKHEC	PacifiCorp	Secured	1,500	5.800%	A2	A	01/15/55	+175
57	01/03/24	DUK	Duke Energy Carolinas LLC	Secured	575	4.850%	Aa3	A	01/15/34	+100
58	01/03/24	DUK	Duke Energy Carolinas LLC (Reopening)	Secured	425	5.400%	Aa3	A	01/15/54	+118
59	01/03/24	AEE	Union Electric Co	Secured	350	5.250%	A2	A	01/15/54	+123
60	01/04/24	WTRG	Essential Utilities Inc	Unsecured	500	5.375%	Baa2	A-	01/15/34	+140
61	01/08/24	EIX	Southern California Edison Co	Secured	500	4.875%	A2	A-	02/01/27	+75
62	01/08/24	EIX	Southern California Edison Co	Secured	900	5.200%	A2	A-	06/01/34	+120
63	01/08/24	NGGLN	National Grid PLC	Unsecured	750	5.418%	Baa2	BBB	01/11/34	+142
64	01/09/24	AQNCN	Liberty Utilities Co	Unsecured	500	5.577%	Baa2	BBB	01/31/29	+160
65	01/09/24	AQNCN	Liberty Utilities Co	Unsecured	350	5.869%	Baa2	BBB	01/31/34	+185
66	01/11/24	NGGLN	Niagara Mohawk Power	Unsecured	500	5.290%	Baa1	BBB+	01/17/34	+130
67	01/11/24	NGGLN	Niagara Mohawk Power	Unsecured	700	5.664%	Baa1	BBB+	01/17/54	+145
68	01/16/24	ES	Eversource Energy	Unsecured	350	5.000%	Baa2	BBB+	1/1/2027	+100
69	01/16/24	ES	Eversource Energy	Unsecured	650	5.500%	Baa2	BBB+	1/1/2034	+150
70	01/16/24	ES	Connecticut Light and Power Co	Secured	350	4.650%	A1	A+	1/1/2029	+75
71	01/22/24	BRKHEC	MidAmerican Energy	Secured	600	5.300%	Aa2	A	02/01/55	+98
72	01/25/24	TE	Tampa Electric	Unsecured	500	4.900%	A3	BBB+	03/01/29	+88
73	01/29/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	600	FRN	Baa1	BBB+	01/29/26	+76
74	01/29/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	1,000	4.950%	Baa1	BBB+	01/29/26	+65
75	01/29/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	900	4.900%	Baa1	BBB+	03/15/29	+95
76	01/29/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	1,100	5.250%	Baa1	BBB+	03/15/34	+120
77	01/29/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	800	5.550%	Baa1	BBB+	03/15/54	+125
78	01/29/24	BRKHEC	Northern Natural Gas Co	Unsecured	500	5.625%	A2	A-	02/01/54	+127
79	02/06/24	SR	Spire Inc	Unsecured	350	5.300%	Baa2	BBB+	03/01/26	+85
80	02/12/24	DTE	DTE Energy Co	Unsecured	1,200	5.100%	Baa2	BBB	03/01/29	+103
81	02/20/24	AWK	American Water Capital Corp	Unsecured	700	5.150%	Baa1	A	03/01/34	+92
82	02/20/24	AWK	American Water Capital Corp	Unsecured	700	5.450%	Baa1	A	03/01/54	+107
83	02/20/24	SO	Georgia Power Co	Unsecured	500	5.004%	Baa1	BBB+	02/23/27	+62
84	02/20/24	SO	Georgia Power Co	Unsecured	900	5.250%	Baa1	BBB+	03/15/34	+102
85	02/20/24	DTE	DTE Electric Co	Secured	500	4.850%	Aa3	A	12/01/26	+47
86	02/20/24	DTE	DTE Electric Co	Secured	500	5.200%	Aa3	A	03/01/34	+93
87	02/21/24	NGGLN	Massachusetts Electric Co	Unsecured	400	5.867%	Baa1	BBB+	02/26/54	+138
88	02/22/24	EXC	Exelon Corp	Unsecured	650	5.150%	Baa2	BBB	03/15/29	+88
89	02/22/24	EXC	Exelon Corp	Unsecured	650	5.450%	Baa2	BBB	03/15/34	+115
90	02/22/24	EXC	Exelon Corp (Reopening)	Unsecured	400	5.600%	Baa2	BBB	03/15/53	+130
91	02/22/24	XEL	Northern States Power Co/MN	Secured	700	5.400%	Aa3	A+	03/15/54	+97
92	02/26/24	PCG	Pacific Gas and Electric Co	Secured	850	5.550%	Baa2	BBB	05/15/29	+125
93	02/26/24	PCG	Pacific Gas and Electric Co	Secured	1,100	5.800%	Baa2	BBB	05/15/34	+153
94	02/26/24	PCG	Pacific Gas and Electric Co (Reopening)	Secured	300	6.750%	Baa2	BBB	01/15/53	+170
95	02/26/24	SO	The Southern Co (Reopening)	Unsecured	400	5.500%	Baa2	BBB	03/15/29	+85
96	02/26/24	SO	The Southern Co (Reopening)	Unsecured	400	5.700%	Baa2	BBB	03/15/34	+117
97	02/26/24	XEL	Xcel Energy Inc	Unsecured	800	5.500%	Baa1	BBB+	03/15/34	+125
98	02/26/24	EXC	Potomac Electric Power Co	Secured	375	5.200%	A2	A	03/15/34	+95
99	02/26/24	EXC	Potomac Electric Power Co	Secured	300	5.500%	A2	A	03/15/54	+110
100	02/26/24	CNP	CenterPoint Energy Houston Electric LLC	Secured	400	5.150%	A2	A	03/01/34	+90
101										

102 FRN: Floating Rate Note

103 MS: Mid-Swap - The average of the bid and offer swap rates for a reference maturity

104 Source: Barclays Bank

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Recent Utility Corporate Bond Issuances

for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-32 (MRB-9)
Page: 2 of 5
Witness: MRBleckman
Date: December 2025

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)
1	02/26/24	DUK	Duke Energy Indiana LLC	Secured	300	5.250%	Aa3	A	03/01/34	+100
2	02/27/24	EIX	Southern California Edison Co	Secured	600	5.350%	A2	A-	03/01/26	+62
3	02/27/24	EIX	Southern California Edison Co	Secured	600	5.150%	A2	A-	06/01/29	+83
4	02/27/24	EIX	Southern California Edison Co	Secured	400	5.750%	A2	A-	04/15/54	+135
5	02/27/24	NEE	NextEra Energy Capital Holdings Inc	Pref/Hybrid	1,000	6.700%	Baa2	BBB	09/01/54	+242
6	02/28/24	PEG	Public Service Electric and Gas Co	Secured	450	5.200%	A1	A	03/01/34	+93
7	02/28/24	PEG	Public Service Electric and Gas Co	Secured	550	5.450%	A1	A	03/01/54	+108
8	03/04/24	NEE	NextEra Energy Capital Holdings Inc	Unsecured	1,000	4.850%	Baa1	BBB+	04/30/31	+142
9	03/04/24	ETR	Entergy Louisiana LLC	Secured	500	5.350%	A2	A	03/15/34	+115
10	03/04/24	ETR	Entergy Louisiana LLC	Secured	700	5.700%	A2	A	03/15/54	+135
11	03/04/24	LNT	Wisconsin Power and Light Co	Unsecured	300	5.375%	Baa1	A	03/30/34	+118
12	03/06/24	AES	AES Andes SA	Unsecured	500	6.300%	Baa3	BBB-	03/15/29	+220
13	03/07/24	AES	Indianapolis Power & Light Co	Secured	650	5.700%	A2	A-	04/01/54	+147
14	03/08/24	AES	IPALCO Enterprises Inc	Secured	400	5.750%	Baa3	BBB-	04/01/34	+170
15	03/11/24	NI	NiSource Inc	Unsecured	650	5.350%	Baa2	BBB+	04/01/34	+128
16	03/11/24	SRE	Sempra Energy	Pref/Hybrid	600	6.875%	Baa3	BBB-	10/01/54	+279
17	03/11/24	DUK	Duke Energy Progress LLC	Secured	500	5.100%	Aa3	A	03/15/34	+103
18	03/11/24	AEP	AEP Transmission Co LLC	Unsecured	450	5.150%	A2	BBB+	04/01/34	+105
19	03/11/24	DUK	Duke Energy Ohio Inc	Secured	425	5.550%	A2	A	03/15/54	+130
20	03/12/24	CEG	Constellation Energy Generation LLC	Unsecured	900	5.750%	Baa2	BBB+	03/15/54	+145
21	03/12/24	SRE	Southern California Gas Co	Secured	500	5.600%	Aa3	A+	04/01/54	+133
22	03/18/24	SRE	San Diego Gas & Electric Co	Secured	600	5.550%	A1	A	04/15/54	+115
23	03/18/24	AEP	Appalachian Power Co	Unsecured	400	5.650%	Baa1	BBB+	04/01/34	+135
24	03/19/24	ES	Public Service Co of New Hampshire (Reopening)	Secured	300	5.350%	A1	A+	10/01/33	+95
25	03/21/24	PPL	The Narragansett Electric Co	Unsecured	500	5.350%	A3	A-	05/01/34	+108
26	03/25/24	PEG	Public Service Enterprise Group Inc	Unsecured	750	5.200%	Baa2	BBB	04/01/29	+100
27	03/25/24	PEG	Public Service Enterprise Group Inc	Unsecured	500	5.450%	Baa2	BBB	04/01/34	+122
28	03/25/24	AEE	Union Electric Company d/b/a Ameren Missouri	Secured	500	5.200%	A2	A	04/01/34	+98
29	04/01/24	XEL	Public Service Co of Colorado	Secured	450	5.350%	A1	A	05/15/34	+105
30	04/01/24	XEL	Public Service Co of Colorado	Secured	750	5.750%	A1	A	05/15/54	+130
31	04/01/24	EVRG	Evergy Metro Inc	Secured	300	5.400%	A2	A	04/01/34	+110
32	04/03/24	ENGIFP	Engie SA	Unsecured	750	5.250%	Baa1	BBB+	04/10/29	+100
33	04/03/24	ENGIFP	Engie SA	Unsecured	750	5.625%	Baa1	BBB+	04/10/34	+128
34	04/03/24	ENGIFP	Engie SA	Unsecured	500	5.875%	Baa1	BBB+	04/10/54	+148
35	04/09/24	DUK	Duke Energy Corporation	Unsecured	750	3.750%	Baa2	BBB	04/01/31	MS+120
36	04/09/24	VST	Vistra Operations Co LLC	Secured	500	6.000%	Baa3	BBB-	04/15/34	+165
37	04/11/24	RWE	RWE Finance US LLC	Unsecured	1,000	5.875%	Baa2	NR	04/16/34	+135
38	04/11/24	RWE	RWE Finance US LLC	Unsecured	1,000	6.250%	Baa2	NR	04/16/54	+160
39	04/15/24	EDF	Electricite de France SA	Unsecured	650	5.650%	Baa1	BBB	04/22/29	+105
40	04/15/24	EDF	Electricite de France SA	Unsecured	650	5.950%	Baa1	BBB	04/22/34	+135
41	04/15/24	EDF	Electricite de France SA	Unsecured	750	6.000%	Baa1	BBB	04/22/64	+185
42	04/15/24	ES	Eversource Energy	Unsecured	700	5.850%	Baa2	BBB+	04/15/31	+120
43	04/15/24	ES	Eversource Energy	Unsecured	700	5.950%	Baa2	BBB+	07/15/34	+135
44	04/29/24	DTE	DTE Energy Co	Unsecured	850	5.850%	Baa2	BBB	06/01/34	+125
45	05/02/24	AEP	Ohio Power Co	Unsecured	350	5.650%	Baa1	BBB+	06/01/34	+110
46	05/06/24	D	Dominion Energy Inc	Pref/Hybrid	1,000	6.875%	Baa3	BBB-	02/01/55	+239
47	05/06/24	D	Dominion Energy Inc	Pref/Hybrid	1,000	7.000%	Baa3	BBB-	06/01/54	+251
48	05/06/24	ED	Consolidated Edison Co of New York Inc	Unsecured	400	5.375%	A3	A-	05/15/34	+90
49	05/06/24	ED	Consolidated Edison Co of New York Inc	Unsecured	1,000	5.700%	A3	A-	05/15/54	+110
50	05/06/24	EXC	Commonwealth Edison Co	Secured	400	5.300%	A1	A	06/01/34	+85
51	05/06/24	EXC	Commonwealth Edison Co	Secured	400	5.650%	A1	A	06/01/54	+105
52	05/06/24	EIX	Southern California Edison Co	Secured	750	5.450%	A2	A-	06/01/31	+97
53	05/06/24	PNW	Arizona Public Service Co	Unsecured	450	5.700%	Baa1	BBB+	08/15/34	+125
54	05/06/24	ITC	ITC Holdings Corp	Unsecured	400	5.650%	Baa2	BBB+	05/09/34	+118
55	05/06/24	OGE	OGE Energy Corp	Unsecured	350	5.450%	Baa1	BBB	05/15/29	+100
56	05/07/24	EIX	SCE Trust VIII ($25 par)	Pref/Hybrid	350	6.950%	Baa3	BB+	05/13/29	+248
57	05/07/24	ETR	Entergy Arkansas LLC	Secured	400	5.450%	A2	A	06/01/34	+100
58	05/07/24	ETR	Entergy Arkansas LLC	Secured	400	5.750%	A2	A	06/01/54	+118
59	05/07/24	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	450	5.100%	A2	A-	05/06/27	+48
60	05/07/24	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	350	5.150%	A2	A-	06/15/29	+73
61	05/07/24	WEC	Wisconsin Electric Power Co	Unsecured	350	5.000%	A2	A-	05/15/29	+60
62	05/08/24	CNP	CenterPoint Energy Inc	Unsecured	700	5.400%	Baa2	BBB	06/01/29	+95
63	05/13/24	NI	NiSource	Pref/Hybrid	500	6.950%	Baa3	BBB-	11/30/54	+245
64	05/13/24	BKH	Black Hills Corporation	Unsecured	450	6.000%	Baa2	BBB+	01/15/35	+155
65	05/13/24	XEL	Northern States Power - WI	Secured	400	5.650%	Aa3	A	06/15/54	+105
66	05/13/24	ETR	Entergy Mississippi	Secured	300	5.850%	A2	A	06/01/54	+123
67	05/15/24	ONCRTX	Oncor Electric Delivery Company	Secured	500	3.500%	A2	A+	05/15/31	MS+80
68	05/16/24	AES	The AES Corp	Pref/Hybrid	950	7.600%	Ba1	BB	01/15/55	+320
69	05/20/24	ETR	Entergy Corp	Pref/Hybrid	1,200	7.125%	Baa3	BBB-	12/01/54	+267
70	05/20/24	AEP	AEP Texas Inc	Unsecured	500	5.450%	Baa2	BBB+	05/15/29	+100
71	05/20/24	AEP	AEP Texas Inc	Unsecured	350	5.700%	Baa2	BBB+	05/15/34	+130
72	05/20/24	ES	NSTAR Electric Co	Unsecured	600	5.400%	A2	A	06/01/34	+98
73	05/21/24	EVRG	Evergy Missouri West Inc	Secured	300	5.650%	A3	A	06/01/34	+125
74	05/28/24	NEE	Florida Power & Light Co	Secured	750	5.150%	Aa2	A+	06/15/29	+60
75	05/28/24	NEE	Florida Power & Light Co	Secured	750	5.300%	Aa2	A+	06/15/34	+80
76	05/28/24	NEE	Florida Power & Light Co	Secured	850	5.600%	Aa2	A+	06/15/54	+95
77	05/28/24	SRE	Sempra Energy (Reopening)	Pref/Hybrid	500	6.875%	Baa3	BBB-	10/01/54	+279
78	06/03/24	EXC	Baltimore Gas and Electric Co	Unsecured	400	5.300%	A3	A	06/01/34	+93
79	06/03/24	EXC	Baltimore Gas and Electric Co	Unsecured	400	5.650%	A3	A	06/01/54	+110
80	06/03/24	XEL	Southwestern Public Service Co	Secured	600	6.000%	A3	A-	06/01/54	+150
81	06/03/24	LNT	Alliant Energy Finance LLC	Unsecured	375	5.400%	Baa2	BBB+	06/06/27	+80
82	06/04/24	PSD	Puget Sound Energy Inc	Unsecured	400	5.330%	A2	A-	06/15/34	+100
83	06/04/24	PSD	Puget Sound Energy Inc	Unsecured	400	5.685%	A2	A-	06/15/54	+120
84	06/05/24	NEE	NextEra Energy Capital Holdings Inc	Pref/Hybrid	1,200	6.750%	Baa2	BBB	06/15/54	+246
85	06/05/24	DUK	Duke Energy Corp	Unsecured	750	5.450%	Baa2	BBB	06/15/34	+118
86	06/05/24	DUK	Duke Energy Corp	Unsecured	750	5.800%	Baa2	BBB	06/15/54	+140
87	06/05/24	AES	AES Andes SA	Pref/Hybrid	530	8.150%	Ba1	BB	06/10/55	+384
88	06/10/24	EMACN	EUSHI Finance Inc	Pref/Hybrid	500	7.625%	Ba1	BB+	12/15/54	+314
89	06/05/24	PNW	Pinnacle West Capital Corp	Unsecured	350	FRN	Baa2	BBB	06/10/26	+82
90	06/17/24	AEP	American Electric Power Co.	Pref/Hybrid	400	7.050%	Baa3	BBB-	12/15/54	+275
91	06/17/24	AEP	American Electric Power Co.	Pref/Hybrid	600	6.950%	Baa3	BBB-	12/15/54	+268
92	06/17/24	ONCRTX	Oncor Electric Delivery	Secured	750	5.550%	A2	A+	06/15/54	+115
93	06/17/24	AEE	Ameren Illinois Company	Secured	625	5.550%	A1	A	07/01/54	+115
94	06/17/24	NI	NiSource Inc	Unsecured	600	5.200%	Baa2	BBB+	07/01/29	+95
95	06/17/24	CNP	CenterPoint Energy Resources Corp	Unsecured	400	5.400%	A3	BBB+	07/01/34	+115
96	06/24/24	HASI	Hannon Armstrong Sustainable Infrastructure Capital I	Unsecured	700	6.375%	Baa3	BB+	07/01/34	+225
97	06/25/24	EIX	Edison International	Unsecured	500	5.450%	Baa2	BBB-	06/15/29	+120
98	07/15/24	NGGLN	The Brooklyn Union Gas Co (Reopening)	Unsecured	150	6.388%	Baa2	BBB+	09/15/33	+167
99	07/15/24	NGGLN	The Brooklyn Union Gas Co	Unsecured	450	6.415%	Baa2	BBB+	07/18/54	+195
100	**07/29/24**	**CMS**	**Consumers Energy Co**	**Secured**	**700**	**4.700%**	**A1**	**A**	**01/15/30**	**+68**

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Recent Utility Corporate Bond Issuances

for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-32 (MRB-9)
Page: 3 of 5
Witness: MRBleckman
Date: December 2025

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)
1	07/29/24	DTE	DTE Energy Co	Unsecured	1,200	4.950%	Baa2	BBB	7/1/2027	+80
2	08/01/24	PEG	Public Service Electric & Gas	Secured	600	4.850%	A1	A	8/1/2034	+90
3	08/01/24	PEG	Public Service Electric & Gas	Secured	500	5.300%	A1	A	8/1/2054	+105
4	08/01/24	AGR	New York State Electric & Gas Corp	Unsecured	525	5.300%	Baa1	A-	8/15/2034	+135
5	08/06/24	ETR	Entergy Louisiana LLC	Secured	700	5.150%	A2	A	09/15/34	+130
6	08/06/24	PPL	PPL Capital Funding Inc	Unsecured	750	5.250%	Baa1	BBB+	09/01/34	+143
7	08/06/24	SR	Spire Missouri Inc	Secured	320	5.150%	A1	A	08/15/34	+130
8	08/06/24	ES	The Connecticut Light and Power Co	Secured	300	4.950%	A1	A+	08/15/34	+110
9	08/06/24	D	Virginia Electric and Power Co	Unsecured	600	5.050%	A2	BBB+	08/15/34	+120
10	08/06/24	D	Virginia Electric and Power Co	Unsecured	600	5.550%	A2	BBB+	08/15/54	+140
11	08/07/24	IDA	Idaho Power Co	Secured	300	5.200%	A2	A-	08/15/34	+125
12	08/07/24	FTSCN	Tucson Electric Power Co	Unsecured	400	5.200%	A3	A-	09/15/34	+128
13	08/08/24	WTRG	Essential Utilities Inc	Unsecured	500	4.800%	Baa2	BBB+	08/15/27	+90
14	08/08/24	NRUC	National Rural Utilities Cooperative Finance Corp	Secured	350	5.000%	A1	A-	08/15/34	+110
15	08/08/24	OGS	One Gas Inc (Reopening)	Unsecured	250	5.100%	Aaa	AA+	04/01/29	+85
16	08/08/24	SRE	Southern California Gas Co	Secured	600	5.050%	Aa3	A+	09/01/34	+110
17	08/08/24	TVA	Tennessee Valley Authority	Unsecured	1,000	4.375%	Aaa	AA+	08/01/34	+48
18	08/12/24	DUK	Piedmont Natural Gas Co Inc	Secured	375	5.100%	A3	BBB+	02/15/35	+120
19	08/12/24	CNP	CenterPoint Energy	Pref/Hybrid	400	7.000%	Baa3	BBB-	02/15/55	+325
20	08/12/24	CNP	CenterPoint Energy	Pref/Hybrid	400	6.850%	Baa3	BBB-	02/15/55	+295
21	08/12/24	ETR	Entergy Texas Inc	Secured	350	5.550%	A3	A	09/15/54	+140
22	08/12/24	OGE	Oklahoma Gas and Electric Co (Reopening)	Secured	350	5.600%	A3	A-	04/01/53	+130
23	08/19/24	DUK	Duke Energy Corp	Pref/Hybrid	1,000	6.450%	Baa3	BBB-	09/01/54	+259
24	09/03/24	FE	FirstEnergy Transmission LLC	Unsecured	400	4.550%	Baa2	BBB+	01/15/30	+92
25	09/03/24	FE	FirstEnergy Transmission LLC	Unsecured	400	5.000%	Baa2	BBB+	01/15/35	+117
26	09/03/24	NI	NiSource Inc.	Pref/Hybrid	500	6.375%	Baa3	BBB-	03/31/55	+253
27	09/03/24	PCG	Pacific Gas and Electric Co	Secured	750	5.900%	Baa2	BBB	10/01/54	+180
28	09/03/24	PCG	Pacific Gas and Electric Co	Secured	1,000	FRN	Baa2	BBB	09/04/25	+95
29	09/03/24	EXC	PECO Energy Co	Secured	575	5.250%	Aa3	A	09/15/54	+112
30	09/03/24	EIX	Southern California Edison Co	Secured	500	4.400%	A2	A-	09/06/26	+55
31	09/03/24	SO	Southern Company Gas Capital Corp	Unsecured	450	4.950%	Baa1	A-	09/15/34	+115
32	09/04/24	LNT	Inerstate Power and Light	Unsecured	350	4.950%	Baa1	A-	09/30/34	+120
33	09/04/24	LNT	Inerstate Power and Light	Unsecured	300	5.450%	Baa1	A-	09/30/54	+140
34	09/04/24	SRE	Sempra	Pref/Hybrid	1,250	6.400%	Baa3	BBB-	10/01/54	+263
35	09/04/24	SO	The Southern Co	Unsecured	750	4.850%	Baa2	BBB+	03/15/35	+110
36	09/09/24	NRUC	National Rural Utilities	Unsecured	300	FRN	A2	A-	09/16/27	+100
37	09/09/24	NRUC	National Rural Utilities	Unsecured	550	4.120%	A2	A-	09/16/27	+58
38	09/09/24	NRUC	National Rural Utilities	Unsecured	500	5.150%	A2	A-	06/15/29	+73
39	09/09/24	PCG	PG&E Corporation	Pref/Hybrid	1,000	7.375%	Ba3	B	03/15/55	+388
40	09/09/24	WEC	Wisconsin Electric Power Co	Unsecured	300	4.600%	A2	A-	10/01/34	+90
41	09/09/24	WEC	Wisconsin Electric Power Co	Unsecured	300	5.050%	A2	A-	10/01/54	+108
42	09/16/24	ALACN	AltaGas Ltd	Pref/Hybrid	900	7.200%	NR	BB	10/15/54	+357
43	09/17/24	ATO	Atmos Energy Corp	Unsecured	650	5.000%	A1	A-	12/15/54	+108
44	09/26/24	NIAENE	Niagara Energy SAC	Unsecured	1,200	5.746%	Baa3	BBB-	10/03/34	+195
45	09/30/24	AEE	Union Electric Company d/b/a Ameren Missouri	Secured	450	5.125%	A2	A	03/15/55	+102
46	10/07/24	BRKHEC	Eastern Energy Gas Holdings	Unsecured	900	5.650%	Baa1	A-	10/15/54	+135
47	10/29/24	CNP	CenterPoint Energy Inc	Pref/Hybrid	500	6.700%	Baa3	BBB-	05/15/55	+259
48	10/31/24	EIX	Edison International	Unsecured	550	5.250%	Baa2	BBB-	03/15/32	+105
49	11/08/24	ONCRTX	Oncor Electric Delivery	Secured	550	4.650%	A2	A+	11/01/29	+52
50	11/13/24	PCG	PG&E Corporation (Reopening)	Pref/Hybrid	500	7.375%	Ba3	BBB-	03/15/55	+388
51	11/14/24	ED	Consolidated Edison Co of New York	Unsecured	350	FRN	A3	A-	11/18/27	+52
52	11/14/24	ED	Consolidated Edison Co of New York	Unsecured	450	5.125%	A3	A-	03/15/35	+70
53	11/14/24	ED	Consolidated Edison Co of New York	Unsecured	650	5.500%	A3	A-	03/15/55	+70
54	11/14/24	D	Dominion Energy	Pref/Hybrid	1,250	6.625%	Baa3	BBB-	05/15/55	+221
55	11/18/24	SRE	Sempra	Pref/Hybrid	400	6.625%	Baa3	BBB-	04/01/55	+235
56	11/18/24	SRE	Sempra	Pref/Hybrid	600	6.550%	Baa3	BBB-	04/01/55	+214
57	11/19/24	VST	Vistra Operations Co	Secured	500	5.050%	Baa3	BBB-	12/30/26	+80
58	11/19/24	VST	Vistra Operations Co	Secured	750	5.700%	Baa3	BBB-	12/30/34	+133
59	11/21/24	BIP	Brookfield Infrastructure Finance ULC	Pref/Hybrid	300	6.750%	NR	BBB-	03/15/55	+245
60	12/02/24	EVRG	Evergy Inc.	Pref/Hybrid	500	6.650%	Baa3	BBB-	06/01/55	+256
61	12/02/24	FE	Jersey Central Power & Light Co	Unsecured	700	5.100%	A3	BBB	01/15/35	+95
62	12/02/24	SO	Georgia Power Co	Unsecured	600	4.550%	A3	A	03/15/30	+52
63	12/02/24	WEC	Wisconsin Public Service	Unsecured	300	4.550%	A2	A-	12/01/29	+48
64	12/03/24	AEP	Public Service Co of Oklahoma	Unsecured	600	5.200%	Baa1	BBB+	01/15/35	+100
65	12/03/24	ETR	System Energy Resources Inc	Secured	300	5.300%	Baa2	BBB+	12/15/34	+113
66	12/04/24	AES	The AES Corporation	Pref/Hybrid	500	6.950%	Ba1	BB	07/15/55	+289
67	12/09/24	HASI	Hannon Armstrong Sustainable Infrastructure Capital I	Unsecured	300	6.375%	Baa3	BB+	07/01/34	+220
68	01/02/25	D	Dominon Energy South Carolina	Secured	450	5.300%	A2	A	01/15/35	+75
69	01/02/25	DUK	Duke Energy Carolinas	Secured	400	4.850%	Aa3	A	03/15/30	+50
70	01/02/25	DUK	Duke Energy Carolinas	Secured	700	5.250%	Aa3	A	03/15/35	+72
71	01/02/25	ETR	Entergy Louisiana	Secured	750	5.800%	A2	A	03/15/35	+103
72	01/06/25	EIX	Southern California Edison Company	Secured	850	5.450%	A2	A-	03/01/35	+85
73	01/06/25	EIX	Southern California Edison Company	Secured	650	5.900%	A2	A-	03/01/55	+108
74	01/06/25	ES	Connecticut Light & Power Company	Secured	400	4.950%	A1	A	01/15/30	+55
75	01/07/25	NGGLN	Boston Gas Company	Unsecured	500	5.843%	Baa1	BBB+	01/10/35	+115
76	01/08/25	SO	Southern Company ($25 par)	Pref/Hybrid	565	6.500%	Baa2	BBB	03/15/85	-
77	01/13/25	BRKHEC	Eastern Energy Gas Holdings	Unsecured	700	5.800%	Baa1	A-	01/15/35	+105
78	01/13/25	BRKHEC	Eastern Energy Gas Holdings	Unsecured	500	6.200%	Baa1	A-	01/15/55	+125
79	01/27/25	KALLPA	Kallpa Generacion SA	Unsecured	500	5.875%	Baa3	NR	01/30/32	+163
80	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	500	FRN	Baa1	BBB+	02/04/28	+80
81	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	1,000	4.850%	Baa1	BBB+	02/04/28	+60
82	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	1,000	5.050%	Baa1	BBB+	03/15/30	+73
83	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	750	5.300%	Baa1	BBB+	03/15/32	+88
84	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	1,000	5.450%	Baa1	BBB+	03/15/35	+98
85	01/30/25	NEE	NextEra Energy Capital Holdings Inc.	Unsecured	750	5.900%	Baa1	BBB+	03/15/55	+113
86	01/30/25	BRKHEC	Nevada Power Company	Pref/Hybrid	300	6.250%	Baa2	BBB-	05/15/55	+194
87	02/04/25	NEE	NextEra Energy Capital Holdings Inc.	Pref/Hybrid	1,500	6.375%	Baa2	BBB	08/15/55	+205
88	02/04/25	NEE	NextEra Energy Capital Holdings Inc.	Pref/Hybrid	1,000	6.500%	Baa2	BBB	08/15/55	+198
89	02/05/25	NFG	National Fuel Gas Co	Unsecured	500	5.500%	Baa3	BBB-	03/15/30	+118
90	02/05/25	NFG	National Fuel Gas Co	Unsecured	500	5.950%	Baa3	BBB-	03/15/35	+147
91	02/05/25	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	600	4.750%	A2	A-	02/07/28	+52
92	02/05/25	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	500	4.950%	A2	A-	02/07/30	+67
93	02/13/25	EXC	Exelon Corporation	Pref/Hybrid	1,000	6.500%	Baa3	BBB	03/15/55	+198
94	02/18/25	CMS	CMS Energy Corporation	Pref/Hybrid	1,000	6.500%	Baa3	BBB-	06/01/55	+196
95	02/18/25	EXC	Exelon Corporation	Unsecured	500	5.125%	Baa2	BBB+	03/15/31	+75
96	02/18/25	EXC	Exelon Corporation	Unsecured	500	5.875%	Baa2	BBB+	03/15/55	+113
97	02/18/25	NEE	Florida Power and Light (Reopening)	Secured	350	5.300%	Aa2	A+	06/15/34	+73
98	02/18/25	NEE	Florida Power and Light	Secured	950	5.700%	Aa2	A+	03/15/55	+93
99	02/18/25	NEE	Florida Power and Light	Secured	700	5.800%	Aa2	A+	03/15/65	+103
100	02/18/25	FTSCN	Tucson Electric Power	Unsecured	300	5.900%	A3	A-	04/15/55	+115

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Recent Utility Corporate Bond Issuances

for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-32 (MRB-9)
Page: 4 of 5
Witness: MRBleckman
Date: December 2025

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)
1	02/18/25	DTE	DTE Energy	Unsecured	1,100	5.200%	Baa2	BBB	04/01/30	+85
2	02/24/25	SO	Georgia Power Company	Unsecured	400	FRN	A3	A	09/15/26	+28
3	02/24/25	SO	Georgia Power Company	Unsecured	500	4.850%	A3	A	03/15/31	+65
4	02/24/25	SO	Georgia Power Company	Unsecured	700	5.200%	A3	A	03/15/35	+83
5	02/24/25	PCG	Pacific Gas & Electric	Secured	1,000	5.700%	Baa2	BBB	03/01/35	+130
6	02/24/25	PCG	Pacific Gas & Electric	Secured	750	6.150%	Baa2	BBB	03/01/55	+150
7	02/24/25	ES	NSTAR Electric	Unsecured	400	4.850%	A2	A-	03/01/30	+65
8	02/24/25	ES	NSTAR Electric	Unsecured	400	5.200%	A2	A-	03/01/35	+85
9	02/24/25	AWK	American Water Company	Unsecured	800	5.250%	Baa1	A	03/01/35	+90
10	02/24/25	CNP	CenterPoint Energy Houston Electric	Secured	500	4.800%	A2	A	03/15/30	+60
11	02/24/25	ETR	Entergy Texas	Secured	500	5.250%	A3	A	04/15/35	+88
12	02/24/25	AEE	Ameren Illinois	Secured	350	5.625%	A1	A	03/01/55	+95
13	02/25/25	SO	Southern Company	Pref/Hybrid	1,800	6.375%	Baa2	BBB	03/15/55	+207
14	02/27/25	PEG	Public Service Electric Gas & Co	Secured	400	5.050%	A1	A	03/01/35	+78
15	02/27/25	PEG	Public Service Electric Gas & Co	Secured	500	5.500%	A1	A	03/01/55	+98
16	02/27/25	AEE	Ameren Corporation	Unsecured	750	5.375%	Baa1	BBB	03/15/35	+110
17	03/03/25	DUK	Duke Energy Progress	Secured	500	4.350%	Aa3	A	03/06/27	+40
18	03/03/25	DUK	Duke Energy Progress	Secured	850	5.050%	Aa3	A	03/15/35	+90
19	03/03/25	DUK	Duke Energy Progress	Secured	750	5.550%	Aa3	A	03/15/55	+110
20	03/03/25	TE	Tampa Electric	Unsecured	600	5.150%	A3	BBB+	03/01/35	+100
21	03/06/25	PEG	Public Service Enterprise Group	Unsecured	600	4.900%	Baa2	BBB	03/15/30	+115
22	03/06/25	PEG	Public Service Enterprise Group	Unsecured	400	5.400%	Baa2	BBB	03/15/35	+140
23	03/06/25	EVRG	Evergy Kansas Central	Secured	300	4.700%	Baa1	BBB+	03/15/28	+73
24	03/06/25	EVRG	Evergy Kansas Central	Secured	300	5.250%	Baa1	BBB+	03/15/35	+100
25	03/06/25	D	Dominion Energy	Unsecured	800	5.000%	Baa2	BBB	06/15/30	+95
26	03/06/25	D	Dominion Energy	Unsecured	700	5.450%	Baa2	BBB	03/15/35	+120
27	03/10/25	PSD	Puget Energy Inc.	Secured	600	5.725%	Baa3	BBB-	03/15/35	+150
28	03/10/25	ETR	Entergy Mississippi	Secured	600	5.800%	A2	A	04/15/55	+125
29	03/10/25	IDA	Idaho Power Co	Secured	400	5.700%	A2	A-	03/15/55	+120
30	03/11/25	EIX	Edison International	Unsecured	550	6.250%	Baa2	BBB-	03/15/30	+250
31	03/11/25	AES	AES Andes SA	Unsecured	400	6.250%	Baa3	BBB-	03/14/32	+210
32	03/12/25	EIX	Southern California Edison Co	Secured	650	5.250%	A2	A-	03/15/30	+118
33	03/12/25	EIX	Southern California Edison Co	Secured	850	6.200%	A2	A-	09/15/55	+160
34	03/12/25	AES	AES Corp	Unsecured	800	5.800%	Baa3	BBB-	03/15/32	+160
35	03/12/25	NWN	Northwest Natural Holding Co	Pref/Hybrid	325	7.000%	NR	BBB	09/15/55	+270
36	03/17/25	XEL	Public Service Co of Colorado (reopening)	Secured	400	5.350%	A1	A	05/15/34	+108
37	03/17/25	XEL	Public Service Co of Colorado	Secured	600	5.850%	A1	A	05/15/55	+125
38	03/17/25	ONCRTX	Oncor Electric Delivery	Secured	500	4.500%	A2	A+	03/20/27	+45
39	03/17/25	ONCRTX	Oncor Electric Delivery	Secured	650	5.350%	A2	A+	04/01/35	+105
40	03/17/25	ONCRTX	Oncor Electric Delivery	Secured	650	5.800%	A2	A+	04/01/55	+120
41	03/18/25	BRKHEC	PacifiCorp	Pref/Hybrid	850	7.375%	Baa2	BBB-	09/15/55	+332
42	03/18/25	XEL	Xcel Energy	Unsecured	350	4.750%	Baa1	BBB	03/15/28	+85
43	03/18/25	XEL	Xcel Energy	Unsecured	750	5.600%	Baa1	BBB	02/15/35	+135
44	03/20/25	NI	NiSource Inc.	Unsecured	750	5.850%	Baa2	BBB+	04/01/55	+130
45	03/20/25	SO	Alabama Power Company	Unsecured	500	5.100%	A1	A	04/02/35	+88
46	03/24/25	OGE	Oklahoma Gas & Electric	Unsecured	350	5.800%	A3	A-	04/01/55	+118
47	03/24/25	SRE	San Diego Gas & Electric	Secured	850	5.400%	A1	A	04/15/35	+110
48	03/26/25	AEE	Union Electric Company	Secured	500	5.250%	A2	A	04/15/35	+92
49	04/14/25	FE	Trans-Allegheny Interstate Line Co	Unsecured	600	5.000%	A3	A-	01/15/31	+100
50	**04/28/25**	**CMS**	**Consumers Energy Co**	**Secured**	**500**	**4.500%**	**A1**	**A**	**01/15/31**	**+67**
51	**04/28/25**	**CMS**	**Consumers Energy Co**	**Secured**	**625**	**5.050%**	**A1**	**A**	**05/15/35**	**+87**
52	04/28/25	XEL	Northern States Power - MN	Secured	600	5.050%	Aa3	A	05/15/35	+83
53	04/28/25	XEL	Northern States Power - MN	Secured	500	5.650%	Aa3	A	05/15/55	+98
54	04/29/25	XEL	Southwestern Public Service Co	Secured	500	5.300%	A3	A-	05/15/35	+115
55	05/05/25	DTE	DTE Electric Company	Secured	300	4.250%	Aa3	A	05/14/27	+45
56	05/05/25	DTE	DTE Electric Company	Secured	500	5.250%	Aa3	A	05/15/35	+93
57	05/05/25	DTE	DTE Electric Company	Secured	500	5.850%	Aa3	A	05/15/55	+103
58	05/05/25	ETR	Entergy Arkansas (Reopening)	Secured	300	5.450%	A2	A	03/01/34	+97
59	05/06/25	D	Dominion Energy Inc	Unsecured	1,000	4.600%	Baa2	BBB	05/15/28	+88
60	05/12/25	AEP	AEP Transmission	Unsecured	425	5.375%	A2	BBB+	06/15/35	+100
61	05/12/25	EXC	Commonwealth Edison	Secured	725	5.950%	A1	A	06/01/55	+105
62	05/12/25	DUK	Duke Energy Indiana	Secured	300	5.900%	Aa3	A	05/15/55	+103
63	05/12/25	PNW	Pinnacle West Capital	Unsecured	400	4.900%	Baa2	BBB	05/15/28	+93
64	05/12/25	PNW	Pinnacle West Capital	Unsecured	400	5.150%	Baa2	BBB	05/15/30	+108
65	05/12/25	SRE	Southern California Gas	Secured	600	5.450%	Aa3	A	06/15/35	+105
66	05/12/25	SRE	Southern California Gas	Secured	500	6.000%	Aa3	A	06/15/55	+120
67	05/13/25	CPXCN	Capital Power US Holdings	Unsecured	700	5.257%	NR	BBB-	06/01/28	+125
68	05/13/25	CPXCN	Capital Power US Holdings	Unsecured	500	6.189%	NR	BBB-	06/01/35	+170
69	05/13/25	EXC	Baltimore Gas & Electric	Unsecured	650	5.450%	A3	A	06/01/35	+98
70	05/13/25	LNT	Interstate Power and Light Co	Unsecured	600	5.600%	Baa1	BBB+	06/29/35	+115
71	05/13/25	TVA	Tennessee Valley Authority	Unsecured	1,500	4.875%	Aaa	AA+	05/15/35	+45
72	05/14/25	PEG	PSEG Power	Unsecured	750	5.200%	Baa2	BBB+	05/15/30	+105
73	05/14/25	PEG	PSEG Power	Unsecured	500	5.750%	Baa2	BBB+	05/15/35	+127
74	05/21/25	FE	Ohio Edison	Unsecured	300	4.950%	A3	BBB+	12/15/29	+80
75	05/28/25	ETR	System Energy Resources Inc (Reopening)	Secured	240	5.300%	Baa2	BBB-	12/15/34	+120
76	06/02/25	PCG	Pacific Gas & Electric	Secured	400	5.000%	Baa1	BBB	06/04/28	+115
77	06/02/25	PCG	Pacific Gas & Electric	Secured	850	6.000%	Baa1	BBB	08/15/35	+160
78	06/02/25	DUK	Duke Energy Ohio	Secured	350	5.300%	A2	A	06/15/35	+88
79	06/11/25	ONCRTX	Oncor Electric Delivery Company	Secured	804	3.625%	A2	A+	06/15/34	MS+120
80	06/12/25	HASI	Hannon Armstrong Sustainable Infrastructure Capital I	Unsecured	600	6.150%	Baa3	BBB-	01/15/31	+225
81	06/12/25	HASI	Hannon Armstrong Sustainable Infrastructure Capital I	Unsecured	400	6.750%	Baa3	BBB-	07/15/35	+245
82	06/16/25	ATO	Atmos Energy Corp	Unsecured	500	5.200%	A2	A-	08/15/35	+80
83	06/16/25	ES	Public Service Co of New Hampshire	Secured	300	4.400%	A1	A	07/01/28	+50
84	06/17/25	XEL	Northern States Power - WI (Reopening)	Secured	250	5.650%	A1	A	06/15/54	+91
85	06/23/25	AEP	Public Service Co. of Oklahoma	Unsecured	800	5.450%	Baa1	BBB+	01/15/36	+115
86	06/23/25	NI	NiSource Inc	Unsecured	900	5.350%	Baa2	BBB+	07/15/35	+105
87	06/23/25	NI	NiSource Inc (Reopening)	Unsecured	750	5.850%	Baa2	BBB+	04/01/55	+115
88	06/30/25	NGGLN	Niagara Mohawk Power	Unsecured	500	4.647%	Baa1	BBB+	10/03/30	+85
89	06/30/25	NGGLN	Niagara Mohawk Power	Unsecured	750	5.996%	Baa1	BBB+	07/03/55	+120
90	08/04/25	D	Dominion Energy	Pref/Hybrid	825	6.000%	Baa3	BBB-	02/15/56	+226
91	08/04/25	XEL	Public Service Company of Colorado	Secured	800	5.150%	A1	A	09/15/35	+97
92	08/04/25	XEL	Public Service Company of Colorado (Reopening)	Secured	200	5.850%	A1	A	05/15/55	+102
93	08/04/25	D	Dominion Energy	Pref/Hybrid	700	6.200%	Baa3	BBB-	02/15/56	+201
94	08/04/25	PPL	Kentucky Utilities Co	Secured	700	5.850%	A1	A	08/15/55	+105
95	08/04/25	CNP	CenterPoint Energy Houston	Secured	600	4.950%	A2	A	08/15/35	+80
96	08/04/25	PPL	Louisville Gas and Electric Co	Secured	700	5.850%	A1	A	08/15/55	+105
97	08/04/25	AGR	New York State Electric & Gas	Unsecured	300	5.050%	Baa1	A-	08/15/35	+88
98	08/05/25	WTRG	Essential Utilities Inc	Unsecured	500	5.250%	Baa2	BBB+	08/15/35	+107
99	08/05/25	TVA	Tennessee Valley Authority	Unsecured	1,250	3.875%	Aa1	AA+	08/01/30	+20
100	08/06/25	PPL	PPL Electric Utilities Corporation	Secured	500	5.550%	A1	A+	08/15/55	+77
101	08/06/25	AES	Indianapolis Power & Light	Secured	350	5.050%	A2	A-	08/15/35	+85

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Recent Utility Corporate Bond Issuances

for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-32 (MRB-9)
Page: 5 of 5
Witness: MRBleckman
Date: December 2025

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)
1	08/06/25	AWK	American Water Capital Corp	Unsecured	900	5.700%	Baa1	A	09/01/55	+90
2	08/07/25	PEG	Public Service Electric & Gas Co	Secured	450	4.900%	A1	A	08/15/35	+67
3	08/11/25	EVRG	Evergy Metro Inc	Secured	400	5.125%	A2	A	09/15/35	+87
4	08/11/25	FE	FirstEnergy Transmission	Unsecured	450	4.750%	Baa2	BBB+	01/15/33	+77
5	08/12/25	PNW	Arizona Public Service Co (Reopening)	Unsecured	250	5.700%	Baa1	BBB+	08/15/34	+90
6	08/12/25	PNW	Arizona Public Service Co	Unsecured	700	5.900%	Baa1	BBB+	08/15/55	+105
7	08/14/25	AES	Dayton Power & Light Company	Secured	375	4.550%	Baa1	BBB+	08/15/30	+75
8	08/19/25	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	700	4.150%	A2	NR	08/25/28	+48
9	08/26/25	SRE	Sempra	Pref/Hybrid	800	6.375%	Baa3	BBB-	04/01/56	+263
10	09/02/25	SO	Alabama Power Company	Unsecured	500	4.300%	A1	A	03/15/31	+60
11	09/02/25	FE	Jersey Central Power & Light Co	Unsecured	350	4.150%	A3	BBB	01/15/29	+55
12	09/02/25	FE	Jersey Central Power & Light Co	Unsecured	500	4.400%	A3	BBB	01/15/31	+70
13	09/02/25	FE	Jersey Central Power & Light Co	Unsecured	500	5.150%	A3	BBB	01/15/36	+90
14	09/03/25	SO	Southern Company Gas Capital Corp	Unsecured	425	4.050%	Baa1	A-	09/15/28	+52
15	09/03/25	SO	Southern Company Gas Capital Corp	Unsecured	425	5.100%	Baa1	A-	09/15/35	+93
16	09/03/25	EXC	PECO Energy Co	Secured	525	4.875%	Aa3	A	09/15/35	+68
17	09/03/25	EXC	PECO Energy Co	Secured	525	5.650%	Aa3	A	09/15/55	+75
18	09/04/25	BRKHEC	Sierra Pacific Power Co	Pref/Hybrid	450	6.200%	Baa3	BBB	12/15/55	+255
19	09/08/25	DUK	Duke Energy Corporation	Unsecured	1,000	4.950%	Baa2	BBB	09/15/35	+95
20	09/08/25	DUK	Duke Energy Corporation	Unsecured	750	5.700%	Baa2	BBB	09/15/55	+103
21	09/08/25	D	Virginia Electric and Power	Unsecured	825	4.900%	A3	BBB+	09/15/35	+87
22	09/08/25	D	Virginia Electric and Power	Unsecured	875	5.600%	A3	BBB+	09/15/55	+92
23	09/08/25	PSD	Puget Sound Energy Inc	Secured	500	5.598%	A2	A-	09/15/55	+88
24	09/08/25	LNT	Interstate Power and Light Co	Unsecured	300	5.600%	Baa1	BBB+	10/01/55	+95
25	09/08/25	DTE	DTE Energy Company ($25 Par)	Pref/Hybrid	600	6.250%	Baa3	BBB-	10/01/85	-
26	09/09/25	DTE	DTE Energy Company	Unsecured	250	4.875%	Baa2	BBB	06/01/28	+57
27	09/09/25	DTE	DTE Energy Company	Unsecured	550	5.050%	Baa2	BBB	10/01/35	+102
28	09/15/25	AEE	Ameren Illinois (Reopening)	Secured	350	5.625%	A1	A	03/01/55	+75
29	09/15/25	RWE	RWE Finance Corp	Unsecured	1,000	5.125%	Baa2	-	09/18/35	+115
30	09/15/25	RWE	RWE Finance Corp	Unsecured	1,000	5.875%	Baa2	-	09/18/55	+125
31	09/16/25	SO	Southern Power Co	Unsecured	550	4.250%	Baa1	BBB+	10/01/30	+70
32	09/16/25	SO	Southern Power Co	Unsecured	550	4.900%	Baa1	BBB+	10/01/35	+90
33	09/18/25	ATO	Atmos Energy Corp	Unsecured	600	5.450%	A2	A-	01/15/56	+77
34	09/18/25	WEC	Wisconsin Electric Power Co	Unsecured	500	4.150%	A2	A-	10/15/30	+50
35	09/22/25	AEP	AEP Texas (Reopening)	Unsecured	150	5.700%	Baa3	BBB+	05/15/34	+97
36	09/22/25	AEP	AEP Texas	Unsecured	750	5.850%	Baa3	BBB+	10/15/55	+112
37	09/23/25	LNT	Alliant Energy Corp	Pref/Hybrid	725	5.750%	Baa3	BBB-	04/01/56	+208
38	09/23/25	AEP	American Electric Power Co	Pref/Hybrid	1,100	5.800%	Baa3	BBB-	03/15/56	+213
39	09/23/25	AEP	American Electric Power Co	Pref/Hybrid	900	6.050%	Baa3	BBB-	03/15/56	+194
40	09/23/25	ENELIM	Enel Finance International NV	Unsecured	1,000	4.125%	Baa1	BBB	09/30/28	+65
41	09/23/25	ENELIM	Enel Finance International NV	Unsecured	1,250	4.375%	Baa1	BBB	09/30/30	+80
42	09/23/25	ENELIM	Enel Finance International NV	Unsecured	1,250	5.000%	Baa1	BBB	09/30/35	+100
43	09/23/25	ENELIM	Enel Finance International NV	Unsecured	1,000	5.750%	Baa1	BBB	9/30/0255	+112
44	09/23/25	ONCRTX	Oncor Electric Delivery	Secured	361	4.200%	A2	A	10/01/35	+105
45	09/24/25	SO	Georgia Power	Unsecured	750	4.000%	A3	A	10/01/28	+112
46	09/24/25	SO	Georgia Power (Reopening)	Unsecured	250	4.875%	A3	A	03/15/31	+112
47	09/24/25	SO	Georgia Power	Unsecured	500	5.500%	A3	A	10/01/55	+112
48	09/24/25	NRG	NRG Energy	Secured	625	4.734%	Baa3	BBB-	10/15/30	+102
49	09/24/25	NRG	NRG Energy	Secured	625	5.407%	Baa3	BBB-	10/15/35	+127
50	09/25/25	BKH	Black Hills Corporation	Unsecured	450	4.550%	Baa2	BBB+	01/31/31	+80
51	09/29/25	D	Dominion Energy (Reopening)	Pref/Hybrid	625	6.000%	Baa3	BBB-	02/15/56	+226
52	09/29/25	D	Dominion Energy (Reopening)	Pref/Hybrid	625	6.200%	Baa3	BBB-	02/15/56	+201
53	09/29/25	XEL	Xcel Energy ($25 Par)	Pref/Hybrid	900	6.250%	Baa2	BBB-	10/15/85	+233
54	09/29/25	EMACN	EUSHI Finance Inc	Pref/Hybrid	750	6.250%	NR	BB+	04/01/56	+251
55	09/30/25	CNP	Centerpoint Energy Inc	Pref/Hybrid	700	5.950%	Baa3	BBB-	04/01/56	+222
56	09/30/25	PCG	Pacific Gas and Electric Co (Reopening)	Secured	400	5.000%	Baa1	BBB	06/04/28	+80
57	09/30/25	PCG	Pacific Gas and Electric Co	Secured	850	5.050%	Baa1	BBB	10/15/32	+115
58	09/30/25	PCG	Pacific Gas and Electric Co	Secured	750	6.100%	Baa1	BBB	10/15/55	+137
59	10/01/25	VST	Vistra Operations Co	Secured	750	4.300%	Baa3	BBB-	10/15/28	+75
60	10/01/25	VST	Vistra Operations Co	Secured	500	4.600%	Baa3	BBB-	10/15/30	+93
61	10/01/25	VST	Vistra Operations Co	Secured	750	5.250%	Baa3	BBB-	10/15/35	+118
62	10/06/25	BASINE	Basin Electric Power Cooperative	Unsecured	700	5.850%	A3	A	10/15/55	+110
63	10/15/25	ES	Eversource Energy	Unsecured	600	4.450%	Baa2	BBB	12/15/30	+87
64	10/15/25	ES	NSTAR Electric (Reopening)	Unsecured	300	5.200%	A2	A-	03/01/35	+82

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Peer Company Commission Authorized Equity Ratios
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-33 (MRB-10)
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

(a) Line No.	(b) State	(c) Proxy Group Company	(d) Regulated Subsidiary	(e) Docket #	(f) Case Type	(g) Date Authorized	(h) Common Equity %
1	Colorado	Atmos Energy Corporation	Atmos Energy Corporation	D-22AL-0348G	Natural Gas	05/04/23	56.50%
2	Kentucky	Atmos Energy Corporation	Atmos Energy Corporation	C-2024-00276	Natural Gas	08/11/25	53.50%
3	Tennessee	Atmos Energy Corporation	Atmos Energy Corporation	D-25-00007	Natural Gas	07/15/25	61.05%
4	Texas	Atmos Energy Corporation	Atmos Energy Corporation	D-OS-24-00019196	Natural Gas	06/17/25	60.97%
5	Indiana	NiSource Inc.	Northern Indiana Public Service Company	Ca-46120	Electric	06/26/25	58.53%
6	Kentucky	NiSource Inc.	Columbia Gas of Kentucky	C-2024-00092	Natural Gas	12/30/24	53.62%
7	Maryland	NiSource Inc.	Columbia Gas of Maryland	C-9754	Natural Gas	04/22/25	53.23%
8	Ohio	NiSource Inc.	Columbia Gas of Ohio	C-21-0637-GA-AIR	Natural Gas	01/26/23	50.60%
9	Pennsylvania	NiSource Inc.	Columbia Gas of Pennsylvania	D-R-2020-3018835	Natural Gas	02/19/21	54.19%
10	Virginia	NiSource Inc.	Columbia Gas of Virginia	C-PUR-2024-00030	Natural Gas	05/15/25	46.56%
11	Oregon	Northwest Natural Gas Company	Northwest Natural Gas Company	D-UG-490	Natural Gas	10/25/24	50.00%
12	Oklahoma	ONE Gas, Inc.	Oklahoma Natural Gas Company	Ca-PUD202100063	Natural Gas	11/30/21	58.55%
13	Texas	ONE Gas, Inc.	Texas Gas Service Company, Inc.	D-OS-24-00017471	Natural Gas	11/20/24	59.58%
14	Arizona	Southwest Gas Corporation	Southwest Gas Corporation	D-G-01551A-23-0341	Natural Gas	03/27/25	48.50%
15	California	Southwest Gas Corporation	Southwest Gas Corporation	A-19-08-015	Natural Gas	03/25/21	52.00%
	Average Equity Ratio						**54.49%**

Source: Individual state commission electronic docket records search.

Selection Criteria:
1. Regulated subsidiary of the Company's ROE proxy group. Refer to Exhibit A-14 (AEB-1), Sch D-5, page 2.
2. Rate order issued from January 1, 2021 through October 15, 2025.
3. Rate order available through online docket search that includes an authorized equity ratio
4. For each regulated subsidiary, latest authorized equity ratio for each state / jurisdiction.

Note: Excludes final orders received by in-state proxy DTE Energy as well as the Company.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
State Regulatory Evaluations
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-34 (MRB-11)
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

Line No.	(a) Tier	(b) State	(c) Company	(d) Equity Ratio	(e) ROE	(f) (d) x (e) Rate of Return
1	Tier 1A	Alabama	Alabama Power	55.00%	10.87%	5.98%
2	Tier 1B	Florida	FPL	60.00%	10.80%	6.48%
3		Georgia	Georgia Power	56.00%	10.50%	5.88%
4		Pennsylvania	UGI (PA)	54.02%	9.85%	5.32%
5	Tier 1C	Wisconsin	WEC	52.42%	10.15%	5.32%
6		North Carolina	Duke Energy	53.00%	9.95%	5.27%
7		Iowa	IPL (IA)	51.00%	9.65%	4.92%
8	Average	Michigan[1]	Consumers Energy	50.00%	9.86%	4.93%

Source: Columns (a)-(c): July 2025 S&P Global Market Intelligence Report - RRA Regulatory Focus - State Regulatory Evaluations - Energy.
Columns (d) & (e): Company materials, S&P Capital IQ, investor presentations, and credit rating reports.
Column (f): Column (d) times column (e).

[1]In August 2024, Michigan's state regulatory ranking was downgraded from Above Average Tier 1C to Average.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cumulative Annual Interest Savings
for the Projected Year Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-35 (MRB-12)
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)
Line			2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
1	S&P Senior Secured Debt Credit Rating		BBB-	BBB	BBB	BBB	BBB+	BBB+	BBB+	A-	A	A	A	A	A	A	A	A	A	A	A	A	
2	Debt Issued - First Mortgage Bonds ($ millions)	A		$ -	$ 600	$ 500	$ 600	$ -	$ 725	$ 750	$ 500	$ 250	$ 450	$ 535	$ 1,900	$1,001	$ 1,661	$ 335	$ 800	$ 2,025	$ 1,300	$ 1,125	$15,056
3	Interest Spread Differential vs. BBB-	B		1.31%	1.31%	1.31%	0.93%	0.99%	1.24%	0.82%	0.82%	0.53%	0.72%	0.61%	0.22%	0.84%	0.74%	0.56%	0.89%	1.32%	0.41%	0.64%	
4	Annual Interest Savings ($ millions)	A x B		$ -	$ 8	$ 7	$ 6	$ -	$ 9	$ 6	$ 4	$ 1	$ 3	$ 3	$ 4	$ 8	$ 12	$ 2	$ 7	$ 27	$ 5	$ 7	
5	Cumulative Annual Interest Savings ($ millions)			$ -	$ 8	$ 14	$ 20	$ 20	$ 29	$ 35	$ 39	$ 41	$ 44	$ 47	$ 51	$ 60	$ 72	$ 74	$ 81	$ 108	$ 113	$ 120	**$ 120**
6	BBB- Rating Issuance Spread	C	N/A	N/A	NMF	4.40%	2.17%	2.55%	2.47%	1.71%	1.69%	1.63%	1.83%	1.47%	1.15%	1.97%	2.01%	1.35%	2.29%	2.69%	1.49%	1.52%	
7	Current Rating Issuance Spread (Line 2)	D	N/A	N/A	NMF	3.09%	1.24%	1.56%	1.24%	0.90%	0.87%	1.11%	1.11%	0.86%	0.93%	1.13%	1.27%	0.79%	1.39%	1.37%	1.07%	0.88%	
8	Issuance Spread Differential vs. BBB-	C - D	-	-	-	1.31%	0.93%	0.99%	1.24%	0.82%	0.82%	0.53%	0.72%	0.61%	0.22%	0.84%	0.74%	0.56%	0.89%	1.32%	0.41%	0.64%	

Annual savings repeats throughout entire life of the debt.

Source: All issuance spreads per the Barclays Bank Utility Deal listing. Initial data began during calendar year 2008. 2025 represents deals year to date as of October 22, 2025.
Line 3: Annual average fixed rate issuance spread versus BBB-, calculated in line 8.
Line 6: Annual average fixed rate BBB- issuance spread.
Line 7: Annual average fixed rate issuance spread for current ratings shown in Line 1.
Line 8 = Line 6 - Line 7.

S&P Global

RRA Regulatory Focus

Quarterly update on decided rate cases

Feb. 4, 2025

Major energy rate case decisions in the US January-December 2024

Quarterly update on decided rate cases

Lisa Fontanella, Research Director

Contributors: Brian Collins, Jim Davis, Russell Ernst, Lillian Federico, Monica Hlinka, Jason Lehmann, Dan Lowrey

Editor: Tom Cobbe

For detailed data

Access the RRA's electric and gas rate case decisions as of Dec. 31, 2024 and related data.

Averages calculated in 2024 show that electric and gas authorized returns on equity continue to trend higher.

To learn more or to request a demo, visit spglobal.com/marketintelligence.

Table of Contents

Executive Summary **3**
Introduction 3
About this report 4

The Take **4**
Overview of electric and gas authorizations 5
Capital structure trends 6
A more granular look at ROE trends 7

Further Reading **11**

About Regulatory Research Associates **11**

Executive Summary

Introduction

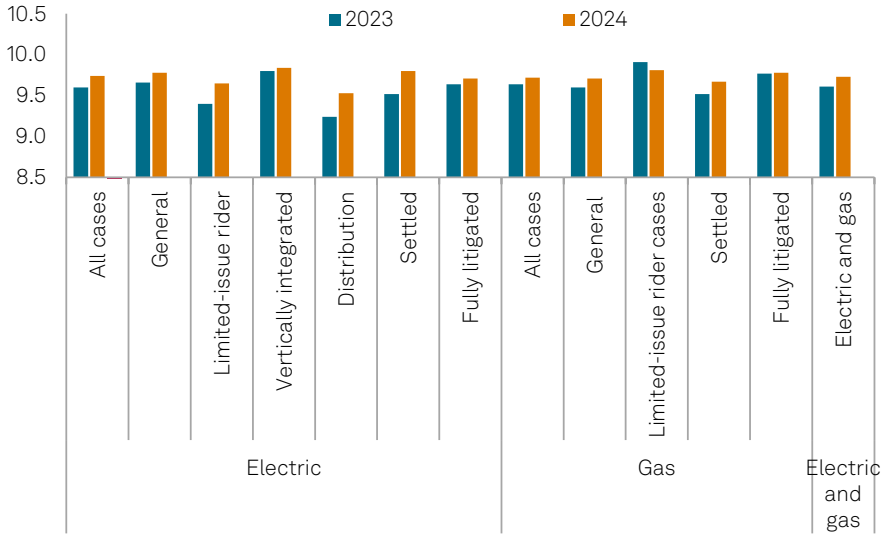
Rate case activity remained elevated in 2024, with nearly 155 decisions issued by state public utility commissions, including 99 electric and gas equity-return determinations.

Amid the heightened rate case activity, the average electric and gas authorized returns on equity (ROEs) rose in 2024.

According to calculations by Regulatory Research Associates, the average authorized ROE for electric utilities was 9.74% in 2024, above the 9.60% average in 2023. There were 55 electric ROE authorizations in 2024 versus 63 in 2023. Similarly, the average authorized ROE for gas utilities was 9.72% in 2024, an increase from 9.64% in 2023, with 44 gas ROE authorizations compared to 43 in 2023.

The primary driver for rate case filings continues to be capital expenditure recovery. Energy utilities are investing in infrastructure to modernize transmission and distribution systems; build new natural gas, solar and wind generation; and deploy new technologies to support the expansion of electric vehicles, battery storage and advanced metering infrastructure, all facilitating the transition toward decarbonization. Additional reasons for rate filings include rising expenses, revised cost-of-capital parameters, economic and sectorwide impacts on operations, recovery of storm and severe-weather-related costs, regulatory approval for alternative regulatory mechanisms, and addressing rate treatment for generation facilities being retired early due to the energy transition.

Average authorized ROE (%)



	2023	2024
Electric averages		
All cases	9.60	9.74
General rate cases	9.66	9.78
Limited-issue rider cases	9.40	9.65
Vertically integrated cases	9.80	9.84
Distribution-only cases	9.24	9.53
Settled cases	9.52	9.80
Fully litigated cases	9.64	9.71
Gas averages		
All cases	9.64	9.72
General rate cases	9.60	9.71
Limited-issue rider cases	9.91	9.81
Settled cases	9.52	9.67
Fully litigated cases	9.77	9.78
Composite electric and gas averages		
Electric and gas	9.61	9.73
US Treasury		
30-year bond yield	4.09	4.41

Data compiled Jan. 28, 2025.
ROE = return on equity.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; US Treasury Department.
© 2025 S&P Global.

About this report

This quarterly report presents a comprehensive analysis of electric and gas rate case decisions issued in the US for 2024, along with select aggregated historical data. The report utilizes data compiled by Regulatory Research Associates (RRA) for its rate case database, accessible via the S&P Capital IQ Pro platform. RRA aims to track all "major" rate cases for investor-owned utilities nationwide, defining "major" as cases where the utility's request leads to a rate change of at least $5 million, or where the commission approves a rate change of at least $3 million. Beyond base rate cases, the database includes details on certain limited-issue rider proceedings, particularly those involving significant rate base additions outside of a general rate case. In some instances, the rate change coverage criteria may not apply. Historical data in this report may differ from previous reports due to variations in presentation, such as the treatment of withdrawn or dismissed cases and the inclusion of cases not previously included in RRA's coverage.

The Take

In 2024, the average authorized returns for electric and gas utilities rose moderately compared to 2023, driven by a higher-interest-rate environment. However, the impact of interest rate increases on authorized returns has not been proportional, as regulators are more cautious about raising ROEs than lowering them. Affordability concerns remain prevalent as regulators manage customer rate increases due to substantial but necessary capital investment related to the energy transition amid inflationary pressures.

In recent years, rate case activity for investor-owned electric and gas utilities in the US has been elevated, with state public utility commissions issuing nearly 155 decisions in 2024. RRA expects this surge in rate case activity to persist given the elevated interest and inflation rates and the need for significant capital expenditures.

Overview of electric and gas authorizations

Both the electric and gas average authorized ROEs in 2024 rose above 2023 levels.

The average ROE authorized for electric utilities in rate cases decided in 2024 was 9.74%, notably above the 9.60% average observed in 2023. There were 55 electric ROE authorizations in 2024 versus 63 in 2023.

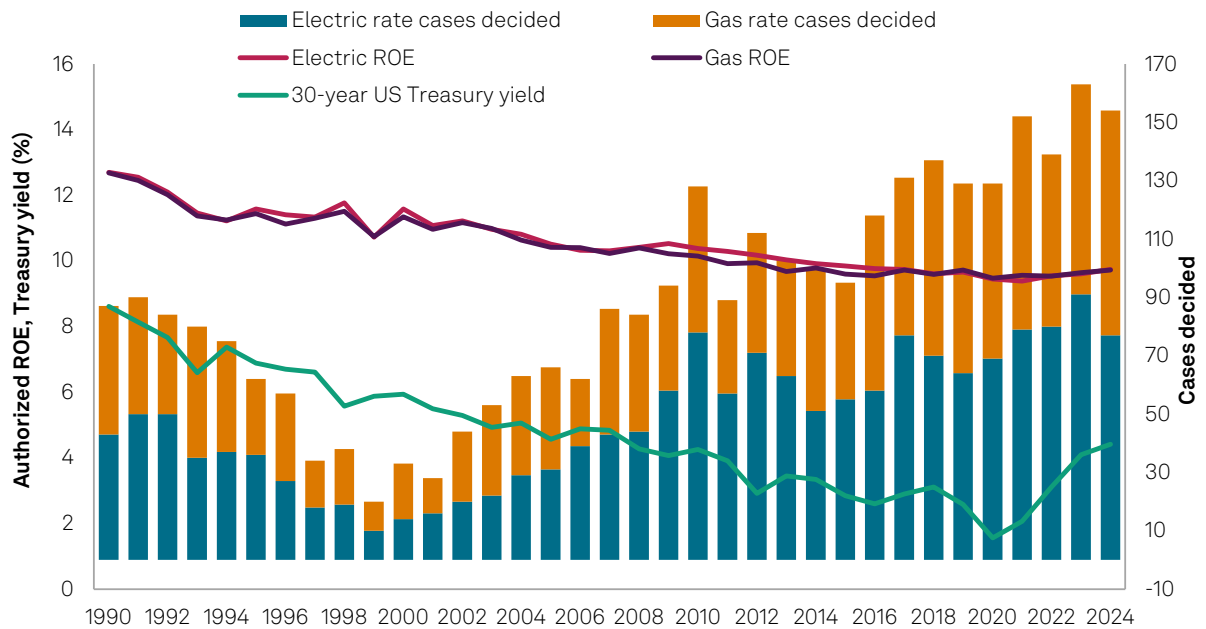
The average ROE authorized for gas utilities in cases decided in 2024 was 9.72%, above the 9.64% average observed in 2023. There were 44 gas ROE authorizations in 2024 versus 43 in 2023.

The electric data set includes several limited-issue rider cases. Historically, the ROEs authorized in these cases were significantly higher than those approved in general rate cases, primarily due to incentives in Virginia for certain types of generation investment. However, these premiums have largely expired. Excluding the 14 rider cases in 2024 and the 15 in 2023, the average authorized ROE for electric cases was 9.78% in 2024, versus 9.66% in 2023. Similarly, excluding the four rider rate cases in 2024 and six in 2023, the average authorized ROE for gas cases was 9.71% in 2024 and 9.60% in 2023. Generally, limited-issue riders have a limited impact on average ROEs in the gas sector, as most gas riders depend on the ROE approved in any given utility's previous base rate case.

In 2024, the median ROE authorized in all electric utility rate cases was 9.70% versus 9.50% in 2023; for gas utilities, the median was 9.70% in 2024 and 9.60% in 2023.

Historically, authorized returns have generally followed the overall trend of interest rates; however the magnitude of changes in authorized ROEs often lag interest rate changes, particularly when rates rise.

Average electric, gas authorized ROEs; number of rate cases decided



Data compiled Jan. 28, 2025.
ROE = return on equity.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; US Treasury Department.
© 2025 S&P Global.

Interest rates — as measured by the 30-year US Treasury bond yield — declined steadily from 1990 to 2020, exerting downward pressure on authorized ROEs. During this period, Treasury yields dropped by over 700 basis points, from 8.61% to 1.56%, while the average authorized ROEs for electric and gas utilities combined decreased by less than 325 basis points, from 12.69% to 9.45%. Notably, average authorized ROEs did not fall below 10% until 2011 for gas utilities and 2014 for electric utilities. The calendar-year averages fell below 9.50% for the first time in 2020.

The decline in authorized ROEs has coincided with an increase in rate case activity, with 100 or more cases adjudicated in 12 of the past 15 calendar years. This count includes electric and gas cases where no ROEs were specified but excludes withdrawn cases. In 2024, nearly 155 cases were decided, with authorized increases totaling over $9 billion.

Between 1990 and 2020, interest rates and authorized ROEs declined at different rates, leading to a widening spread between authorized ROEs and the average yield on 30-year US Treasurys. This spread increased from just over 400 basis points in 1990 to nearly 800 basis points in 2020.

The widening spread is primarily due to regulators' implicit understanding that the interest rate drop driven by US Federal Reserve intervention was atypical. Consequently, regulators did not fully reflect the interest rate drop in newly authorized ROEs. In some instances, regulators recognized that industry changes and economic instability posed increased risks for investors, justifying a higher premium over interest rates.

Since 2020, with rising interest rates, the spread has begun to narrow, reaching about 530 basis points in 2024. Given the various factors increasing customer bills, the spread may continue to narrow, as regulators may become more reluctant about raising authorized returns.

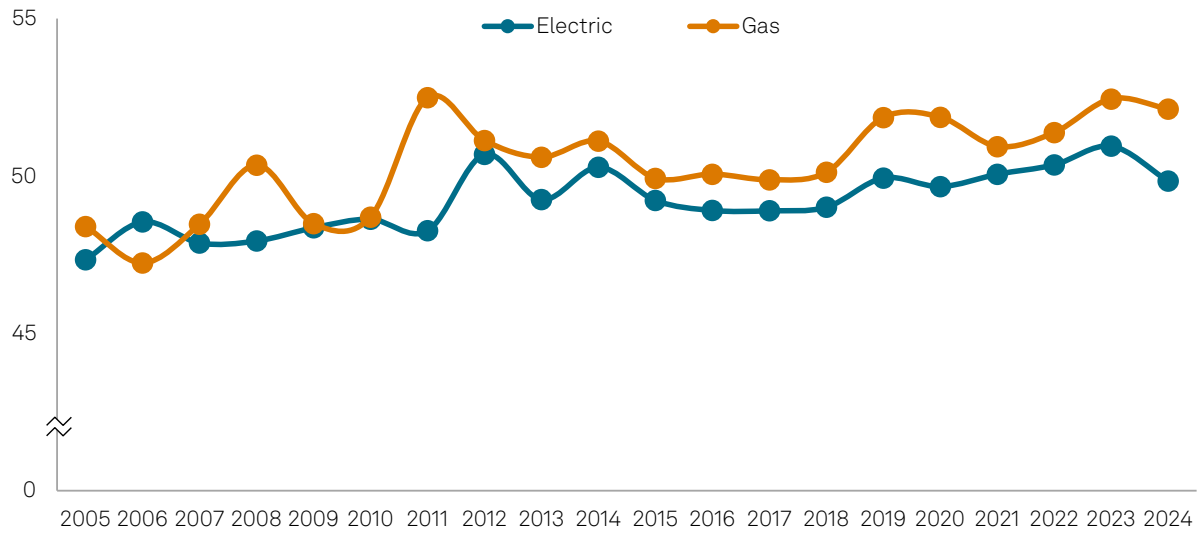
Capital structure trends

The negative cash flow impact from federal tax changes that took effect in 2018 raised concerns regarding utility liquidity and credit metrics. In response, many utilities sought higher common equity ratios. Consequently, the average authorized equity ratios adopted by utility commissions in 2019 were modestly higher than those observed in 2018 and 2017.

For the full years 2024, 2023, 2022, 2021 and 2020, the average equity ratios authorized in electric utility cases were 49.84%, 50.95%, 50.36%, 50.06% and 49.67%, respectively. During the same period, average equity ratios authorized gas utilities were 52.13%, 52.45%, 51.38%, 50.94% and 51.87%.

From a longer-term perspective, equity ratios have generally increased over the past several years. In 2005, the average equity ratio approved in electric rate cases was 47.34%; for gas utilities, it was 48.40%. Following the 2008 financial crisis, many commissions began approving equity-richer capital structures. Authorized equity ratios for gas utilities have consistently been higher than those for electric utilities for most of the period since 2005.

Average authorized equity ratio (%)



Data compiled Jan. 28, 2025.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; US Treasury Department.
© 2025 S&P Global.

A more granular look at ROE trends

Thus far, the discussion has focused on broad trends in authorized ROEs. The following sections provide a more detailed analysis.

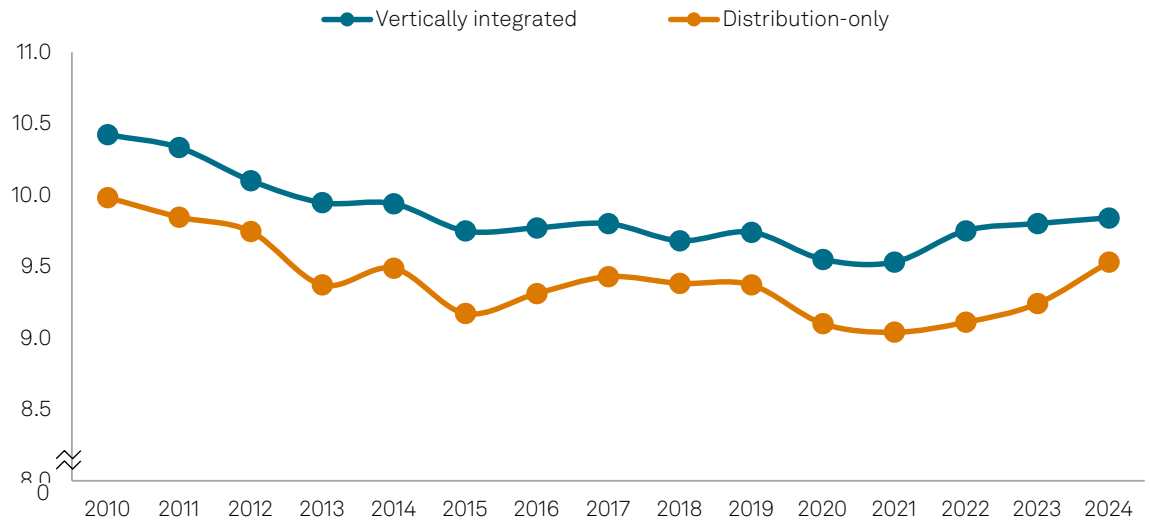
RRA has noted significant differences in average ROEs based on the types of proceedings or decisions in which these ROEs were established.

Due to the restructuring of the electric industry, several states have unbundled electric rates and introduced retail competition for generation. In these states, commissions have jurisdiction only over return parameters and revenue requirement for distribution operations.

RRA finds that the annual average authorized ROEs in vertically integrated cases involving generation have historically been about 30-65 basis points higher than in distribution-only cases. This difference likely reflects the increased risk associated with the ownership and operation of generation assets.

In 2024, the industry average ROE for vertically integrated electric utilities was 9.84%, slightly above the 9.80% average in 2023. For electric distribution-only cases, the industry average ROE was 9.53% in 2024, significantly above the 9.24% average in 2023.

Average authorized electric ROEs (%)

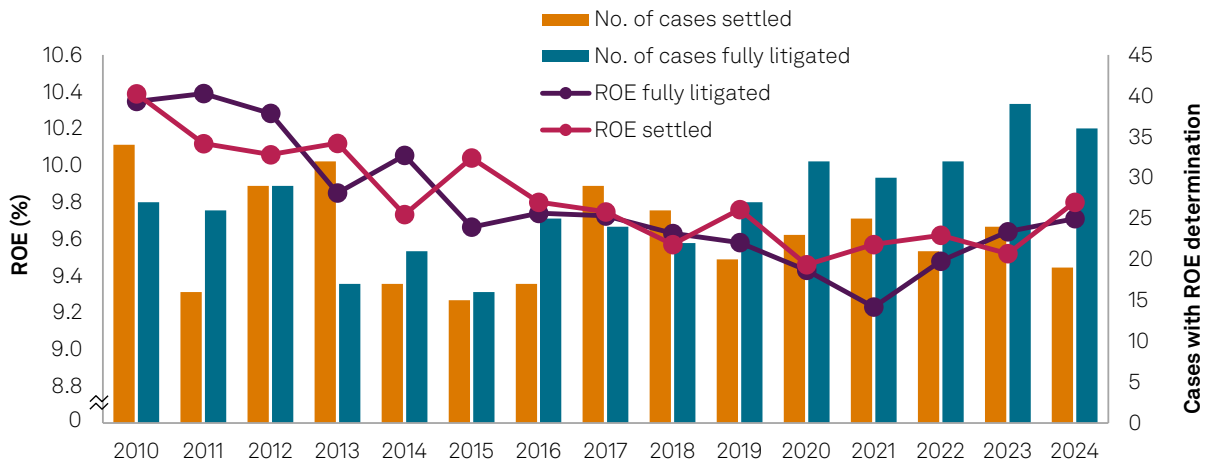


Data compiled Jan. 28, 2025.
ROE = return on equity.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2025 S&P Global.

In recent years, settlements have frequently been used to resolve rate cases, with many taking the form of "black box" settlements. These do not specify the ROE or other typical rate case parameters underlying the stipulated rate change. However, some states require settlements to specify these values, or at least the specific adjustments from which these values were derived.

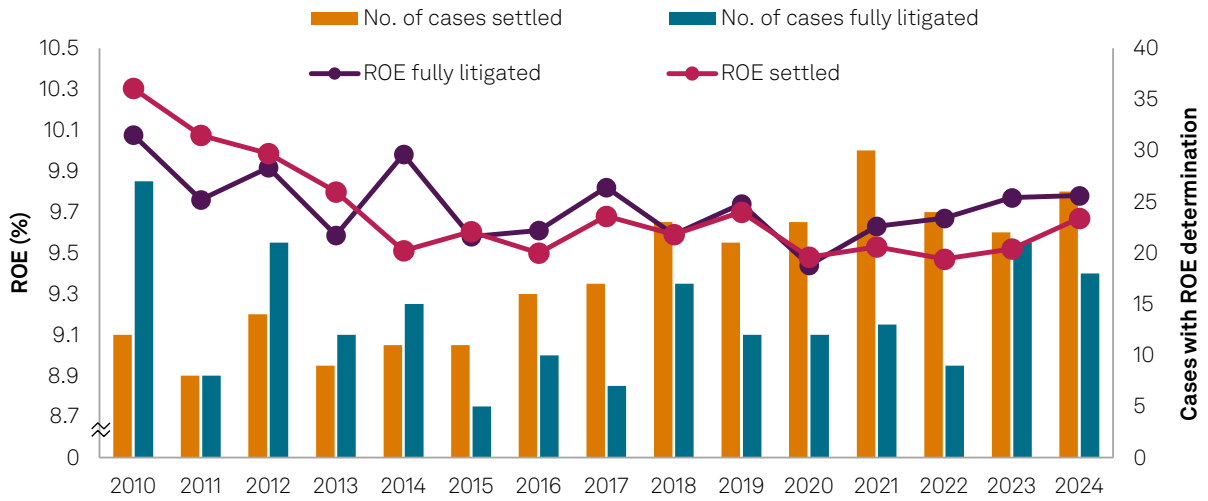
For both electric and gas cases, RRA has observed no consistent pattern in the average authorized ROEs between settled and fully litigated cases. In some years, the average authorized ROE was higher for fully litigated ones, while in others, the opposite was true.

Average authorized electric ROEs: settled vs. fully litigated cases



Data compiled Jan. 28, 2025.
ROE = return on equity.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2025 S&P Global.

Average authorized gas ROEs: settled vs. fully litigated cases



Data compiled Jan. 28, 2025.
ROE = return on equity.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2025 S&P Global.

The following discussion focuses on the corresponding tables available here.

Table 1 shows the average ROE authorized in major electric and gas rate decisions annually since 1990 and quarterly since 2020, followed by the number of observations in each period. **Table 2** indicates the composite electric and gas industry data for all major cases, summarized annually since 2005 and quarterly since 2021.

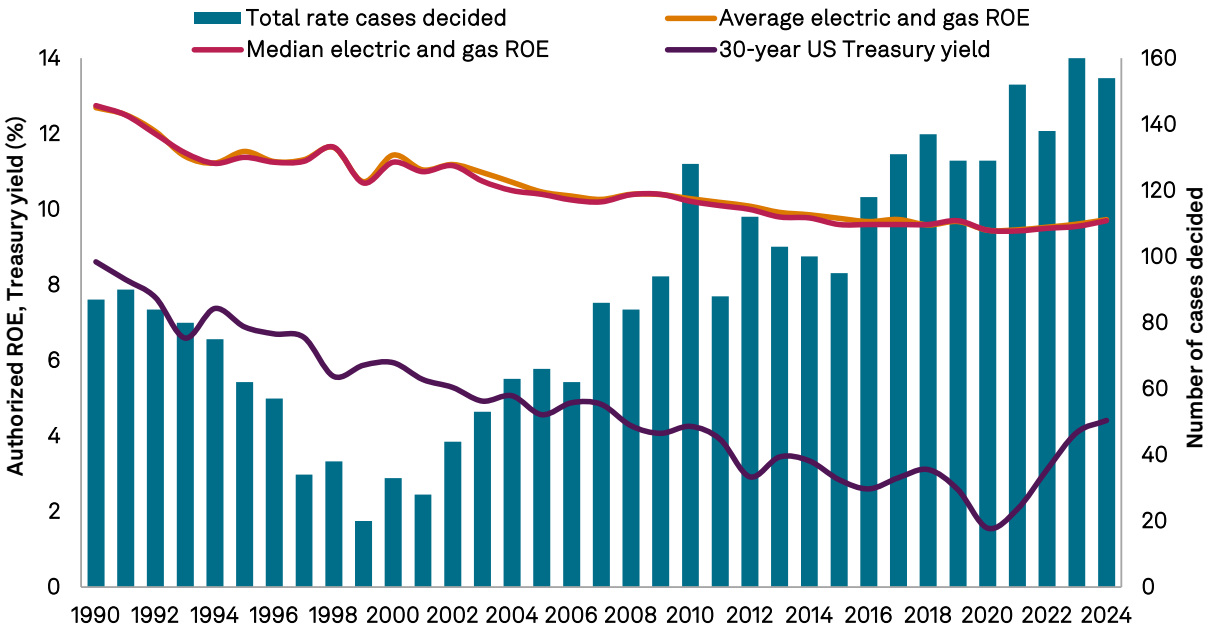
Tables 3 and **4** provide comparisons since 2010 of average authorized ROEs for settled versus fully litigated cases, general rate cases versus limited-issue rider proceedings and vertically integrated cases versus distribution-only cases for electric and gas utilities, respectively.

The individual electric and gas cases decided in 2024 are listed in **Table 5**, with the decision date shown first, followed by the company name, company ticker, the abbreviation for the state issuing the decision, the authorized rate of return, the ROE and the percentage of common equity in the adopted capital structure. Next, RRA indicates the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered when the decisions were rendered. This study does not reflect fuel adjustment clause rate changes.

The simple mean is utilized for the return averages. In addition, the average equity returns indicated in this report reflect the ROEs approved in cases decided during the specified periods; they are not necessarily representative of the average currently authorized ROEs for utilities industrywide or the returns earned by the utilities.

Table 6 and the graph below track the average and median equity return authorized for all electric and gas rate cases since 1990. As the table indicates, the average authorized ROEs have generally trended downward since 1990, reflecting the significant decline in interest rates and capital costs over this time frame. However, with the higher interest rate environment in the past couple of years, the average is beginning to trend moderately upward.

Composite electric, gas average authorized ROEs; total number of rate cases



Data compiled Jan. 28, 2025.
ROE = return on equity.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; US Treasury Department.
© 2025 S&P Global.

Further Reading

RRA Quarterly State Regulatory Evaluations — Energy

RRA Utility Holding Company Comparative Regulatory Risk Assessment — November 2024 Release

Major energy utility cases in progress in the US - Quarterly update on pending rate cases

General Elections: A deep dive into the 2024 state-level elections

The Commissions

The Rate Case Process: A Conduit to Enlightenment

Rate base: It's more complicated than it sounds

Frequently Asked Questions

Intro to Water Utilities — Current Trends and Growth Drivers

An Overview of FERC Regulation

FERC Regulatory Review

About Regulatory Research Associates

Regulatory Research Associates, a group within S&P Global Commodity Insights, is the leading authority on utility securities and regulation. Understanding the financial and strategic impact of federal and state regulation is a key to success in the energy business. For over 40 years, Regulatory Research Associates has been the leading provider of independent research, expert analysis, proprietary data and consultation on utility securities and regulation. S&P Global Commodity Insights produces content for distribution on S&P Capital IQ Pro.

CONTACTS

The Americas
+1 877 863 1306
market.intelligence@spglobal.com

Europe, Middle East & Africa
+44 20 7176 1234
market.intelligence@spglobal.com

Asia-Pacific
+852 2533 3565
market.intelligence@spglobal.com
www.spglobal.com/marketintelligence

Copyright © 2025 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.

These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable. No content (including index data, ratings, credit-related analyses and data, research, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Global Market Intelligence or its affiliates (collectively S&P Global). The Content shall not be used for any unlawful or unauthorized purposes. S&P Global and any third-party providers (collectively S&P Global Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Global Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON "AS IS" BASIS. S&P GLOBAL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Global Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global Market Intelligence's opinions, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Global Market Intelligence may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Global Market Intelligence assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Global keeps certain activities of its divisions separate from each other to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global's public ratings and analyses are made available on its websites, www.standardandpoors.com (free of charge) and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P Global publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

S&P Global

RRA Regulatory Focus

RRA Regulatory Focus Quarterly Regulatory Evaluations

August 7, 2024

RRA State Regulatory Evaluations — Energy

Lillian Federico, Research Director, Energy

Contributors: Brian Collins, Jim Davis, Russell Ernst, Lisa Fontanella, Monica Hlinka, Jason Lehmann, Dan Lowrey

Editor: Majda Shabbir

For detailed data

Access RRA's State Regulatory Rankings July 2024.

Regulatory Research Associates, a group within S&P Global Commodity Insights, evaluates the regulatory climate for energy utilities in each of the jurisdictions within the 50 states and the District of Columbia — a total of 53 jurisdictions — on an ongoing basis. S&P Global Commodity Insights produces content for distribution on S&P Capital IQ Pro.

To learn more or to request a demo, visit spglobal.com/marketintelligence.

Table of Contents

Executive Summary **3**
Introduction 3
About This Report 3
The Take **4**
Recent ranking changes **5**
Jurisdictions to watch **8**
Outlook **11**
RRA's rankings process **15**
Methodology 15
Overview of issues considered in the ranking process 16
Further Reading **31**
About the Author(s) **33**
About Regulatory Research Associates **33**

Executive Summary

Introduction

RRA evaluates the regulatory climate for energy utilities in each of the jurisdictions RRA evaluates the regulatory climate for energy utilities in each of the jurisdictions within the 50 states and the District of Columbia — a total of 53 jurisdictions — on an ongoing basis. The evaluations are assigned from an investor perspective and indicate the relative regulatory risk associated with the ownership of securities issued by each jurisdiction's energy utilities.

Each evaluation is based upon consideration of the numerous factors affecting the regulatory process, including gubernatorial involvement, legislation and court activity, and may be adjusted as events occur that cause RRA to modify its view of the regulatory risk for a given jurisdiction.

RRA reviews the ranking of a particular jurisdiction on an ongoing basis as developments occur and then holistically reviews the rankings when preparing the quarterly comprehensive ranking reports. The issues considered are discussed in RRA Research Notes, Commission Profiles, Topical Special Reports and Rate Case analyses. RRA also considers information obtained from contacts with the commissioners and staff, as well as company and government personnel. The final evaluation is an indicator of the probable level and quality of the earnings to be realized by the state's utilities as a result of regulatory, legislative and court actions.

It is important to note that RRA's rankings are from an investor perspective and are intended to provide insight into the relative risk associated with owning the securities of the jurisdictions in question. They are not an assessment of whether regulators are "doing a good job." In addition, the rankings look at not only the commission's actions but those taken by the jurisdiction's legislature, courts and chief executive, as well as the various stakeholders that intervene in the regulatory process.

About This Report

This report provides a discussion of recent changes in RRA's energy regulatory rankings, with details regarding the rationale for these changes. The report also identifies jurisdictions with ongoing proceedings or developing issues that have the potential to impact the relative regulatory risk for utilities operating within a given jurisdiction and, by extension, the ranking of that jurisdiction. The report also provides a discussion of key regulatory issues that impact the sector outlook as a whole. Finally, the report includes an overview of RRA's ranking methodology and the issues RRA examines in deriving the rankings.

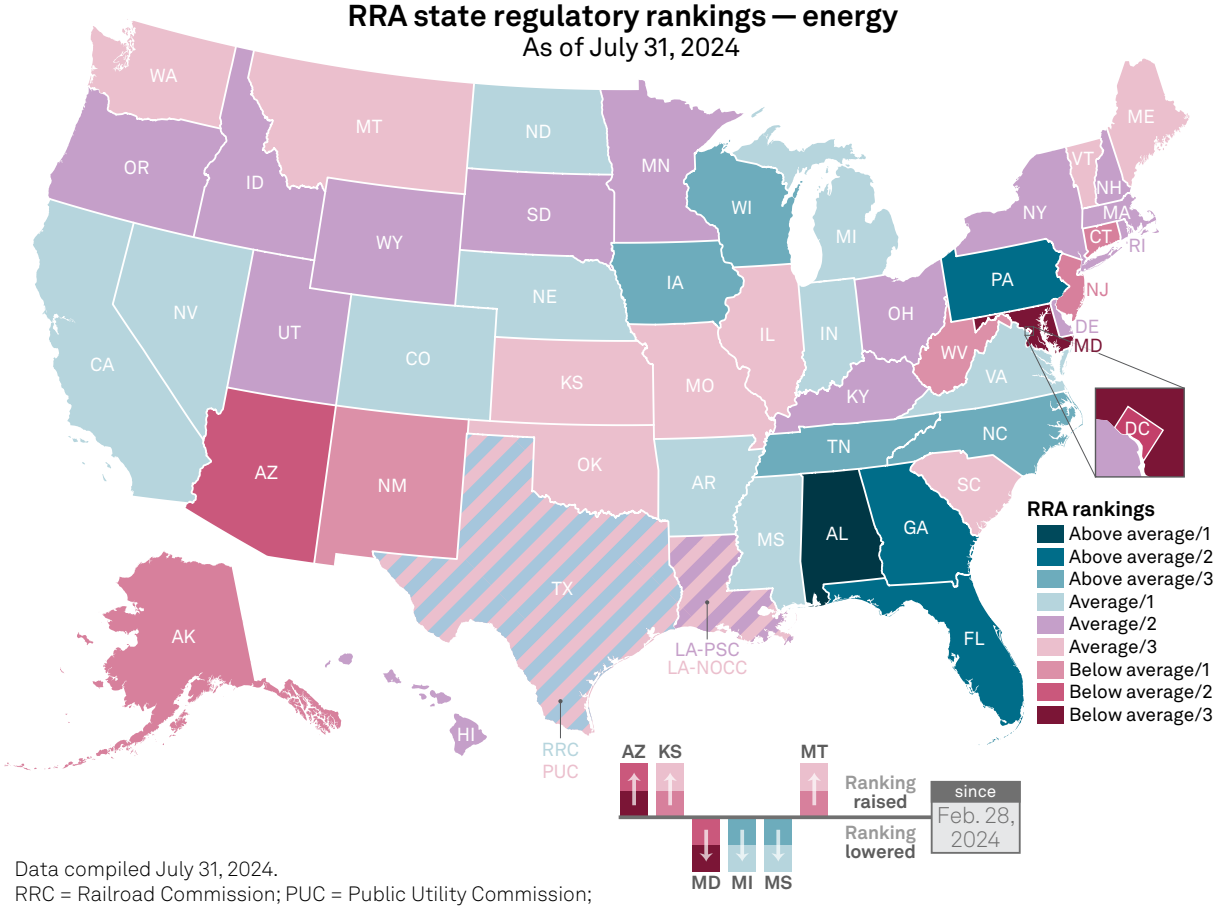
The Take

In light of recent and ongoing developments, Regulatory Research Associates has altered the regulatory rankings of six state-level jurisdictions under coverage and identified nine jurisdictions that bear watching, given recent commission, legislative, gubernatorial and/or court activity.

Developments continue to unfold on a variety of key issues across the regulated utility sector nationwide on an ongoing basis, including evolving public policy related to the energy transition, accelerated capital spending driven largely by programs to meet a variety of societal goals, and higher inflation and interest rates than the US had seen in the prior four decades.

State regulators will play a pivotal role in determining the direction and magnitude of these impacts on the financial performance of the utilities that fall under their purview. How the individual jurisdictions meet these challenges will continue to inform RRA's prospective comparative risk assessments.

RRA state regulatory rankings — energy
As of July 31, 2024



Data compiled July 31, 2024.
RRC = Railroad Commission; PUC = Public Utility Commission;
PSC = Public Service Commission; NOCC = New Orleans City Council.
Map credit: Joe Felizadio.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

Recent ranking changes

Following a comprehensive review of the current rankings conducted during July, RRA made six ranking changes. RRA is raising the ranking of **Arizona**, **Kansas** and **Montana**, while lowering the rankings of **Maryland**, **Michigan** and **Mississippi**. The reasons for these changes are discussed in the paragraphs that follow.

Recent rate case decisions issued by the **Arizona** Corporation Commission (ACC) have been relatively constructive. The commission's decision for Pinnacle West Capital Corp. subsidiary Arizona Public Service Co. earlier in 2024 in particular represents a marked improvement over a 2021 ACC ruling that incorporated one of the lowest equity return authorizations observed by RRA in the last 40 years. Several recent commission electric rate orders have also authorized the state's investor-owned utilities to implement a constructive system reliability benefit mechanism to recognize rate base additions between rate cases. Based on these developments, RRA upgraded its rating of the Arizona regulatory environment for energy utilities to Below Average/2 from Below Average/3.

RRA also raised the ranking of the **Kansas** regulatory climate to Average/3 from Below Average/1 to recognize the recent enactment of legislation that allows the use of plant-in-service accounting for electric utility infrastructure investments that are made between a utility's base rate proceedings. Prospectively, the utilities will be permitted to defer, for future recovery, 90% of the depreciation expense and rate of return associated with "qualifying electric plant" investments. The resulting regulatory asset balances, which are to accrue carrying charges at the utility's weighted average cost of capital and be amortized over a 20-year period once included in rates, are to be adjusted to reflect any prudence disallowances ordered by the Kansas Corporation Commission. The new law is expected to mitigate the impact of regulatory lag for the electric utilities operating in the state and improve their prospects for earning their authorized returns.

Additionally, RRA also raised the ranking of the **Montana** regulatory climate to Average/3 from Below Average/1, in recognition of the constructive aspects of recent electric and gas rate case decisions issued by the Montana Public Service Commission for NorthWestern Energy Corp. In these proceedings, the Montana PSC authorized returns on equity that exceeded nationwide averages approved in settled cases for both electric and gas utilities. The authorized electric return on equity (ROE) exceeded nationwide average for all electric cases, while the authorized gas ROE approximated the nationwide average. In addition, the orders allow NorthWestern Energy to defer, for later rate recovery, incremental wildfire expenses that are capped annually. Given that the Montana PSC relies upon historical test periods and average rate base valuations that tend to exacerbate regulatory lag and that the magnitude of wildfire-associated costs appears to be accelerating rapidly for many utilities across the US Northwest, RRA views the ability of NorthWestern Energy to defer its wildfire expense for future recovery as constructive from an investor viewpoint. In pending rate cases before the Montana PSC, NorthWestern Energy is seeking a new balancing account for wildfire management costs, which may help to further reduce regulatory lag as it pertains to investments in wildfire mitigation programs and insurance costs.

By contrast, the **Maryland** regulatory climate has become increasing risky from an investor standpoint since the governor changed in January 2023. The incoming governor, Democrat Wes Moore, quickly removed three members of the Maryland Public Service Commission from office, including the chairman. The incoming chair, who has now been in the position for a little over a year, is a former attorney in the Office of People's Counsel (OPC). In the wake of this change, the OPC has become more vocal and taken a more contentious stance in regulatory proceedings.

RRA state regulatory evaluations

State-by-state listing — Energy

Jurisdiction	Ranking	Jurisdiction	Ranking	Jurisdiction	Ranking
Alabama	Above Average/1	Louisiana — NOCC	Average/3	Ohio	Average/2
Alaska	Below Average/1	Louisiana — PSC	Average/2	Oklahoma	Average/3
Arizona*	Below Average/2	Maine	Average/3	Oregon	Average/2
Arkansas	Average/1	Maryland**	Below Average/3	Pennsylvania	Above Average/2
California	Average/1	Massachusetts	Average/2	Rhode Island	Average/2
Colorado	Average/1	Michigan**	Average/1	South Carolina	Average/3
Connecticut	Below Average/2	Minnesota	Average/2	South Dakota	Average/2
Delaware	Average/2	Mississippi**	Average/1	Tennessee	Above Average/3
District of Columbia	Below Average/2	Missouri	Average/3	Texas — PUC	Average/3
Florida	Above Average/2	Montana*	Average/3	Texas — RRC	Average/1
Georgia	Above Average/2	Nebraska	Average/1	Utah	Average/2
Hawaii	Average/2	Nevada	Average/1	Vermont	Average/3
Idaho	Average/2	New Hampshire	Average/2	Virginia	Average/1
Illinois	Average/3	New Jersey	Below Average/1	Washington	Average/3
Indiana	Average/1	New Mexico	Below Average/1	West Virginia	Below Average/1
Iowa	Above Average/3	New York	Average/2	Wisconsin	Above Average/3
Kansas*	Average/3	North Carolina	Above Average/3	Wyoming	Average/2
Kentucky	Average/2	North Dakota	Average/1		

Data compiled July 31, 2024.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission.
* Ranking raised since Feb. 28, 2024.
** Ranking lowered since Feb. 28, 2024
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

One of the new commissioners is a former state legislator, while the other is an attorney who has represented various stakeholder interests before state and federal regulators. Since these changes, the commission's decisions have become more restrictive from an investor viewpoint, culminating in a June 2024 decision rejecting a multiyear rate plan proposed by Exelon Corp. subsidiary Potomac Electric Power Co., and raising questions regarding future use of that framework in the state.

Contemporaneous with this decision, Anthony O'Donnell, a long-time commissioner who did not participate in issuing the order, resigned, creating uncertainty with respect to the future makeup of the commission and opening up the prospect for another more consumer-oriented replacement.

In light of these developments, RRA is again lowering the ranking for Maryland regulation, this time to Below Average/3 from Below Average/2. This is the third reduction in the jurisdiction's ranking since mid-2023.

RRA is also lowering the ranking of **Michigan** regulation — to Average/1 from Above Average/3. While the jurisdiction remains more constructive than average from an investor viewpoint, the outcomes of recent rate proceedings have been mixed and could indicate a tightening in the regulatory climate.

RRA had placed the state on watch following a 2022 rate case decision in which the Michigan Public Service Commission authorized DTE Energy Inc. subsidiary DTE Electric Co. (DTE-E) an increase in rates that was less than 10% of that requested. At the time, RRA viewed the decision to be an anomaly.

The company filed a new rate case less than three months later, asserting that existing rates and projected electricity sales could not sustain its major capital investment program. Even though the ultimate outcome of this case was more constructive, DTE-E filed a third case within four months of the decision (on March 28, 2024), which is pending. The filing has met significant resistance from consumer groups who characterize the request as "absurd in both the astounding dollars and obnoxious timing," implying that this case will be more contentious than usual.

In a July 2 fully litigated electric rate decision for American Electric Power Co. subsidiary Indiana Michigan Power Co. (IMP), the commission authorized the company a rate increase that was about half of what IMP had requested. Rate of return and expense items accounted for most of the revenue requirement differences; among the items disallowed by the PSC were costs associated with employee incentive compensation and enhanced customer service technology, as well as a company-proposed inflation adjustment. Similar to the DTE-E proceedings, the commission voted to keep IMP's ROE unchanged despite recent increases in interest rates.

While a recently decided (July 23) gas rate case for CMS Energy subsidiary Consumers Energy Co. (CE) was settled rather than fully litigated, the stipulated revenue requirement increase was also less than half of that requested by CE and the authorized ROE remained unchanged from the last case.

While the approved ROEs for DTE, IMP and CE remain above prevailing industry averages, they compare less favorably to these averages, which have risen, albeit modestly, in recent periods.

Against this backdrop, six major utility rate cases are pending, including the aforementioned DTE-E electric rate case, most of which are driven at least in part by capital spending programs intended to comply with state reliability and energy transition policies; outcomes consistent with the above recently completed cases could render it difficult for the companies to continue to support these initiatives.

Also of concern, the electric utilities have been subject to more intensive scrutiny since extensive outages ensued in August 2021, following a major storm.

The **Mississippi** energy utilities continue to operate under streamlined, formulaic alternative rate plans in lieu of general base rate cases. The plans provide for annual rate adjustments and reflect timely recognition of new investments and fluctuations in operating costs. When specified, authorized equity returns as calculated under the plans have generally exceeded prevailing industry averages. However, RRA is lowering the rating of Mississippi regulation at this time to Average/1 from Above Average/3. The change partially reflects the relative inexperience of the three new commissioners that were seated at the Mississippi Public Service Commission earlier in 2024 but is also necessary to maintain a normalized balance in RRA's relative ranking of US regulatory bodies.

In conjunction with the prior review conducted during February 2024, RRA changed the ranking of **Virginia** regulation, raising it to Average/1 from Average/2, to reflect the removal of significant regulatory uncertainty with the election of two individuals to fill long-standing vacancies on the Virginia State Corporation Commission.

RRA also noted that in December 2023, RRA had lowered the ranking of the **Illinois** regulatory climate to Average/3 from Average/2 to reflect the impact of adverse rulings issued for Exelon Corp. subsidiary Commonwealth Edison Co. and Ameren Corp. subsidiary Ameren Illinois Co. in their respective multiyear grid and rate plan proceedings.

Jurisdictions to watch

In addition to the jurisdictions discussed above, where RRA has observed a shift in the regulatory climate, there are nine states where current trends and expected near-term developments could signal a shift in the level of regulatory risk for investors. Even though RRA recently revised the ranking of the regulatory climates in Arizona, Connecticut and Illinois, these jurisdictions continue to bear monitoring.

While RRA raised the ranking of **Arizona** regulation as part of its current review (discussed in the preceding section of this report), ongoing issues merit continued scrutiny, including the ACC's actions earlier in 2024 to reexamine certain long-standing rules, raising the prospect of a rollback of the commission's renewable energy requirements, among other things. While some commissioners have asserted that the rules have unnecessarily burdened ratepayers, the state's major electric utilities are continuing to transition toward more renewable heavy generation portfolios, and a disruption in the policy could have unforeseen consequences for the companies. In addition, three of the ACC's five commissioner seats are up for election this year, as are the governor and both chambers of the Arizona legislature. Changes in the makeup of these branches of state government could result in significant commission policy changes.

After lowering the ranking of **Connecticut** regulation in August 2023, RRA has continued to closely monitor the jurisdiction, which continues to be one of the most challenging in the US. Changes are currently underway to the makeup of the Connecticut Public Utilities Regulatory Authority (PURA), which under state law can be comprised of up to five members. Gov. Ned Lamont (Democrat) recently announced that long-standing commissioner John Betkoski (Democrat), who is serving beyond the end of his term, will be stepping down at the end of 2024. At the same time, Lamont announced the nomination of former state legislator and utility government affairs employee, David Arconti, Jr, (Democrat) as a new PURA commissioner to begin serving Aug. 5, subject to confirmation by the General Assembly in 2025. The other current members of the PURA, Chair Marissa Gillett (Democrat) and Michael Caron (Republican) continue to serve beyond the expiration of their terms.

Recent rate case decisions have demonstrated significant constriction in the regulatory climate and have created additional uncertainty surrounding the overall tenor of regulatory policy in the state. An appeal is ongoing of a 2023 rate case decision, in which the PURA authorized Avangrid Inc. subsidiary The United Illuminating Co. an 8.63% that reflected a 47-basis-point penalty for management and operational performance issues. Even without the penalty, the implied base ROE of 9.10% was among the lowest approved for an energy utility in recent years.

There are two gas rate cases pending for other Avangrid subsidiaries, as well as a legislatively mandated alternative ratemaking proceeding where the PURA is reviewing rules governing multiyear rate plans, earnings-sharing mechanisms, revenue decoupling and potential performance-based ratemaking measures for the electric utilities.

Even though RRA recently lowered the ranking of Illinois to reflect restrictive **Illinois** Commerce Commission (ICC) rate case rulings issued in late 2023, the state continues to bear watching, as Exelon Corp. subsidiary Commonwealth Edison Co. (ComEd) and Ameren Corp. subsidiary Ameren Illinois Co. have revised grid plan filings, pending ICC consideration. The commission is expected to render decisions on the proposals in December.

Further, the ICC's determinations in gas proceedings in late 2023 raise the possibility of the commission continuing to disregard the recommendations put forth by its own internal experts to the detriment of the state's utilities, raising the potential for further constriction in the regulatory climate. Three of the five commissioners are relatively new, having been in office for about a year; so, even though one of the "new" commissioners has served before, the commissioners are evolving in terms of how they work together. In addition to the revised grid plan requests, there is one pending rate case for a relatively small gas utility.

Iowa remains a jurisdiction to watch, considering the Iowa Utilities Commission's (IUC) actions in recent advanced ratemaking decisions regarding new renewable generation projects. In October 2023, the IUC made modifications to a settlement for Alliant Energy Corp. subsidiary Interstate Power and Light Co. (IPL), including a reduction in the authorized ROE for new solar generation; the settlement had specified a 10.75% ROE, but the IUC authorized a 10.25% ROE. While being higher than prevailing industry averages, the modified ROE is below previously approved ROEs for these types of facilities.

Prior to that, in April 2023, the IUC approved Berkshire Hathaway Inc. subsidiary MidAmerican Energy Co.'s Wind PRIME project but rejected a settlement regarding the associated advance ratemaking principles, leaving the ROE to be determined in a future rate case. On rehearing, the parties reached a revised agreement that the IUC approved without modification in December 2023, including an authorization of a 10.75% ROE for the project. However, in the ruling, one commissioner expressed concerns about approving a "premium ROE" within mature renewable energy markets, potentially indicating an eventual conclusion to the practice of approving premium ROEs for these types of investments.

RRA state regulatory evaluations — Energy*

(By category, jurisdictions to watch highlighted)

Above Average/1	Above Average/2	Above Average/3	Average/1	Average/2	Average/3	Below Average/1	Below Average/2	Below Average/3
Alabama	Florida	Iowa	Arkansas	Delaware	Illinois	Alaska	Arizona	Maryland
	Georgia	North Carolina	California	Hawaii	Kansas	New Jersey	Connecticut	
	Pennsylvania	Tennessee	Colorado	Idaho	Louisiana — NOCC	New Mexico	Dist. of Columbia	
		Wisconsin	Indiana	Kentucky	Maine	West Virginia		
			Michigan	Louisiana — PSC	Missouri	New Mexico		
			Mississippi	Massachusetts	Montana	West Virginia		
			Nebraska	Minnesota	Oklahoma			
			Nevada	New Hampshire	South Carolina			
			North Dakota	New York	Texas — PUC			
			Texas — RRC	Ohio	Vermont			
			Virginia	Oregon	Washington			
				Rhode Island				
				South Dakota				
				Utah				
				Wyoming				

Data compiled July 31, 2024.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission.
*Within a given subcategory, states are listed in alphabetical order, not by relative ranking.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

It is noteworthy that two of the three current commissioners are relatively new to the IUC, having joined in May 2023. Consequently, two pending rate cases may face some uncertainty. IPL is in the midst of its first major electric and gas base rate case since 2019; hearings are underway after certain parties signed a nonunanimous settlement. Black Hills Iowa Gas Utility Co. LLC also has a case in progress — its first in about three years.

Kentucky continues to bear watching, as the Kentucky Public Service Commission's pattern of imposing modifications to rate case settlements over the past couple of years remains a cause for concern. The most recent rate case decision for a large utility occurred in January 2024, when the PSC authorized American Electric Power Co. Inc. subsidiary Kentucky Power Co. a rate increase that was meaningfully below the stipulated hike the parties had agreed to in a settlement; the revenue requirement difference stemmed largely from an adverse ruling on transmission-related cost recovery. The commission also rejected a settlement provision that called for the company to implement a distribution reliability rider.

Separately, legislation enacted earlier in 2023 prohibits the Kentucky PSC from approving requests to retire fossil fuel-fired facilities, unless the utility can demonstrate that the plant's retirement would not adversely impact ratepayers or the region's electric grid reliability. The Kentucky PSC recently approved one such proposal — by PPL Corp. subsidiaries Louisville Gas and Electric Co. and Kentucky Utilities Co. — that will result in meaningful changes to the composition of the companies' generation portfolios.

On a constructive note, a separate bill signed in 2023 allows the electric utilities to securitize certain costs associated with retired generation facilities and storm restoration efforts. The PSC recently approved Kentucky Power's securitization request. Even so, it is unclear how the commission will approach future requests.

The term of former Chairman Kent Chandler, a Democrat, expired June 30, and he left the commission instead of seeking reappointment. Gov. Andy Beshear, a Democrat, has not named a replacement. This development adds uncertainty to the state's regulatory climate at the same time that investors are seeking clarity regarding the commission's stance on a variety of regulatory matters.

New Jersey bears watching at this juncture, as Public Service Enterprise Group Inc. subsidiary Public Service Electric and Gas Co. — the largest utility in the state — is in the midst of its first combination electric and gas base rate case in several years. Proceedings are also underway for two of the major gas local distribution companies (LDCs), New Jersey Resources Inc. subsidiary New Jersey Natural Gas Co. and Elizabethtown Gas Co., with Elizabethtown Gas affiliate South Jersey Gas Co. expected to file a case by the end of 2024. The latter two LDCs are held by South Jersey Industries Inc., which is owned by Infrastructure Investments Fund US Holding 2 LP.

With these cases, as well as various energy transition proceedings under way, including a review of the state's Energy Master Plan, the New Jersey Board of Public Utilities is operating with one vacancy and three new members who took office in 2023, including the recently named president.

Due to uncertainty caused by changes in the composition of the **Oklahoma** Corporation Commission (OCC), the combative stance taken in recent proceedings by one of the long-time OCC members and the commission's decision to depart from customary practice and require significant changes to a rate case settlement, RRA lowered its ranking of Oklahoma regulation in November 2023. RRA continues to consider Oklahoma a state to watch, as two of the major energy utilities in the state have substantial rate requests pending.

The regulatory climate in **Texas**, as it pertains to the electric utilities under the purview of the Public Utility Commission of Texas, continues to bear watching. The regulatory framework in Texas and the PUC has been the focus of intense scrutiny, since a 2021 severe weather event caused widespread multiday outages and price spikes within Electric Reliability Council of Texas (ERCOT). While various proceedings are ongoing to transform the framework, the dramatic controversies that arose following that event have largely abated. Recent wildfire and severe storm activity could cause renewed focus on the utilities and the market structure in Texas.

Gov. Greg Abbott's reelection in 2022 provided a measure of stability, though there continues to be turnover at the PUC. One commissioner is serving beyond the end of term that expired in 2021, and both the PUC chair and a newly appointed commissioner are serving pending confirmation by the Senate when the legislature reconvenes in 2025.

Against this backdrop, both CenterPoint Energy Inc. subsidiary CenterPoint Energy Houston Electric Co. and American Electric Power Co. subsidiary AEP Texas Inc. filed rate cases in the first quarter of 2024 and certain intervenors took restrictive positions in their direct testimony in these cases. While a settlement was reached in the AEP Texas case, CenterPoint has filed a motion to withdraw its case in light of ongoing controversy surrounding the company's response to outages caused by Hurricane Beryl and the PUC has initiated a review of CenterPoint's actions during and following the storm.

Several of the utilities have also filed system resiliency proposals in accordance with 2023 legislation; these proceedings may prove challenging in light of the recent weather-related events.

The **Wyoming** regulatory climate bears watching, as the legal and legislative ramifications of a contentious electric general rate case decision for Berkshire Hathaway Inc. subsidiary PacifiCorp continue to play out. The utility has already filed a federal suit against the Wyoming Public Service Commission's order issued in January, arguing that the commission failed to account for the costs of maintaining reserve capacity, as mandated by the Federal Energy Regulatory Commission. PacifiCorp also plans to pursue action in state court, although the company has not specified when it plans to file.

In addition, multiple pieces of legislation enacted during the 2024 session addressed several issues that arose in recent commission proceedings, including recovery of costs associated with neighboring states' environmental policies and cost-tracking mechanisms to allow utilities to recover changes in certain electric supply costs between rate cases.

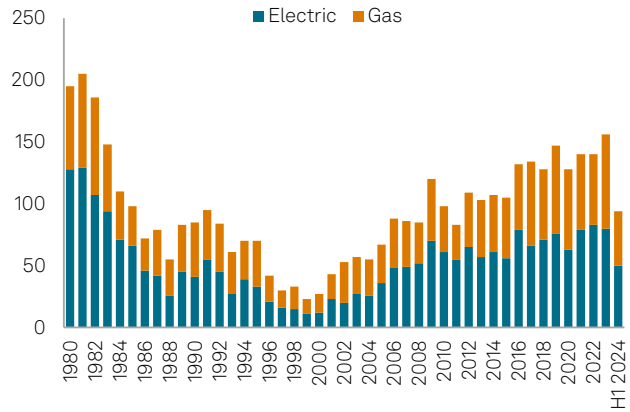
Outlook

Developments continue to unfold on a variety of key issues across the regulated utility sector nationwide. Accelerating capital spending to address a variety of public policy goals, inflation and rising interest rates present challenges for utilities and regulators and are driving an active rate case agenda across the US.

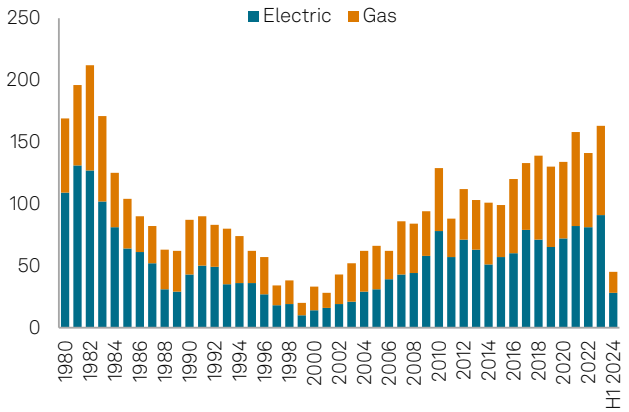
There were 164 electric and gas rate cases decided for the US investor-owned energy utilities in RRA's coverage universe during 2023, with an aggregate $9.3 billion of rate increases approved in those cases. During the first half of 2024, 45 cases were decided, netting $2.3 billion in rate increases.

The covered companies filed 156 new electric and gas rate cases, including limited-issue rider proceedings in 2023, with 94 filed in the first half of 2024. The combined rate increases requested in the 2023 cases aggregated to more than $18.1 billion, while those sought in the 2024 filings added up to almost $12.3 billion.

Major rate cases fillings, 1980-2022



Major rate cases decisions, 1980-2022



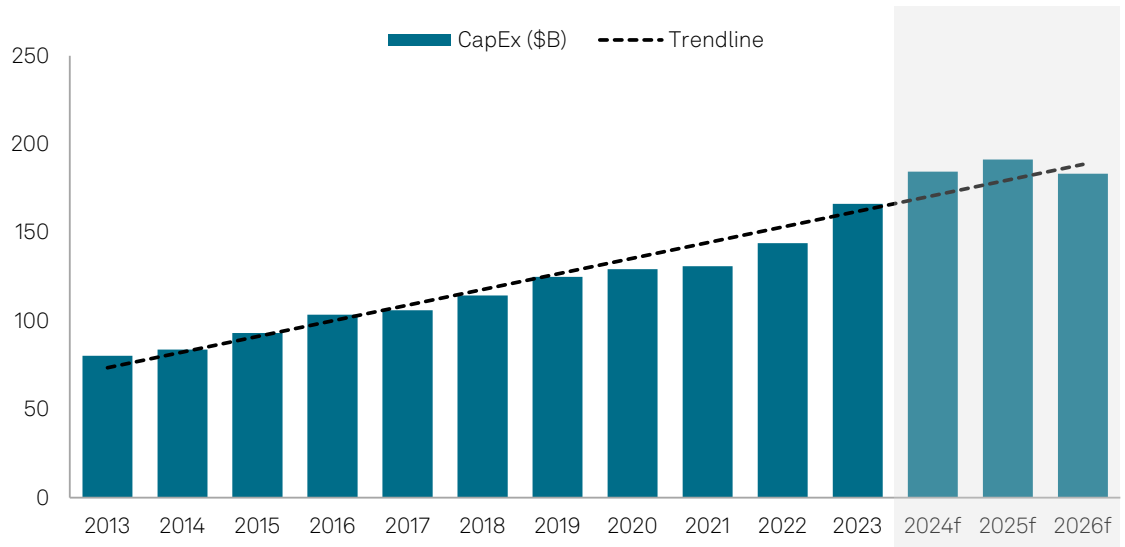
Data compiled July 24, 2024.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights
© 2024 S&P Global.

RRA anticipates this trend of robust rate case activity will persist for the foreseeable future, driven by continued expansion in capital spending.

Capital spending has risen steadily since 2006, when the energy utilities included in RRA's sample of the publicly traded US energy utilities reported total actual capital spending of about $52 billion; actual capital spending for the group came in at $166 billion in 2023.

According to data gathered by RRA in March, spending is expected to expand to $184 billion in 2024, increase to $191 billion in 2025 and moderate to $183 billion in 2026, bringing the total for the forecast period (2024–2026) to $559 billion.

Energy actual and estimated capital spending



Data compiled March 27, 2024.
Capex = capital expenditure; f = forecast.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

The impacts of severe weather events, such as hurricanes, winter storms and wildfires, continue to play a more prominent role in utility financial outlooks and are contributing to the active rate case agenda.

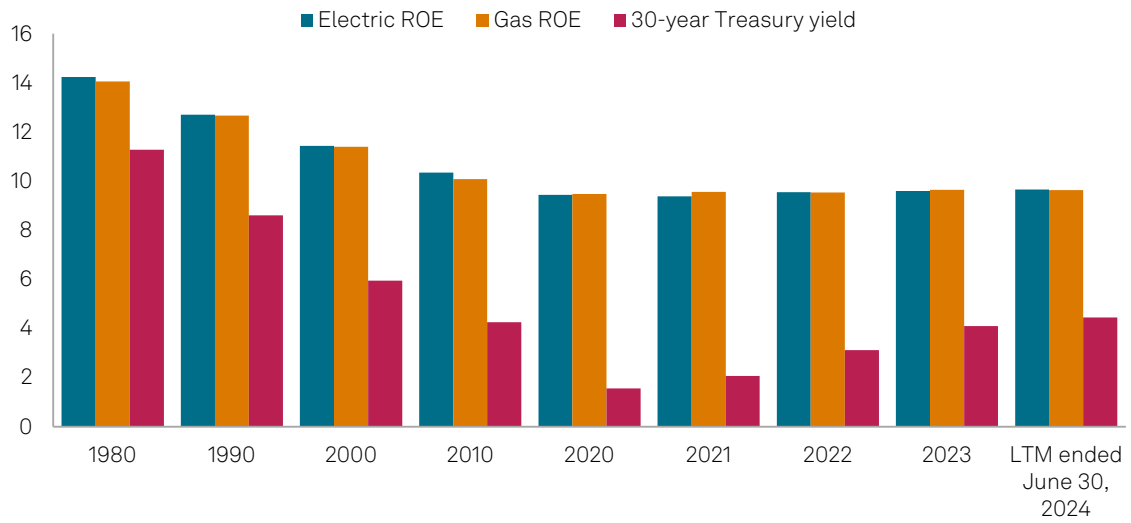
The need to recover the related costs, together with the previously listed factors, will continue to put upward pressure on rates, exacerbating prevailing concerns about ratepayer impacts and affordability, and rendering it challenging for companies to reflect higher financing costs in their authorized returns.

The spread between average authorized ROEs and US Treasury bond yield contracted to roughly 550 basis points in 2023 from almost 800 basis points in 2020. The spread has continued to shrink in 2024, such that for the 12 months ended June 30, 2024, the spread approximated 520 basis points.

Still, the spread remains higher than it was during previous periods. For example, during the early 1980s — another time when the industry faced aggressive capital spending and persistently high levels of inflation and interest rates — the spread between Treasury yields and authorized ROEs was less than 300 basis points.

Average US utility authorized ROEs; 30-year US Treasury bond yields

Select calendar years, 1980-2023, LTM June 30, 2024

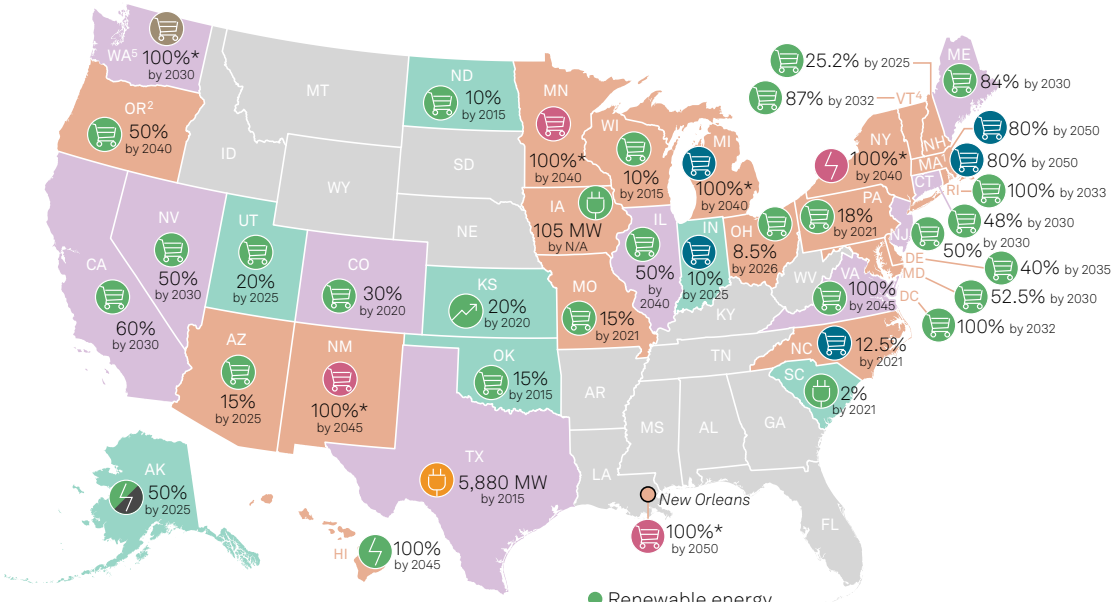


Data compiled July 24, 2024.
ROE=return on equity; LTM = last 12 months.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

The evolving energy transition presents unique challenges for the electric and gas utility sector, but also offers potential for growth. Much of the evolution has come via state legislative initiatives and energy issues continue to be a focus in the current legislative session.

Energy issues will be a factor in the 2024 US presidential election, as well as state level elections, with gubernatorial elections scheduled in 11 states, legislative elections in 44 states and utility commissioners on the ballots in 10 states.

State renewable and clean energy standards and goals



- Mandatory renewable, clean energy standards
- Nonbinding energy goals
- Additional goals on top of a mandatory standard

- Renewable energy
- Clean energy
- Carbon-free
- Greenhouse gas neutral
- Alternative energy
- Solar energy

- Electric generation
- Installed capacity
- Peak demand
- Retail sales

California	100%	2045	Illinois	100%	2050	New Jersey	100%	2035	Washington	100%	2045
Colorado	100%[3]	2050	Maine	100%	2050	Texas	10,000 MW	2025			
Connecticut	100%	2040	Nevada	100%	2050	Virginia	100%	2040			

Data compiled July 29, 2024.
Targets indicate the final requirement and do not include interim steps. The data also does not include voluntary targets adopted by utilities, corporations, public power districts, etc.
* There are interim steps within the renewable portfolio standard that allow for a target to be met with renewable energy resources; however, the carbon-free target is the ultimate target resource policy.
[1] Massachusetts currently has in place a Clean Energy Standard and a separate Renewable Portfolio Standard. The 40% renewables by 2030 standard does not have a stated expiration date; the standard is to increase by 1% each year and will reach 100% renewable energy by 2090. The clean energy standard requires 80% clean energy by 2050.
[2] The state's clean energy targets legislation requires retail electricity providers to reduce emissions by 100% by 2040; while it is a separate policy, it is complementary and works in tandem with the renewable portfolio standard.
[3] The goal is in place for a retail utility that provides service to more than 500,000 customers, such as Xcel Energy, or any utility that decides to opt in.
[4] Legislation enacted in June 2024 modifes and increases the state's renewable portfolio standard to 100% retail sales by 2030 or 2035, depending on the size of the provider. The state's largest utility, Green Mountain Power, must reach the 100% target by 2030.
[5] Washington has an additional 15% renewable energy standard in place. The state's 2045 target of 100% renewable and nonemitting resources is a mandate and not a voluntary goal.
Design credit: Cat VanVliet.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

These factors raise the overall level of uncertainty, or investor risk, across the sector. State regulators will play a pivotal role in determining the direction and magnitude of these impacts on the financial performance of the utilities that fall under their purview. How the individual jurisdictions meet these challenges will continue to inform RRA's prospective comparative risk assessments.

RRA's rankings process

RRA ranks the regulatory climate in a total of 53 state-level jurisdictions, including the District of Columbia and the New Orleans City Council, and two regulatory bodies in Texas — the Public Utility Commission of Texas regulates electric utilities, while the Railroad Commission of Texas regulates gas local distribution companies.

RRA maintains three principal ranking categories — Above Average, Average and Below Average — with Above Average indicating a relatively more constructive, lower-risk regulatory environment from an investor viewpoint and Below Average indicating a less constructive, higher-risk regulatory climate.

The numbers 1, 2 and 3 within each principal ranking category indicate relative position. The designation 1 indicates a stronger or more constructive ranking from an investor viewpoint; 2, a midrange rating; and 3, a less constructive rating.

Hence, if you were to assign numeric values to each of the nine resulting categories, with a "1" being the most constructive from an investor viewpoint and a "9" being the least constructive from an investor viewpoint, then Above Average/1 would be a "1" and Below Average/3 would be a "9."

Methodology

RRA designed the rankings to reflect the interest of equity and fixed-income investors across more than 30 individual metrics. The metrics are scored based on the covering analysts' subjective judgment and then aggregated to create a single score for each state, with certain categories, such as the state's history with respect to authorized equity returns, practice with respect to rate case test years and presence, or lack of alternative ratemaking provisions, weighted more heavily than others.

RRA then ranks the states from lowest to highest and distribute them among the nine categories to create an approximate normal distribution. The team then reviews the distribution and may adjust individual state rankings based on the covering analysts' recommendations, subject to review by a designated panel of senior analysts.

The variables that RRA considers in determining each state's ranking are largely the broad issues detailed in state commission profiles and those that arise in the context of rate cases, generic policy proceedings, legislation and gubernatorial directives.

RRA's articles and reports on these issues are accessible through the S&P Capital IQ Pro platform, as are the jurisdictional commission profiles and RRA's database of major investor-owned utility rate case decisions going back to 1980.

RRA State Regulatory Evaluations*

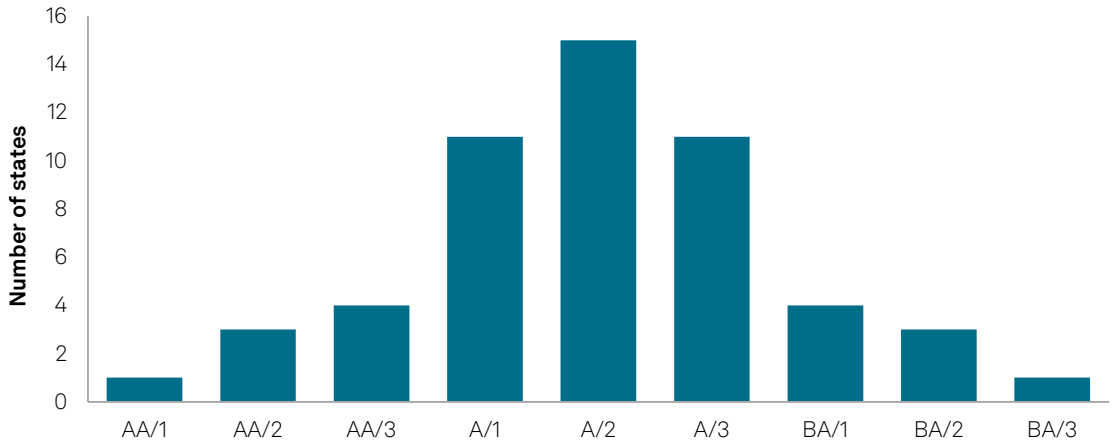
Above Average/1	Average/1	Below Average/1
Alabama	Arkansas	Alaska
	California	New Mexico
	Colorado	New Jersey
	Michigan	West Virginia
	Mississippi	
	Indiana	
	Nebraska	
	Nevada	
	North Dakota	
	Texas — RRC	
	Virginia	
Above Average/2	**Average/2**	**Below Average/2**
Florida	Delaware	Arizona
Georgia	Hawaii	Connecticut
Pennsylvania	Idaho	District of Columbia
	Kentucky	
	Louisiana — PSC	
	Massachusetts	
	Minnesota	
	New York	
	New Hampshire	
	Ohio	
	Oregon	
	Rhode Island	
	South Dakota	
	Utah	
	Wyoming	
Above Average/3	**Average/3**	**Below Average/3**
Iowa	Illinois	Maryland
North Carolina	Louisiana — NOCC	
Tennessee	Kansas	
Wisconsin	Maine	
	Missouri	
	Montana	
	Oklahoma	
	South Carolina	
	Texas — PUC	
	Vermont	
	Washington	

Data compiled July 31, 2024.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission.
* Within a given subcategory, states are listed in alphabetical order, not by relative ranking.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

As implied by the above discussion, the rankings reflect the state regulatory commission's decisions and the impact of the actions taken by the governor, the legislature, the courts and consumer advocacy groups. The policies examined pertain largely to rate cases and the ratemaking process, but RRA also consider issues such as industry restructuring, corporate governance, treatment of proposed mergers and those related to the ongoing energy transition.

In the charts within this report that depict the rankings by category, the jurisdictions within each category are listed in alphabetical order rather than by relative position within the category.

State regulatory rankings distribution — energy



Data compiled July 31, 2024.
AA = Above Average; A = Average; BA = Below Average.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

RRA endeavors to maintain an approximately normal distribution, with most rankings in the three average categories and the remainder split almost evenly between the Above Average and Below Average categories.

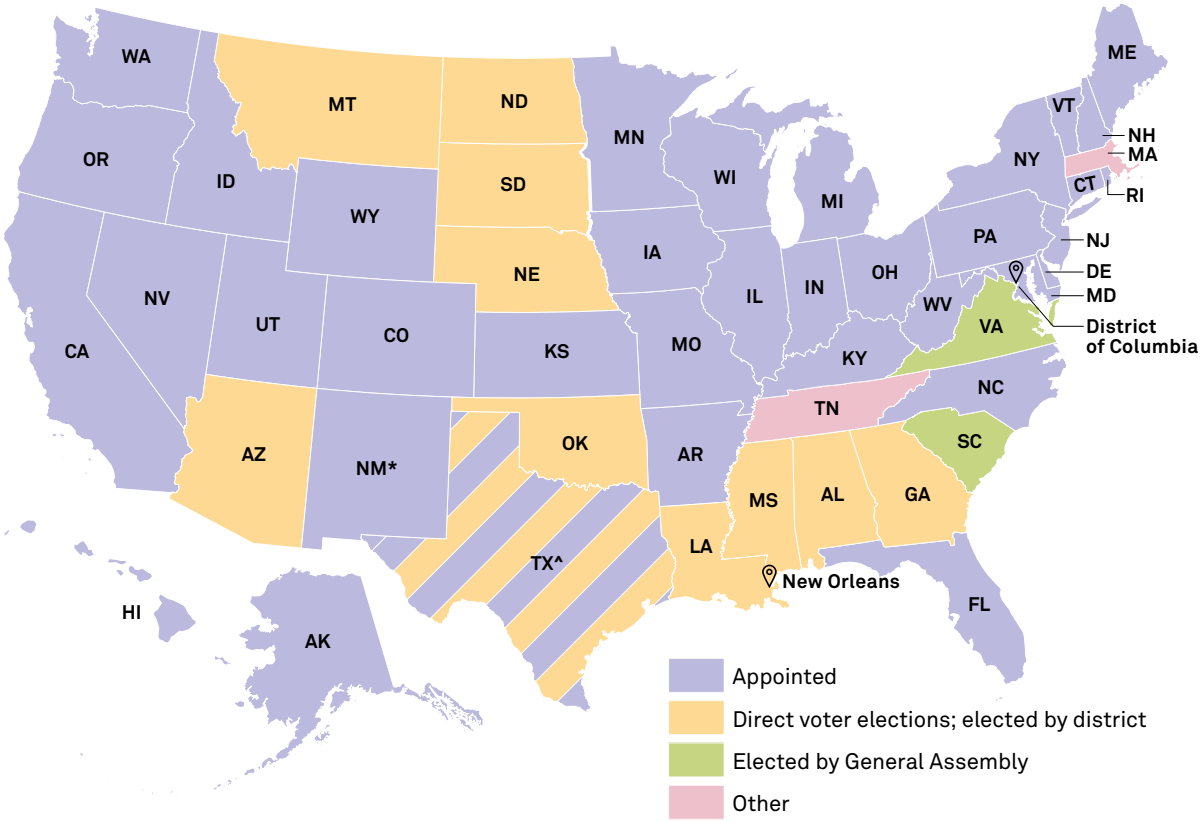
Overview of issues considered in the ranking process

The summaries below provide an overview of the variables RRA looks at, including a brief discussion of how each can impact the ranking of a given regulatory environment.

Governor/Mayor — Actions of the governor (or the mayor in the District of Columbia/City of New Orleans) may impact a jurisdiction's ranking. RRA takes no view on which political party is the more constructive option but does consider to what extent energy issues were of focus of recent elections, whether the governor seeks to become involved in the regulatory process and the type of influence the governor seeks to exert.

Commissioner selection process/membership — RRA examines how commissioners are selected in each state. All else being equal, RRA attributes a greater level of investor risk to states where commissioners are elected rather than appointed. Generally, energy regulatory issues are less politicized when they are not subject to debate in the context of an election.

Commissioner selection methods in US



Data compiled July 31, 2024.
* Prior to Jan. 1, 2023, commissioners were chosen through general elections.
^ The Public Utility Commission of Texas members are appointed by the governor, while members of the Railroad Commission of Texas are elected in statewide elections.
Source: Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

Realistically, a commissioner candidate who indicates support for the utilities and their shareholders or appears amenable to rate increases is unlikely to be popular with voters. In addition, there might not be specific experience requirements to run for commissioner, so a newly elected candidate may have a steeper learning curve with respect to utility regulatory and financial issues, which could make discerning the decisions that an individual might make more difficult and could increase regulatory uncertainty.

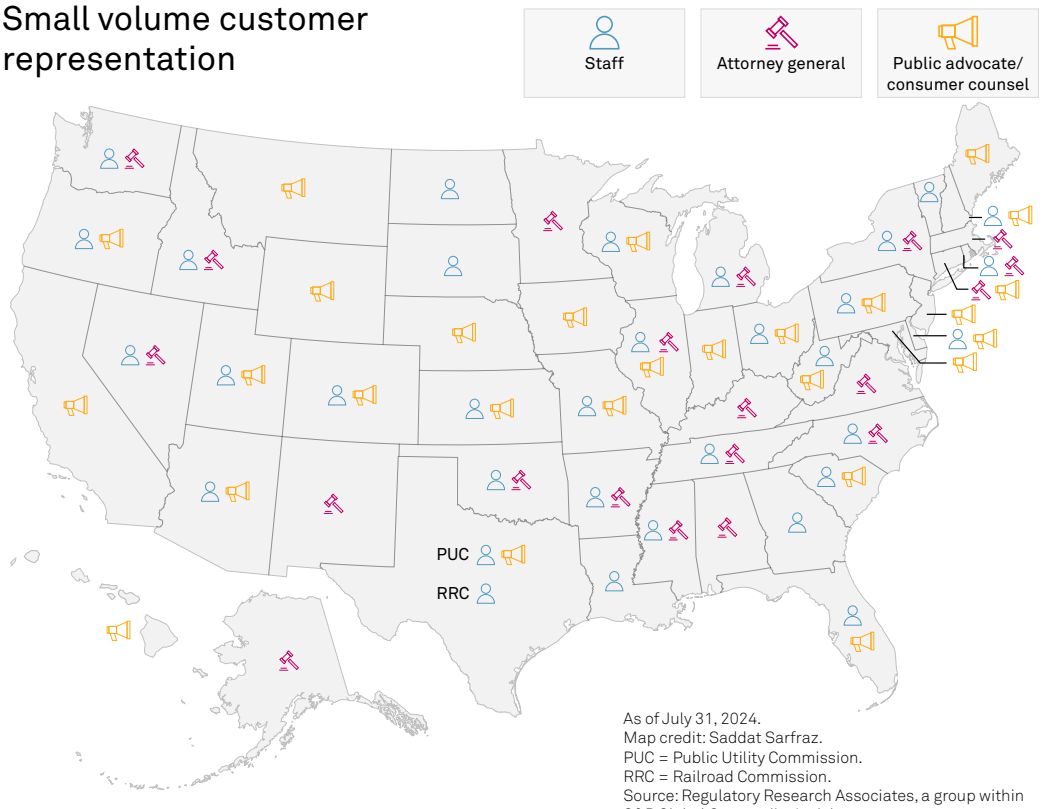
There have been some notable instances, however, in which energy issues played a key role in gubernatorial/senatorial elections in states where commissioners are appointed, with detrimental consequences for the utilities.

In addition, RRA looks at the commissioners themselves and their backgrounds. Experience in economics and finance and/or energy issues is generally seen as a positive sign. Previous employment by the commission or a consumer advocacy group is sometimes viewed as a negative indicator.

New commissioners with little experience or exposure to utility issues represent the highest level of risk simply because there is no way to foresee their actions or the time they will take to “get up to speed.” Controversy or “scandal” surrounding an individual and/or the potential for a conflict of interest are also crucial factors to consider.

Similarly, a high rate of turnover, extended vacancies, and leaving commissioners serving for a long period of time beyond the end of their terms all add to the level of regulatory risk in RRA's view.

Commission staff/consumer interest — Most commissions have a staff that participates in rate proceedings. The staff may represent the consumer interest, act as advisors to the commissioners or play a less defined role. In addition, there may or may not be additional state-level organizations that are charged with representing the interests of a certain class or classes of customers, such as the attorney general or a consumer advocate, coalitions of cities in which the utility operates, private consortia or lobbying groups that represent certain stakeholder groups and/or large-volume commercial and industrial customers that intervene directly in rate cases.



As of July 31, 2024.
Map credit: Saddat Sarfraz.
PUC = Public Utility Commission.
RRC = Railroad Commission.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

Generally, the greater the number of consumer intervenors, the greater the level of uncertainty for investors, as in most instances, the only party representing investors' interests is the company. The level of risk for investors also depends on the caliber and influence of the intervening parties and the level of contentiousness in the rate case process. Even though a commission may not adopt an extreme position taken by an intervenor, the inclusion of an extreme position in the record for the case widens the range of possible outcomes, increasing the risk of a negative outcome for investors. RRA's opinion on these issues is largely based on experience and observations.

Settlements — An increasing number of cases in recent years have been resolved by settlements rather than through a fully litigated process. There are often clear incentives for utilities and entities with vested interests in the sector to compromise. Utilities often obtain settlement benefits in the form of key utility policy objectives and more timely and favorable rate case outcomes than would otherwise be achievable. In some instances, however, settlement negotiations can be protracted and extend the duration of a rate case.

A settlement may set out all of the typical rate case parameters, such as rate of return and rate base, but many are "black box" settlements. These black box settlements are filed when the parties settle all, or nearly all, of their differences in the proceeding, but none of the parties want to disclose the final outcome on a given issue to avoid establishing a precedent.

Or, during settlement discussions, each party may have contemplated a certain revenue change amount as acceptable and may have performed calculations regarding the rate base and rate-of-return parameters behind their revenue requirement positions. Different values for these inputs, however, could be used in varying combinations to determine the same revenue requirement.

All else being equal, the ability of the parties to reach an agreement without having to go through a fully litigated proceeding is considered constructive, particularly since it reduces the likelihood of an after-the-fact court review. However, the agreements are generally less detailed than a fully litigated decision; so, there is a lack of clarity regarding how certain key issues were resolved.

In some instances, the parties may agree on only certain issues and will execute a partial settlement on those issues, while the remaining issues in the case will be litigated.

Rate case timing — For each state commission, RRA considers whether there is a set time frame within which a rate case must be decided, the length of any such statutory time frame and the degree to which the commission adheres to that time frame.

About two-thirds of state commissions nationwide have a rule or statute that requires a rate case to be decided within seven to 12 months of filing; very few have requirements that a case be completed in less than seven months.

Shorter time frames may apply for limited-issue proceedings or if the parties reach an agreement.

RRA generally views a set time frame as preferable, as it provides a degree of certainty as to when any new revenue may begin to be collected. In some states, however, the time frame may be extended with the company's agreement.

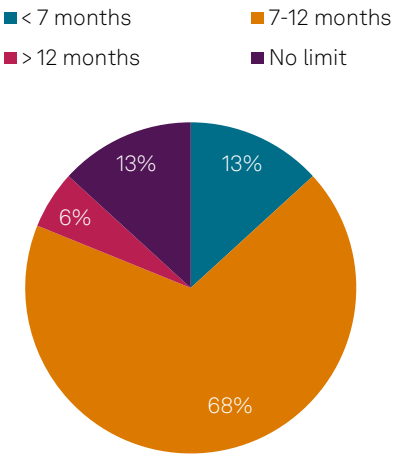
In addition, a shorter time frame for a decision generally reduces the likelihood that the actual conditions, during the first year the new rates will be in effect, will vary markedly from the test period utilized to set new rates, thus keeping regulatory lag to a minimum.

Interim procedures — RRA views the ability to implement all or a portion of a proposed rate increase on an interim basis prior to a final decision as constructive.

In jurisdictions that allow interim rate increases, the utility is required to refund any related over-collections, generally with interest, if the commission approves a rate change that is below the interim rates.

Implementation of an interim increase may be permitted by state law or may require prior approval by the commission, which may not be easy to obtain. Certain states allow a commission to establish an effective date for new rates prior to the final order in the case. The company would then be permitted to recoup any revenue not collected between the effective date and the decision date.

Rate case time frame



Data compiled as of July 31, 2024.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
©2024 S&P Global.

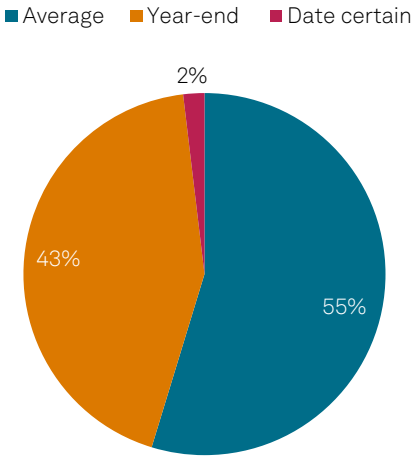
Rate base — A utility's rate base is essentially the company's "prudent" capital investment as determined by the applicable regulatory authorities, net of accumulated depreciation and other adjustments. Rate base is the net asset base of an electric, gas or water utility upon which an allowed rate of return — usually the company's weighted average cost of capital — is applied. The rate base value is a key variable that regulatory bodies use in a rate case to determine a utility's revenue requirement.

A commission's rate base policies can impact a utility's ability to earn its authorized ROE. State statutes often outline these policies, and the commission usually does not have much latitude with respect to these overall policies.

A key factor in assessing whether the company has been accorded a reasonable opportunity to earn the authorized return is the methodology the commission uses to determine rate base.

Commissions are nearly evenly split between those that employ a year-end, or terminal, valuation and those that utilize an average approach, with one using a "date certain" methodology. In some instances, the commission may employ a different rate base valuation method, depending on the utility type or case type or based on the test year selected by the company. For example, a forward-looking test year may be used in a limited-issue rider proceeding or a multiyear rate plan, even though a historical test year is used in traditional single-step base rate cases. Some states allow the utility to choose between a forecast or historical test year but require that an average rate base be used if a forecast test year is requested, while a year-end rate base must be used if a historical test period is selected.

Rate base valuation method



Data compiled July 31, 2024.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 by S&P Global.

In general, assuming that rate bases are rising, i.e., new investment is outpacing depreciation, a year-end valuation is preferable from an investor viewpoint.

This again relates to how well the parameters used to set rates reflect actual conditions that will exist during the rate-effective period; hence, the more recent the valuation, the more likely it is to approximate the actual level of rate base being employed to serve customers once the new rates are placed into effect.

Some commissions permit post-test-year adjustments to rate base for 'known and measurable' items. Generally, this practice benefits the utilities when operating costs are rising and/or the company is making significant investments in infrastructure and other capital items.

The rules with respect to what constitutes a known and measurable adjustment, however, are not always specific, and there can be a good deal of controversy about what is and is not acceptable under state law or commission rules.

Another key consideration is whether state law and/or the commission generally permits the inclusion in rate base of construction work in progress (CWIP) for a cash return. CWIP represents assets that are not yet operational but ultimately will serve customers. Some states prohibit the inclusion in rate base of items that are not currently, i.e., during the test year or within a reasonably short period of time following the end of the test year, 'used and useful' in providing service to customers. Thus, CWIP must be excluded.

In these instances, the companies are permitted to accrue allowance for funds used during construction (AFUDC), which is essentially booking a return on the construction investment as a regulatory asset that is recoverable from ratepayers once the project in question becomes operational. While this method bolsters earnings, it does not augment cash flow and does not support credit metrics.

Investors generally view the inclusion of CWIP in rate base for a cash return as constructive since it helps to maintain cash flow metrics during a large construction cycle. In addition, if the company is not able to time its next rate case to coincide with the in-service date of a project, there may be a time period where the plant is operating and, therefore, the company can no longer accrue AFUDC but the utility is incurring operations and maintenance costs and booking depreciation expense, none of which are yet reflected in rates.

This becomes particularly challenging when the utility's construction program consists of several smaller projects with short ramp-up times, making it more difficult for the company to file a case quickly enough to reflect each new project.

Test year — The rate case test year is simply the 12-month period used as a baseline in examining the utility's actual revenues, expenses and rate base. In assessing the level of regulatory risk, RRA examines whether a historical test year is chosen or a future 12-month period with a forecast of the utility's revenues, expenses and rate base.

Almost two-thirds of the 53 jurisdictions covered by RRA utilize a test year that is historical at the time of filing, which increases regulatory lag and uncertainty for investors.

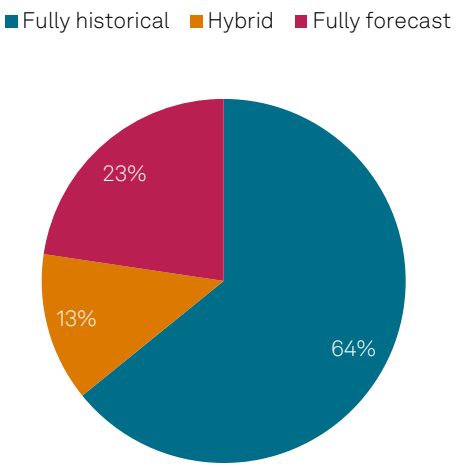
A fully forecast test year is generally considered to be most constructive, particularly in periods of robust capital spending, high inflation and rising interest rates.

Under a hybrid approach, the test year is partially forecast at the time the case is filed but is fully historical by the time the case is decided. The company generally files updates during the proceeding to reflect actual results as they become available.

Some jurisdictions use different test period types for different kinds of proceedings or utilities. For example, the commission may use a historical test year for single-year base rate cases but the use forward-looking test years for multiyear rate cases, alternative regulation plans and/or adjustment clauses.

Many jurisdictions allow for known and measurable adjustments to the test year, but there is considerable variability regarding how far beyond the end of the test year these adjustments may go, and statutes governing the definition of known and measurable can be ambiguous. Consequently, there can be wide disagreement among the rate case parties as to which adjustments qualify.

Rate case test year



Data compiled July 31, 2024.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 by S&P Global.

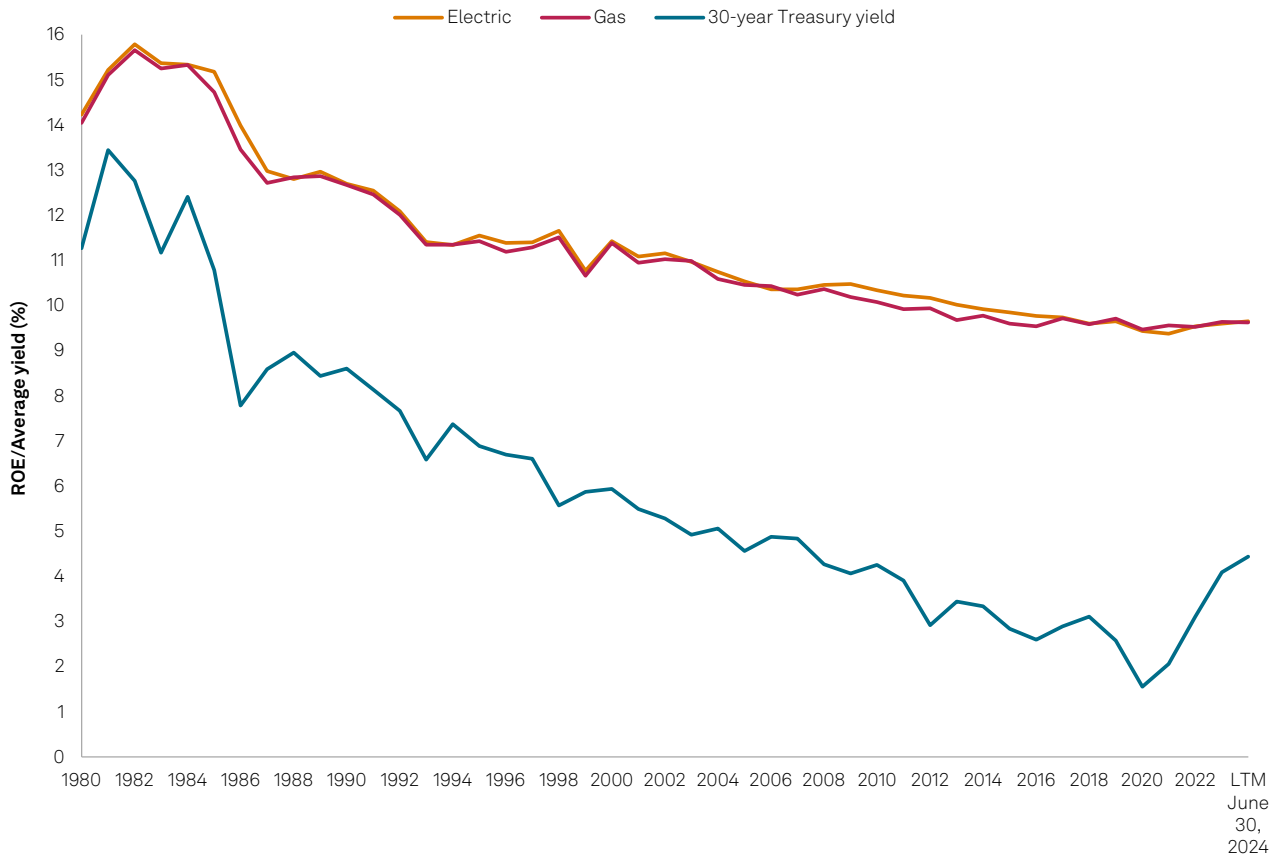
Conversely, in periods where there is only a modest amount of capital spending, i.e., depreciation is outpacing new spending, low inflation and falling interest rates, the use of a historical test year and the associated regulatory lag would work in the utility's favor, as rates would likely reflect higher costs than the utility incurs.

Rate of return — The capital structure, debt cost rates and authorized equity return combine to determine the company's weighted average cost of capital, which is known as the return on rate base in the context of a rate case.

Return on equity (ROE) — The authorized ROE is perhaps the single-most litigated issue in any rate case. Commissions generally rely on financial formulas, such as the discounted cash flow, capital asset pricing model and risk premium approaches, as applied to a proxy group of companies with similar risk characteristics.

Average authorized ROE for US utilities, 30-year Treasury bond yields

Calendar years 1980 - 2023. LTM June 30, 2024



Data compiled July 24, 2024
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
LTE = Last 12 months.
© 2024 S&P Global.

While these financial models appear objective, there are subjective judgments that go into many aspects of the analysis: the appropriate peer group, the level of risk in the subject company's operations and how it may differ from that of the proxy group and whether there are any other factors that warrant an adjustment to the base calculations.

In establishing rankings, RRA looks at the ROEs historically authorized utilities in a given state and compares them to nationwide industry averages, as calculated in RRA's Major Rate Case Decisions Quarterly Update reports. When referring to these "averages," RRA means the simple average of the ROEs approved in cases decided in a particular period; returns carried over from prior years are not included in the averages.

How the authorized ROEs in a given state compare to prevailing nationwide industry averages is only one aspect of RRA's analysis. Any given utility may be authorized a relatively high ROE, but factors such as the age or "staleness" of the test period, rate base valuation method, adjustments to the company-proposed rate base and expenses, and the way the commission chooses to calculate test year revenue and other adjustments may render it unlikely that the company will earn the authorized return.

Hence, a given rate case decision may be restrictive from an investor viewpoint, even though the authorized ROE is equal to or above the average.

Capital structure — The equity layer in the authorized capital structure is another aspect of a commission rate case decision that may impact the utility's ability to earn the authorized ROE. Most commissions utilize the company's actual capital structure at a given point in time, but in some instances, the commission may rely on an imputed capital structure that represents a mix of debt and equity that the commission views as more reasonable or economically efficient. These are known as hypothetical capital structures.

The commission may include short-term debt and/or other items not generally considered to be part of the utility's cost of capital for financial reporting purposes, such as job development investment tax credits, customer deposits or accumulated deferred taxes (as an alternative to reflecting accumulated deferred tax balances as an offset to rate base). These are generally considered "ratepayer supplied capital" and are accorded a blended cost based on the company's financial weighted average cost of capital or may be assigned a cost rate of zero. Such capital structures are known as regulatory capital structures.

If a commission uses a capital structure that is more highly leveraged than the company's actual structure, this will lower the authorized overall return and the revenue requirement ultimately approved and render it more difficult for the company to earn the authorized return on its actual equity, all else being equal.

Senior capital cost rates — The costs of long- and short-term debt are generally set at the weighted average interest rate on the outstanding issuances. While it is rare, a commission may choose to exclude a recent debt refinancing that alters the company's debt cost rate or may determine that the company was slow to take advantage of opportunities to refinance debt at a lower cost rate. If this occurs, and the senior capital cost rates used to set rates are lower than those that the company will experience while rates are in effect, then the utility will have a more difficult time earning its authorized ROE.

The cost of preferred stock, where there is any, is set based on the guaranteed dividend rate on the outstanding shares.

Accounting — RRA looks at whether a state commission has permitted unique or innovative accounting practices designed to bolster earnings. Such treatment may be approved in response to extraordinary events, such as severe weather events or the COVID-19 pandemic, and changes in federal tax laws, or for volatile expenses, such as fuel and pension costs. Generally, such treatment involves deferral of expenditures that exceed the level of such costs reflected in base rates. In some instances, the commission may approve an accounting adjustment, such as a change in depreciation rates, to temporarily bolster certain financial metrics or to eliminate over-earnings without requiring a full-blown rate case.

Actions taken to address emerging issues and their impact on the utilities are also key. For example, in the wake of the energy transition movement, an increasing number of fossil generation facilities and legacy meters are being retired early. Other types of utility assets are also at risk of becoming "stranded" costs as the transition progresses. In some states, companies have been permitted to accelerate depreciation of certain facilities to complete recovery of the investment prior to an accelerated shutdown of the asset. In others, the utilities are permitted to defer the remaining book value at closure as a regulatory asset that is to be recovered over a period of years; the unamortized balance may or may not be accorded a return.

Alternative regulation — RRA generally views as constructive the adoption of alternative regulation plans that are designed to streamline the regulatory process and accelerate cost recovery or allow utilities to augment earnings in some way. These plans can be broadly or narrowly focused.

Narrowly focused plans may allow the company to retain a portion of cost savings relative to a base level of some expense type (e.g., fuel, purchased power, pension cost, etc.), permit a company to retain a portion of off-system sales revenues for shareholders or provide a company an enhanced ROE for achieving operational performance and/or customer service metrics or for investing in certain types of projects (e.g., demand-side management programs, renewable resources, new traditional plant investment, etc.).

Broad-based plans include ROE-based sharing mechanisms, formula-based rates and MRPs that apply to all cost-of-service issues rather than specific investments or expenses. These types of plans may also include performance-based incentives.

The use of plans with somewhat broader scopes, such as ROE-based earnings-sharing plans, is, for the most part, considered to be constructive, but it depends upon the level of the ROE benchmarks specified in the plan — if any deadband that applies is symmetrical around the ROE target, and whether variations from the benchmark or outside the deadband are shared symmetrically.

Formula-based ratemaking plans generally refer to frameworks where the commission establishes a revenue requirement, including a target ROE, capital structure and rate of return for an initial rate base as part of a traditional cost-of-service base rate proceeding. Once the initial parameters are set, rates may adjust periodically to reflect changes in expenses, revenue and capital investment. These changes generally occur on an annual basis, and there may be limitations on the percentage change that can be implemented in a given year or a period of years.

Others use multiyear rate plans, under which the commission approves a succession of rate changes that are designed to consider anticipated changes in revenues, expenses and rate base. The commission may approve a static authorized ROE, or the plan may provide for adjustments to the ROE during the plan's term. These plans often include true-up mechanisms to ensure that the company makes the investments it committed to at the time the plan was approved. The plans often include earnings-sharing mechanisms and may also include PBR provisions or stay-out provisions, preventing a company from filing a successive rate case until a future point in time.

Court actions — This aspect of state regulation is particularly difficult to evaluate. Common sense would dictate that a court action that overturns restrictive commission rulings is a positive. However, the tendency for commission rulings to come before the courts and for extensive and sometimes protracted litigation as appeals go through several layers of court review may add an untenable degree of uncertainty to the regulatory process. Also, as is the case with commissioners, RRA looks at whether judges are appointed or elected, as political considerations are more likely to influence elected jurists.

Legislation — While RRA's commission profiles provide statistics regarding the makeup of each state legislature, RRA has not found a specific correlation between the quality of energy legislation enacted and the political party controlling the legislature.

If the governor and legislature are of the same political party, it is less likely that controversy will arise around key policy initiatives, which may directly or indirectly impact the energy regulatory framework. In instances where energy issues are a main focus, a lack of consensus between the legislative and executive branches of the state government can create uncertainty and increase risk for utility investors and other industry stakeholders.

Key considerations with respect to legislation include how prescriptive newly enacted laws are; whether the bill is clear or ambiguous and open to varied interpretations; whether it balances ratepayer and shareholder interests rather than only "protecting" the consumer; whether the legislation takes a long-term view or is a "knee-jerk" reaction to a specific set of circumstances; and whether it could constrict the utilities' opportunities to achieve their business objectives.

Legislative activity impacting utility regulatory issues has been robust in recent years as state policymakers, utilities and industry stakeholders seek to address 'disruptors' that challenge the traditional regulatory framework.

RRA follows these developments closely to assess whether the states take a balanced, sustainable approach and how the adopted policies will affect legacy utility providers.

Corporate governance — The term corporate governance generally refers to a commission's ability to intervene in a utility's financial decision-making process through required preapproval of all securities issuances, limitations on leverage in utility capital structures, dividend payout limitations, ring-fencing protocols and authority over mergers. Corporate governance may also include oversight of affiliate transactions.

RRA views a modest level of corporate governance provisions to be the norm, and in some circumstances, these provisions, such as ring fencing, have protected utility investors as well as ratepayers. However, a degree of oversight that would allow the commission to "micromanage" the utility's operations, limit the company's financial flexibility or significantly reduce the company's ability to pursue strategic mergers would be viewed as restrictive.

In recent years, RRA has observed an increasing emphasis on environmental, social and governance issues, and supplier and workforce diversity and social justice issues. In many instances, these policies are part of the ongoing energy transition. At this time, RRA takes no view on whether policymakers/regulators should adopt these practices, but when specific policies or targets are implemented, RRA evaluates how compliance costs are addressed.

M&A activity — The pace of merger activity fluctuates over time and consequently, so does the importance of a commission's merger policies.

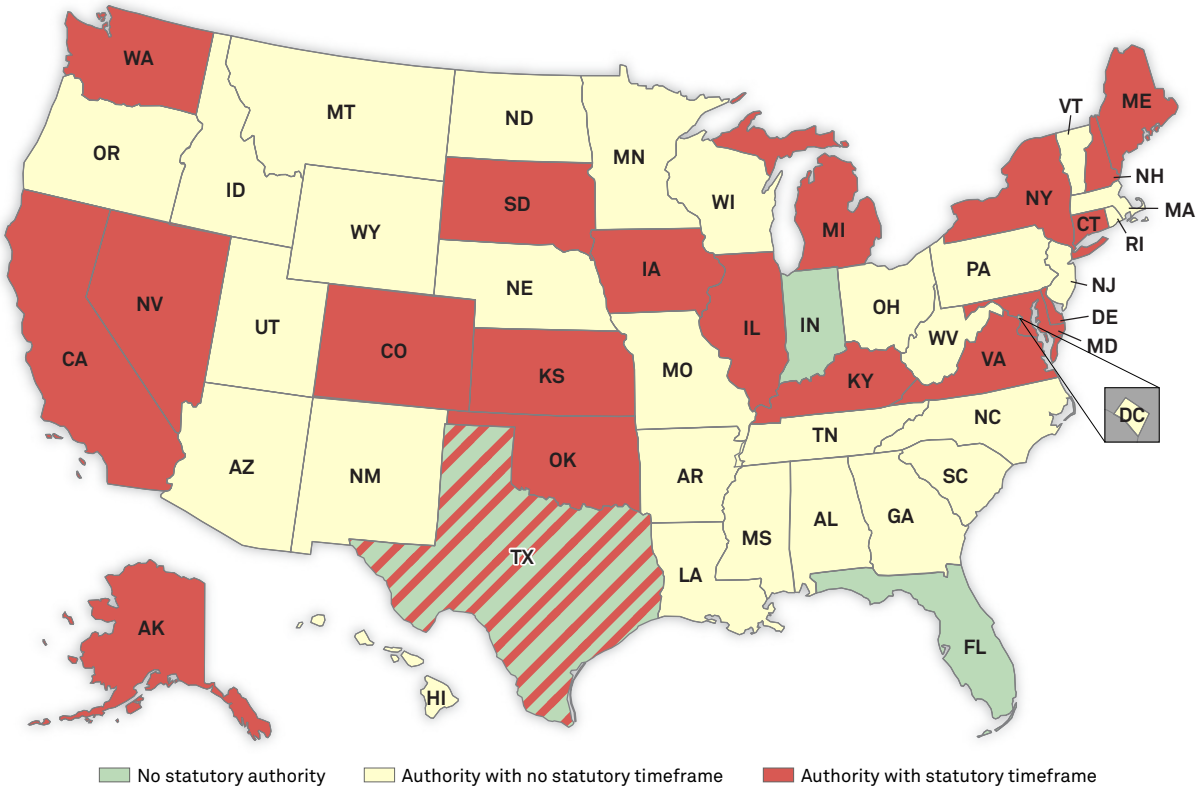
Deals involving regulated utilities are subject to review by all but three of the 53 state-level jurisdictions followed RRA follows.

The review process and standards vary widely for the 50 jurisdictions where commission preapproval is required. In 20 of the jurisdictions, the commission must complete a merger review within a prescribed period, but the remaining jurisdictions have no timeline for their merger reviews, which means a commission could effectively "pocket veto" a transaction by delaying a decision until either the merger agreement between the applicants expires or pursuing the transaction is no longer feasible.

The definition of what constitutes a transaction that is subject to review can vary widely and may include sales of individual assets or a marginal minority interest, as well as larger transactions where a controlling interest or the whole company is changing hands. State law often lacks specificity with respect to what constitutes a transaction that is subject to regulatory review.

In cases where the state commission has authority over mergers, RRA reviews the type of approval standard that is contained in state law and/or has been applied in specific situations.

Utility mergers — statutory authority



As of July 31, 2024.
In Texas, mergers involving electric utilities are subject to commission review; mergers involving local gas distribution companies are not.
Map credit: Arleigh Andes.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

For discussion purposes, RRA groups the statutory standards into three general buckets: public interest, which is generally thought to be the least restrictive; no net ratepayer harm, which is somewhat more restrictive; and net ratepayer benefit, which is the most restrictive.

In many instances, regulators have broad discretion to interpret what the statutes mean by these terms. So, the standard of review is often more readily apparent by looking at how prior transactions were addressed than by reading the statutory language — one commission's public interest might be another's net ratepayer benefit.

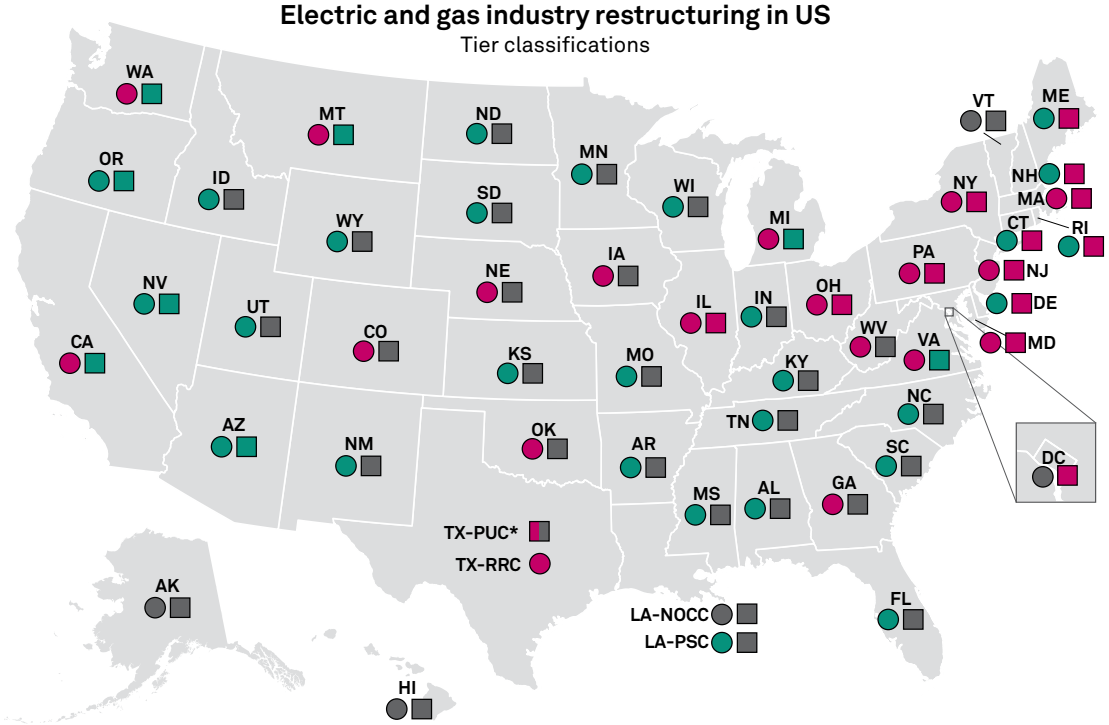
In addition, RRA considers whether the parties reached a settlement and, if so, whether the commission honored that settlement or required additional commitments. RRA also examines how politicized the process was: Did the governor (or the mayor in the District of Columbia and the City of New Orleans) play a role? Did the transaction garner much local media attention in the affected jurisdiction?

More narrowly, RRA reviews the conditions placed on the commission's approval of these transactions, including whether the company will be permitted to retain a portion of any merger-related cost savings, if guaranteed rate reductions or credits are required that are or are not directly related to merger savings, whether certain assets were required to be divested, the type of local control and workforce commitments required, whether there are requirements for certain types of investment to further the state's public policy goals that may or may not be consistent with the companies' business models and if the related costs will be recoverable from ratepayers and whether the commission placed stringent limitations on capital structure and/or dividend policy or composition of the board of directors.

Electric regulatory reform/industry restructuring — Electric industry restructuring refers to the implementation of a framework under which some or all retail customers can obtain their generation service from a competitive supplier of their choice. In a movement that began in the mid-1990s, about 20 jurisdictions implemented retail competition for all or a portion of the customers in the utilities' service territories. The last of the transition periods ended as recently as 2011, when restructuring-related rate freezes concluded for certain Pennsylvania utilities.

Electric and gas industry restructuring in US

Tier classifications



Gas tiers

Tier 1 — All customers are permitted to competitively procure their gas supply, irrespective of volumes.

Tier 2 — Select customers are permitted to competitively procure their gas supply, usually based on volume.

Tier 3 — All customers procure their gas supply from the utility under bundled rates.

Power tiers

Tier 1 — Power prices are competitively determined for all retail customers within the jurisdiction; both standard-offer-service and retail-access customers.
Retail access is permitted for all customers.

Tier 2 — Retail access is permitted to at least some customers/customer classes. Competitively priced power is limited to retail access customers. Power prices for standard-offer-service customers remain regulated.
For the most part, utilities remain vertically integrated.

Tier 3 — Power prices are fully regulated for all retail customers. All retail customers must purchase their power from the franchised utility. Utiities are vertically integrated.

As of July 31, 2024.
NOCC = New Orleans City Council; PSC = Public Service Commission; PUC = Public Utility Commission; RRC = Railroad Commission.
* One in the Electric Reliability Council of Texas territory; three outside of it.
Map credit: Joe Felizadio.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

Once the transition periods were completed, RRA focused more on how standard-offer or default service is procured for customers who do not select an alternative provider and how much, if any, market-price risk the utility must absorb. RRA classifies each of the regulatory jurisdictions into one of three tiers based on their relative electric industry restructuring status.

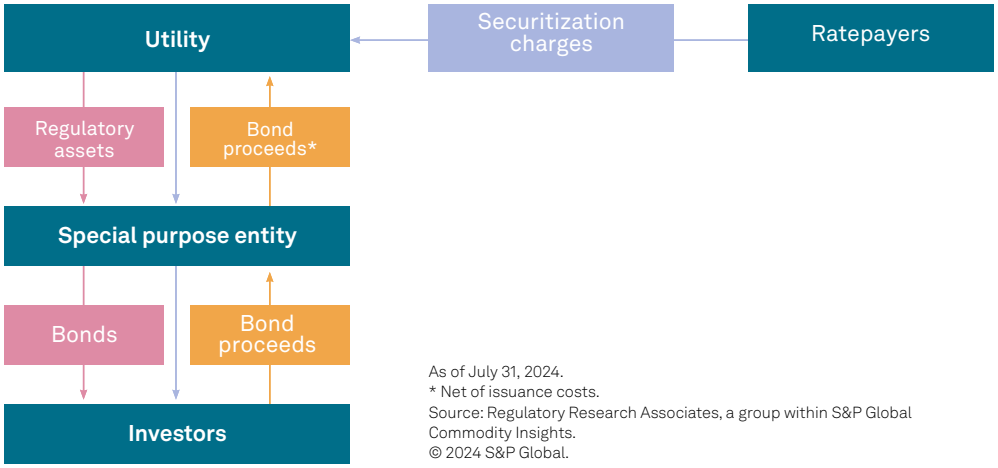
Gas regulatory reform/industry restructuring — Retail competition for gas supply is more widespread than electric retail competition, and the transition was far less contentious, as the magnitude of stranded asset costs was much smaller due to the more disaggregated structure of the industry.

Large-volume customers in most states can select their gas supply provider; the availability of gas customer choice is much more limited for small-volume customers. Like electric retail competition, RRA generally does not view a state's decision to implement retail competition for gas service as either positive or negative from an investor viewpoint. RRA primarily considers how stranded costs are addressed and how default-service, obligation-related costs are recovered.

Securitization — As it pertains to utilities, securitization refers to the issuance of bonds backed by a specific existing revenue stream that regulators and/or state legislators have 'guaranteed.' This does not mean that the securities are backed by the 'full faith and credit' of the jurisdiction but instead provides certainty that the revenue collections and/or underlying assets cannot be deemed imprudent and disallowed in the future.

Securitization generally requires a utility to assign an eligible regulatory asset and a designated revenue stream for that asset to a 'bankruptcy remote' special-purpose entity or trust; in some instances, a state financing authority fulfills this role. The trust or financing authority, in turn, issues bonds that the transferred revenue stream will service. The proceeds from the bond issuance flow to the utility and, in many cases, are used to retire outstanding higher-cost debt and/or buy back common equity, thus lowering the company's weighted average cost of capital.

Securitization flow chart



As of July 31, 2024.
* Net of issuance costs.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 S&P Global.

While it is unclear if securitization requires legislation, a specific legislative mandate generally improves the rating accorded securitization bonds and lowers the associated cost of capital, given that a legislatively supported revenue stream may be more difficult to rescind than a stand-alone order of a state commission. In RRA's experience, no state commission has authorized securitization in the absence of enabling legislation.

Securitization is viewed as an attractive option because it allows regulators to minimize the customer rate impacts related to the recovery of a particular utility asset. The carrying charge on the asset would be the lower interest rate applied to a highly rated, usually AAA, corporate bond rather than the utility's weighted average cost of capital or even the interest rate on typical utility bonds, which are generally rated BBB and carry higher interest rates.

At the same time, securitization reduces the investment risk for the utility by providing the utility with up-front recovery of its investment in what are usually non-revenue-producing assets. The company can then redeploy those investment dollars elsewhere.

Securitization has been used for various purposes to finance energy efficiency and conservation investment, address stranded costs associated with the implementation of retail competition or the extension of energy transition policies, reduce the impact on ratepayers of recovery of extraordinary storm costs or unusually high deferred balances or to finance bankruptcy reorganization plans.

Adjustment clauses — Adjustment clauses have been widely utilized to allow utilities to recover fuel and purchased power costs outside of base rate cases, as these costs are generally subject to a high degree of variability. In some instances, a baseline level is reflected in base rates, with only deviations from that amount addressed in the adjustment clause, whereas in others, the entire annual fuel/purchased power cost amount is reflected in the clause.

Over time, the types of costs recovered through these mechanisms were expanded in some jurisdictions to include items such as pension and healthcare costs, demand-side management program costs, Federal Energy Regulatory Commission-approved regional transmission organization costs, new generation plant investment, and transmission and distribution infrastructure spending.

RRA generally views the use of these types of mechanisms as constructive but also looks at the frequency with which the adjustments occur and whether: there is a true-up mechanism; adjustments are forward-looking or based on a historical period; a cash return on CWIP is permitted for mechanisms involving new investments; the mechanism includes an earnings-sharing mechanism that offers the utility upside earnings potential; or incentive(s) for making certain types of investment or for achieving benchmark performance that provide the opportunity to increase earnings.

Another class of adjustment clauses, known as revenue decoupling mechanisms, allows utilities to adjust rates between rate cases to reflect fluctuations in revenues versus the level approved in the most recent base rate case due to various factors.

Some of these factors, such as weather, are beyond a utility's control, and the mechanism can work both ways — it can allow the company to raise rates to recoup revenue losses associated with weather trends that reduce customer usage, and conversely, it can also require the company to reduce rates when weather trends cause usage to be higher than normal.

As energy efficiency initiatives have expanded, decoupling mechanisms have also been implemented to reduce the disincentive for utilities to pursue these types of programs by making the utilities whole for reductions in sales volumes and revenues associated with customer participation.

Some of these mechanisms also allow the utility to adjust rates to reflect fluctuations in customer usage that are brought about by broader economic issues, such as demographic shifts, large commercial/industrial customers migrating to other service areas, businesses shutting down due to changes in their respective industries, recessions and, theoretically, broad-based crises like the COVID-19 pandemic.

RRA considers a decoupling mechanism that adjusts for all three of these factors to be a "full" decoupling mechanism and designates those that address only one or two of these factors as "partial" decoupling mechanisms.

Generally, an adjustment mechanism would be viewed as less constructive if there are provisions that limit the utility's ability to fully implement revenue requirement changes under certain circumstances, e.g., if the utility is earning more than its authorized return or if the adjustment exceeds a certain threshold.

Integrated resource planning — RRA generally considers the existence of a resource-planning process to be constructive from an investor viewpoint, as it may provide the utility at least some measure of protection from hindsight prudence reviews of its resource acquisition decisions. In some cases, the process may also provide for preapproval of the ratemaking parameters and/or a specific cost for a new facility. RRA views these types of provisions as constructive, as the utility can make more informed decisions as to whether it will proceed with a proposed project based on the expected level of support a utility proposal receives from regulators.

Renewable energy/emissions requirements — Goals for renewable energy deployment and emissions reductions have become increasingly intertwined in recent years and often need to be viewed in tandem.

As with retail competition, RRA does not take a stand as to whether the implementation of renewable portfolio standards or an emissions reduction mandate is positive or negative from an investor viewpoint. However, RRA considers whether there is a defined preapproval and/or cost-recovery mechanism for investments in projects designed to comply with these standards.

RRA also reviews if there is a mechanism, such as a rate increase cap, that limits the impact of the related public policy goals on customers. Such a mechanism could impede the utility's ability to recover program-related costs, pursue additional investments and/or recover increased costs related to other facets of its business. RRA also looks at whether incentives, such as an enhanced ROE, are available for these types of projects.

The proliferation of renewables, particularly those that are customer-sited or distributed resources, and the related rise of battery storage and electric vehicles have raised questions regarding the traditional centralized industry framework and whether that framework needs to change, ushering in a second phase of electric industry restructuring. How these changes are implemented is something RRA considers in its rankings.

With respect to emissions, the threat of a federal carbon emissions standard for utilities and the spread of state-level initiatives have caused many companies to rethink legacy coal-fired generation, causing plants to be shut down sooner than anticipated. The way the commissions address these potential stranded costs also poses a risk for investors and is factored into the rankings.

The zero-carbon movement has also caused utilities/states to reexamine investments in nuclear facilities and, in some cases, to develop programs designed to support the continued operation of those facilities, even though they may not be economic from a competitive-market standpoint. RRA also considers the way these issues are addressed.

Rate structure — RRA looks for existing rate structures related to economic development or load retention. If such structures are in place, RRA examines whether and how any associated revenue shortfall is addressed. More broadly, RRA looks at any steps taken in rate cases to reduce/eliminate interclass rate subsidies, i.e., to equalize rates of return across customer classes.

In addition, RRA considers whether the commission has adopted or moved toward a straight-fixed-variable rate design, under which a greater portion of a company's fixed costs are recovered through the fixed monthly customer charge, thus providing the utility greater certainty of recovering its fixed costs.

This is increasingly important in an environment where weather patterns are more volatile, energy efficiency/conservation programs proliferate and large amounts of nonrevenue-producing capital spending are required to upgrade and harden the grid.

In conjunction with the influx of renewables and distributed generation, issues surrounding the level of compensation owed to customer-owners for excess power they put back into the grid have become increasingly important and, in some instances, controversial. The way these pricing arrangements, known as net metering, are structured can impact the ability of the utilities to recover their fixed distribution system costs and, by extension, their ability to earn their authorized returns.

RRA also looks at whether the state has implemented policies to address electric vehicle charging and time-of-use rates, as well as tariffs for renewable natural gas.

Fixed vs. variable costs

Fixed	Variable
Depreciation	Gas commodity
Delivery O&M	Electric commodity
Property taxes	Generation O&M
Return on investment	
Customer service	

Data compiled as of July 31, 2024
O&M=operations and maintenance.
Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.
© 2024 by S&P Global.

Further Reading

Jurisdictions with ranking changes

New investment rider among key aspects of case ruling for Arizona Public Service

Evergy-backed cost recovery bill approved by Kan. state House

ONE Gas Kan. utility backs condensed performance-based approach to ratemaking

NorthWestern files Mont. rate cases to address $1B of capital expenditures

Parties recommend significant disallowances in Chesapeake's Md. rate case

Md. regulators reject Exelon multiyear plan, opt for one-time rate increase

Md. governor to consider handful of energy bills as legislative session ends

Mich. commission staff supports smaller electric rate increase for DTE Energy

Mich. regulators adopt settlement, pare back rate increase for Consumers Energy

Mich. regulators halve electric rate request by Indiana Michigan Power

Recent developments signal shifts in energy regulatory climate in 2 states

Jurisdictions to watch

Ariz. regulators focus on renewables, test years, other varied issues

Decision on tap in Avangrid's Conn. gas rate cases

Iberdrola deal to buy rest of Avangrid to face some regulatory scrutiny

United Illuminating files brief urging court to reverse negative rate decision

Conn. lawmakers look to update state climate goals, study gas phaseout options

Commonwealth Edison seeks to address regulatory uncertainty with new grid plan

With new grid plan filing, Ameren seeks to assuage commission's prior concerns

Commission to resolve post-hearing issues in Alliant's Iowa base rate case

Alliant's Iowa settlement includes 5-year electric rate increase moratorium

Black Hills Iowa Gas requests $20.7M rate hike for capex, higher operating costs

Rider risk profile a prominent focus in Columbia Gas' Ky. rate change request

Elizabethtown Gas files 1st rate case since acquisition by infrastructure fund

Okla. commission staff concerned with AEP utility's rider, tree trimming plans

Okla. commission staff criticizes vegetation management practices at OGE utility

Parties reach unopposed settlement in AEP Texas rate case

Settlement talks begin in CenterPoint's Texas rate case amid storm controversy

Texas governor appoints consumer advocate to PUC

Wyo. consumer advocate seeks additional conditions in Enbridge-Dominion deal

Low-carbon standard, rates, reliability top list for Wyo. lawmakers

Industry trends

Energy authorized returns edge higher in H1 2024

First-half 2024 utility rate requests above average but trail 2023's record

Flurry of energy rate case activity underway in US

Utility capex primed for profusion in 2024 and beyond

RRA reference reports

Demystifying rate base mechanics can be instructive for industry practitioners

Understanding main aspects of case process empowers utility sector participants

For detailed information about each jurisdiction's policies and regulatory ranking, visit the Commissions page on S&P Capital IQ Pro.

For a full listing of past and pending rate cases, rate case statistics and upcoming events, visit the Energy Research Home Page on S&P Capital IQ Pro.

For a complete, searchable listing of RRA's in-depth research and analysis, please go to the Energy Research Library S&P Capital IQ Pro.

About the Author(s)

Author: Lillian Federico, Research Director, Energy

Contributors: Brian Collins, Jim Davis, Russell Ernst, Lisa Fontanella, Monica Hlinka, Jason Lehmann, Dan Lowrey

About Regulatory Research Associates

Regulatory Research Associates, a group within S&P Global Commodity Insights, is the leading authority on utility securities and regulation. Understanding the financial and strategic impact of federal and state regulation is a key to success in the energy business. For more than 40 years, Regulatory Research Associates has been the leading provider of independent research, expert analysis, proprietary data and consultation on utility securities and regulation. S&P Global Commodity Insights produces content for distribution on S&P Capital IQ Pro.

CONTACTS

The Americas
+1 877 863 1306
market.intelligence@spglobal.com

Europe, Middle East & Africa
+44 20 7176 1234
market.intelligence@spglobal.com

Asia-Pacific
+852 2533 3565
market.intelligence@spglobal.com
www.spglobal.com/marketintelligence

Copyright © 2024 by S&P Global Market Intelligence. S&P Global Commodity Insights produces content for distribution by S&P Global Market Intelligence. S&P Global Market Intelligence and S&P Global Commodity Insights are owned by S&P Global Inc.

These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable. No content (including index data, ratings, credit-related analyses and data, research, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Global Market Intelligence or its affiliates (collectively S&P Global). The Content shall not be used for any unlawful or unauthorized purposes. S&P Global and any third-party providers (collectively S&P Global Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Global Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON "AS IS" BASIS. S&P GLOBAL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Global Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global Market Intelligence's opinions, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Global Market Intelligence may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Global Market Intelligence assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Global keeps certain activities of its divisions separate from each other to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global's public ratings and analyses are made available on its websites, www.standardandpoors.com (free of charge) and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P Global publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

UBS

Global Research and Evidence Lab
10 May 2023

US Utilities

Pricing Power Analysis and Regulatory Rankings

Equities

Americas

Utilities

Ross Fowler, CFA
Analyst
ross.fowler@ubs.com
+1-212-713-1287

Gregg Orrill
Analyst
gregg.orrill@ubs.com
+1-212-713 1064

William Appicelli, CFA
Analyst
william.appicelli@ubs.com
+1-212-713 1414

Updated Regulatory Rankings

We have updated the regulatory rankings of the 58 jurisdictions in North America across five Tiers (Tier 1 is most constructive, Tier 5 is least constructive). See Figure 3. We rate the jurisdictions using seven criteria. We believe constructive regulation provides a positive feedback loop of consistent and fair outcomes for investors, that also results in better customer service and satisfaction, which is what regulators want to see to constructively regulate. Jurisdictions that moved up are AL, ID, and PA (to Tier 1 from Tier 2), CA, MO, and ND (to Tier 2 from Tier 3), and NY (to Tier 4 from Tier 5). We would also note that while LA remained in Tier 3 it moved up significantly from the bottom to the top of that Tier. Jurisdictions that moved down are IN and MI (to Tier 2 from Tier 1), AK (to Tier 4 from Tier 3), and DC, MS, and NM (to Tier 5 from Tier 4).

Lower Relative Pricing Power a Risk to Regulation and Growth

Our pricing power analysis tends to point to where regulatory strain or growth pressures may develop. We saw this last year when our metric showed lower relative pricing power for EXC, PEG, NI, EMA, D, PCG, WEC, and NEE. Most either lowered or rebased their growth - EXC, PEG, and NI; or, faced material regulatory headwinds - EMA and the rate cap legislation in NS, and D with the overall strategic review and legislation in VA reworking the regulatory construct. For WEC, although the rate case outcome was constructive in WI, the rhetoric during the hearing was not encouraging. Where pricing power did not pressure regulation or earnings growth was for NEE and PCG. We rank FL as the most constructive regulatory jurisdiction in North America and NEE's rates at FPL are set through 2025. We also believe CA regulation is increasingly constructive around wildfire and clean energy policy goals, as evidenced by the move to Tier 2 in this year's jurisdiction rankings. Companies that show lower relative pricing power in our updated analysis that did not in May 2022 are AES, CMS, CNP, DTE, ED, ES, and EVRG. Of these names we are Buy rated on AES mainly for the unregulated story, and CNP, where we think significant customer growth in TX can help alleviate pricing pressures. We are Neutral on the remaining names with lower pricing power in '23 vs. '22 and remain diligent in watching regulatory processes in MI for CMS and DTE, in CT for ES, and in KS for EVRG as well as policy in NY for ED. Names that showed continued lower relative pricing power in '23 vs. '22 are D, EXC, NI, PEG, and WEC where D, EXC, NI, and PEG have either gone into or completed a strategic review and/or lowered/rebased their growth rates. WEC remains in a Tier 1 regulatory jurisdiction in WI, but the LNT rate case in that state, as well as WEC's gas case in IL are worth watching.

Updated Pricing Power Analysis - Affordability Inflation vs. Growth

Our analysis places the group across one of four quadrants, although a little more than half of companies are clustered around the combined medians (see Figure 1). We have overlayed the weighted average regulatory ranking quartile of each company on this matrix indicated by color as noted. Those companies outside the median zone in one of the four quadrants are: (I) Pricing power with lower costs or higher weighted average disposable income growth: PCG, PPL, and SO; (II) Lower pricing power, requiring constructive regulation to maintain growth: AES, CMS, CNP, EXC, ES and NI; (III) Lower pricing power that would require constructive regulation or policy support to accelerate growth: D, DTE, ED, EVRG, PEG, and WEC; (IV) Pricing power and opportunity to accelerate growth if regulation is constructive: EIX, OGE, and PNW.

This report has been prepared by UBS Securities LLC. **ANALYST CERTIFICATION AND REQUIRED DISCLOSURES, INCLUDING INFORMATION ON THE QUANTITATIVE RESEARCH REVIEW PUBLISHED BY UBS, BEGIN ON PAGE 8.** UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

ANALYSIS OF PRICING POWER IN REGULATED UTILITIES

Given investor focus on inflation and its potential impacts, and the potential for accelerating capital expenditures and rate base growth into the clean energy transition (Cap-Ex Update: Breakthroughs in Spending, 30 March 2023) we analyzed the "pricing power" of regulated utilities. Instead of just a straight analysis of annual increases in bills, we took the estimated bill increase divided by the weighted average personal income by jurisdiction for each company. We then estimated the total increase in that metric through 2029 and annualized that number. We believe this is a more accurate representation of "pricing power" for a utility as it takes into account the relative affordability of the projected bill increases across the relative incomes of the customer base across a company's jurisdictions.

To calculate bill inflation, we used each company's projected capital plan and extended that at flat capex to 2029 from the end of each company's forecast to determine rate base growth. For fuel expenses, we used forward curves and retired all coal generation by 2028 and replaced it with a third each of solar, wind, and natural gas. We incorporated non-fuel O&M increases of 2%/year, held interest expense at 5.5%, used 30-year depreciation, and an allowed return of 10.2% and a 48% equity ratio. While individual companies may achieve better or worse metrics, we tried to create an average metric across companies over the eight-year time frame. Retail sales growth averaged approximately 1% per year.

To calculate disposable income, we took each state or province's disposable income in 2021 and grew it by forecast gross state or provincial product through 2025 and then held annual gross state or provincial product growth constant through 2029. For each company we weighted this by earnings power by jurisdiction to estimate the weighted average disposable income.

Dividing annual bills by weighted average disposable income projected into 2029 and seeing how much that grew versus the same metric in 2021, and annualizing that growth provides a measure of bill affordability inflation. When we graph this against annualized projected utility and parent only EPS growth, the results are shown in Figure 1 below. We have also overlayed the weighted average regulatory ranking quartile onto this graph through the color of the dots: 1st quartile is green, 2nd quartile is blue, 3rd quartile is yellow, and 4th quartile is red. This relative regulatory quartile is important, as more constructive regulation will likely allow for more EPS growth with more affordability inflation, all else equal.

In Figure 1, about half of the companies end up around the median level of growth and affordability inflation of ~6.3% and just under 1%, respectively. Those outside of the median grouping end up in one of four quadrants: (I) high growth and low affordability inflation - where there is clear pricing power due to lower cost structures or higher disposable income growth; (II) high growth and higher affordability inflation, where pricing power needs to be maintained by constructive regulation or policy support to maintain growth; (III) lower growth and higher affordability inflation - where there is lower relative pricing power and it would require constructive regulation or, more likely a state or provincial energy policy initiative to accelerate growth above the median, and (IV) low growth and low affordability inflation - where there is an opportunity to accelerate growth if regulation is constructive or where a company might get stuck at lower than median growth if regulation is more challenging.

Our pricing power analysis tends to point to where regulatory strain or growth pressures may develop as we saw last year when our metric showed lower relative pricing power for EXC, PEG, NI, EMA, D, PCG, WEC, and NEE. Most either lowered or rebased their growth - EXC, PEG, and NI or faced material regulatory headwinds - EMA and the rate cap legislation in NS; D with the overall strategic review and legislation in VA reworking the regulatory construct. For WEC although the rate case outcome was constructive in WI the rhetoric during the hearing was not encouraging. Where pricing power did not pressure regulation or earnings growth was for NEE and PCG. We rank FL as the most constructive regulatory jurisdiction in North America and NEE's rates at FPL are set through 2025. We also believe CA regulation is increasingly supportive around wildfire and clean energy policy goals, as evidenced by the move to Tier 2 in this year's jurisdiction rankings. Companies that show lower relative pricing power in our updated

analysis that did not in May 2022 are AES, CMS, CNP, DTE, ED, ES, and EVRG. Of these names we are Buy rated on AES mainly for the unregulated story, and CNP, where we think significant customer growth in TX can help alleviate pricing pressures. We are Neutral on the remaining names with lower pricing power in '23 vs. '22 and remain diligent in watching regulatory processes in MI for CMS and DTE, in CT for ES, and in KS for EVRG as well as policy in NY for ED. Names that showed continued lower relative pricing power in '23 vs. '22 are D, EXC, NI, PEG, and WEC where D, EXC, NI, and PEG have either gone into or completed a strategic review and/or lowered/rebased their growth rates. WEC remains in a Tier 1 regulatory jurisdiction in WI, but the LNT rate case in that state, as well as WEC's gas case in IL are worth watching.

Figure 1: EPS Growth vs. Affordability Inflation May 2023

Source: Company filings, FactSet, S&P Global Market Intelligence, UBS Equity Research estimates

NOTES:

Wtd. Avg. Regulatory Rank in indicated by color. Green is 1st quartile, Blue is 2nd quartile, Yellow is 3rd quartile, and Red is 4th quartile.

Bill inflation is calculated as the increase in annual bills/disposable income, annualized. Disposable income is grown at state forecast GDP, and a weighted average is taken by company.

Figure 2: EPS Growth vs. Affordability Inflation May 2022

Source: Company filings, FactSet, S&P Global Market Intelligence, UBS Equity Research estimates

NOTES:

Wtd. Avg. Regulatory Rank in indicated by color. Green is 1st quartile, Blue is 2nd quartile, Yellow is 3rd quartile, and Red is 4th quartile.

Bill inflation is calculated as the increase in annual bills/disposable income, annualized. Disposable income is grown at state forecast GDP, and a weighted average is taken by company.

UPDATED REGULATORY RANKINGS

We are updating our jurisdictional regulatory rankings which we do approximately every 6 months. Our last update was in November 2022 Shifting Reguatory and Growth Quartiles.

We rate the jurisdictions using seven criteria. We believe that constructive regulation provides a positive feedback loop of consistent and fair outcomes for investors, that also results in better customer service and satisfaction, which is what regulators want to see to constructively regulate. At the bottom of Figure 3 we show the average JD Power Customer Service scores, which are mostly consistent with our tiered rankings. Those jurisdictions highlighted in green moved up, and those highlighted in red moved down versus our previous rankings. As a reminder the table reads as an ranking histogram so Florida in Tier 1 is more constructive than British Columbia in Tier 1, and so on.

Figure 3: UBS North America Jurisdictional Regulatory Rankings

UBS REGULATORY JURISDICTION RANKINGS - May 2023 Update

TIER 1	TIER 2	TIER 3	TIER 4	TIER 5
		New Jersey		
		Louisiana		
		Massachusetts		
		Oregon		
		South Carolina		
		Tennessee		
	Arkansas	Washington		
Florida	Indiana	Newfoundland & Labrador	Rhode Island	Alberta
British Columbia	Kentucky	Ontario	Nova Scotia	District of Columbia
North Carolina	Michigan	Virginia	West Virginia	Mississippi
Utah	California	Wyoming	Alaska	New Mexico
Wisconsin	FERC	Ohio	Kansas	Connecticut
Iowa	Missouri	Oklahoma	Minnesota	Maine
Alabama	North Dakota	Texas	Nevada	Montana
Georgia	Colorado	Maryland	New Hampshire	South Dakota
Idaho	Delaware	Prince Edward Island	Nebraska	Vermont
Pennsylvania	Illinois	Hawaii	New York	Arizona
JD Power Average Customer Service Scores				
751	718	727	717	719

Source: S&P Capital IQ Pro, FactSet, JD Power, UBS Equity Research

NOTES: Green indicates moved up a Tier since last rankings, Red indicates moved down a Tier. LA is highlighted given it moved significantly within Tier 3 since the last rankings

The ranking criteria are as follows:

1) Elected vs. Appointed Commissions: Elected commissioners tend to focus more closely on managing customer affordability which can dampen investment vs. appointed commissions that tend to be more policy driven, all else equal.

2) Tendency to Settle vs. Litigate Rate Cases: Settlements have the advantage of being quicker, less risky and less prone to legal appeal than fully litigated rate proceedings. States that regularly settle are preferred by investors.

3) Regulatory Lag: Regulatory lag is the difference between authorized returns on equity and earned returns resulting from time lag between dollars invested in rate base and authorized revenues reflecting that spending. We rank regulatory lag based on the time it takes to reach a decision in rate cases.

4) Rate and Customer Bill Levels: Utilities' prices are often a material factor in state economic development. States with high prices versus their surroundings tend to scrutinize utility investment more closely than states with low bills. We look at the average rate and the average residential bill.

5) Allowed Return Spread: We measure the return spread over 10-year Treasury note of the ordered rate cases since 2010 by jurisdiction. As rate of return setting policies and practices are grounded in decades of case law, jurisdictions that allow high and low return spreads tend to continue with that practice.

6) Regulatory Mechanisms: We include an average of eight mechanisms. These include things like tracking mechanisms, forward test years, formula rate plans, and performance based regulation.

7) UBS Subjective Investor Friendliness Factor: Based on our knowledge of current commission actions.

Biggest Changes to the State Rankings

With this review we highlight the largest positive and negative ranking votes out of 58 total jurisdictions we are covering in the United States and Canada:

Positive Changes

- Alabama. Constructive tracking mechanisms, high ROE spreads, and lower relative rates moved the state into Tier 1 relative to other jurisdictions.
- Idaho. Continued low rates moved the jurisdiction into Tier 1 relative to other jurisdictions.
- Pennsylvania. Relative improvement given other states fell to Tier 2.
- California. Regulatory lag improved from 5th quintile to 4th which moved the state from the top of Tier 3 in our May 2022 analysis into Tier 2.
- Missouri. Regulatory lag improved from 3rd quintile to 2nd, moving the state to Tier 2 from near the top of Tier 3 in our prior analysis.
- North Dakota. Settlements became more common, and historical ROE spread improved to 2nd quintile from 3rd quintile, offset slightly by regulatory lag increasing, moving to the 4th quintile from the 3rd.
- Louisiana. Did not move out of Tier 3, however did have a significant move worth highlighting from the bottom to the top of that Tier. ROE spread to the 10 year improved and it moved to 2nd quintile from 4th in that category.
- New York. Settle vs. Litigate improved to 1st quintile from the 2nd.

Negative Changes

- Indiana. Cost to customers got a bit worse with a move to the 3rd quintile from the 2nd which was enough to move the state to Tier 2 from the bottom of Tier 1 in May 2022.
- Michigan. ROE spread to the 10 year came in to 3rd quintile from 2nd, and we moved our subjectiveness ranking to 2nd quintile vs. 1st quintile.
- Alaska. Moved lower as other states moved higher so lost relative positioning into Tier 3
- District of Columbia. Lower rate of settlements, 5th quintile ROE spreads, and 4th quintile regulatory lag pushed this jurisdiction to the top of Tier 5 relative to other jurisdictions from the bottom of Tier 4 in May 2022.
- Mississippi. Elected commission with higher relative costs to customers average regulatory lag, and 5th quintile ROE spreads versus risk free rates, pushed this state into Tier 5 relative to other jurisdictions.
- New Mexico. Was at the bottom of Tier 4 in our May 2022 analysis and was a relative mover to Tier 5 as New York improved into Tier 4.

Valuation Method and Risk Statement

North America Utilities: Our valuation methodology for the group is price to earnings based. The adjustments applied fall into 7 categories. These are as follows: 1) Group Valuation Bias: Flowing from our valuation work comparing Baa corporate yields to group dividend yields and RU price to earnings ratios to those for the S&P 500, we incorporate a positive or negative adjustment to our group multiple representing the gap we calculate to the nearest 5%; 2) Growth Adjustment: We adjust our valuations based on the growth quartile each utility occupies. First quartile receives a 4% premium, second quartile a 2% premium, third quartile a 2% discount and fourth quartile a 4% discount; 3) Regulatory Adjustment: Our valuation adjustments for regulation are based on our proprietary Regulatory Rankings. First quartile jurisdictions receive 10%, second quartile 5%, third quartile -5% and fourth quartile -10%; 4) Clean Energy Transition: A potential 5% premium for a risk adjusted clean energy transition growth opportunity; 5) Earnings Consistency Adjustment: For companies that fall in the top quartile of % Time Beat/Meet, we include +4%; 6) Multi Utility Diversified Valuation: For multi utilities (those with more than 15% of unregulated earnings), we perform a sum-of-the-parts analysis applying business/region appropriate valuations to those diversified businesses; 7) One-off Adjustments: In special situations, we value risk on an issue-specific basis. Common areas where we apply such an adjustment include: large project construction risk, legal risk, and announced M&A completion risk. We identify the following risk factors: rising interest rates; regulatory and policy risks; operational risks; construction risks; cybersecurity risk to the transmission grid and/or customer data, and extreme weather events.

IPPs: Our valuation methodology is based on mid-cycle EV/EBITDA multiples of 7.1x.

CEG: Our valuation methodology is based on an infrastructure comp on EV/EBITDA.

Water Utilities: Our valuation methodology for the group is price-to-earnings based. Our methodology includes: 1) Growth Adjustment: We adjust our valuations based on the growth quartile each utility occupies. First quartile receives a 4% premium, second quartile a 2% premium, third quartile a 2% discount and fourth quartile a 4% discount; and 2) Regulatory Adjustment: Our valuation adjustments for regulation are based on our proprietary Regulatory Rankings. First quartile jurisdictions receive 10%, second quartile 5%, third quartile -5% and fourth quartile -10%.

North American utilities: We identify the following risk factors for the sector overall: rising interest rates; regulatory and policy risks; operational risks; construction risks; cybersecurity risk to the transmission grid and/or customer data, and extreme weather events.

IPPs: We identify the following risks for the sector: Power prices, fuel prices, capacity prices, supply and demand for electricity, extreme weather, economic conditions, and cost of financing and collateral hedging.

CEG: We identify the following risks for CEG: Power price volatility above the nuclear PTC price, uranium fuel prices, supply and demand for electricity, cost of financing and nuclear operational risk.

Water Utilities: We identify the following risks: rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events.

Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; certain additional disclosures concerning UBS research recommendations; and terms and conditions for certain third party data used in research report, please visit https://www.ubs.com/disclosures. The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results. Additional information will be made available upon request. UBS Securities Co. Limited is licensed to conduct securities investment consultancy businesses by the China Securities Regulatory Commission. UBS acts or may act as principal in the debt securities (or in related derivatives) that may be the subject of this report. This recommendation was finalized on: 10 May 2023 07:22 PM GMT. UBS has designated certain Research department members as Derivatives Research Analysts where those department members publish research principally on the analysis of the price or market for a derivative, and provide information reasonably sufficient upon which to base a decision to enter into a derivatives transaction. Where Derivatives Research Analysts co-author research reports with Equity Research Analysts or Economists, the Derivatives Research Analyst is responsible for the derivatives investment views, forecasts, and/or recommendations. **Quantitative Research Review:** UBS publishes a quantitative assessment of its analysts' responses to certain questions about the likelihood of an occurrence of a number of short term factors in a product known as the 'Quantitative Research Review'. Views contained in this assessment on a particular stock reflect only the views on those short term factors which are a different timeframe to the 12-month timeframe reflected in any equity rating set out in this note. For the latest responses, please see the Quantitative Research Review Addendum at the back of this report, where applicable. For previous responses please make reference to (i) previous UBS research reports; and (ii) where no applicable research report was published that month, the Quantitative Research Review which can be found at https://neo.ubs.com/quantitative, or contact your UBS sales representative for access to the report or the Quantitative Research Team on qa@ubs.com. A consolidated report which contains all responses is also available and again you should contact your UBS sales representative for details and pricing or the Quantitative Research team on the email above.

Analyst Certification:
Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers and were prepared in an independent manner, including with respect to UBS, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	54%	22%
Neutral	FSR is between -6% and 6% of the MRA.	36%	21%
Sell	FSR is > 6% below the MRA.	10%	18%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 March 2023.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

KEY DEFINITIONS: Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. In some cases, this yield may be based on accrued dividends. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

EXCEPTIONS AND SPECIAL CASES: UK and European Investment Fund ratings and definitions are: Buy: Positive on factors such as structure, management, performance record, discount; **Neutral:** Neutral on factors such as structure, management, performance record, discount; **Sell:** Negative on factors such as structure, management, performance record, discount. **Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

Research analysts contributing to this report who are employed by any non-US affiliate of UBS Securities LLC are not registered/ qualified as research analysts with FINRA. Such analysts may not be associated persons of UBS Securities LLC and therefore are not subject to the FINRA restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. The name of each affiliate and analyst employed by that affiliate contributing to this report, if any, follows.

UBS Securities LLC: Gregg Orrill, Ross Fowler, CFA, William Appicelli, CFA.

Company Disclosures

Company Name	Reuters	12-month rating	Price	Price date
AES Corp[16]	AES.N	Buy	US$21.71	08 May 2023
Alliant Energy Corp[16]	LNT.O	Neutral	US$54.76	08 May 2023
Ameren Corp[16]	AEE.N	Neutral	US$89.14	08 May 2023
American Electric Power Inc[16,7,6b]	AEP.O	Buy	US$92.14	08 May 2023
CMS Energy Corp[16]	CMS.N	Neutral	US$61.19	08 May 2023
CenterPoint Energy Inc[16]	CNP.N	Buy	US$30.25	08 May 2023
Consolidated Edison Inc[16]	ED.N	Neutral	US$99.01	08 May 2023
DTE Energy Co[16]	DTE.N	Neutral	US$113.00	08 May 2023
Dominion Energy Inc[16,7,6b]	D.N	Neutral	US$56.50	08 May 2023
Duke Energy Corp[16,7,6b,6c]	DUK.N	Neutral	US$98.90	08 May 2023
Edison International[16]	EIX.N	Buy	US$73.39	08 May 2023
Emera Inc	EMA.TO	Buy	C$58.95	08 May 2023
Entergy Corp[16,7,6b,6c]	ETR.N	Neutral	US$106.91	08 May 2023
Evergy, Inc[16]	EVRG.O	Neutral	US$62.05	08 May 2023
Eversource Energy[16,7,6b]	ES.N	Neutral	US$76.75	08 May 2023
Exelon Corp[16,7,6b,6c]	EXC.O	Buy	US$42.77	08 May 2023
FirstEnergy Corp[16]	FE.N	Buy	US$39.09	08 May 2023
Fortis Inc[16]	FTS.TO	Sell	C$61.27	08 May 2023
NextEra Energy Inc[2,4,5,16,7,6a]	NEE.N	Buy	US$76.06	08 May 2023
NiSource Inc.[16]	NI.N	Neutral	US$28.45	08 May 2023
OGE Energy Corp[16]	OGE.N	Neutral	US$37.55	08 May 2023
PG&E Corp[16,7,6b,6c]	PCG.N	Neutral	US$17.41	08 May 2023
PPL Corp[16]	PPL.N	Buy	US$28.59	08 May 2023
Pinnacle West Capital Corp[16,7,6b]	PNW.N	Sell	US$79.82	08 May 2023
Public Service Enterprise Group[16,7,6b]	PEG.N	Buy	US$63.49	08 May 2023
Sempra[16]	SRE.N	Buy	US$154.93	08 May 2023
Southern Co[13,16]	SO.N	Buy	US$74.57	08 May 2023

Company Name	Reuters	12-month rating	Price	Price date
WEC Energy Group Inc[16]	WEC.N	Neutral	US$95.03	08 May 2023
Xcel Energy Inc[16]	XEL.O	Neutral	US$69.32	08 May 2023

Source: UBS. All prices as of local market close. Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date.

2. UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months.
4. Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity or one of its affiliates.
5. UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company/entity within the next three months.
6a. This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and investment banking services are being, or have been, provided.
6b. This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-investment banking securities-related services are being, or have been, provided.
6c. This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-securities services are being, or have been, provided.
7. Within the past 12 months, UBS Securities LLC and/or its affiliates have received compensation for products and services other than investment banking services from this company/entity.
13. UBS Group AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company`s common equity securities as of last month`s end (or the prior month`s end if this report is dated less than 10 days after the most recent month`s end).
16. UBS Securities LLC makes a market in the securities and/or ADRs of this company.

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report. For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Securities LLC, 1285 Avenue of Americas, New York, NY 10019, USA, Attention: Investment Research.

The Disclaimer relevant to Global Wealth Management clients follows the Global Disclaimer.

Global Disclaimer

This document has been prepared by UBS Securities LLC, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

This document is provided solely to recipients who are expressly authorized by UBS to receive it. If you are not so authorized you must immediately destroy the document.

Global Research is provided to our clients through UBS Neo, and in certain instances, UBS.com and any other system or distribution method specifically identified in one or more communications distributed through UBS Neo or UBS.com (each a system) as an approved means for distributing Global Research. It may also be made available through third party vendors and distributed by UBS and/or third parties via e-mail or alternative electronic means.

All Global Research is available on UBS Neo. Please contact your UBS sales representative if you wish to discuss your access to UBS Neo. Where Global Research refers to "UBS Evidence Lab Inside" or has made use of data provided by UBS Evidence Lab and you would like to access that data please contact your UBS sales representative. UBS Evidence Lab data is available on UBS Neo. The level and types of services provided by Global Research and UBS Evidence Lab to a client may vary depending upon various factors such as a client's individual preferences as to the frequency and manner of receiving communications, a client's risk profile and investment focus and perspective (e.g., market wide, sector specific, long-term, short-term, etc.), the size and scope of the overall client relationship with UBS and legal and regulatory constraints.

When you receive Global Research through a system, your access and/or use of such Global Research is subject to this Global Research Disclaimer and to the UBS Neo Platform Use Agreement (the "Neo Terms") together with any other relevant terms of use governing the applicable System.

When you receive Global Research via a third party vendor, e-mail or other electronic means, you agree that use shall be subject to this Global Research Disclaimer, the Neo Terms and where applicable the UBS Investment Bank terms of business (https://www.ubs.com/global/en/investment-bank/regulatory.html) and to UBS's Terms of Use/Disclaimer (https://www.ubs.com/global/en/legalinfo2/disclaimer.html). In addition, you consent to UBS processing your personal data and using cookies in accordance with our Privacy Statement (https://www.ubs.com/global/en/legalinfo2/privacy.html) and cookie notice (https://www.ubs.com/global/en/legal/privacy/users.html).

If you receive Global Research, whether through a System or by any other means, you agree that you shall not copy, revise, amend, create a derivative work, provide to any third party, or in any way commercially exploit any UBS research provided via Global Research or otherwise, and that you shall not extract data from any research or estimates provided to you via Global Research or otherwise, without the prior written consent of UBS.

In certain circumstances (including for example, if you are an academic or a member of the media) you may receive Global Research otherwise than in the capacity of a client of UBS and you understand and agree that (i) the Global Research is provided to you for information purposes only; (ii) for the purposes of receiving it you are not intended to be and will not be treated as a "client" of UBS for any legal or regulatory purpose; (iii) the Global Research must not be relied on or acted upon for any purpose; and (iv) such content is subject to the relevant disclaimers that follow.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction.

This document is a general communication and is educational in nature; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. By providing this document, none of UBS or its representatives has any responsibility or authority to provide or have provided investment advice in a fiduciary capacity or otherwise. Investments involve risks, and investors should exercise prudence and their own judgment in making their investment decisions. None of UBS or its representatives is suggesting that the recipient or any other person take a specific course of action or any action at all. The recipient should carefully read this document in its entirety and not draw inferences or conclusions from the rating alone. By receiving this document, the recipient acknowledges and agrees with the intended purpose described above and further disclaims any expectation or belief that the information constitutes investment advice to the recipient or otherwise purports to meet the investment objectives of the recipient. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors.

Options, structured derivative products and futures (including OTC derivatives) are not suitable for all investors. Trading in these instruments is considered risky and may be appropriate only for sophisticated investors. Prior to buying or selling an option, and for the complete risks relating to options, you must receive a copy of "The Characteristics and Risks of Standardized Options." You may read the document at https://www.theocc.com/publications/risks/riskchap1.jsp or ask your salesperson for a copy. Various theoretical explanations of the risks associated with these instruments have been published. Supporting documentation for any claims, comparisons, recommendations, statistics or other technical data will be supplied upon request. Past performance is not necessarily indicative of future results. Transaction costs may be significant in option strategies calling for multiple purchases and sales of options, such as spreads and straddles. Because of the importance of tax considerations to many options transactions, the investor considering options should consult with his/her tax advisor as to how taxes affect the outcome of contemplated options transactions.

Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the Information.

Prior to making any investment or financial decisions, any recipient of this document or the information should take steps to understand the risk and return of the investment and seek individualized advice from his or her personal financial, legal, tax and other professional advisors that takes into account all the particular facts and circumstances of his or her investment objectives.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in any materials to which this document relates (the "Information"), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups, personnel or other representative of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party. In no circumstances may this document or any of the Information (including any forecast, value, index or other calculated amount ("Values")) be used for any of the following purposes:

(i) valuation or accounting purposes;

(ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or

(iii) to measure the performance of any financial instrument including, without limitation, for the purpose of tracking the return or performance of any Value or of defining the asset allocation of portfolio or of computing performance fees.

By receiving this document and the Information you will be deemed to represent and warrant to UBS that you will not use this document or any of the Information for any of the above purposes or otherwise rely upon this document or any of the Information.

UBS has policies and procedures, which include, without limitation, independence policies and permanent information barriers, that are intended, and upon which UBS relies, to manage potential conflicts of interest and control the flow of information within divisions of UBS and among its subsidiaries, branches and affiliates. For further information on the ways in which UBS manages conflicts and maintains independence of its research products, historical performance information and certain additional disclosures concerning UBS research recommendations, please visit https://www.ubs.com/disclosures.

Research will initiate, update and cease coverage solely at the discretion of UBS Research Management, which will also have sole discretion on the timing and frequency of any published research product. The analysis contained in this document is based on numerous assumptions. All material information in relation to published research reports, such as valuation methodology, risk statements, underlying assumptions (including sensitivity analysis of those assumptions), ratings history etc. as required by the Market Abuse Regulation, can be found on UBS Neo. Different assumptions could result in materially different results.

The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas

within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS and/or its divisions as a whole, of which investment banking, sales and trading are a part, and UBS's subsidiaries, branches and affiliates as a whole.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms under English law or, if not carried out by UBS in the UK the law of the relevant jurisdiction in which UBS determines it carries out the activity) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

Within the past 12 months UBS AG, its affiliates or subsidiaries may have received or provided investment services and activities or ancillary services as per MiFID II which may have given rise to a payment or promise of a payment in relation to these services from or to this company.

United Kingdom: This material is distributed by UBS AG, London Branch to persons who are eligible counterparties or professional clients. UBS AG, London Branch is authorised by the Prudential Regulation Authority and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. **Europe:** Except as otherwise specified herein, these materials are distributed by UBS Europe SE, a subsidiary of UBS AG, to persons who are eligible counterparties or professional clients (as detailed in the Bundesanstalt fur Finanzdienstleistungsaufsicht (BaFin) Rules and according to MIFID) and are only available to such persons. The information does not apply to, and should not be relied upon by, retail clients. UBS Europe SE is authorised by the European Central Bank (ECB) and regulated by the BaFin and the ECB. **Germany, Luxembourg, the Netherlands, Belgium and Ireland:** Where an analyst of UBS Europe SE has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE. In all cases it is distributed by UBS Europe SE and UBS AG, London Branch. **Turkey:** Distributed by UBS AG, London Branch. No information in this document is provided for the purpose of offering, marketing and sale by any means of any capital market instruments and services in the Republic of Turkey. Therefore, this document may not be considered as an offer made or to be made to residents of the Republic of Turkey. UBS AG, London Branch is not licensed by the Turkish Capital Market Board under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instruments/services may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the Capital Market Board. However, according to article 15 (d) (ii) of the Decree No. 32, there is no restriction on the purchase or sale of the securities abroad by residents of the Republic of Turkey. **Poland:** Distributed by UBS Europe SE (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce regulated by the Polish Financial Supervision Authority. Where an analyst of UBS Europe SE (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce. **Russia:** Prepared and distributed by UBS Bank (OOO). Should not be construed as an individual Investment Recommendation for the purpose of the Russian Law - Federal Law #39-FZ ON THE SECURITIES MARKET Articles 6.1-6.2.**Switzerland:** Distributed by UBS AG to persons who are institutional investors only. UBS AG is regulated by the Swiss Financial Market Supervisory Authority (FINMA). **Italy:** Prepared by UBS Europe SE and distributed by UBS Europe SE and UBS Europe SE, Italy Branch. Where an analyst of UBS Europe SE, Italy Branch has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE, Italy Branch. **France:** Prepared by UBS Europe SE and distributed by UBS Europe SE and UBS Europe SE, France Branch. Where an analyst of UBS Europe SE, France Branch has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE, France Branch. **Spain:** Prepared by UBS Europe SE and distributed by UBS Europe SE and UBS Europe SE, Spain Branch. Where an analyst of UBS Europe SE, Spain Branch has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE, Spain Branch. **Sweden:** Prepared by UBS Europe SE and distributed by UBS Europe SE and UBS Europe SE, Sweden Branch. Where an analyst of UBS Europe SE, Sweden Branch has contributed to this document, the document is also deemed to have been prepared by UBS Europe SE, Sweden Branch.**South Africa:** Distributed by UBS South Africa (Pty) Limited (Registration No. 1995/011140/07), an authorised user of the JSE and an authorised Financial Services Provider (FSP 7328). **Saudi Arabia:** This document has been issued by UBS AG (and/or any of its subsidiaries, branches or affiliates), a public company limited by shares, incorporated in Switzerland with its registered offices at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH-8001 Zurich. This publication has been approved by UBS Saudi Arabia (a subsidiary of UBS AG), a Saudi closed joint stock company incorporated in the Kingdom of Saudi Arabia under commercial register number 1010257812 having its registered office at Tatweer Towers, P.O. Box 75724, Riyadh 11588, Kingdom of Saudi Arabia. UBS Saudi Arabia is authorized and regulated by the Capital Market Authority to conduct securities business under license number 08113-37. **UAE / Dubai:** The information distributed by UBS AG Dubai Branch is only intended for Professional Clients and/or Market Counterparties, as classified under the DFSA rulebook. No other person should act upon this material/communication. The information is not for further distribution within the United Arab Emirates. UBS AG Dubai Branch is regulated by the DFSA in the DIFC. UBS is not licensed to provide banking services in the UAE by the Central Bank of the UAE, nor is it licensed by the UAE Securities and Commodities Authority. **Israel:** This Material is distributed by UBS AG, London Branch. UBS Securities Israel Ltd is a licensed Investment Marketer that is supervised by the Israel Securities Authority (ISA). UBS AG, London Branch and its affiliates incorporated outside Israel are not licensed under the Israeli Advisory Law. UBS may engage among others in issuance of Financial Assets or in distribution of Financial Assets of other issuers for fees or other benefits. UBS AG, London Branch and its affiliates may prefer various Financial Assets to which they have or may have an Affiliation (as such term is defined under the Israeli Advisory Law). Nothing in this Material should be considered as investment advice under the Israeli Advisory Law. This Material is being issued only to and/or is directed only at persons who are Eligible Clients within the meaning of the Israeli Advisory Law, and this Material must not be furnished to, relied on or acted upon by any other persons. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a **'non-US affiliate'**) to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. UBS Securities LLC is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule"), and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule. **Canada:** Distributed by UBS Securities Canada Inc., a registered investment dealer in Canada and a Member-Canadian Investor Protection Fund, or by another affiliate of UBS AG that is registered to conduct business in Canada or is otherwise exempt from registration. **Brazil:** Except as otherwise specified herein, this Material is prepared by UBS Brasil Corretora de Câmbio, Títulos e Valores Mobiliários S.A. (UBS Brasil CCTVM) to persons who are eligible investors residing in Brazil, which are considered to be Professional Investors (Investidores Profissionais), as designated by the applicable regulation, mainly the CVM Resolution No. 30 from the 11th of May 2021 (determines the duty to verify the suitability of products, services and transactions with regards to the client´s profile). UBS Brasil CCTVM is a subsidiary of UBS BB Servicos de Assessoria Financeira e Participacoes S.A. ("UBS BB"). UBS BB is an association between UBS AG and Banco do Brasil (through its subsidiary BB – Banco de Investimentos S.A.), of which UBS AG is the majority owner and which provides investment banking services and coverage in Brazil, Argentina, Chile, Paraguay, Peru and Uruguay. **Hong Kong:** Distributed by UBS Securities Asia Limited. Please contact local licensed persons of UBS Securities Asia Limited in respect of any matters arising from, or in connection with, the analysis or document **Singapore:** Distributed by UBS Securities Pte. Ltd. [Co. Reg. No.: 198500648C] or UBS AG, Singapore Branch. Please contact UBS Securities Pte. Ltd., an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110); or UBS AG, Singapore Branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or document. The recipients of this document represent and warrant that they are accredited and institutional investors as defined in the Securities and Futures Act (Cap. 289). **Japan:** Distributed by UBS Securities Japan Co., Ltd. to professional investors (except as otherwise permitted). Where this report has been prepared by UBS Securities Japan Co., Ltd., UBS Securities Japan Co., Ltd. is the author, publisher and distributor of the report. Distributed by UBS AG, Tokyo Branch to Professional Investors (except as otherwise permitted) in relation to foreign exchange and other banking businesses when relevant. **Australia:** Clients of UBS AG: Distributed by UBS AG (ABN 47 088 129 613 and holder of Australian Financial Services License No. 231087). Clients of UBS Securities Australia Ltd: Distributed by UBS Securities Australia Ltd (ABN 62 008 586 481 and holder of Australian Financial Services License No. 231098). This document contains general information and/or general advice only and does not constitute personal financial product advice. As such, the Information in this document has been prepared without taking into account any investor's objectives, financial situation or needs, and investors should, before acting on the Information, consider the appropriateness of the Information, having regard to their objectives, financial situation and needs. If the Information contained in this document relates to the acquisition, or potential acquisition of a particular financial product by a 'Retail' client as defined by section 761G of the Corporations Act 2001 where a Product Disclosure Statement would be required, the retail client should obtain and consider the Product Disclosure Statement relating to the product before making any decision about whether to acquire the product. **New Zealand:** Distributed by UBS New Zealand Ltd. UBS New Zealand Ltd is not a registered bank in New Zealand. You are being provided with this UBS publication or material because you have indicated to UBS that you are a "wholesale client" within the meaning of section 5C of the Financial Advisers Act 2008 of New Zealand (Permitted Client). This publication or material is not intended for clients who are not Permitted Clients (non-permitted Clients). If you are a non-permitted Client you must not rely on this publication or material. If despite this warning you nevertheless rely on this publication or material, you hereby (i) acknowledge that you may not rely on the content of this publication or material and that any recommendations or opinions in such this publication or material are not made or provided to you, and (ii) to the maximum extent permitted by law (a) indemnify UBS and its associates or related entities (and their respective Directors, officers, agents and Advisors) (each a 'Relevant Person') for any loss, damage, liability or claim any of them may incur or suffer as a result of, or in connection with, your unauthorised reliance on this publication or material and (b) waive any rights or remedies you may have against any Relevant Person for (or in respect of) any loss, damage, liability or claim you may incur or suffer as a result of, or in connection with, your unauthorised reliance on this publication or material. **Korea:** Distributed in Korea by UBS Securities Pte. Ltd., Seoul Branch. This report may have been edited or contributed to from time to time by affiliates of UBS Securities Pte. Ltd., Seoul Branch. This material is intended for professional/institutional clients only and not for distribution to any retail clients. **Malaysia:**

This material is authorized to be distributed in Malaysia by UBS Securities Malaysia Sdn. Bhd (Capital Markets Services License No.: CMSL/A0063/2007). This material is intended for professional/institutional clients only and not for distribution to any retail clients. **India:** Distributed by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000. It provides brokerage services bearing SEBI Registration Number: INZ000259830; and Research Analyst services bearing SEBI Registration Number: INH000001204. Name of Compliance Officer Mr. Parameshwaran Shivaramakrishnan, Phone : +912261556151, Email : parameshwaran.s@ubs.com, Name of Grievance Officer Parameshwaran Shivaramakrishnan, Phone : +912261556151, Email :ol-ubs-sec-compliance@ubs.com Registration granted by SEBI, and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. UBS AG, its affiliates or subsidiaries may have debt holdings or positions in the subject Indian company/companies. UBS AG, its affiliates or subsidiaries may have financial interests (e.g. loan/derivative products, rights to or interests in investments, etc.) in the subject Indian company / companies from time to time. Within the past 12 months, UBS AG, its affiliates or subsidiaries may have received compensation for non-investment banking securities-related services and/or non-securities services from the subject Indian company/companies. The subject company/companies may have been a client/clients of UBS AG, its affiliates or subsidiaries during the 12 months preceding the date of distribution of the research report with respect to investment banking and/or non-investment banking securities-related services and/or non-securities services. With regard to information on associates, please refer to the Annual Report at: https://www.ubs.com/global/en/about_ubs/investor_relations/annualreporting.html **Taiwan:** Except as otherwise specified herein, this material may not be distributed in Taiwan. Information and material on securities/instruments that are traded in a Taiwan organized exchange is deemed to be issued and distributed by UBS Securities Pte. LTD., Taipei Branch, which is licensed and regulated by Taiwan Financial Supervisory Commission. Save for securities/instruments that are traded in a Taiwan organized exchange, this material should not constitute "recommendation" to clients or recipients in Taiwan for the covered companies or any companies mentioned in this document. No portion of the document may be reproduced or quoted by the press or any other person without authorisation from UBS. **Indonesia:** This report is being distributed by PT UBS Sekuritas Indonesia and is delivered by its licensed employee(s), including marketing/sales person, to its client. PT UBS Sekuritas Indonesia, having its registered office at Sequis Tower Level 22 unit 22-1,Jl.Jend. Sudirman, kav.71, SCBD lot 11B, Jakarta 12190. Indonesia, is a subsidiary company of UBS AG and licensed under Capital Market Law no. 8 year 1995, a holder of broker-dealer and underwriter licenses issued by the Capital Market and Financial Institution Supervisory Agency (now Otoritas Jasa Keuangan/OJK). PT UBS Sekuritas Indonesia is also a member of Indonesia Stock Exchange and supervised by Otoritas Jasa Keuangan (OJK). Neither this report nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens except in compliance with applicable Indonesian capital market laws and regulations. This report is not an offer of securities in Indonesia and may not be distributed within the territory of the Republic of Indonesia or to Indonesian citizens in circumstance which constitutes an offering within the meaning of Indonesian capital market laws and regulations.

The disclosures contained in research documents produced by UBS AG, London Branch or UBS Europe SE shall be governed by and construed in accordance with English law.

UBS specifically prohibits the redistribution of this document in whole or in part without the written permission of UBS and in any event UBS accepts no liability whatsoever for any redistribution of this document or its contents or the actions of third parties in this respect. Images may depict objects or elements that are protected by third party copyright, trademarks and other intellectual property rights. © UBS 2023. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

Global Wealth Management Disclaimer

You receive this document in your capacity as a client of UBS Global Wealth Management. This publication has been distributed to you by UBS Switzerland AG (regulated by FINMA in Switzerland) or its affiliates (**"UBS"**) with whom you have a banking relationship with. The full name of the distributing affiliate and its competent authority can be found in the country-specific disclaimer at the end of this document.

The date and time of the first dissemination of this publication is the same as the date and time of its publication.

Risk information:

You agree that you shall not copy, revise, amend, create a derivative work, provide to any third party, or in any way commercially exploit any UBS research, and that you shall not extract data from any research or estimates, without the prior written consent of UBS.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction.

This document is **for your information only**; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. By providing this document, none of UBS or its representatives has any responsibility or authority to provide or have provided investment advice in a fiduciary capacity or otherwise. Investments involve risks, and investors should exercise prudence and their own judgment in making their investment decisions. None of UBS or its representatives is suggesting that the recipient or any other person take a specific course of action or any action at all. By receiving this document, the recipient acknowledges and agrees with the intended purpose described above and further disclaims any expectation or belief that the information constitutes investment advice to the recipient or otherwise purports to meet the investment objectives of the recipient. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors.

Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the information (as defined below).

Prior to making any investment or financial decisions, any recipient of this document or the information should take steps to understand the risk and return of the investment and seek individualized advice from his or her personal financial, legal, tax and other professional advisors that takes into account all the particular facts and circumstances of his or her investment objectives.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in any materials to which this document relates (the "Information"), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups, personnel or other representative of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party. In no circumstances may this document or any of the Information (including any forecast, value, index or other calculated amount ("Values")) be used for any of the following purposes: (i) valuation or accounting purposes; (ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or (iii) to measure the performance of any financial instrument including, without limitation, for the purpose of tracking the return or performance of any Value or of defining the asset allocation of portfolio or of computing performance fees.

By receiving this document and the Information you will be deemed to represent and warrant to UBS that you will not use this document or any of the Information for any of the above purposes or otherwise rely upon this document or any of the Information.

UBS has policies and procedures, which include, without limitation, independence policies and permanent information barriers, that are intended, and upon which UBS relies, to manage potential conflicts of interest and control the flow of information within divisions of UBS (including between Global Wealth Management and UBS Global Research) and among its subsidiaries, branches and affiliates. For further information on the ways in which UBS manages conflicts and maintains independence of its research products, historical performance information and certain additional disclosures concerning UBS research recommendations, please visit https://www.ubs.com/research-methodology.

Research will initiate, update and cease coverage solely at the discretion of research management, which will also have sole discretion on the timing and frequency of any published research product. The analysis contained in this document is based on numerous assumptions. Different assumptions could result in materially different results.

The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other

areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS and/or its divisions as a whole, of which investment banking, sales and trading are a part, and UBS's subsidiaries, branches and affiliates as a whole.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

Options and futures are not suitable for all investors, and trading in these instruments is considered risky and may be appropriate only for sophisticated investors. Prior to buying or selling an option, and for the complete risks relating to options, you must receive a copy of "Characteristics and Risks of Standardized Options". You may read the document at https://www.theocc.com/about/publications/character-risks.jsp or ask your financial advisor for a copy.

Investing in structured investments involves significant risks. For a detailed discussion of the risks involved in investing in any particular structured investment, you must read the relevant offering materials for that investment. Structured investments are unsecured obligations of a particular issuer with returns linked to the performance of an underlying asset. Depending on the terms of the investment, investors could lose all or a substantial portion of their investment based on the performance of the underlying asset. Investors could also lose their entire investment if the issuer becomes insolvent. UBS does not guarantee in any way the obligations or the financial condition of any issuer or the accuracy of any financial information provided by any issuer. Structured investments are not traditional investments and investing in a structured investment is not equivalent to investing directly in the underlying asset. Structured investments may have limited or no liquidity, and investors should be prepared to hold their investment to maturity. The return of structured investments may be limited by a maximum gain, participation rate or other feature. Structured investments may include call features and, if a structured investment is called early, investors would not earn any further return and may not be able to reinvest in similar investments with similar terms. Structured investments include costs and fees which are generally embedded in the price of the investment. The tax treatment of a structured investment may be complex and may differ from a direct investment in the underlying asset. UBS and its employees do not provide tax advice. Investors should consult their own tax advisor about their own tax situation before investing in any securities.

Important Information About Sustainable Investing Strategies: Sustainable investing strategies aim to consider and incorporate environmental, social and governance (ESG) factors into investment process and portfolio construction. Strategies across geographies and styles approach ESG analysis and incorporate the findings in a variety of ways. Incorporating ESG factors or Sustainable Investing considerations may inhibit the portfolio manager's ability to participate in certain investment opportunities that otherwise would be consistent with its investment objective and other principal investment strategies. The returns on a portfolio consisting primarily of sustainable investments may be lower or higher than portfolios where ESG factors, exclusions, or other sustainability issues are not considered by the portfolio manager, and the investment opportunities available to such portfolios may differ. Companies may not necessarily meet high performance standards on all aspects of ESG or sustainable investing issues; there is also no guarantee that any company will meet expectations in connection with corporate responsibility, sustainability, and/or impact performance.

Within the past 12 months UBS Switzerland AG, its affiliates or subsidiaries may have received or provided investment services and activities or ancillary services as per MiFID II which may have given rise to a payment or promise of a payment in relation to these services from or to this company.

If you require detailed information on disclosures of interest or conflict of interest as required by Market Abuse Regulation please contact the mailbox MAR_disclosures_twopager@ubs.com. Please note that e-mail communication is unsecured.

External Asset Managers / External Financial Consultants: In case this research or publication is provided to an External Asset Manager or an External Financial Consultant, UBS expressly prohibits that it is redistributed by the External Asset Manager or the External Financial Consultant and is made available to their clients and/or third parties.

Bahrain: UBS is a Swiss bank not licensed, supervised or regulated in Bahrain by the Central Bank of Bahrain to undertake banking or investment business activities in Bahrain. Therefore, prospects/clients do not have any protection under local banking and investment services laws and regulations. **Brazil**: This report is only intended for Brazilian residents who are directly purchasing or selling securities in the Brazil capital market through a local authorized institution. **Canada**: The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada or, alternatively, pursuant to a dealer registration exemption. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. In Canada, this publication is distributed by UBS Investment Management Canada Inc. **China**: This report and any offering material such as term sheet, research report, other product or service documentation or any other information (the "Material") sent with this report was done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the material erroneously, UBS asks that you kindly delete it and inform UBS immediately. This report is prepared by UBS Switzerland AG or its offshore subsidiary or affiliate (collectively as "UBS Offshore"). UBS Offshore is an entity incorporated out of China and is not licensed, supervised or regulated in China to carry out banking or securities business. The recipient should not contact the analysts or UBS Offshore which produced this report for advice as they are not licensed to provide securities investment advice in China. UBS Investment Bank (including Research) has its own wholly independent research and views which at times may vary from the views of UBS Global Wealth Management. The recipient should not use this document or otherwise rely on any of the information contained in this report in making investment decisions and UBS takes no responsibility in this regard. **Czech Republic**: UBS is not a licensed bank in the Czech Republic and thus is not allowed to provide regulated banking or investment services in the Czech Republic. This communication and/or material is distributed for marketing purposes and constitutes a "Commercial Message" under the laws of Czech Republic in relation to banking and/or investment services. Please notify UBS if you do not wish to receive any further correspondence. **Denmark**: This publication is not intended to constitute a public offer under Danish law. It is distributed only for information purposes to clients of UBS Europe SE, Denmark Branch, filial af UBS Europe SE, with place of business at Sankt Annae Plads 13, 1250 Copenhagen, Denmark, registered with the Danish Commerce and Companies Agency, under No. 38 17 24 33. UBS Europe SE, Denmark Branch, filial af UBS Europe SE is subject to the joint supervision of the European Central Bank, the German Central Bank (Deutsche Bundesbank), the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin"), as well as of the Danish Financial Supervisory Authority (Finanstilsynet), to which this publication has not been submitted for approval. UBS Europe SE is a credit institution constituted under German law in the form of a Societas Europaea, duly authorized by BaFin. **Egypt**: Securities or other investment products are not being offered or sold by UBS to the public in Egypt and they have not been and will not be registered with the Egyptian Financial Regulatory Authority (FRA). **France**: This publication is not intended to constitute a public offer under French law, it does not constitute a personal recommendation as it is distributed only for information purposes to clients of UBS (France) S.A., French "société anonyme" with share capital of € 132.975.556, at 69 boulevard Haussmann F-75008 Paris, registered with the "Registre du Commerce et des Sociétés" of Paris under N° B 421 255 670. UBS (France) S.A. is a provider of investment services duly authorized according to the terms of the "Code monétaire et financier", regulated by French banking and financial authorities as the "Autorité de contrôle prudentiel et de résolution" and "Autorité des marchés financiers", to which this publication has not been submitted for approval. **Germany**: This publication is not intended to constitute a public offer under German law. It is distributed only for information purposes to clients of UBS Europe SE, Germany, with place of business at Bockenheimer Landstrasse 2-4, 60306 Frankfurt am Main. UBS Europe SE is a credit institution constituted under German law in the form of a Societas Europaea, duly authorized by the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin") and supervised jointly by the European Central Bank, the German Central Bank (Deutsche Bundesbank) and BaFin, to which this publication has not been submitted for approval. **Hong Kong SAR**: This publication is distributed to clients of UBS AG Hong Kong Branch by UBS AG Hong Kong Branch, a licensed bank under the Hong Kong Banking Ordinance and a registered institution under the Securities and Futures Ordinance. UBS AG Hong Kong Branch is incorporated in Switzerland with limited liability. **India**: Distributed by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000. It provides brokerage services bearing SEBI Registration Number INZ000259830; merchant banking services bearing SEBI Registration Number: INM000010809 and Research Analyst services bearing SEBI Registration Number: INH000001204. UBS AG, its affiliates or subsidiaries may have debt holdings or positions in the subject Indian company/companies. UBS AG, its affiliates or subsidiaries may have financial interests (e.g. like loan/derivative products, rights to or interests in investments, etc.) in the subject Indian company/companies from time to time. Within the past 12 months, UBS AG, its affiliates or subsidiaries may have received compensation for non-investment banking securities-related services and/or non-securities services from the subject Indian company/companies. The subject company/companies may have been a client/clients of UBS AG, its affiliates or subsidiaries during the 12 months preceding the date of distribution of the research report with respect to investment banking and/or non-investment banking securities-related services and/or non-securities services. With regard to information on associates, please refer to the Annual Report at: https://www.ubs.com/global/en/about_ubs/investor_relations/annualreporting.html. **Indonesia**: This communication and any offering material term sheet, research report, other product or service documentation or any other information (the "Material") sent with this communication was done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the Material erroneously, UBS asks that you kindly delete the

e-mail and inform UBS immediately. The Material, where provided, was provided for your information only and is not to be further distributed without the consent of UBS. None of the Material has been registered or filed under the prevailing laws and with any financial or regulatory authority in your jurisdiction. The Material may not have been approved, disapproved, endorsed, registered or filed with any financial or regulatory authority in your jurisdiction. UBS has not, by virtue of the Material, made available, issued any invitation to subscribe for or to purchase any investment (including securities or products or futures contracts). The Material is neither an offer nor a solicitation to enter into any transaction or contract (including futures contracts) nor is it an offer to buy or to sell any securities or products. The relevant investments will be subject to restrictions and obligations on transfer as set forth in the Material, and by receiving the Material you undertake to comply fully with such restrictions and obligations. You should carefully study and ensure that you understand and exercise due care and discretion in considering your investment objective, risk appetite and personal circumstances against the risk of the investment. You are advised to seek independent professional advice in case of doubt. Any and all advice provided on and/or trades executed by UBS pursuant to the Material will only have been provided upon your specific request or executed upon your specific instructions, as the case may be, and may be deemed as such by UBS and you. **Israel**: UBS is a premier global financial firm offering wealth management, asset management and investment banking services from its headquarters in Switzerland and its operations in over 50 countries worldwide to individual, corporate and institutional investors. In Israel, UBS Switzerland AG is registered as Foreign Dealer in cooperation with UBS Wealth Management Israel Ltd., a wholly owned UBS subsidiary. UBS Wealth Management Israel Ltd. is an Investment Marketing licensee which engages in Investment Marketing and is regulated by the Israel Securities Authority. This publication is intended for information only and is not intended as an offer to buy or solicitation of an offer. Furthermore, this publication is not intended as an investment advice. No action has been, or will be, taken in Israel that would permit an offering of the product(s) mentioned in this document or a distribution of this document to the public in Israel. In particular, this document has not been reviewed or approved by the Israeli Securities Authority. The product(s) mentioned in this document is/are being offered to a limited number of sophisticated investors who qualify as one of the investors listed in the first supplement to the Israeli Securities Law, 5728-1968. This document may not be reproduced or used for any other purpose, nor be furnished to any other person other than those to whom copies have been sent. Anyone who purchases the product(s) mentioned herein shall do so for its own benefit and for its own account and not with the aim or intention of distributing or offering the product(s) to other parties. Anyone who purchases the product(s) shall do so in accordance with its own understanding and discretion and after it has received any relevant financial, legal, business, tax or other advice or opinion required by it in connection with such purchase(s). The word "advice" and/or any of its equivalent terms shall be read and construed in conjunction with the definition of the term "investment marketing" as defined under the Israeli Regulation of Investment Advice, Investment Marketing and Portfolio Management Law. The Swiss laws and regulations require a number of mandatory disclosures to be made in independent financial research reports or recommendations. Pursuant to the Swiss Financial Market Infrastructure Act and the Financial Market Infrastructure Ordinance-FINMA, banks must disclose the percentage of voting rights they hold in companies being researched, if these holdings are equal to or exceed the statutory thresholds. In addition, the Directives on the Independence of Financial Research, issued by the Swiss Bankers Association, mandate a number of disclosures, including the disclosure of potential conflicts of interest, the participation within previous 12 months in any securities issues on behalf of the company being researched, as well as the fact that remuneration paid to the financial analysts is based generally upon the performance of (i) the new issues department or investment banking; or (ii) securities trading performance (including proprietary trading) or sales. **Italy**: This publication is not intended to constitute a public offer under Italian law. It is distributed only for information purposes to clients of UBS Europe SE, Succursale Italia, with place of business at Via del Vecchio Politecnico, 3-20121 Milano. UBS Europe SE, Succursale Italia is subject to the joint supervision of the European Central Bank, the German Central Bank (Deutsche Bundesbank), the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin"), as well as of the Bank of Italy (Banca d'Italia) and the Italian Financial Markets Supervisory Authority (CONSOB - Commissione Nazionale per le Società e la Borsa), to which this publication has not been submitted for approval. UBS Europe SE is a credit institution constituted under German law in the form of a Societas Europaea, duly authorized by BaFin. **Jersey**: UBS AG, Jersey Branch, is regulated and authorized by the Jersey Financial Services Commission for the conduct of banking, funds and investment business. Where services are provided from outside Jersey, they will not be covered by the Jersey regulatory regime. UBS AG, Jersey Branch is a branch of UBS AG a public company limited by shares, incorporated in Switzerland whose registered offices are at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH 8001 Zurich. UBS AG, Jersey Branch's principal place of business is 1, IFC Jersey, St Helier, Jersey, JE2 3BX. **Luxembourg**: This publication is not intended to constitute a public offer under Luxembourg law. It is distributed only for information purposes to clients of UBS Europe SE, Luxembourg Branch ("UBS Luxembourg"), R.C.S. Luxembourg n° B209123, with registered office at 33A, Avenue J. F. Kennedy, L-1855 Luxembourg. UBS Europe SE is a credit institution constituted under German law in the form of a Societas Europaea (HRB n° 107046), with registered office at Bockenheimer Landstrasse 2-4, D-60306 Frankfurt am Main, Germany, duly authorized by the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin") and subject to the joint prudential supervision of BaFin, the European Central Bank and the central bank of Germany (Deutsche Bundesbank). UBS Luxembourg is furthermore supervised by the Luxembourg prudential supervisory authority (Commission de Surveillance du Secteur Financier), in its role as host member state authority. This publication has not been submitted for approval to any public supervisory authority. **Malaysia**: This communication and any offering material term sheet, research report, other product or service documentation or any other information (the "Material") sent with this communication was done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the Material erroneously, UBS asks that you kindly delete the e-mail and inform UBS immediately. The Material, where provided, was provided for your information only and is not to be further distributed in whole or in part in or into your jurisdiction without the consent of UBS. The Material may not have been reviewed, approved, disapproved, endorsed, registered or filed with any financial or regulatory authority in your jurisdiction. UBS has not, by virtue of the Material, made available, issued any invitation to subscribe for or to purchase any investment (including securities or derivatives products). The Material is neither an offer nor a solicitation to enter into any transaction or contract (including future contracts) nor is it an offer to buy or to sell any securities or derivatives products. The relevant investments will be subject to restrictions and obligations on transfer as set forth in the Material, and by receiving the Material you undertake to comply fully with such restrictions and obligations. You should carefully study and ensure that you understand and exercise due care and discretion in considering your investment objective, risk appetite and personal circumstances against the risk of the investment. You are advised to seek independent professional advice in case of doubt. Any and all advice provided on and/or trades executed by UBS pursuant to the Material will only have been provided upon your specific request or executed upon your specific instructions, as the case may be, and may be deemed as such by UBS and you. **Mexico**: This information is distributed by UBS Asesores México, S.A. de C.V. ("UBS Asesores"), an affiliate of UBS Switzerland AG, incorporated as a non-independent investment advisor under the Mexican regulation due to the relation with a Foreign Bank. UBS Asesores is registered under number 30060-001-(14115)-21/06/2016 and subject to the supervision of the Mexican Banking and Securities Commission ("CNBV") exclusively regarding the rendering of (i) portfolio management services, (ii) securities investment advisory services, analysis and issuance of individual investment recommendations, and (iii) anti-money laundering and terrorism financing matters. This UBS publication or any material related thereto is addressed only to Sophisticated or Institutional Investors located in Mexico. Research reports only reflect the views of the analysts responsible for the report. The compensation of the analyst(s) who prepared this report is determined exclusively by research management and senior management of any entity of UBS Group to which such analyst(s) render(s) services. **Monaco**: This document is not intended to constitute a public offering or a comparable solicitation under the Principality of Monaco laws, but might be made available for information purposes to clients of UBS (Monaco) S.A., a regulated bank having its registered office at 2 avenue de Grande Bretagne 98000 Monaco operating under a banking license granted by the "Autorité de Contrôle Prudentiel et de Résolution" (ACPR) and the Monegasque government which authorizes the provision of banking services in Monaco. UBS (Monaco) S.A. is also licensed by the "Commission de Contrôle des Activités Financières" (CCAF) to provide investment services in Monaco. The latter has not approved this publication. **Nigeria**: The investment products mentioned in this material are not being offered or sold by UBS to the public in Nigeria and they have not been submitted for approval nor registered with the Securities and Exchange Commission of Nigeria. If you are interested in products of this nature, please let us know. The investment products mentioned in this material are not being directed to, and are not being made available for subscription by any persons within Nigeria other than the selected investors to whom the offer materials have been addressed as a private sale or domestic concern within the exemption and meaning of Section 69(2) of the Investments and Securities Act, 2007 (ISA). This material has been provided to you at your specific unsolicited request and for your information only. **Philippines:** This communication was done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the Material erroneously, UBS asks that you kindly delete the e-mail and inform UBS immediately. The Material, where provided, was provided for your information only and is not to be further distributed in whole or in part in or into your jurisdiction without the consent of UBS. The Material may not have been reviewed, approved, disapproved, endorsed, registered or filed with any financial or regulatory authority in your jurisdiction. UBS has not, by virtue of the Material, made available, issued any invitation to subscribe for or to purchase any investment (including securities or derivatives products). The Material is neither an offer nor a solicitation to enter into any transaction or contract (including future contracts) nor is it an offer to buy or to sell any securities or derivatives products. The relevant investments will be subject to restrictions and obligations on transfer as set forth in the Material, and by receiving the Material you undertake to comply fully with such restrictions and obligations. You should carefully study and ensure that you understand and exercise due care and discretion in considering your investment objective, risk appetite and personal circumstances against the risk of the investment. You are advised to seek independent professional advice in case of doubt. Any and all advice provided on and/or trades executed by UBS pursuant to the Material will only have been provided upon your specific request or executed upon your specific instructions, as the case may be, and may be deemed as such by UBS and you. **Portugal**: UBS Switzerland AG is not licensed to conduct banking and financial activities in Portugal nor is UBS Switzerland AG supervised by the portuguese regulators (Bank of Portugal "Banco de Portugal" and Portuguese Securities Exchange Commission "Comissão do Mercado de Valores Mobiliários"). **Qatar**: UBS Qatar LLC is authorized by the Qatar Financial Centre Regulatory Authority, with QFC no. 01169, and has its registered office at 14th Floor, Burj Alfardan Tower, Building 157, Street No. 301, Area No. 69, Al Majdami, Lusail, Qatar. UBS Qatar LLC neither offers any brokerage services nor executes any order with, for or on behalf of its clients. A client order will have to be placed with, and executed by, UBS Switzerland AG in Switzerland or an affiliate of UBS Switzerland AG, that is domiciled outside Qatar. It is in the sole discretion of UBS Switzerland AG in Switzerland or its affiliate to accept or reject an order and UBS Qatar LLC does not have authority to provide a confirmation in this respect. UBS Qatar LLC may however communicate payment orders and investment instructions to UBS Switzerland AG in Switzerland for receipt, acceptance and execution. UBS Qatar LLC is not authorized to act for and on behalf of UBS Switzerland AG or an affiliate of UBS Switzerland AG. This document and any attachments hereto are intended for eligible counterparties and business customers only. **Russia**: This document or information contained therein is for information purposes only and constitutes neither a public nor a private offering, is not an invitation to make offers, to sell, exchange or otherwise transfer any financial instruments in the Russian Federation to or for the benefit of any Russian person or entity and does not constitute an advertisement or offering of securities in the Russian Federation within the meaning of Russian securities laws. The information contained herein is not an "individual investment recommendation" as defined in Federal Law of 22 April 1996 No 39-FZ "On Securities Market" (as amended) and the financial instruments and operations

specified herein may not be suitable for your investment profile or your investment goals or expectations. The determination of whether or not such financial instruments and operations are in your interests or are suitable for your investment goals, investment horizon or the acceptable risk level is your responsibility. We assume no liability for any losses connected with making any such operations or investing into any such financial instruments and we do not recommend to use such information as the only source of information for making an investment decision. **Saudi Arabia**: UBS Saudi Arabia is authorised and regulated by the Capital Market Authority to conduct securities business under licence number 08113-37. **Singapore**: Clients of UBS AG Singapore branch are asked to please contact UBS AG Singapore branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or report. UBS AG is incorporated in Switzerland with limited liability. UBS AG has a branch registered in Singapore (UEN S98FC5560C). This communication and any offering material term sheet, research report, other product or service documentation or any other information (the "Material") sent with this communication was done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the Material erroneously, UBS asks that you kindly delete the e-mail and inform UBS immediately. The Material, where provided, was provided for your information only and is not to be further distributed in whole or in part in or into your jurisdiction without the consent of UBS. The Material may not have been reviewed, approved, disapproved or endorsed by any financial or regulatory authority in your jurisdiction. UBS has not, by virtue of the Material, made available, issued any invitation to subscribe for or to purchase any investment (including securities or products or futures contracts). The Material is neither an offer nor a solicitation to enter into any transaction or contract (including future contracts) nor is it an offer to buy or to sell any securities or products. The relevant investments will be subject to restrictions and obligations on transfer as set forth in the Material, and by receiving the Material you undertake to comply fully with such restrictions and obligations. You should carefully study and ensure that you understand and exercise due care and discretion in considering your investment objective, risk appetite and personal circumstances against the risk of the investment. You are advised to seek independent professional advice in case of doubt. Any and all advice provided on and/or trades executed by UBS pursuant to the Material will only have been provided upon your specific request or executed upon your specific instructions, as the case may be, and may be deemed as such by UBS and you. **Sweden**: This publication is not intended to constitute a public offer under Swedish law. It is distributed only for information purposes to clients of UBS Europe SE, Sweden Bankfilial, with place of business at Regeringsgatan 38, 11153 Stockholm, Sweden, registered with the Swedish Companies Registration Office under Reg. No 516406-1011. UBS Europe SE, Sweden Bankfilial is subject to the joint supervision of the European Central Bank, the German Central Bank (Deutsche Bundesbank), the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, "BaFin"), as well as of the Swedish supervisory authority (Finansinspektionen), to which this publication has not been submitted for approval. UBS Europe SE is a credit institution constituted under German law in the form of a Societas Europaea, duly authorized by BaFin. **Taiwan**: This material is provided by UBS AG, Taipei Branch in accordance with laws of Taiwan, in agreement with or at the request of clients/prospects. **Thailand**: This communication and any offering material, term sheet, research report, other product or service documentation or any other information (the "Material") sent with this communication were done so as a result of a request received by UBS from you and/or persons entitled to make the request on your behalf. Should you have received the Material erroneously, UBS asks that you kindly delete the e-mail and inform UBS immediately. The Material, where provided, was provided for your information only and is not to be further distributed in whole or in part in or into your jurisdiction without the consent of UBS. The Material may not have been reviewed, approved, disapproved, endorsed, registered or filed with any financial or regulatory authority in your jurisdiction. UBS has not, by virtue of the Material, made available, issued any invitation to subscribe for or to purchase any investment (including securities or derivatives products). The Material is neither an offer nor a solicitation to enter into any transaction or contract (including future contracts) nor is it an offer to buy or to sell any securities or derivatives products. The relevant investments will be subject to restrictions and obligations on transfer as set forth in the Material, and by receiving the Material you undertake to comply fully with such restrictions and obligations. You should carefully study and ensure that you understand and exercise due care and discretion in considering your investment objective, risk appetite and personal circumstances against the risk of the investment. You are advised to seek independent professional advice in case of doubt. Any and all advice provided and/or trades executed by UBS pursuant to the Material will only have been provided upon your specific request or executed upon your specific instructions, as the case may be, and may be deemed as such by UBS and you. **Turkey**: The information in this document is not provided for the purpose of offering, marketing or sale of any capital market instrument or service in the Republic of Turkey. Therefore, this document may not be considered as an offer made, or to be made, to residents of the Republic of Turkey in the Republic of Turkey. UBS Switzerland AG is not licensed by the Turkish Capital Market Board (the CMB) under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instrument/service may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the CMB. However, according to article 15 (d) (ii) of the Decree No. 32 residents of the Republic of Turkey are allowed to purchase or sell the financial instruments traded in financial markets outside of the Republic of Turkey. Further to this, pursuant to article 9 of the Communiqué on Principles Regarding Investment Services, Activities and Ancillary Services No. III-37.1, investment services provided abroad to residents of the Republic of Turkey based on their own initiative are not restricted. **United Arab Emirates (UAE)**: UBS is not a financial institution licensed in the UAE by the Central Bank of the UAE nor by the Emirates' Securities and Commodities Authority and does not undertake banking activities in the UAE. UBS AG Dubai Branch is licensed by the DFSA in the DIFC. This document is provided for your information only and does not constitute financial advice. **United Kingdom**: This document is issued by UBS Wealth Management, a division of UBS AG which is authorised and regulated by the Financial Market Supervisory Authority in Switzerland. In the United Kingdom, UBS AG is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of regulation by the Prudential Regulation Authority are available from us on request. A member of the London Stock Exchange. This publication is distributed to retail clients of UBS Wealth Management. **Ukraine**: UBS is not registered and licensed as a bank/financial institution under Ukrainian legislation and does not provide banking and other financial services in Ukraine. UBS has not made, and will not make, any offer of the mentioned products to the public in Ukraine. No action has been taken to authorize an offer of the mentioned products to the public in Ukraine and the distribution of this document shall not constitute financial services for the purposes of the Law of Ukraine "On Financial Services and State Regulation of Financial Services Markets" dated 12 July 2001. Any offer of the mentioned products shall not constitute an investment advice, public offer, circulation, transfer, safekeeping, holding or custody of securities in the territory of Ukraine. Accordingly, nothing in this document or any other document, information or communication related to the mentioned products shall be interpreted as containing an offer, a public offer or invitation to offer or to a public offer, or solicitation of securities in the territory of Ukraine or investment advice under Ukrainian law. Electronic communication must not be considered as an offer to enter into an electronic agreement or other electronic instrument within the meaning of the Law of Ukraine "On Electronic Commerce" dated 3 September 2015. This document is strictly for private use by its holder and may not be passed on to third parties or otherwise publicly distributed. **USA**: Distributed to US persons by UBS Financial Services Inc. or UBS Securities LLC, subsidiaries of UBS AG. UBS Switzerland AG, UBS Europe SE, UBS Bank, S.A., UBS Brasil Administradora de Valores Mobiliários Ltda., UBS Asesores México, S.A. de C.V., UBS SuMi TRUST Wealth Management Co., Ltd., UBS Wealth Management Israel Ltd. and UBS Menkul Degerler AS are affiliates of UBS AG. **UBS Financial Services Inc. accepts responsibility for the content of a report prepared by a non-US affiliate when it distributes reports to US persons. All transactions by a US person in the securities mentioned in this report should be effected through a US-registered broker dealer affiliated with UBS, and not through a non-US affiliate. The contents of this report have not been and will not be approved by any securities or investment authority in the United States or elsewhere. UBS Financial Services Inc. is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.**

© UBS 2023. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

Industry Credit Outlook 2025

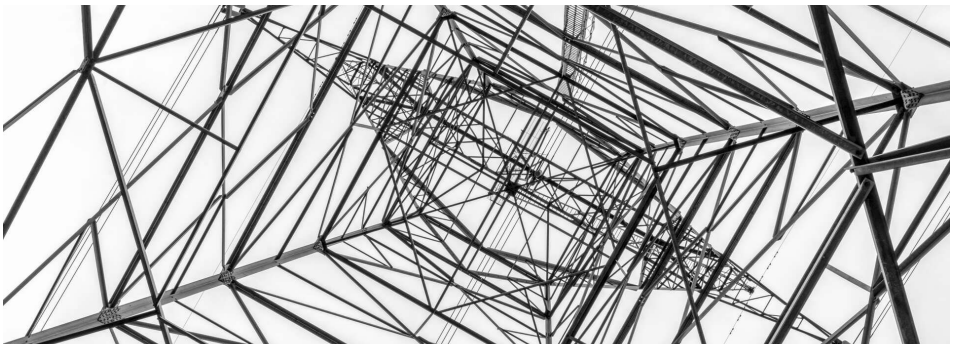
S&P Global Ratings

North America Regulated Utilities

Capex and climate change pressures credit quality

January 14, 2025

This report does not constitute a rating action.



Contacts

Gabe Grosberg
New York
+1 212 438 6043
gabe.grosberg
@spglobal.com

Gerrit Jepsen
New York
+1 212 438 2529
gerrit.jepsen
@spglobal.com

Obioma Ugboaja
New York
+1 212 438 7406
obioma.ugboaja
@spglobal.com

Matthew O'Neill
New York
+1 212 438 4295
matthew.oneill
@spglobal.com

What's changed?

Lower ratings headroom. A high percentage of companies are operating with only minimal financial cushion from our downgrade threshold.

Rising capital spending, higher cash flow deficits, and increased wildfire risks led to downgrades outpacing upgrades for the fifth consecutive year.

Data centers spur electricity sales growth at about 1% annually, which will provide modest support to credit quality.

What are the key assumptions for 2025?

High cash flow deficits of about $100 billion, which could harm financial performance if not funded in a credit-supportive manner.

Robust dividends of about $50 billion for 2025 and at a dividend payout ratio of about 60%.

Record amount of hybrid securities. The industry issued $26 billion of them in 2024, and we expect this trend will persist.

What are the key risks around the baseline?

Rising wildfire risks stemming from climate change.

Tax legislation could weaken financial measures if the new Republican administration lowers the corporate tax rate, reduces tax credits, or eliminates their transferability.

Common equity issuance is below our base-case expectations, and has been for the last several years, leading to weaker financial measures.

Ratings Trends: North America Regulated Utilities

Chart 1

Ratings distribution

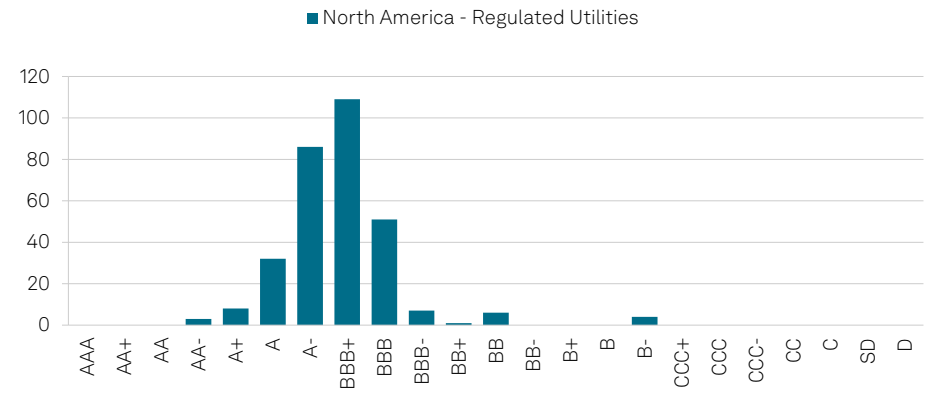


Chart 2

Ratings outlooks

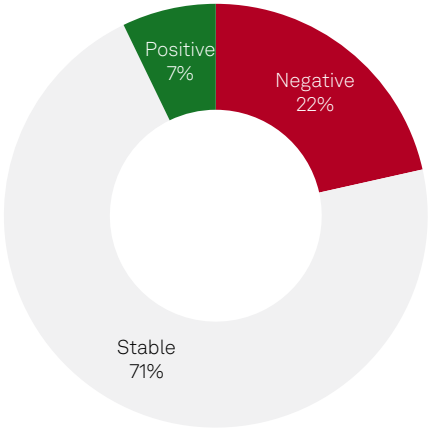
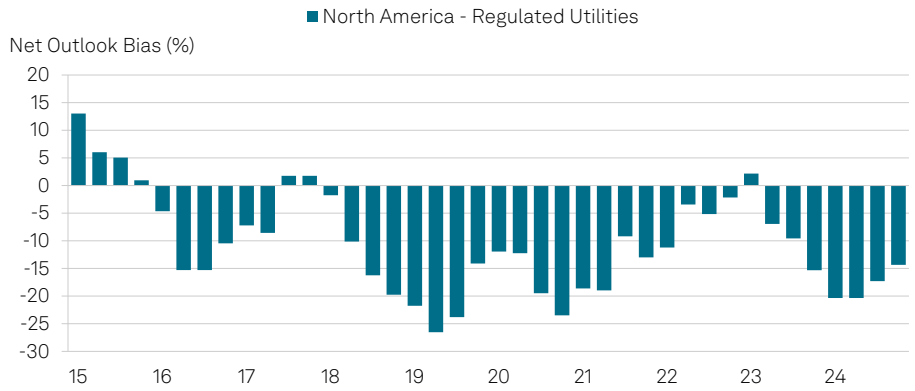


Chart 3

Ratings outlook net bias



Source: S&P Global Ratings. Ratings data measured at quarter-end.

Industry Credit Metrics: North America Regulated Utilities

Chart 4

Debt / EBITDA (median, adjusted)

Chart 5

FFO / Debt (median, adjusted)

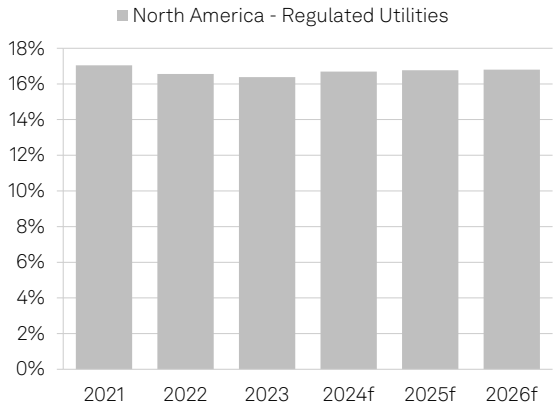


Chart 6

Cash flow and primary uses

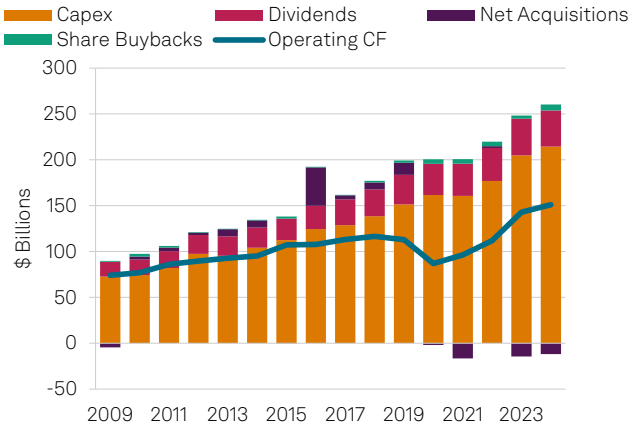
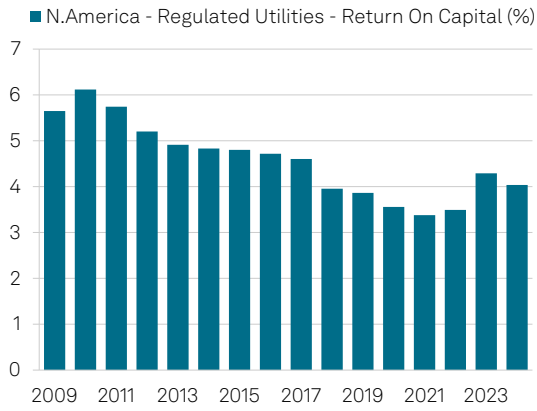


Chart 7

Return on capital employed



Source: S&P Global Ratings, S&P Capital IQ.
Revenue growth shows local currency growth weighted by prior-year common-currency revenue share. All other figures are converted into U.S. dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. FFO—Funds from operations. Most recent (2024) figures for cash flow and primary uses and return on capital employed use the last 12 months' data.

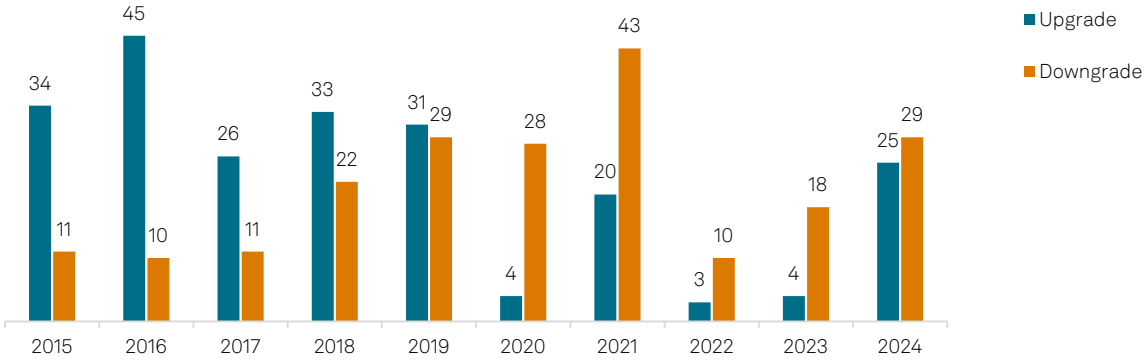
Industry Outlook

Ratings trends and outlook

In 2024, downgrades among North America's investor-owned regulated utilities outpaced upgrades for the fifth consecutive year (see chart 8). Most were directly attributable to rising wildfire risks, robust capital spending, and challenging regulatory constructs. We expect these risks will persist for 2025, further pressuring the industry's credit quality.

Chart 8

North America regulated utilities' upgrades and downgrades



Source: S&P Global Ratings.

Main assumptions about 2025 and beyond

1. Record capital spending.

The industry is heavily investing in safety, reliability, energy transition, and data centers. We expect this spending will exceed $300 billion before the end of the decade.

2. Management of regulatory risk.

This includes constructive rate case orders, minimizing regulatory lag, and earning the authorized return on equity (ROE).

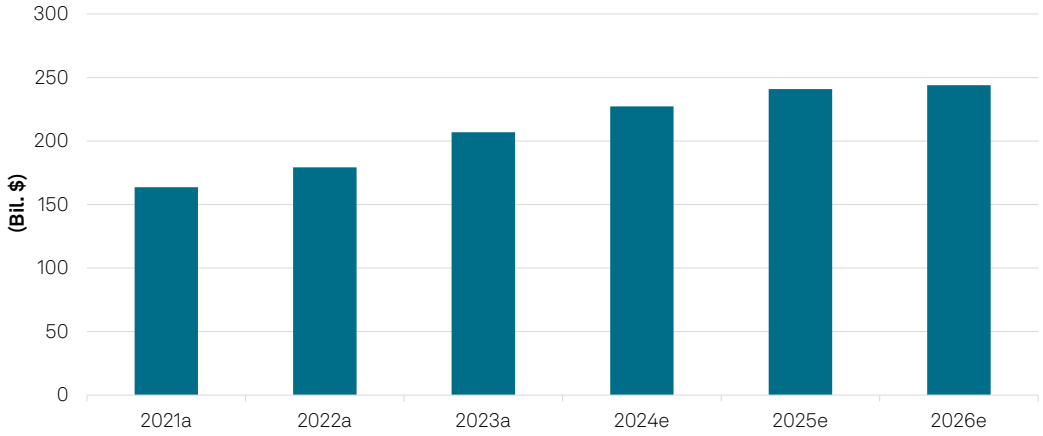
3. Climate change increases risks.

The growing frequency of devastating physical events, including hurricanes, storms, and wildfires, is elevating the industry's credit risks.

Capital spending continues to break records. We expect capital spending for North America's electric, gas, and water utilities will grow by a compound annual growth rate (CAGR) of about 10%. Accordingly, we expect 2025 capital spending to reflect about $240 billion (see chart 9). To date, the industry's capital spending has been primarily focused on safety, reliability, and energy transition.

Chart 9

North America regulated utilities' rising capital expenditures

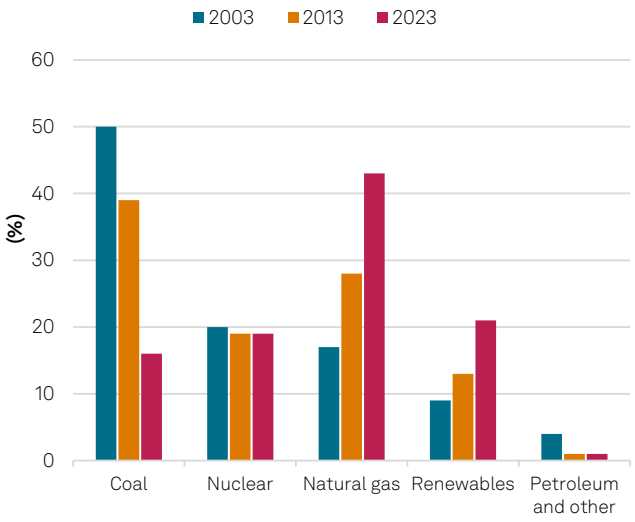


a—Actual. e—Estimate. Capital expenditures represent North American investor-owned electric gas, and water utilities.
Source: S&P Global Ratings.

Energy transition remains key. Over the past decade the industry has invested billions on reducing its reliance on coal-fired generation by about 50% (see chart 10), and today, coal represents only about 15% of total electric generation. Most of the coal was replaced with natural gas, which has about half the carbon emissions. We expect the industry will replace most of its remaining coal-fired generation by about 2030 with renewables and batteries, further reducing its carbon and greenhouse gas (GHG) emissions. The industry has reduced its GHG emissions by nearly 30% over the past decade (see chart 11), and we expect it will reduce them by another 30% by 2035.

Chart 10

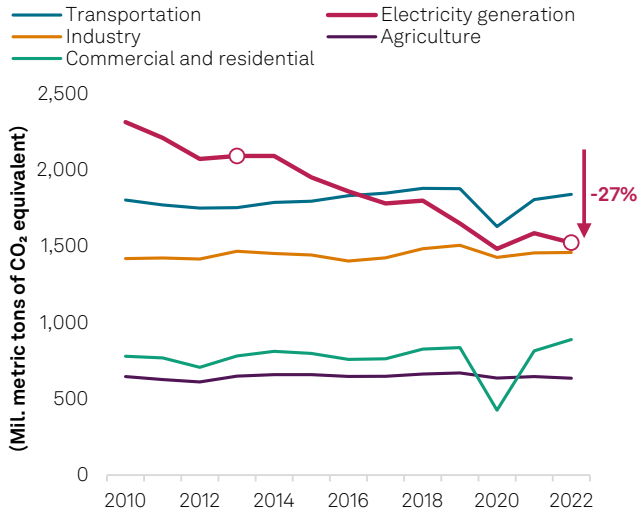
U.S. generation transformation



Source: U.S. Energy Information Administration.

Chart 11

GHG emissions by economic sector (2010-2022)

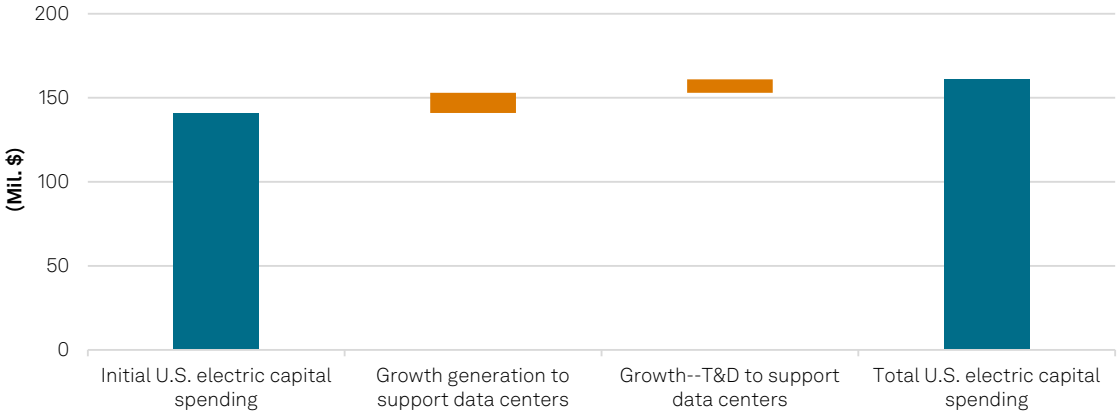


Source: U.S. Environmental Protection Agency.

Data center growth is relatively new, and our current base-case assumptions do not fully incorporate the incremental spending necessary for it. The higher spending for data centers is more likely to begin in 2026. Accordingly, 2026 capex could potentially increase by about another 15% above our current base case (see chart 12).

Chart 12

Data center growth will increase U.S. electric utility annual capital spending by about 15%

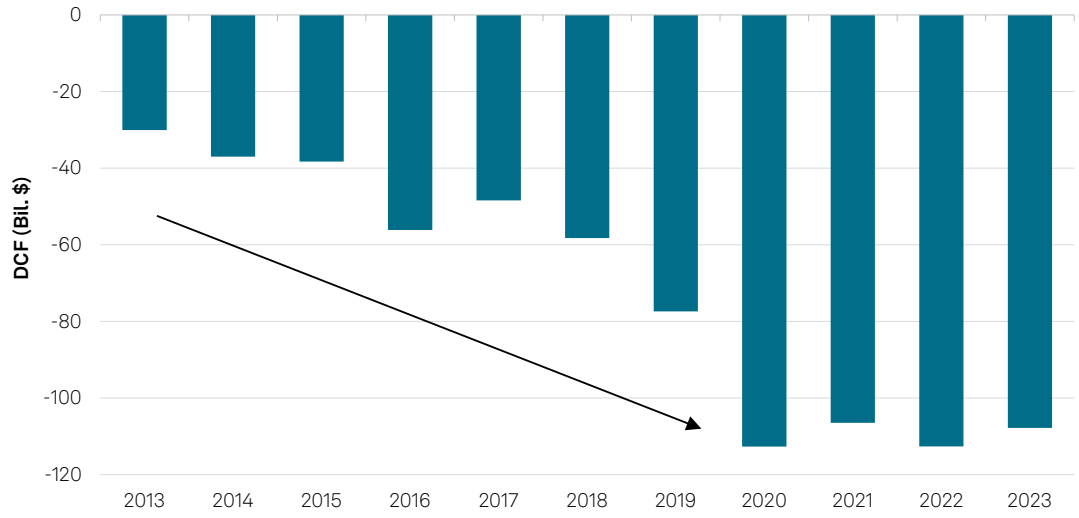


T&D—Transmission and distribution. Source: S&P Global Ratings.

Cash flow deficits will rise as a result, increasing the pressure on the industry's credit quality. Over the past decade the industry's cash flow deficits have grown from about $50 billion to consistently over $100 billion (see chart 13), and we expect this trend will continue.

Chart 13

North America regulated utilities' cash flow deficits



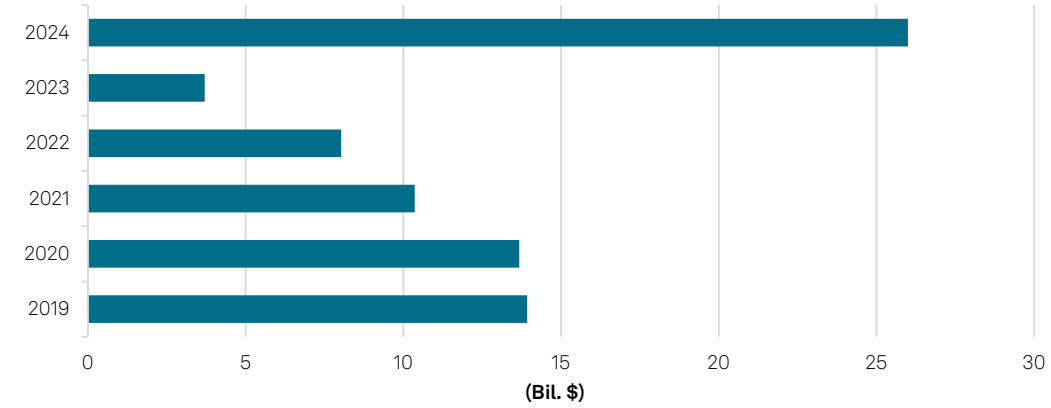
DCF—Discretionary cash flow. Sources: S&P Global Capital IQ, S&P Global Ratings.

Hybrid security issuance reached an all-time high of about $26 billion in 2024, far exceeding the previous record of about $14 billion in 2019 (see chart 14). We expect the industry will maintain this level of issuance in 2025 given its increased capital spending. This robust issuance supported the industry's 2024 financial measures because we typically assess hybrid securities as more

credit supportive than debt, with most of these securities having intermediate (50%) or high (100%) equity content.

Chart 14

North America regulated utilities' annual hybrid securities issuance

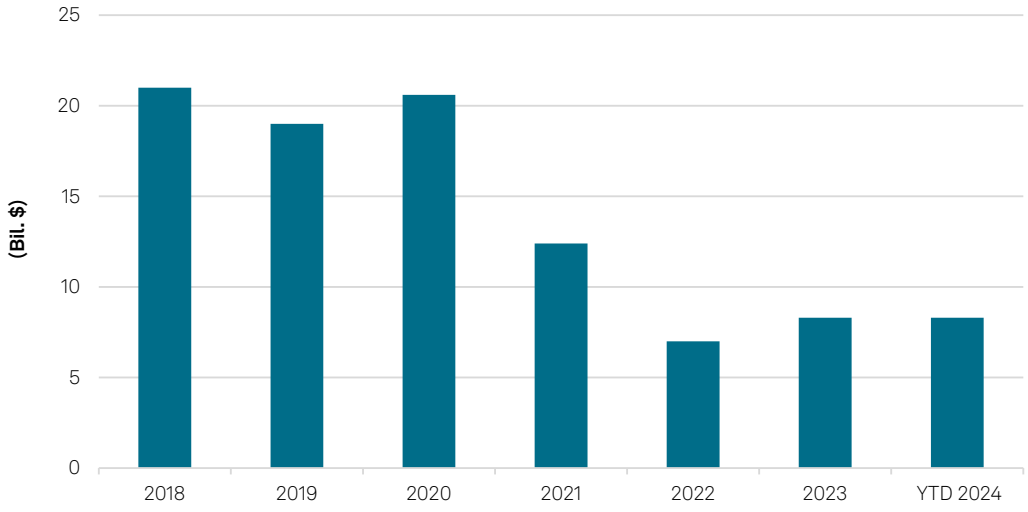


Sources: S&P Global Ratings, S&P Global Market Intelligence.

Common equity issuance has been weak and consistently below our expectations since 2021, pressuring the industry's financial measures. It raised only about $8 billion in 2024, and we estimate that the full year will reflect only about $10 billion. This is well below the industry's average run rate of about $20 billion annually between 2018-2020 (see chart 15). We expect 2025 common equity issuance will again be relatively weak and more reflective of 2024 levels. Without significantly more common equity issuance, we expect the industry's financial measures will continue to weaken, albeit gradually, supporting our negative outlook.

Chart 15

North America regulated utilities' common equity issuance



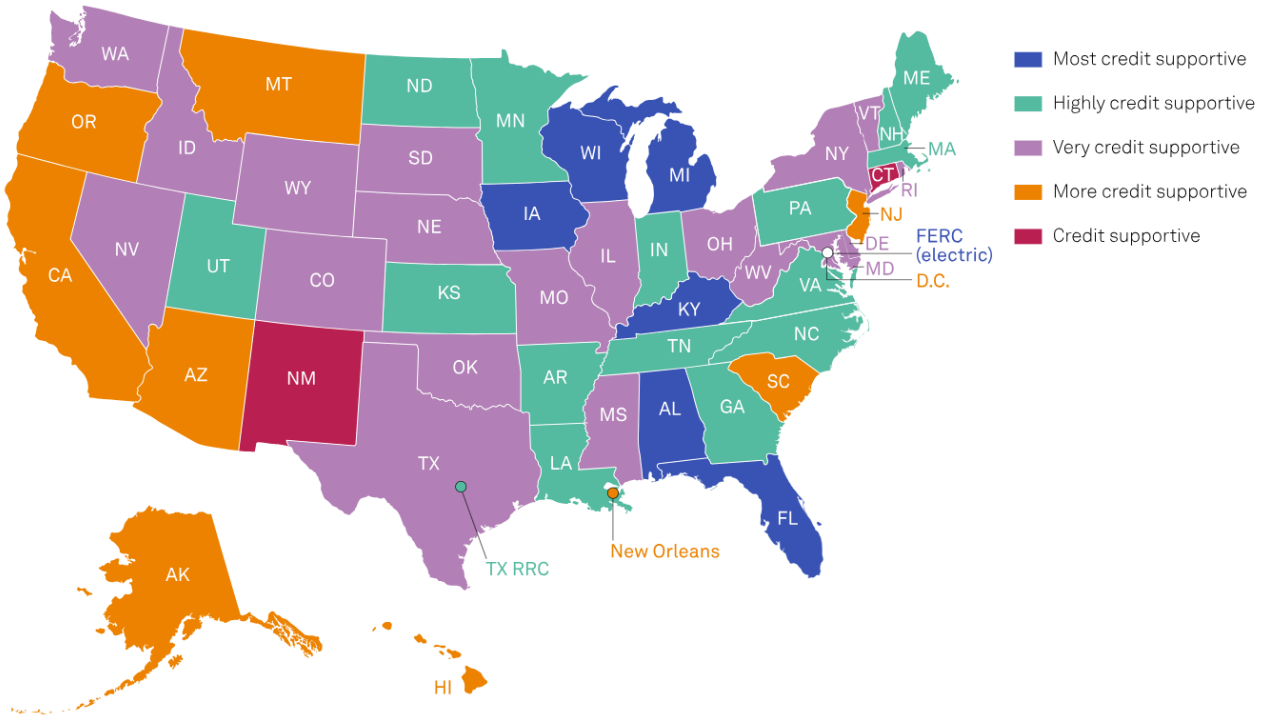
YTD—Year-to-date as of Dec. 15, 2024. Sources: S&P Global Ratings, S&P Global Market Intelligence.

Effective management of regulatory risk will continue. We assess all North America's regulatory jurisdictions as credit supportive or better, reflecting the industry's generally stable and predictable cash flows (see chart 16). Over the past decade much of the industry has implemented regulatory mechanisms such as decoupling, interim rates, capital trackers, formula rate plans, forward test years, muti-year rate case filings, and regulatory riders to significantly improve cash flow stability while minimizing regulatory lag (that is, the timing difference between when a utility incurs costs and when it's recovered from ratepayers).

Chart 16

Regulatory assessment by state

As of November 2024



Source: S&P Global Ratings.

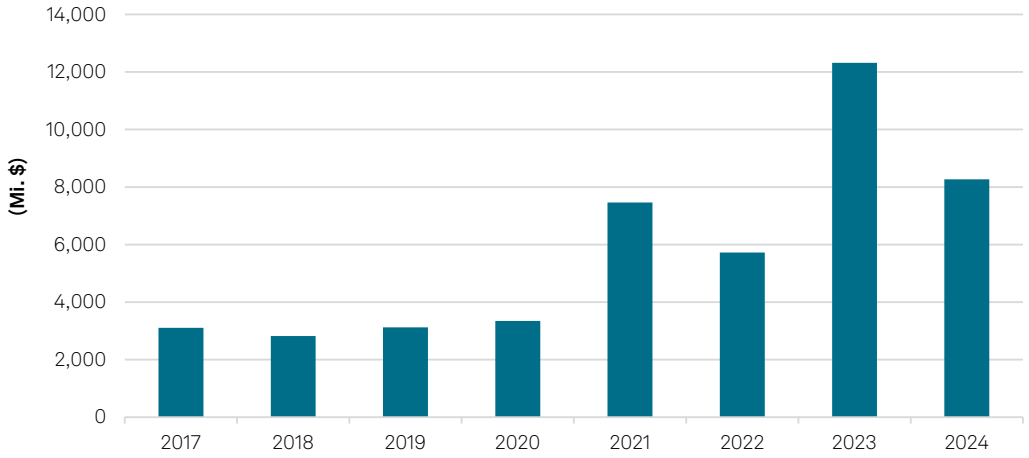
In general, we expect utilities will operate in a regulatory jurisdiction that is supportive of their credit quality by allowing for the full recovery of all their operating and capital costs in a timely manner. We also expect the regulatory jurisdiction will provide a consistent and predictable regulatory framework that results in cash flow stability. Our view of the industry's regulatory constructs supports the industry's mostly investment-grade ratings despite the industry continuing to operate with material cash flow deficits.

Recently, we revised downward our assessment of Connecticut's regulatory construct to credit supportive from more credit supportive. We now expect the state's regulated utilities will be increasingly subject to below-average authorized ROEs, regulatory lag, and an inconsistent ability to earn their lower authorized ROEs. These developments will increase the utilities' cash flow volatility, decrease the stability of their financial performances, and weaken their ability to consistently manage regulatory risk. Other regulatory jurisdictions that we continue to carefully monitor include Arizona, Colorado, District of Columbia, Illinois, Maryland, Michigan, New Mexico, Texas, and West Virginia.

Regulatory rate case order increases have substantially risen over the past four years, reflecting the industry's robust capital spending. Rate case increases for 2021-2024 have increased by more than 2.5x compared to 2017-2020 (see chart 17), and there are more than 100 U.S. rate cases pending, for which utilities are requesting over $16 billion more in revenue. This is in line with our base case that this year's rate case orders will again be robust and most likely in the top three years for rate case order increases.

Chart 17

U.S. rate case orders

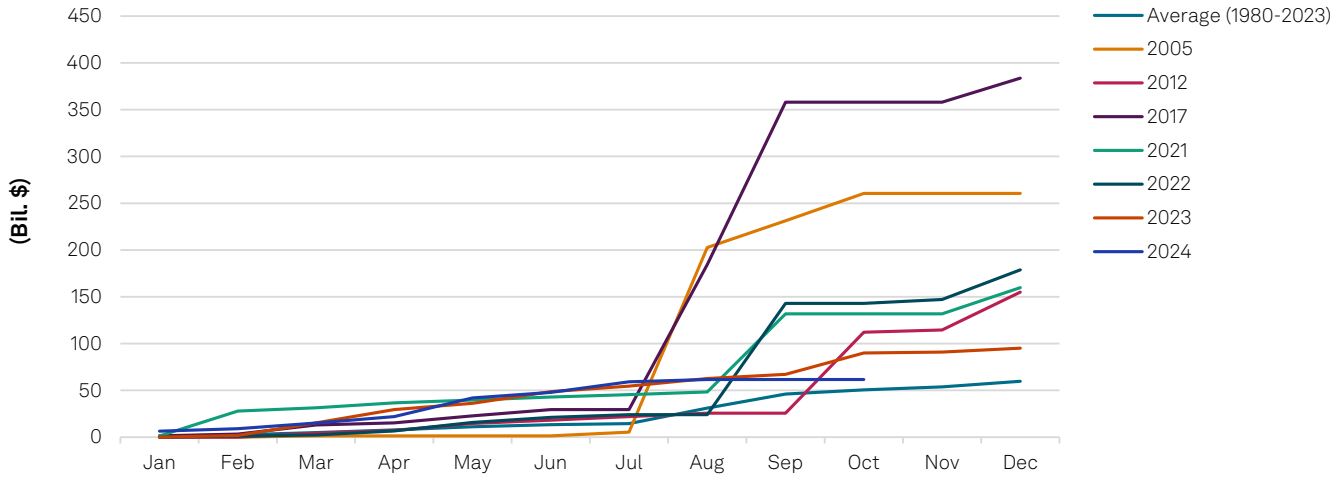


Source: S&P Global Commodity Insights.

Utilities' exposure to physical risks are increasing. According to the National Oceanic and Atmospheric Administration (NOAA), on an inflation-adjusted basis, 2021 and 2022 represent two of the most destructive years for extreme weather events since 1980 (see chart 18). We assume these trends will persist, magnifying physical risks for the utility industry.

Chart 18

U.S. billion-dollar weather disaster year-to-date event cost (CPI-adjusted)



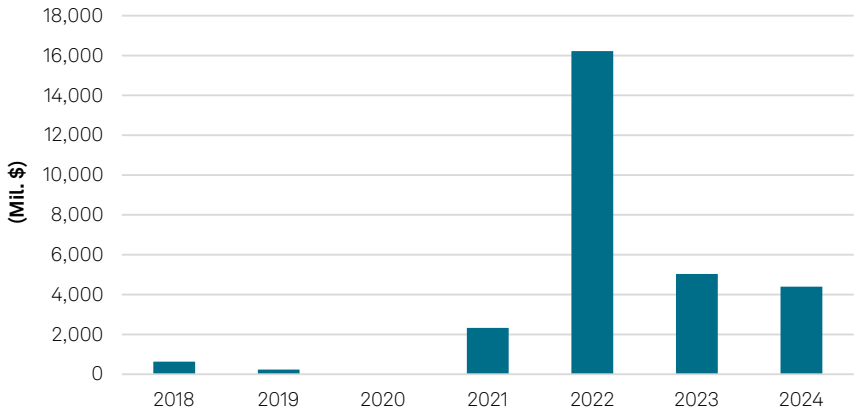
Source: National Ocean and Atmospheric Administration.

Drier, hotter weather has increased the acreage designated as high-fire-risk across the U.S. This is already taking a toll on credit ratings. For example, in 2024 we downgraded parent Xcel Energy Inc. and subsidiary Southwestern Public Service Co. (SPS) because of the scale and severity of the wildfires in the Texas panhandle, which highlights their increasing wildfire exposure. Overall, because of climate change, we expect the industry's wildfire risk will increase.

Securitization increased, which we assess as supportive of credit quality (see chart 19). Securitization allows for the issuance of debt secured by a non-bypassable charge to the customer's bill, allowing the utility to fully recover storm-related costs at a lower interest rate for customers. Because the debt is secured by the high likelihood of customers paying their bills, the associated interest costs are typically lower. We often deconsolidate such debt, resulting in stronger credit measures.

Chart 19

S&P Global Ratings-rated utility-related securitization issuance (2018-2024)



Source: S&P Global Ratings.

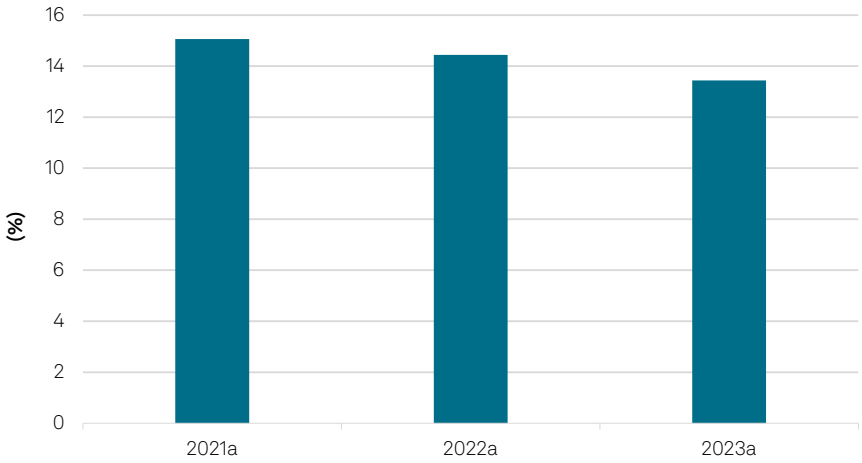
We expect securitization will remain an effective tool that the industry will continue to use. Our base case includes increasing severe natural disasters and weather events as well as continued efforts to decarbonize the energy sector, which sometimes requires securitization to fully recover under-depreciated retiring fossil-fuel generating plants.

Credit metrics and financial policy

We expect rising capital spending and increasing cash flow deficits that are not sufficiently funded in a credit-supportive manner will continue to pressure the industry's financial performance. Its average funds from operations (FFO) to debt was about 15% in 2021 and has gradually fallen to about 13.5%, primarily reflecting rising leverage (see chart 20). Given our expectations for continued increasing capital spending over the next decade, we expect financial performance and credit quality will continue to be pressured.

Chart 20

North American regulated utilities' average FFO to debt



a—Actual. Source: S&P Global Ratings.

Key risks or opportunities around the baseline

1. Wildfire mitigation efforts.

Wildfire risk mitigation, while clearly a credit positive, may not fully address the threats associated with extreme weather events.

2. Data centers and sales growth.

Data center electricity demand will likely boost revenues at North American investor-owned regulated utilities and provide modest support for the industry's credit quality.

3. Managing the customer bill.

The average electric customer bill is about 2% of U.S. median household income, which represents good value for customers relative to other typical household bills. Preserving this value is critical for the industry to maintain credit quality.

Wildfire risk has expanded. Recent events in the Northeast U.S. lead us to believe wildfire risk has spread and now potentially affects nearly every utility across North America. (About 15 years ago, it was primarily limited to just Southern California.)

Wildfire risk is highly negative for credit quality. The scale of potential liabilities, unpredictable nature of exposures, and frequency of events have materially increased wildfire risk for many utility stakeholders. From a credit standpoint, litigation risk is more problematic than risk of damage to infrastructure because it is difficult to predict or quantify and is so far without sufficient mitigation or containment. Also, wildfire-related litigation payments are typically not recoverable in rates or through other regulatory mechanisms, making them more problematic than physical risk.

Additional wildfire risks to credit quality include:

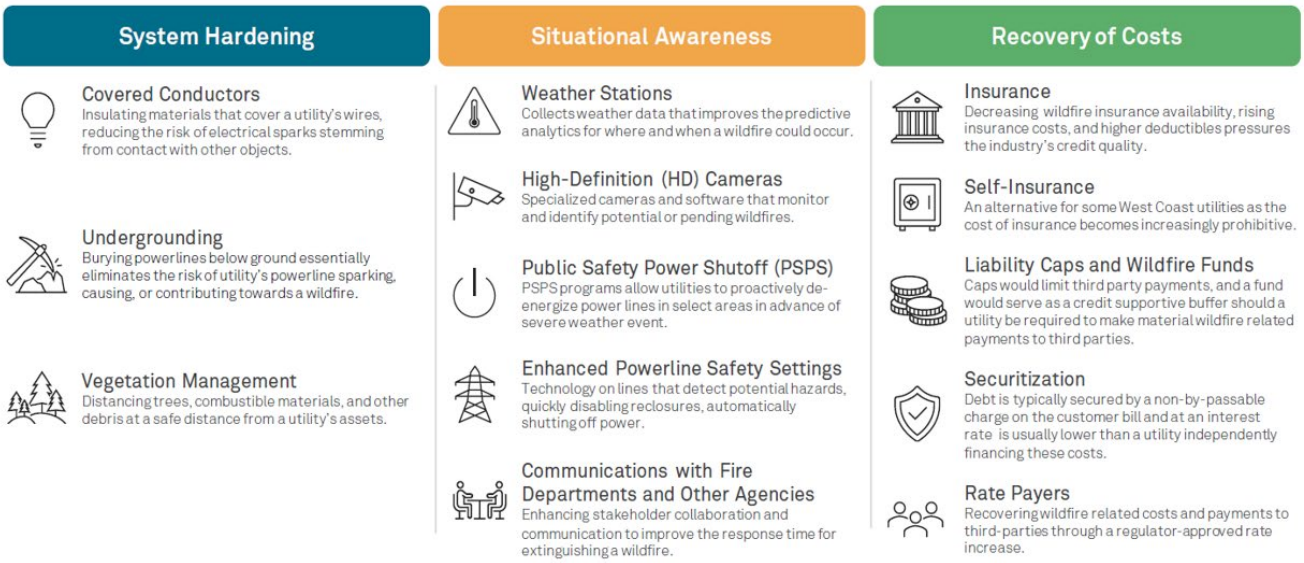
- Insurance is becoming more expensive and less available.
- It only requires a relatively small percentage of damaged or destroyed structures from a wildfire to have a material negative effect on a utility's credit quality.

- The utility industry's relatively high leveraged balance sheets and modest authorized ROEs are not a backstop for wildfire risk.
- Utilities that are impacted by a catastrophic wildfire and material third-party claims typically cannot implement other strategic initiatives.

Mitigation strategies. We expect the industry will develop plans that reduce damages, minimize litigation risk, and expand capabilities for cost recovery from wildfires. We believe the industry will be able to implement much of these strategies over the nearer term because most are not predicated on the development of new technologies or products. That said, because the industry operates in many different service territories and topographies, we expect each utility's mitigation plan will be customized to its unique exposure. Chart 21 represents an array of wildfire mitigation strategies that either have or are being implemented by many utilities across North America.

Chart 21

North American regulated utilities' wildfire mitigation efforts



Source: S&P Global Ratings.

Data centers will likely deliver a return to electricity sales growth. We expect electricity sales will increase at a CAGR of about 1.1%. This reflects our view that systematic and careful planning across the investor-owned utility sector will likely limit its realistic capability to grow at a substantially faster pace. In general, the expansion of utility infrastructure assets is a long-term planning process that requires permitting, siting, and regulatory approvals.

However, even a 1% CAGR for electricity sales will likely prove transformative for the utility industry, which has experienced flat sales growth over the past two decades. In particular, the growing number of data centers will allow the industry to spread its fixed costs over a wider base. We anticipate this will provide some cushion for the industry to effectively manage regulatory risk and maintain credit quality without necessarily requiring that every rate case order is highly supportive of credit quality.

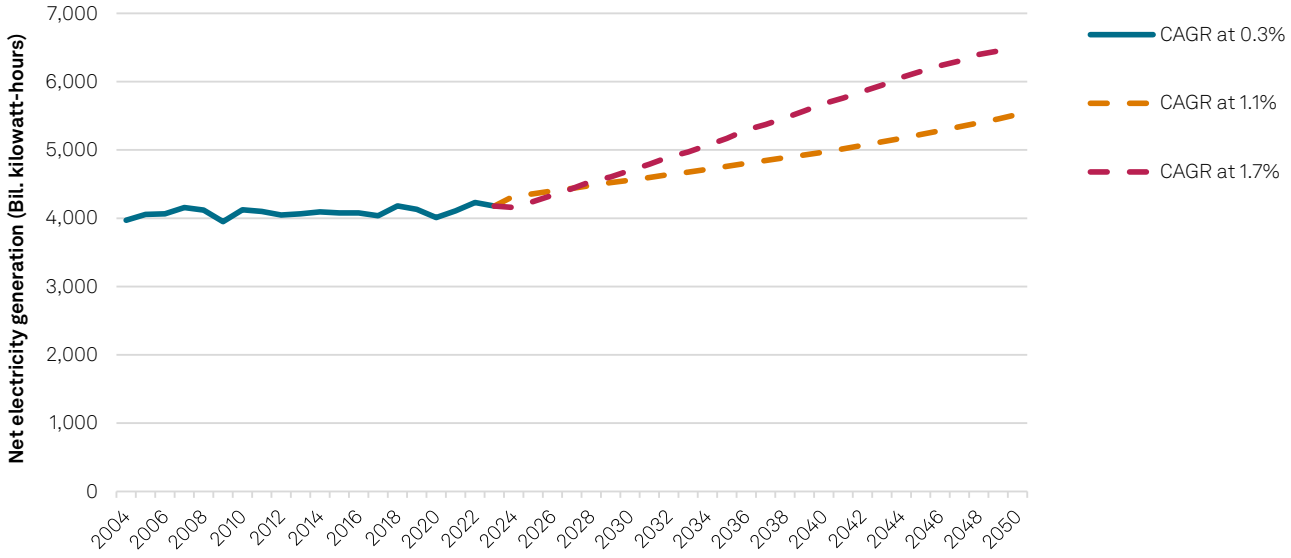
We also expect electric utilities' sales CAGR will be maintained over the longer term (see chart 22), which will support the industry's long-term credit quality. We expect growth in data center numbers will support most of the industry's growth through 2030. In the following decade,

increased onshoring of manufacturing and wider spread adoption of electric vehicles will also support growth.

Chart 22

Growth will be transformative for utilities used to stagnation

Electricity demand: U.S. regulated electric utilities



Data as of June 2024. CAGR—Compound annual growth rate. Sources: U.S. Energy Information Administration (historical and 1.1% CAGR) and S&P Global Commodity Insights (1.7% CAGR).

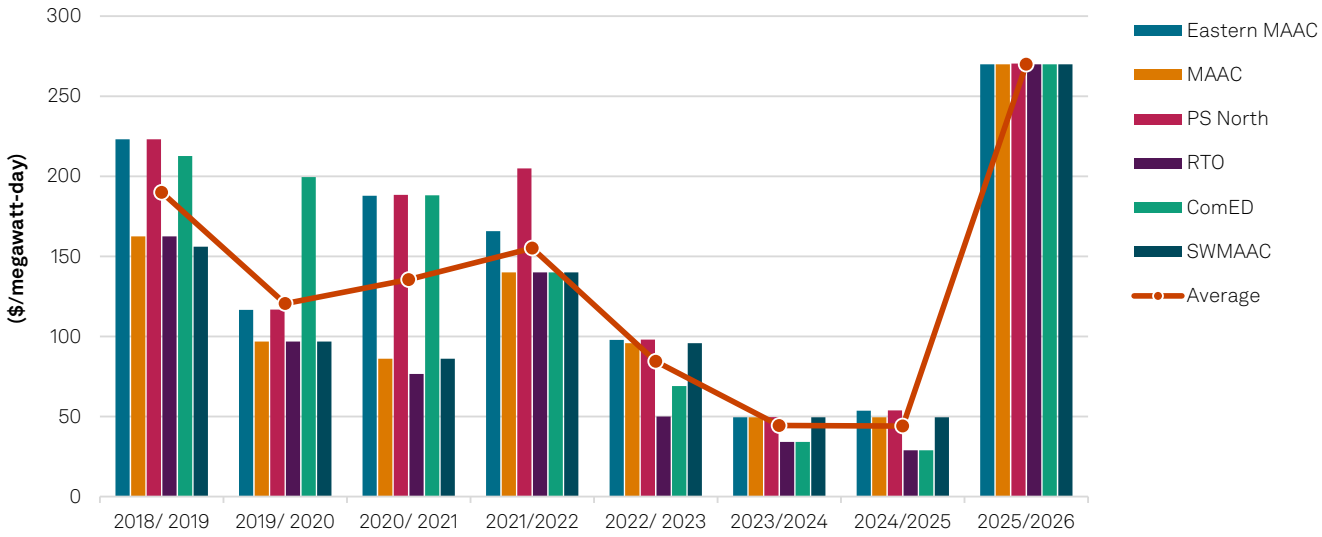
Data center credit risks. The industry must structure rates and contracts to ensure that the new data center customers are paying their share of electricity costs. Meeting the demands of relatively few, but very large, data center customers will require significant capital spending and infrastructure investments. If utilities assign a significant portion of data center-related infrastructure costs to existing residential customers, customer bills would increase. This, in turn, pressures regulators to limit rate case increases, which can negatively affect the industry's ability to effectively manage regulatory risk.

Therefore, we expect the increased capital spending needed to accommodate data center growth will be primarily recovered from data center customers over decades. Such a plan comes with risks. For example, a technological breakthrough that reduces or eliminates the need for data centers could shift the recovery of these long-term infrastructure investments onto residential customers.

Capacity prices. Pennsylvania-New Jersey-Maryland (PJM) Interconnection capacity prices materially increased during its latest capacity auction (see chart 23). These higher prices are directly passed onto customers, significantly increasing the electric utility bill. If these higher prices persist, it will likely result in higher customer complaints, pressuring regulators to limit increases to other areas of the customer bill that could potentially pressure a utility’s ability to effectively manage regulatory risk.

Chart 23

PJM capacity auction results



Source: PJM website.

U.S. Environmental Protection Agency (EPA). In 2024 the EPA released final rules aimed at reducing pollution from fossil fuel-fired power plants, which included carbon pollution standards and effluent limitation guidelines and standards for coal-fired power plants. These rules would have increased costs for utilities, specifically regarding the requirement to install carbon capture and sequestration or storage technology on coal-fired power plants intending to operate beyond 2039.

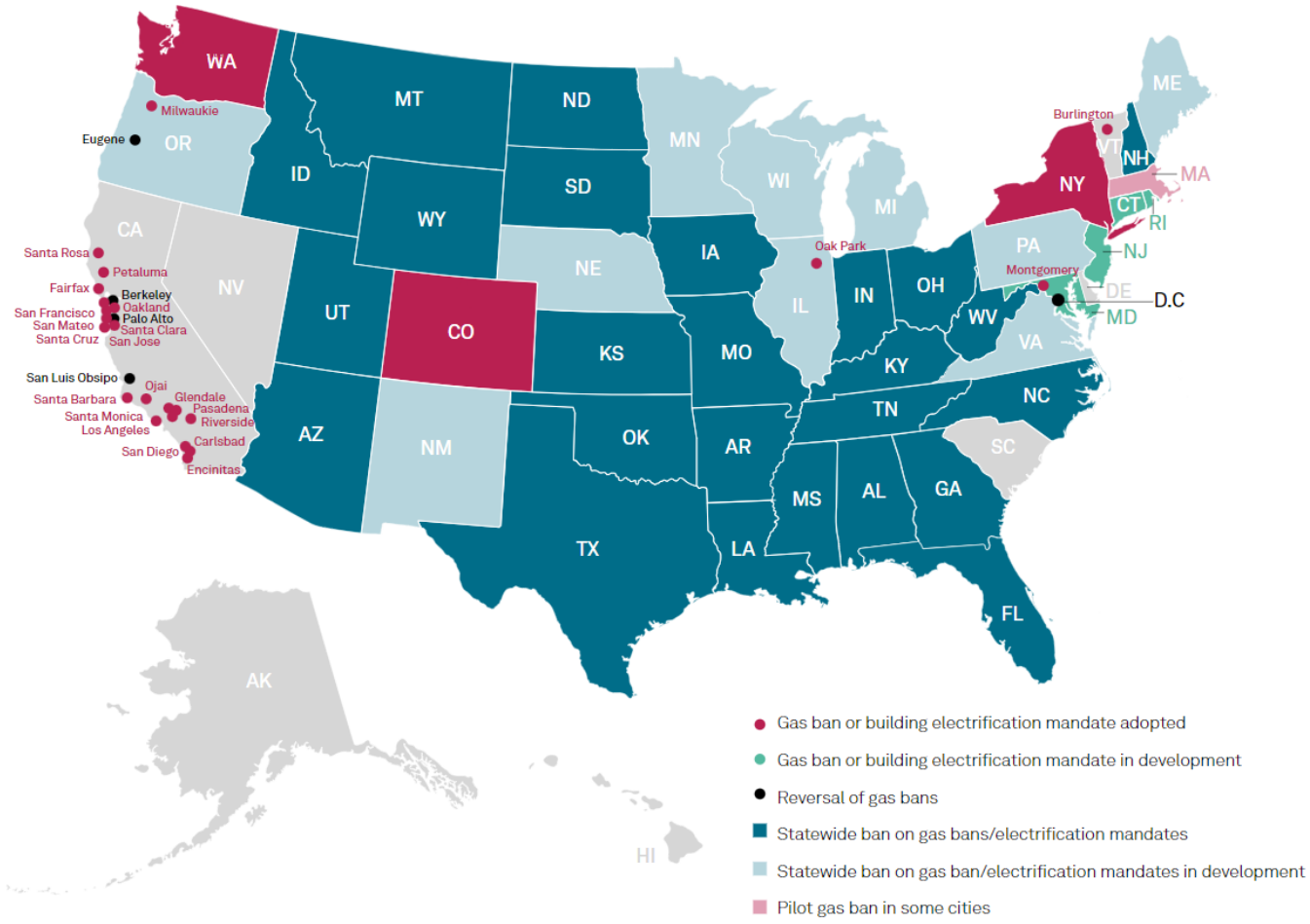
However, we note that the incoming U.S. presidential administration and Republican majority in congress could modify or eliminate these rules. We will monitor executive, legislative, or legal actions that could impact the industry's credit quality.

Full electrification. We expect the longer-term credit quality for some natural gas local distribution companies (LDC) will become increasingly challenging, especially for utilities that operate in warmer climates or whose cities or states have banned new gas connections, severely limiting the growth of natural gas LDCs (see chart 24). We expect this trend will also gradually persist through the passage of local city and town building codes that limit carbon and other emissions.

Offsetting some of this risk is that a majority of states have imposed a ban on the ban of new gas connections. Furthermore, gas LDCs are attempting to reduce their environmental risks by decreasing their carbon footprint through investing in renewable natural gas, blending hydrogen, and initiating various hydrogen infrastructure projects.

Chart 24

Gas bans and electrification mandates



Data as of April 26, 2024. *Municipalities shown on map are a subset of municipalities in the U.S. that have gas ban policies or electric reach codes in place. §Colorado and Burlington mandates target emissions requirements set out in respective laws or regulations. Source: S&P Global Commodity Insights.

Cybersecurity. While cybersecurity breaches against infrastructure assets have been relatively low, we believe the threat of cyberattacks remains high. The 2024 cybersecurity breach against American Water Works Co. Inc. underscores the risks. But the sector has heavily invested to limit this risk. We believe the sector's ongoing vigilance in this area is critical to maintaining credit quality.

Related Research

- Wildfire-Exposed U.S. Investor-Owned Utilities Face Increasing Credit Risks Without Comprehensive Solutions, Nov. 6, 2024
- Data Centers: Rapid Growth Creates Opportunities And Issues, Oct. 30, 2024
- Evolving Risks In North American Corporate Ratings: Climate Change, Oct. 29, 2024
- Data Centers: Welcome Electricity Growth Will Fall Short Of U.S. Data Center Demand, Oct. 22, 2024
- Energy Transition: U.S. Investor-Owned Regulated Electric Utilities Face Hurdles With The EPA's Finalized Rules For Fossil-Fueled Power Plants, Oct. 17, 2024
- North American Utility Regulatory Jurisdictions Update: Some Notable Developments, Sept. 24, 2024

Copyright 2025 © by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&Ps opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.spglobal.com/ratings (free of charge) and www.ratingsdirect.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.spglobal.com/ratings/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

S&P Global
Ratings

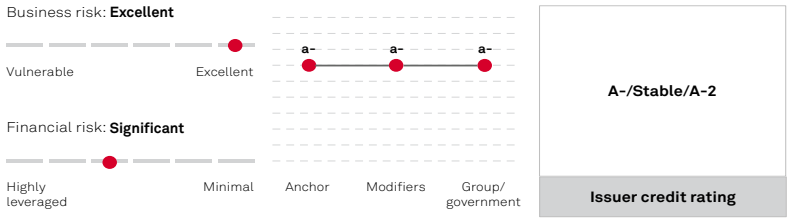
RatingsDirect®

Consumers Energy Co.

September 15, 2025202x

This report does not constitute a rating action.

Ratings Score Snapshot



Credit Highlights

Overview

Key strengths	Key risks
Monopolistic vertically integrated electric utility and gas distribution utility operations.	Lack of operating diversity that makes the company largely depend on Michigan regulators to sustain its credit quality.
Favorable regulatory construct in Michigan.	A 2024 third-party audit that indicated below-average system reliability as measured by system and customer average interruption indices.
Large customer base of 1.9 million electric and 1.8 million gas customers.	Negative discretionary cash flow, reflecting robust capital spending, which indicates external funding needs.
Insulated subsidiary of its parent, CMS Energy Corp., allowing us to rate it one notch above the parent.	Susceptibility to adverse weather events, including winter and convective storms.
	Exposure to cyclical commercial and industrial customers, which account for 45%-50% of electric utility revenues and 20%-25% of gas utility revenues.

We expect Consumers Energy Co. (CE) to continue to effectively manage its regulatory risk. We believe Michigan's regulatory construct is above average compared with peers because of the benefit of a streamlined 10-month rate case process. Other constructive rate mechanisms

Primary Contact

Ruchi Agrawal
Toronto
14372252983
ruchi.agrawal
@spglobal.com

Secondary Contact

Obioma Ugboaja, CFA
New York
1-212-438-7406
obie.ugboaja
@spglobal.com

Research Contributor

Pradeep arul Pragash
CRISIL Global Analytical Center,
an S&P Global Ratings affiliate
Chennai

include the use of forward test-years, power supply cost rider adjustments, and natural gas cost rider adjustments. These mechanisms help the company earn its allowed return on equity (ROE) and minimize regulatory lag.

CE is currently seeking rate increases in both electric and gas businesses. In June 2025 CE filed for a $460 million electric rate increase, based on a 10.25% ROE (previously approved 9.9%) and an equity layer of 42.94% (previously approved 41.73%). Separately, CE is seeking a $217 million rate increase in its gas business. This is premised on a ROE of 10.25% (previously approved 9.9%) and an equity layer of 42.58% (previously approved 41.48%).

We continue to monitor related developments. We will also continue to monitor the company's performance in light of a 2024 third-party audit which indicated a below-average system reliability assessment for CE as measured by system and customer average interruption indices.

Table 1

Consumers Energy Co. rate-case details

	Electric rate case		Gas rate case	
	Present case: Requested by CE 6/2/2025	Previous case: Authorized by MPSC 3/21/2025	Present case: CE revised request 6/25/2025	Previous case: Authorized by MPSC 7/23/2024
Rate change amount (mil. $; excluding deferrals)	438.8	153.8	217.1	35.0
Return on equity (%)	10.25	9.90	10.25	9.90
Common equity to total capital (%)	42.94	41.73	42.58	41.48

MPSC--Michigan Public Service Commission. N.A.--Not available. Sources: Company, S&P Capital IQ Pro.

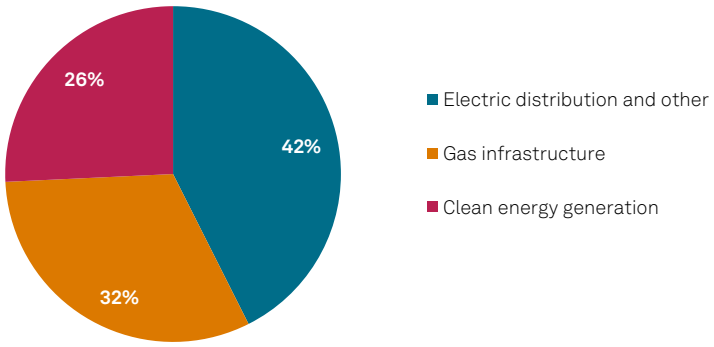
The company's elevated capital spending plan prioritizes infrastructure upgrades and its energy transition plans. Over the next five years, CE plans to invest $20 billion to maintain and upgrade its electric distribution systems and gas infrastructure, as well as reduce its carbon emissions. This includes $8.5 billion for electric distribution upgrades--such as strengthening circuits, replacing poles, and connecting clean energy sources--and $6.3 billion for gas infrastructure improvements to enhance safety, sustain deliverability, and cut methane emissions. Additionally, $5.2 billion will fund clean generation investments in wind, solar, and hydroelectric resources.

The company also intends to reduce its carbon exposure in line with its Integrated Resource Plan (IRP), which the MPSC approved in June 2022. The plan includes a goal to reach net-zero carbon emission by 2040 and a goal to retire CE's owned coal-fired generation plants in 2025. However, on June 1, 2025, the US Department of Energy (DOE) ordered CE to extend the retirement of its coal fired J.H. Campbell power plant by 90 days. Furthermore, the company's IRP targets a gradual reduction in its gas-fired generation dependence after 2025. The company has also announced a net-zero greenhouse gas emissions target by 2050 and a zero-methane emissions target by 2030 for its gas distribution system.

Consumers Energy Co.

Chart 1

CE's five-year investment plan (2025-2029)



Source: Company fillings.

Copyright © 2025 by Standard & Poor's Financial Services LLC. All rights reserved.

A portion of CE's service territory has a relatively high wildfire risk classification from the Federal Emergency Management Agency (FEMA). This area is contiguous and has a population of 10,000-15,000 people, 7,000-9,000 housing units (about 40%-60% occupied), and median home values of $100,000-$150,000, according to 2024 U.S. census data. Part of the company's capital spending plan is focused on smart electric systems and anticipates pursuing further undergrounding pilots, with the potential to underground up to 400 miles of electric lines per year, starting in 2027, to address some of its climate-related risks.

While CE has not been found culpable for any wildfires in its service territory and is not currently party to any material litigation, we will continue to monitor the company's ability to effectively manage its risks associated with adverse weather events.

We expect CE's credit measures to remain within the significant financial risk profile category. Throughout our base-case scenario, we expect funds from operations (FFO) to debt of 17%-20%.

Outlook

The stable rating outlook on CE reflects our expectation that management will focus on its core utility operations and reach constructive regulatory outcomes to avoid increasing business risk. We expect CE will maintain stand-alone financial measures consistent with the middle of the range for its financial risk profile category, specifically FFO to debt of 17%-20%.

Downside scenario

We could lower our rating on CE if:

- The stand-alone financial measures weaken such that FFO to debt weakens to consistently below 15%; or
- We lower our rating on parent CMS Energy.

Upside scenario

Although less likely, we could raise our rating on CE if:

- We raise our rating on CMS Energy; and
- CE's stand-alone financial measures improve, reflecting FFO to debt consistently above 20%.

Our Base-Case Scenario

Assumptions

- Consistent rate case filings and use of existing regulatory mechanisms;
- Elevated capital spending over the forecast period averaging $4 billion annually;
- Annual dividends averaging $1 billion-$1.2 billion annually;
- Equity infusion by the parent to maintain the company's capital structure;
- All debt maturities refinanced; and
- Continued negative discretionary cash flow financed in a balanced manner to support the regulated capital structure.

Key metrics

Period ending	Dec-31-2022	Dec-31-2023	Dec-31-2024	Dec-31-2025	Dec-31-2026	Dec-31-2027
(Mil. $)	2022a	2023a	2024a	2025e	2026f	2027f
Adjusted ratios						
Debt/EBITDA (x)	4.6	4.6	4.6	4-5	4-5	4-5
FFO/debt (%)	18.7	17.6	17.9	17-19	18-20	18-20
FFO cash interest coverage (x)	7.0	5.4	5.5	5-6	5-6	5-6

a--Actual. e--Estimate. f--Forecast. FFO--Funds from operations.

Company Description

CE is a subsidiary of CMS Energy and operates as an electric and gas utility serving about 1.9 million electric and 1.8 million natural gas customers in Michigan. CE's electric business operates as a vertically integrated utility that generates, distributes, and sells electricity. The electric utility sources 25%-30% of its generation from purchased power, rather than from its own plants. The company also sells, stores, and transports natural gas. It is based in Jackson, Mich. CE contributes to about 95% of CMS' EBITDA.

Peer Comparison

Consumers Energy Co.--Peer Comparisons

	Consumers Energy Co.	DTE Electric Co.	Wisconsin Power & Light Co.	Wisconsin Electric Power Co.	Consolidated Edison Co. of New York Inc.
Foreign currency issuer credit rating	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2
Local currency issuer credit rating	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2
Period	Annual	Annual	Annual	Annual	Annual
Period ending	2024-12-31	2024-12-31	2024-12-31	2024-12-31	2024-12-31
Mil.	$	$	$	$	$
Revenue	7,076	6,166	1,845	3,980	14,129
EBITDA	2,692	3,078	870	1,859	4,748
Funds from operations (FFO)	2,218	2,840	712	1,219	3,564
Interest	551	696	176	275	1,207
Cash interest paid	493	469	172	576	1,121
Operating cash flow (OCF)	2,365	2,725	752	1,369	3,304
Capital expenditure	2,854	3,604	819	1,546	4,398
Free operating cash flow (FOCF)	(489)	(879)	(67)	(177)	(1,094)
Discretionary cash flow (DCF)	(1,605)	(1,655)	(263)	(417)	(2,167)
Cash and short-term investments	44	11	51	0	1,254
Gross available cash	44	11	51	0	1,254
Debt	12,403	13,266	4,025	6,163	25,253
Equity	11,413	11,154	4,101	5,492	19,971
EBITDA margin (%)	38.0	49.9	47.2	46.7	33.6
Return on capital (%)	6.9	7.3	6.8	11.7	6.2
EBITDA interest coverage (x)	4.9	4.4	4.9	6.8	3.9
FFO cash interest coverage (x)	5.5	7.1	5.1	3.1	4.2
Debt/EBITDA (x)	4.6	4.3	4.6	3.3	5.3
FFO/debt (%)	17.9	21.4	17.7	19.8	14.1
OCF/debt (%)	19.1	20.5	18.7	22.2	13.1
FOCF/debt (%)	(3.9)	(6.6)	(1.7)	(2.9)	(4.3)
DCF/debt (%)	(12.9)	(12.5)	(6.5)	(6.8)	(8.6)

Business Risk

Our assessment of CE's business risk profile reflects the company's monopolistic electric and natural gas utility operations and effective management of regulatory risk. The MPSC regulates

CE, and we view the regulatory environment in Michigan as above average compared with peers. This is demonstrated through the company's use of forward-looking test years and a streamlined 10-month rate case process. Furthermore, CE benefits from other constructive rate mechanisms, such as the power supply cost recovery adjustment rider, and the gas cost recovery adjustment rider.

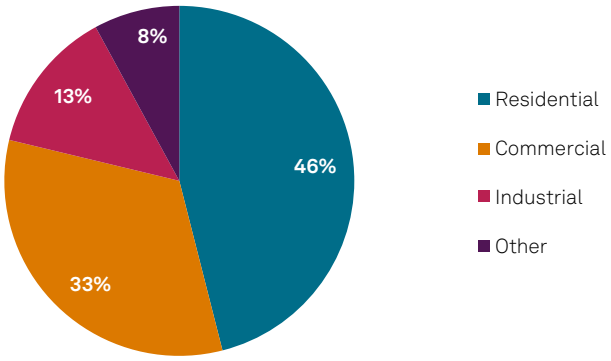
In 2023, the state passed a law that allows electric utilities in the state to earn a return equal to their pre-tax weighted average cost of capital on payments made under new purchased-power agreements. These constructive rate mechanisms enable CE to generally earn its allowed ROE and minimize regulatory lag.

The company actively manages its gas supply to reduce price volatility and support its gas system operations by injecting natural gas into storage during the summer months for use during the winter months. During 2024, 47% of the natural gas supplied to all customers during the winter months came from storage. Additionally, CE's large customer base of about 1.9 million electric customers and about 1.8 million natural gas customers throughout Michigan bolsters the company's business risk profile.

That said, the company’s service territory is susceptible to localized storms and adverse weather conditions. It is also exposed to cyclical commercial and industrial customers for its electric operations, which contribute about 45%-50% of the company’s electric revenues. Furthermore a 2024 third-party audit indicated below-average system reliability assessment for CE as measured by system and customer average interruption indices, which we will continue to monitor.

Chart 2

CE's 2024 electrical revenue by customer class



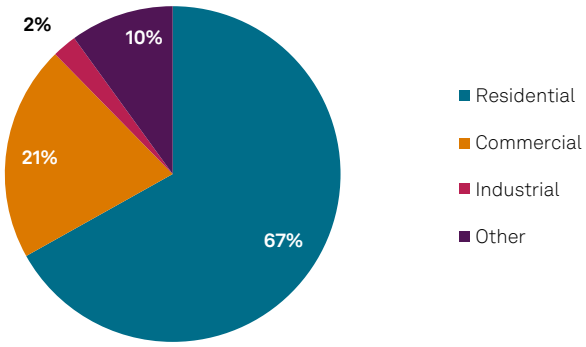
Source: Company fillings.

Copyright © 2025 by Standard & Poor’s Financial Services LLC. All rights reserved.

Consumers Energy Co.

Chart 3

CE's 2024 gas revenue by customer class



Source: Company fillings.

Copyright © 2025 by Standard & Poor's Financial Services LLC. All rights reserved.

Financial Risk

We assess CE's financial measures using our medial volatility table, reflecting the company's lower risk regulated electric and gas utility operations and its effective management of regulatory risk. Under our base-case scenario, we expect:

- Elevated capital spending averaging about $4.0 billion annually over the forecast period;
- Dividends averaging $1.0 billion-$1.2 billion annually;
- Equity infusion by the parent to maintain the company's capital structure;
- Continued use of existing regulatory mechanisms;
- Negative discretionary cash flow; and
- The refinancing of all debt maturities.

As such, we anticipate financial measures to be consistent with the middle of the range for the significant financial risk category. Specifically, we forecast FFO to debt of 17%-20%.

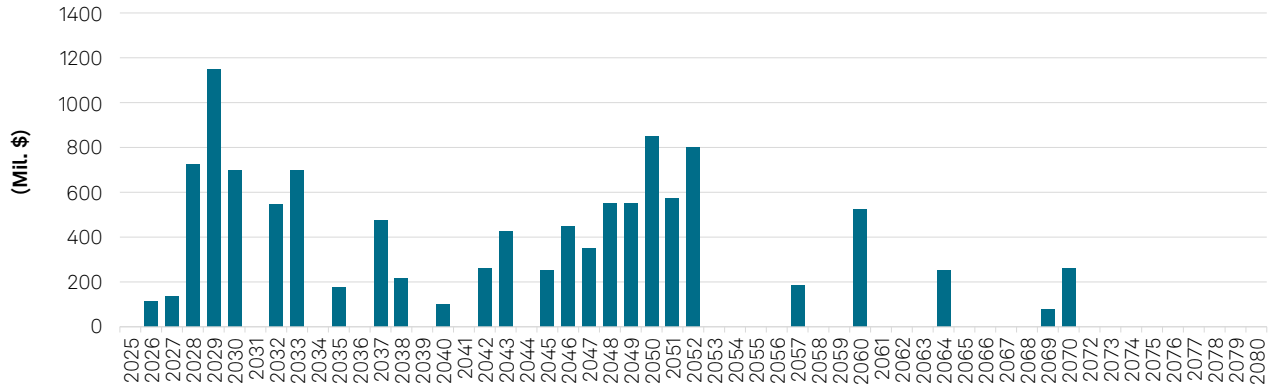
Consumers Energy Co.

Debt maturities

Chart 4

CE's debt maturities

First mortgage bonds as of December 2024



Source: Company fillings.

Copyright © 2025 by Standard & Poor's Financial Services LLC. All rights reserved.

Consumers Energy Co.--Financial Summary

Period ending	Dec-31-2019	Dec-31-2020	Dec-31-2021	Dec-31-2022	Dec-31-2023	Dec-31-2024
Reporting period	2019a	2020a	2021a	2022a	2023a	2024a
Display currency (mil.)	$	$	$	$	$	$
Revenues	6,341	6,155	6,987	8,117	7,129	7,076
EBITDA	2,252	2,392	2,406	2,397	2,485	2,692
Funds from operations (FFO)	1,823	1,968	2,040	2,057	2,000	2,218
Interest expense	335	393	381	375	496	551
Cash interest paid	296	373	376	343	454	493
Operating cash flow (OCF)	1,688	1,265	2,013	984	2,415	2,365
Capital expenditure	2,191	2,254	2,136	2,275	2,279	2,854
Free operating cash flow (FOCF)	(502)	(989)	(124)	(1,291)	136	(489)
Discretionary cash flow (DCF)	(1,094)	(1,628)	(847)	(2,061)	(560)	(1,605)
Cash and short-term investments	11	20	22	43	35	44
Gross available cash	11	20	22	43	35	44
Debt	8,238	9,113	9,415	11,024	11,371	12,403

Consumers Energy Co.

Consumers Energy Co.--Financial Summary

Common equity	7,737	8,556	9,261	10,137	10,782	11,413
Adjusted ratios						
EBITDA margin (%)	35.5	38.9	34.4	29.5	34.9	38.0
Return on capital (%)	7.7	7.5	6.9	6.3	6.2	6.9
EBITDA interest coverage (x)	6.7	6.1	6.3	6.4	5.0	4.9
FFO cash interest coverage (x)	7.2	6.3	6.4	7.0	5.4	5.5
Debt/EBITDA (x)	3.7	3.8	3.9	4.6	4.6	4.6
FFO/debt (%)	22.1	21.6	21.7	18.7	17.6	17.9
OCF/debt (%)	20.5	13.9	21.4	8.9	21.2	19.1
FOCF/debt (%)	(6.1)	(10.9)	(1.3)	(11.7)	1.2	(3.9)
DCF/debt (%)	(13.3)	(17.9)	(9.0)	(18.7)	(4.9)	(12.9)

Reconciliation Of Consumers Energy Co. Reported Amounts With S&P Global Adjusted Amounts (Mil. $)

	Debt	Shareholder Equity	Revenue	EBITDA	Operating income	Interest expense	S&PGR adjusted EBITDA	Operating cash flow	Dividends	Capital expenditure
Financial year	Dec-31-2024									
Company reported amounts	12,162	11,431	7,200	2,706	1,515	518	2,692	2,446	797	2,842
Cash taxes paid	-	-	-	-	-	-	19	-	-	-
Cash interest paid	-	-	-	-	-	-	(493)	-	-	-
Lease liabilities	69	-	-	-	-	-	-	-	-	-
Operating leases	-	-	-	5	1	1	(1)	4	-	-
Intermediate hybrids (equity)	19	(19)	-	-	-	1	(1)	(1)	(1)	-
Accessible cash and liquid investments	(44)	-	-	-	-	-	-	-	-	-
Capitalized interest	-	-	-	-	-	13	(13)	(13)	-	(13)
Share-based compensation expense	-	-	-	25	-	-	-	-	-	-

Consumers Energy Co.

Reconciliation Of Consumers Energy Co. Reported Amounts With S&P Global Adjusted Amounts (Mil. $)

	Debt	Shareholder Equity	Revenue	EBITDA	Operating income	Interest expense	S&PGR adjusted EBITDA	Operating cash flow	Dividends	Capital expenditure
Securitized stranded costs	(700)	-	(124)	(124)	(37)	(37)	37	(87)	-	-
Power purchase agreements	415	-	-	47	22	22	(22)	25	-	25
Asset-retirement obligations	548	-	-	33	33	33	-	-	-	-
Nonoperating income (expense)	-	-	-	-	55	-	-	-	-	-
Reclassification of interest and dividend cash flows	-	-	-	-	-	-	-	(9)	-	-
Debt: other	(65)	-	-	-	-	-	-	-	-	-
Total adjustments	241	(19)	(124)	(14)	74	33	(474)	(81)	(1)	12
S&P Global Ratings adjusted	**Debt**	**Equity**	**Revenue**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from Operations**	**Operating cash flow**	**Dividends**	**Capital expenditure**
	12,403	11,413	7,076	2,692	1,589	551	2,218	2,365	796	2,854

Liquidity

We assess CE's liquidity as adequate, with sources covering uses by 1.1x over the coming 12 months, and that its sources cover uses even if forecast consolidated EBITDA declines 10%. We believe the supportive regulatory framework provides manageable cash flow stability for the company even in times of economic stress, supporting our use of slightly lower thresholds to assess liquidity.

In addition, CE can absorb high-impact, low-probability events, in our view, as the company maintains about $1.1 billion in committed credit facilities through 2027, and can likely lower its capital spending (averaging $2.8 billion-$3.0 billion annually) during stressful periods, indicating a limited need for refinancing under such conditions. CE can borrow $500 million from parent CMS Energy as per its renewed credit agreement in December 2024.

Furthermore, our assessment reflects the company's prudent risk management and sound relationships with its banking group. Overall, we believe that the company can withstand adverse market circumstances over the next 12 months with sufficient liquidity to meet its obligations. As on June 30, 2025, CE had about $570 million of debt maturities in the next 12 months, and we

expect the company to proactively address these maturities well in advance of their scheduled due dates.

Principal liquidity sources

- Estimated cash FFO of about $2.8 billion;
- Credit facilities of about $1.1 billion; and
- Available cash of about $600 million as on June 30, 2025.

Principal liquidity uses

- Debt maturities of about $570 million over the next 12 months as on June 30, 2025;
- Working capital outflows of about $170 million; and
- Estimated maintenance capital spending of about $3.1 billion; and
- Dividends of about $1 billion.

Covenant Analysis

Requirements

CE's credit agreements contain a covenant for CE to maintain debt to capitalization below 65%.

Compliance expectations

In our base-case scenario, we expect CE to remain compliant with this covenant and have sufficient headroom.

Environmental, Social, And Governance

Environmental factors are a negative consideration in our credit rating analysis of CE. The company's use of fossil fuel generation sources exposes it to heightened energy transition risks. The capacity of its generation portfolio comprises about 35% natural gas, 19% coal, 17% hydroelectric, 17% oil and gas, and 12% wind and solar as of Dec. 31, 2024. The company's accelerated coal retirement plan for its utility partially mitigates this risk. It includes a goal to be coal-free in owned generation in 2025 and have 60% of its utility's capacity portfolio sourced from clean energy resources by 2030 and 100% by 2040.

Furthermore, the company experienced heightened winter and convective storm activity in recent years.

While CE has not been found culpable for any wildfires in its service territory and is not currently party to litigation concerning these matters, a portion of its service territory has a relatively high wildfire risk classification from FEMA. This area is contiguous and has a population of about 10,000-15,000 inhabitants, 7,000-9,000 housing units, of which about 40%-60% are occupied, and median home values of $100,000-$150,000 according to 2024 U.S. Census data. Part of the company's capital spending plan is focused on smart electric systems and anticipates pursuing further undergrounding pilots, with the potential to underground up to 400 miles of electric lines per year starting in 2027. We will continue to monitor the company's ability to effectively manage its risks associated with adverse weather events.

Group Influence

Under our group rating methodology, we consider CMS Energy to be the parent of the group with a group credit profile (GCP) of 'bbb+'. We assess CE as a core subsidiary of CMS Energy largely because we view the utility as integral to the group's identity, highly unlikely to be sold and having a strong commitment from management, given the company's emphasis on maintaining the size of the regulated utility operations relative to the nonutility businesses.

Given CE's stand-alone credit profile, and because CE is operationally separate and maintains sufficient insulating measures, we rate the utility one notch above the GCP. Some of the key insulating measures are:

- CE is a separate and stand-alone legal entity that functions independently (both financially and operationally), files its own rate cases, and is independently regulated by MPSC;
- CE has its own records and books, including stand-alone audited financial statements;
- The utility has its own funding arrangements, including issuing its own long-term debt, and it has a separate committed credit facility to cover its short-term funding needs;
- CE does not comingle funds, assets, or cash flow with parent CMS Energy or its other subsidiaries, and it does not participate in a money pool;
- We believe there is a strong economic basis for CMS Energy to preserve CE's credit strength, reflecting CE's low-risk, profitable, and regulated utility business model. CE is also a significant portion of CMS Energy, accounting for about 95% of the consolidated company; and
- There are no cross-default provisions between parent CMS Energy and CE that could directly lead to a default at the utility.

Issue Ratings--Subordination Risk Analysis

Capital structure

- As on Dec. 31, 2024, CE's capital structure comprised about $12.2 billion of long-term debt, including about $11.4 billion in first-mortgage bonds (FMBs), $700 million of securitized debt (all of which is deconsolidated from our credit metrics), and about $110 million of tax-exempt revenue bonds.

Analytical conclusions

- We rate the company's senior unsecured debt 'A-', in-line with the long-term issuer credit rating on CE as the rated issuances are senior unsecured debt issued by a qualifying investment grade utility as per our criteria.
- We base our 'A-2' short-term rating on our 'A-' issuer credit rating.

Issue Ratings--Recovery Analysis

Key analytical factors

- We assign recovery ratings to FMBs issued by U.S. utilities, which can result in issue ratings being notched above an issuer credit rating on a utility, depending on the rating category and

the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of secured utility bonds that qualify for a recovery rating as defined in our criteria.

- CE's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

Rating Component Scores	
Foreign currency issuer credit rating	**A-/Stable/A-2**
Local currency issuer credit rating	**A-/Stable/A-2**
Business risk	**Excellent**
Country risk	Very Low
Industry risk	Very Low
Competitive position	Excellent
Financial risk	**Significant**
Cash flow/leverage	Significant
Anchor	**a-**
Modifiers	
Diversification/portfolio effect	Neutral (no impact)
Capital structure	Neutral (no impact)
Financial policy	Neutral (no impact)
Liquidity	Adequate (no impact)
Management and governance	Neutral (no impact)
Comparable rating analysis	Neutral (no impact)
Stand-alone credit profile	**a-**
Group credit profile	**BBB+**
Entity status within group	**Core, Insulated (no change to SACP)**

Related Criteria

- Criteria | Corporates | General: Sector-Specific Corporate Methodology, July 7, 2025
- General Criteria: Hybrid Capital: Methodology And Assumptions, Feb. 10, 2025
- Criteria | Corporates | General: Corporate Methodology, Jan. 7, 2024
- Criteria | Corporates | General: Methodology: Management And Governance Credit Factors For Corporate Entities, Jan. 7, 2024
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017

Consumers Energy Co.

- Criteria | Corporates | General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings Detail (as of September 15, 2025)*

Consumers Energy Co.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
Issuer Credit Ratings History	
30-Oct-2019	A-/Stable/A-2
03-Dec-2014	BBB+/Stable/A-2
11-Sep-2014	BBB/Positive/A-2
Related Entities	
CMS Energy Corp.	
Issuer Credit Rating	BBB+/Stable/A-2
Junior Subordinated	BBB-
Preferred Stock	BBB-
Senior Unsecured	BBB

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

Consumers Energy Co.

Copyright © 2025 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Some of the Content may have been created with the assistance of an artificial intelligence (AI) tool. Published Content created or processed using AI is composed, reviewed, edited, and approved by S&P personnel.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.spglobal.com/ratings (free of charge), and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.spglobal.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

MOODY'S RATINGS

Infrastructure and Project Finance

CREDIT OPINION
29 May 2025

Update

Send Your Feedback

RATINGS

Consumers Energy Company

Domicile	Jackson, Michigan, United States
Long Term Rating	(P)A3
Type	Senior Unsec. Shelf - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Jairo Chung +1.212.553.5123
VP-Sr Credit Officer
jairo.chung@moodys.com

Lily Cochran +1.212.553.4795
Ratings Associate
lily.cochran@moodys.com

Michael G. Haggarty +1.212.553.7172
Associate Managing Director
michael.haggarty@moodys.com

Jim Hempstead +1.212.553.4318
MD - Global Infrastructure & Cyber Risk
james.hempstead@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Consumers Energy Company

Update to credit analysis

Summary

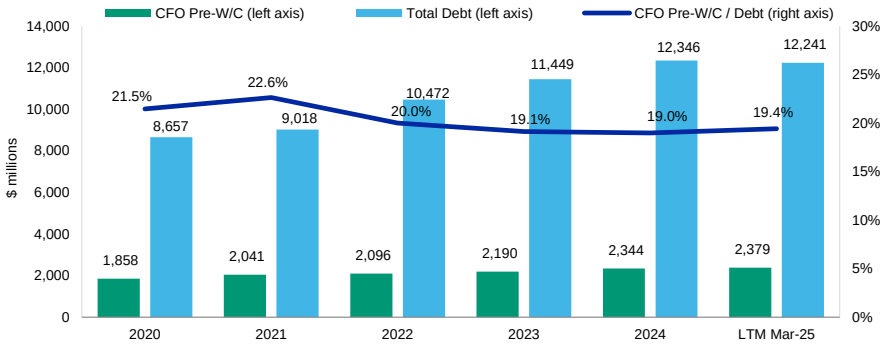
Consumers Energy Company's (Consumers Energy) credit profile reflects its business risk as a vertically integrated electric and gas utility operating in the credit supportive regulatory environment of Michigan. We expect the utility to maintain a relatively stable financial profile with cash flow from operations before changes in working capital (CFO pre-WC) to debt averaging around 19-21%, including an adjustment to exclude securitization debt, over the next 2-3 years.

At the end of the 31 March 2025, Consumers Energy's CFO pre-WC to debt ratio was 20.5%, including the adjustment to exclude securitization bonds. The company will continue to execute its robust capital investment plan and have an active regulatory calendar over this period. Based on the Michigan regulatory framework, we expect the utility to recover its investment costs on a timely basis and to earn an appropriate return on its investments.

Consumers Energy's stand-alone financial performance has historically been affected by the significant debt at its parent company CMS Energy Corporation (CMS, Baa2 stable). However, CMS has made notable progress in reducing the percentage of parent debt in its capital structure in recent years. We now estimate that the percentage of parent debt will remain below 25% of total consolidated debt. All of Consumer Energy's outstanding debt obligations are secured.

Exhibit 1

Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
When we adjust the total debt to exclude securitization debt, Consumers Energy's CFO pre-WC/debt would be 20.5%, 20.1% and 20.5% in 2023, 2024 and LTM ending 31 March 2025, respectively.
Source: Moody's Financial Metrics™

Credit strengths

» Credit supportive regulatory environment in Michigan

» Transparent and timely cost recovery

» Stable financial profile

Credit challenges

» Robust capital investment plan

» Maintaining regulatory support for these capital investments

» Lack of geographic and regulatory diversity with single state service territory

Rating outlook

The stable outlook reflects our expectation that financial metrics will remain stable and that Consumers Energy will continue to benefit from a consistent and generally credit supportive regulatory environment. The stable outlook also incorporates our view that Consumers Energy will maintain prudent financial policies while managing through its robust investment cycle and that debt levels at the parent will not increase materially.

Factors that could lead to upgrade

A rating upgrade could be considered if credit metrics improve such that CFO pre-WC to debt is above 21% on a sustained basis. In addition, if the Michigan regulatory framework becomes even more formulaic, transparent or timely with its suite of cost recovery mechanisms for Consumers Energy, a rating upgrade could be possible.

Factors that could lead to downgrade

A rating downgrade could be considered if there is a material deterioration in the credit supportiveness of the Michigan regulatory environment or if the company's CFO pre-WC to debt ratio declines below 18% on a sustained basis.

Key indicators

Exhibit 2

Consumers Energy Company

	2020	2021	2022	2023	2024	LTM Mar-25
CFO Pre-W/C + Interest / Interest	6.6x	7.5x	7.1x	5.8x	5.5x	5.5x
CFO Pre-W/C / Debt	21.5%	22.6%	20.0%	19.1%	19.0%	19.4%
CFO Pre-W/C – Dividends / Debt	14.1%	14.6%	12.7%	13.0%	12.5%	12.9%
Debt / Capitalization	44.9%	43.7%	45.1%	45.8%	46.0%	45.3%

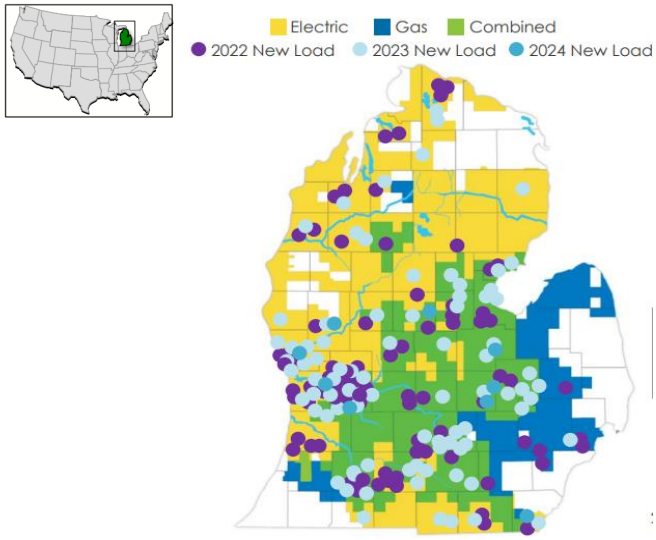
All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Credit metrics included in the exhibit include securitization bonds. When we adjust the total debt to exclude securitization debt, Consumers Energy's CFO pre-WC/debt would be 20.5%, 20.1% and 20.5% in 2023, 2024 and LTM ending 31 March 2025, respectively.
Source: Moody's Financial Metrics™

Profile

Consumers Energy is a vertically integrated electric and gas utility serving approximately 1.9 million electric and 1.8 million gas customers in the state of Michigan with an average rate base of $26 billion at the end of 2024. Consumers Energy's electric operations account for approximately two thirds of its revenue, cash flow and asset base. The utility is a wholly-owned subsidiary of CMS and, as the primary subsidiary of the parent company, it represents over 95% of CMS's consolidated earnings and cash flows. In addition to Consumers Energy, CMS has a subsidiary called NorthStar Clean Energy, a non-utility domestic independent power producer and marketer.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

Exhibit 3
Consumers Energy's Service Territory



Source: Company filings

Detailed credit considerations

Consumers Energy Company's ESG credit impact score is CIS-3

We view the regulatory environment in Michigan to be credit supportive. Consumers Energy is regulated by the Michigan Public Service Commission (MPSC) and we view the regulatory framework in Michigan to be more credit supportive than most other states. The state of Michigan has a long history of enacting legislations that are supportive of utility investments in the state. As a result of 2008 and 2016 energy legislation in Michigan, the regulatory framework has been streamlined, improving both the rate case process and the timeliness of cost recovery. The 2016 legislation provided additional assurance of utility investment recovery by expanding the certificate of necessity (CON) process, which had already included pre-construction approval for large generating resources, into an integrated resource planning (IRP) process. The IRP process considers a wide range of factors including fuel costs, demand forecasts, resource adequacy, competitive pricing, environmental mandates and transmission options before the construction of major projects.

The latest energy legislation enacted in Michigan (2023 Energy Law) laid out the state's renewable energy standards. Under the new law, renewable energy standards were raised to 50% by 2030 and 60% by 2035 from the previous 15% by 2021 requirement. It also set a clean energy standard of 80% by 2035 and 100% by 2040. Under the law, zero to low-carbon emitting sources, such as nuclear generation and natural gas generation with carbon capture, are considered clean energy sources. Along with these new standards, the new legislation expanded the authority of the MPSC to oversee their implementation. Consumers Energy filed its Clean Energy Plan in November 2024 and will file an update in 2026. Given the existing regulatory framework in Michigan, we expect the company's collaborative dialogue with both stakeholders and regulator to continue under the new legislation.

In its filing in November 2024, Consumers Energy proposed 9 GW of purchased and owned solar energy resources and up to 2.8 GW of new, competitive bid wind capacity. Under its plan, Consumers Energy will retire all of its coal-fired power plants. While the company was set to retire its last remaining coal-fired power plant, J.H. Campbell power plant, on 1 June 2025, the US Department of Energy (DOE) issued an executive order to extend the retirement of this power plant by 90 days. It is expected that this power plant will be in service through mid-August 2025.

The utility purchased the 1.2 GW natural gas fired power plant called Covert in May 2023 in anticipation of the coal-fired generating capacity retirement. The company also contracted to purchase 400 MW of battery storage capacity to ensure system reliability. As a result of the settlement agreement related to Consumers Energy IRP, the utility is allowed to record approximately $1.3 billion of the remaining book value of these power plants as a regulatory asset and earn a 9% return on equity (ROE) through the remaining life. Instead of securitizing the remaining book value, the settlement will minimize the impact of the accelerated coal retirements on

Consumers Energy's credit metrics. We view this settlement to be constructive and evidence of continued credit supportiveness in Michigan.

Consumers Energy Company's ESG credit impact score is CIS-3

Michigan utilities benefit from numerous formulaic rate adjustment mechanisms that provide a high degree of cash flow stability and assurance of recovery. For example, Consumers Energy has forward-looking Power Supply Cost Recovery (PSCR) and Gas Cost Recovery (GCR) mechanisms that are intended to ensure that it can recover prudently incurred power and gas supply costs. The PSCR covers fuel and purchased power costs as well as transmission and emission allowance costs. Differences between actual and forecast costs are deferred for recovery or refunded in the following year. The PSCR is a surcharge mechanism and provides a degree of base rate and cash flow stability, a credit positive. The GCR mechanism may be adjusted monthly within a capped range to minimize over/under recoveries, although interim gas inventory buildup could substantially increase the company's working capital financing when gas prices increase sharply.

Gas utilities in the state also benefit from programs designed to assure recovery of needed infrastructure improvements. The company's enhanced infrastructure replacement program (EIRP) is a MPSC authorized 25-year incremental investment program to upgrade natural gas infrastructure, including the replacement of 2,700 miles of natural gas distribution and service pipelines with more durable material.

Consumers Energy Company's ESG credit impact score is CIS-3

Consumers Energy maintains an active regulatory schedule with its electric and gas general rate cases typically filed annually in an alternating pattern. Over the last three years, Consumers Energy experienced downward pressure on its allowed ROE in its rate cases although the company was able to maintain a 9.9% allowed ROE. We expect Consumers Energy to maintain a stable financial profile because there are other offsetting mechanisms such as usage of forward test year to allow the utility to earn appropriate returns and to recover investment costs on a timely basis. However, further deterioration of the allowed ROE is likely to put negative pressure on the company's overall financial profile.

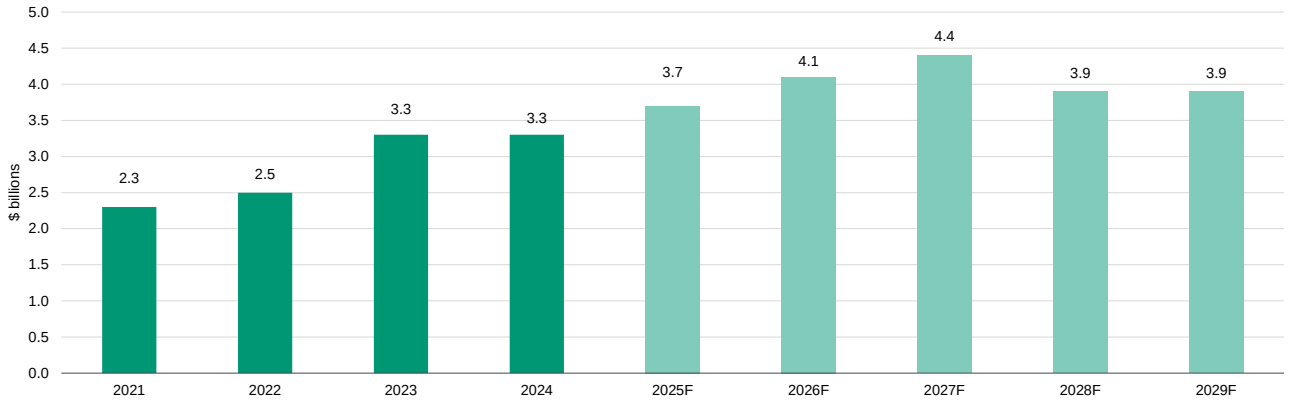
Consumers Energy's latest electric rate case received a final order in March 2025 from the MPSC. The final order authorized an increase of $176 million electric base rates based on a 9.9% return on equity and 50% equity capitalization. The rate increase was also based on a test year ending 28 February 2026 and the total rate base was approximately $14.86 billion. The utility currently has a gas rate case pending before the MPSC. Consumers Energy filed its rate increase request in December 2024. The MPSC staff filed its recommendation, proposing a rate increase of $177 million based on a 9.75% ROE and 50% equity capitalization. Consumers Energy's current allowed ROE and equity capitalization are 9.9% and 50%, respectively. The MPSC must issue a final order before or in October 2025.

Consumers Energy Company's ESG credit impact score is CIS-3

Consumers Energy's capital spending continues to be robust. The company increased its five-year capital expenditure plan through 2029 to $20 billion, approximately $3 billion higher than the previous plan. Consumers Energy will invest approximately $6.3 billion primarily to maintain and upgrade its gas utility infrastructure; $8.5 billion related to its electric distribution and other infrastructure; and $5.2 billion related to clean energy generation. These investments should enhance the company's reliability and safety as well as help it execute its decarbonization plan.

Exhibit 4

Consumers Energy's elevated capital program will extend at least through 2029

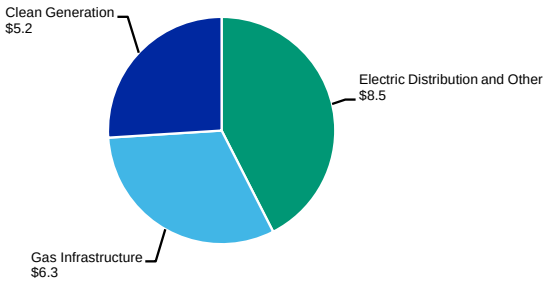


Source: Company filings

Through this period, Consumers Energy plans to keep rate increases modest, which should help to maintain regulatory support for investment cost recovery. Funding for these investments will be provided by internally generated cash flow, the issuance of debt at Consumers Energy and equity contributions from CMS. We expect Consumers Energy's near-term credit metric to be somewhat pressured given the level of expected investment expenditure and the timing of the cost recovery. Over the next 12-18 months, its CFO pre-WC to debt ratio could range 18%-19% including securitization bonds. Excluding the securitization bonds, we expect the metric to range 19% - 20%. At the end of 2024 and as of 31 March 2025, Consumers Energy produced a CFO pre-WC to debt ratio of 20.1% and 20.5%, respectively, excluding securitization debt.

Exhibit 5

Planned Capital Expenditures 2025 - 2029 ($ billions)

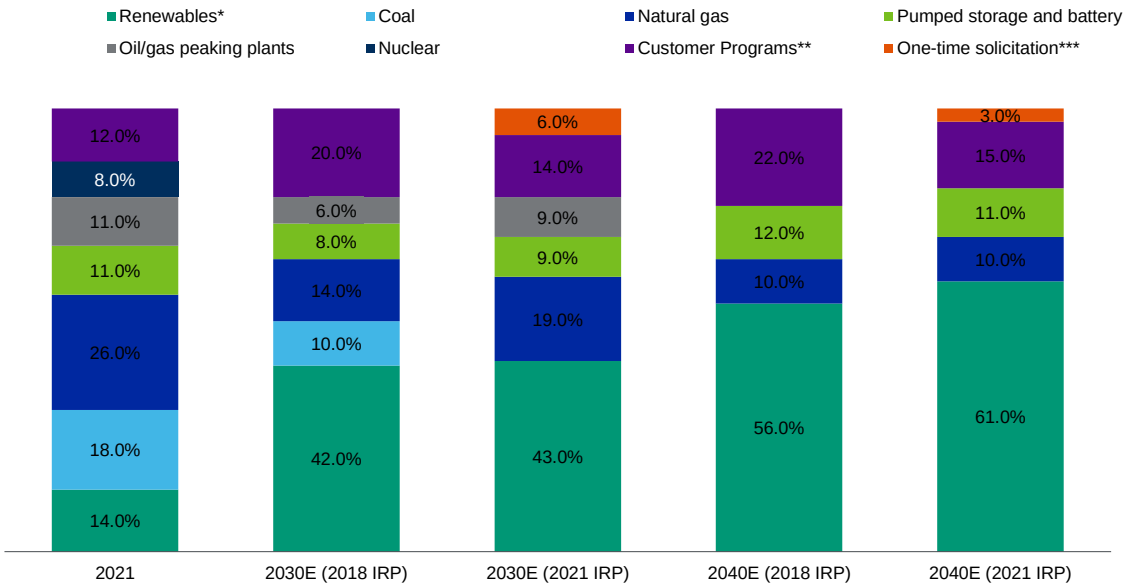


Source: Company filings

Through 2040, Consumers Energy will add up to 8 GW of solar power, which is 2 GW more than what was approved in the company's 2018 IRP. As a result, by 2040, 60% of Consumers Energy's generation capacity will be from renewable sources. In order to replace the retiring coal capacity, the utility acquired the Covert natural gas-fired power plant for approximately $815 million in 2023. It issued requests for proposals (RFP) for two purchased power agreements (PPA) for 500 MW of dispatchable generation and 200 MW of clean energy sources. Under the financial compensation mechanism (FCM), Consumers Energy is allowed earn a return on the PPAs. Pre-tax weighted average cost of capital is approximately 9%. This mechanism allows the utility to earn returns without incurring additional construction risks, a credit positive.

Exhibit 6

Based on the latest IRP settlement, more than 60% of Consumers Energy's generation sources will be renewables by 2040



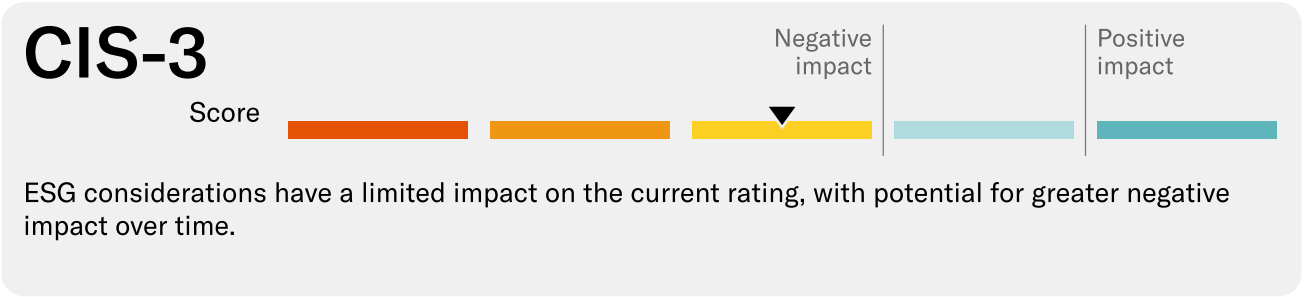
*Does not include renewable RECs.
**Includes energy waste reduction, demand response, and conservation voltage reduction program.
***One-time solicitation to acquire approximately 700 MW of capacity from sources in Michigan's Lower Peninsula beginning in 2025.
Source: Company filings

ESG considerations

Consumers Energy Company's ESG credit impact score is CIS-3

Exhibit 7

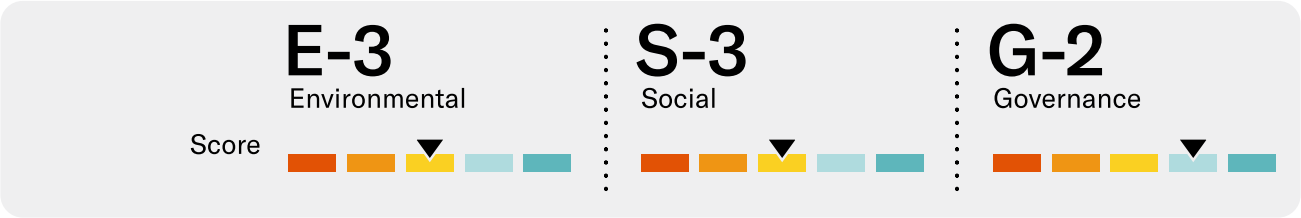
ESG credit impact score



Source: Moody's Ratings

Consumers Energy's **CIS-3** indicates that ESG considerations have limited impact on the current credit rating with greater potential for negative impact over time. It reflects some exposure to physical climate risk due to increasing frequency and severity of storm activities. It also incorporates social risks stemming from inherent risk associated with regulated utilities and governance risk that is not a material driver.

Exhibit 8
ESG issuer profile scores



Source: Moody's Ratings

Environmental

Consumers Energy's **E-3** issuer profile score reflects some exposure to physical climate risk, which highlights the increasing severity and frequency of extreme storm activities. It also incorporates some exposure to carbon transition risk associated with its gas utility operations and gas-fired power plants.

Social

Consumers Energy's **S-3** issuer profile score is primarily related to its customer and regulatory relations as well as demographic and societal trends. The utility's regulatory environment, as well as its interaction with the MPSC, are important in considering the utility's social risk. Also, the safety and reliability of its operations are important social considerations.

Governance

Consumers Energy's **G-2** issuer profile score reflects our view that its governance does not pose a particular risk and is not a material driver in the company's overall credit profile. It also incorporates its position as a subsidiary of CMS whose corporate governance considerations including financial policy and risk management influence Consumers Energy.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis

We expect Consumers Energy's liquidity profile to be adequate over the next 12-18 months.

Consumers Energy's external liquidity sources include a $1.1 billion secured revolving credit facility expiring in December 2027 and, as of 31 March 2025, net availability was $1.075 billion with $25 million of letters of credit outstanding. Consumers Energy also maintains a $250 million secured credit facility terminating in November 2025 and had $178 million available as of 31 March 2025. Both facilities are secured by first mortgage bonds. These credit facilities provide support for working capital needs and act as a backstop to Consumer Energy's $500 million commercial paper program. At 31 March 2025, the company had no commercial paper notes outstanding under the program. The credit facilities do not include a material adverse change representation for new borrowings, and have only one financial covenant, setting the maximum debt to capital at 65%. At 31 March 2025, its debt to capital ratio was 50%.

These facilities includes sustainability linked pricing metrics, which permits pricing adjustments for meeting targets related to sustainability. Targets include renewable generation and diverse supplier spend, highlighting its commitment to shifting its exposure to a greater renewable content and to supplier diversity.

The utility's continuing capital expenditure program and dividend policy will result in negative free cash flow for the foreseeable future. However, the company has a reasonable amount of external liquidity, demonstrated market access, and regularly receives capital contributions from its parent.

For the period ended 31 March 2025, Consumers Energy generated approximately $2.5 billion of cash from operations, invested $3.03 billion and distributed $801 million of dividends to CMS, resulting in negative free cash flow of approximately $1.33 billion. Given its robust investment plan, we expect Consumers Energy to maintain its negative free cash flow position over the 12-18 months.

In May 2025, Consumers issued $500 million 4.5% first mortgage bonds due 2031 and $625 million first mortgage bonds due 2035.

Methodology and scorecard

We use our global Regulated Electric and Gas Utilities rating methodology as the primary methodology for analyzing Consumers Energy Company.

Exhibit 9

Rating factors

Consumers Energy Company

Regulated Electric and Gas Utilities Industry [1][2]	Current LTM 3/31/2025		Moody's 12-18 Month Forward View	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	Aa	Aa	Aa	Aa
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Aa	Aa	Aa	Aa
b) Sufficiency of Rates and Returns	A	A	A	A
Factor 3 : Diversification (10%)				
a) Market Position	Baa	Baa	Baa	Baa
b) Generation and Fuel Diversity	Baa	Baa	Baa	Baa
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	5.8x	A	5.5x - 6x	A
b) CFO pre-WC / Debt (3 Year Avg)	19.1%	Baa	19% - 20%	Baa
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	12.6%	Baa	12% - 13%	Baa
d) Debt / Capitalization (3 Year Avg)	45.7%	Baa	45% - 46%	Baa
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		A3		A3
HoldCo Structural Subordination Notching		0		0
a) Scorecard-Indicated Outcome		A3		A3
b) Actual Rating Assigned				A3

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Moody's forecasts are Moody's opinion and do not represent the views of the issuer.
Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 10

Peer comparison

Consumers Energy Company

	Consumers Energy Company (P)A3 Stable			DTE Electric Company (P)A2 Stable			Northern States Power Company (Minnesota) A2 Stable			Wisconsin Electric Power Company A2 Stable			DTE Gas Company A3 Stable		
(in $ millions)	FY Dec-23	FY Dec-24	LTM Mar-25	FY Dec-23	FY Dec-24	LTM Mar-25	FY Dec-23	FY Dec-24	LTM Mar-25	FY Dec-23	FY Dec-24	LTM Mar-25	FY Dec-23	FY Dec-24	LTM Mar-25
Revenue	7,166	7,200	7,451	5,804	6,277	6,265	6,043	5,767	5,888	4,045	3,980	4,120	1726	1783	1946
CFO Pre-W/C	2,190	2,344	2,379	2,565	2,969	2,915	2,261	2,171	2,090	992	1,231	1,269	638	538	625
Total Debt	11,449	12,346	12,241	12,523	13,611	13,425	7,692	8,436	8,355	6,596	7,050	6,899	2642	2883	2861
CFO Pre-W/C + Interest / Interest	5.8x	5.5x	5.5x	6.7x	6.4x	6.1x	7.8x	6.8x	6.5x	3.1x	3.5x	3.6x	7.2x	5.5x	6.1x
CFO Pre-W/C / Debt	19.1%	19.0%	19.4%	20.5%	21.8%	21.7%	29.4%	25.7%	25.0%	15.0%	17.5%	18.4%	24.1%	18.7%	21.8%
CFO Pre-W/C – Dividends / Debt	13.0%	12.5%	12.9%	12.5%	16.1%	15.8%	21.0%	19.9%	19.6%	9.4%	14.1%	14.9%	16.9%	11.4%	14.4%
Debt / Capitalization	45.8%	46.0%	45.3%	48.4%	48.4%	48.2%	43.0%	42.3%	41.5%	50.0%	49.6%	47.7%	42.3%	42.2%	40.8%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Source: Moody's Financial Metrics™

Exhibit 11

Moody's–adjusted cash flow reconciliation

Consumers Energy Company

(in $ millions)	2020	2021	2022	2023	2024	LTM Mar-25
FFO	**1,993.9**	**2,054.1**	**2,124.9**	**2,064.8**	**2,204.9**	**2,276.9**
+/- Other	(136.0)	(13.0)	(29.0)	125.0	139.0	102.0
CFO Pre-WC	**1,857.9**	**2,041.1**	**2,095.9**	**2,189.8**	**2,343.9**	**2,378.9**
+/- ΔWC	25.0	(53.0)	(1,098.0)	243.0	105.0	122.0
CFO	**1,882.9**	**1,988.1**	**997.9**	**2,432.8**	**2,448.9**	**2,500.9**
- Div	638.0	723.0	770.0	696.0	796.0	802.0
- Capex	2,183.9	2,066.1	2,255.9	2,259.8	2,850.9	3,035.9
FCF	**(939.0)**	**(801.0)**	**(2,028.0)**	**(523.0)**	**(1,198.0)**	**(1,337.0)**
(CFO Pre-W/C) / Debt	21.5%	22.6%	20.0%	19.1%	19.0%	19.4%
(CFO Pre-W/C - Dividends) / Debt	14.1%	14.6%	12.7%	13.0%	12.5%	12.9%
FFO / Debt	23.0%	22.8%	20.3%	18.0%	17.9%	18.6%
RCF / Debt	15.7%	14.8%	12.9%	12.0%	11.4%	12.0%
Revenue	6,189.0	7,021.0	8,151.0	7,166.0	7,200.0	7,451.0
Interest Expense	332.3	315.3	341.9	454.7	524.1	525.0
Net Income	798.3	837.8	883.2	801.7	931.3	1,004.0
Total Assets	25,399.0	27,140.0	29,916.0	31,852.0	34,088.0	34,029.0
Total Liabilities	16,861.5	17,879.5	19,779.5	21,070.5	22,675.5	22,391.5
Total Equity	8,537.5	9,260.5	10,136.5	10,781.5	11,412.5	11,637.5

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.
Source: Moody's Financial Metrics™

Ratings

Exhibit 12

Category	Moody's Rating
CONSUMERS ENERGY COMPANY	
Outlook	Stable
Sr Sec Bank Credit Facility	A1
First Mortgage Bonds	A1
Senior Secured Shelf	(P)A1
LT IRB/PC	A3
Pref. Stock	Baa1
Commercial Paper	P-2
PARENT: CMS ENERGY CORPORATION	
Outlook	Stable
Sr Unsec Bank Credit Facility	Baa2
Senior Unsecured	Baa2
Jr Subordinate	Baa3
Pref. Stock	Ba1

Source: Moody's Ratings

© 2025 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.
CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.
MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.
ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.
MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.
All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.
To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.
To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.
NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.
Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at ir.moodys.com under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."
Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.
Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.
Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.
Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

FitchRatings

Corporates
Electric-Corporate
United States

Consumers Energy Company

Consumers Energy Company (Consumers Energy; A–/Stable) ratings derive support from its regulated utility operations under continued regulatory support in Michigan. Sizeable capital expenditure (capex) plans focused on reliability, decarbonization and evolving load demand in the state are expected to pressure Consumers Energy's funds from operations (FFO) leverage to its 4.5x rating threshold in the near term before improving to 4.4x in 2028 and 4.2x in 2029.

Key Rating Drivers

Decarbonization and Reliability Drive Capex: Consumers Energy's capex plan increased to $20 billion for 2025-2029, from $17 billion for 2024-2028. The increase is partly driven by the 9 GW solar and 4 GW wind pipeline filed as part of Consumer Energy's November 2024 Renewable Energy Plan, aligning with Michigan's target of 60% renewable energy by 2035. The increase also pertains to reliability spend on the electric distribution side. Consumers Energy is also on track to eliminate coal from its generation mix by mid-2025.

Fitch anticipates further capex for system resource adequacy and potential load growth in the state as Consumers Energy plans an Integrated Resource Plan in 2H26. Michigan's recent energy legislation include expanded incentives and improved economics for PPAs, which provide some investment flexibility in Fitch's view. Fitch believes concerns on the capex are largely mitigated by the Michigan Public Service Commission's (MPSC) constructive ratemaking policies and alignment with state policy, which is key to maintaining credit metrics. Monetization of tax credits on renewable projects and parent equity should provide further support.

Near-Term Leverage Pressured: Fitch expects Consumers Energy's FFO leverage to be weaker than previously forecasted in the near term, with no headroom, but then improve to 4.4x in 2028 and 4.2x in 2029. This is due to higher capex, though partially offset by rate base growth and load growth. Subsequent leverage improvement is expected from increasing tax credit monetizations on completed projects and continued regulatory support.

Fitch estimates Consumers Energy will sell about $600 million of tax credits over the forecast period. Fitch assumes any changes in the ability to monetize tax credits will result in adjustments to Consumers Energy's financial plan, supporting current credit metrics.

Retails Sales Growth Expected: Fitch expects Consumers Energy to benefit from increasing energy demand from manufacturing activity and data center demand in Michigan. Fitch now estimates previously flat retail sales to grow by 1% to 3% annually through 2029. A further uptick is likely in the outer years given the evolving data center activity in the state, especially after the recent sales and use tax exemption on data center equipment. While load growth is cash flow accretive, the continued ability to recover capital investments in a credit-supportive manner will remain key to the ratings.

Rate Case Activity: In December 2024, Consumers Energy filed a gas rate case requesting a $248 million increase, with a 10.25% return on equity (ROE) and a test year ending in October 2026. A decision is expected in 4Q25. An electric rate case requesting a $277 million increase, based on a 10.25% ROE and a test year ending February 2026, was also filed in May 2024. The MPSC recently delivered a largely constructive decision authorizing a $154 million revenue increase, with a 9.9% allowed ROE, and recovery of $22 million through a separate surcharge for distribution deferral.

Ratings

Long-Term IDR	A–
Short-Term IDR	F2
Senior Unsecured Debt - Long-Term Rating	A
Senior Secured Debt - Long-Term Rating	A+
Senior Unsecured Debt - Short-Term Rating	F2
Outlook	
Long-Term Foreign-Currency IDR	Stable

Click here for the full list of ratings

ESG and Climate

Highest ESG Relevance Scores	
Environmental	3
Social	3
Governance	3
2035 Climate Vulnerability Signal:	39

Applicable Criteria

Sector Navigators – Addendum to the Corporate Rating Criteria (December 2024)
Corporates Recovery Ratings and Instrument Ratings Criteria (August 2024)
Corporate Hybrids Treatment and Notching Criteria (November 2020)
Parent and Subsidiary Linkage Rating Criteria (June 2023)
Corporate Rating Criteria (December 2024)

Related Research

Global Corporates Macro and Sector Forecasts — March 2025 (March 2025)
North American Utilities Outlook 2025 (December 2024)
North American Utilities, Power & Gas Dashboard: 4Q24 (January 2025)
North American Utilities Monitor: 2Q24 (August 2024)

Analysts

Simar Jolly
+1 647 556 8268
simar.jolly@fitchratings.com

Daniel Neama
+1 212 908 0561
daniel.neama@fitchratings.com

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Michigan Regulation Remains Supportive: Fitch notes that the regulatory environment under the MPSC has been characterized by some recent lighter-than-expected rate outcomes and increased scrutiny on storm responses. Nevertheless, Fitch believes the framework remains constructive from a credit perspective, allowing for full pass-through of fuel costs and purchased power, forward-looking test years and a timely 10-month rate case resolution. Furthermore, Consumers Energy's authorized ROE of 9.9% compares favorably with industry averages. Fitch expects continued annual rate case filings.

Storm Audit Concluded: An MPSC-ordered audit of utility compliance with storm outages and safety regulations was concluded in late 2024. The audit findings cited the need to address aging infrastructure, improve maintenance practices and manage outages more effectively to enhance service reliability. While Fitch does not expect an immediate material negative outcome, the audit could highlight higher reliability investment needs and higher regulatory scrutiny in subsequent rate cases. Fitch continues to believe that the risk of performance-based penalties is manageable within Consumers Energy's current credit profile.

Parent/Subsidiary Linkage: There is parent-subsidiary rating linkage between CMS Energy Corporation (CMS Energy; BBB/Stable) and Consumers Energy. Fitch considers CMS Energy's standalone credit profile (SCP), based upon consolidated metrics, to be weaker than Consumer Energy's SCP. Emphasis is placed on the latter's status as a regulated entity. Legal ring-fencing is considered porous, given the general protections afforded by economic regulation. Access and control are also evaluated as porous. CMS Energy centrally manages the treasury function; however, both entities issue their own long-term debt. Fitch will limit the difference between the Long-Term IDRs of CMS Energy and Consumers Energy to two notches.

Financial Summary

(USD Mil.)	2021	2022	2023	2024
Gross revenue	6,987	8,116	7,127	7,050
EBITDA	2,195	2,260	2,345	2,538
CFO (Fitch-defined)	1,948	954	2,387	2,328
FFO	1,974	2,052	2,144	2,223
Debt	8,727	10,230	10,613	11,589
FFO leverage (x)	3.9	4.4	4.2	4.4
FFO interest coverage (x)	8.0	8.1	6.2	5.9
EBITDA leverage (x)	4.0	4.5	4.5	4.6

F – Forecast
Source: Fitch Ratings, Fitch Solutions

Peer Analysis

The credit profile of Consumers Energy is comparable to peers like DTE Electric Company (DTEE; A-/Stable), Northern States Power Company-Minnesota (NSP-Minnesota; A-/Stable) and Northern States Power Company-Wisconsin (NSP-Wisconsin; A-/Stable), and Public Service Company of Colorado (A-/Stable). All four are regulated utilities with single state operations albeit in generally constructive environments.

Fitch forecasts Consumer Energy's FFO leverage to average at its 4.5x threshold in the near term and then improve to 4.2x through 2029. This is better than the 4.5x to 4.8x projected in 2025-2027 for the pure gas utility, DTE Gas Company (BBB+/Stable). Financial metrics at other electric peers are marginally stronger, with leverage forecasted to average 3.8x through 2027 at DTEE, 3.8x-4.2x for NSP-Wisconsin and 3.6x for NSP-Minnesota, making them well-positioned for their ratings.

Rating Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- FFO leverage expected to exceed 4.5x on a sustained basis;
- A material deterioration of the Michigan regulatory environment;
- A downgrade to CMS Energy's Long-Term IDR.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- A positive rating action on Consumers Energy would also require an equally positive rating action on its parent, CMS Energy, under Fitch's Parent and Subsidiary Linkage Criteria;
- FFO leverage expected to be less than 3.5x on a sustained basis.

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Liquidity and Debt Structure

Fitch considers liquidity for Consumers Energy to be adequate.

Consumers Energy's $500 million CP program is supported by its $1.1 billion revolving credit facility (RCF) maturing in December 2027, with $1 billion available as of Dec. 31, 2024. It also has a separate $250 million RCF with $192 million available.

Consumers Energy had $44 million in unrestricted cash as of Dec. 31, 2024. Consumers Energy has bond maturities of $115 million in 2026, $135 million in 2027 and $725 million in 2028. Fitch views these maturities as manageable given the history of successful refinancing and expected continued access to capital markets. As of Dec. 31, 2024, Consumers Energy was compliant with its consolidated debt to capitalization covenants of 65%.

ESG Considerations

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

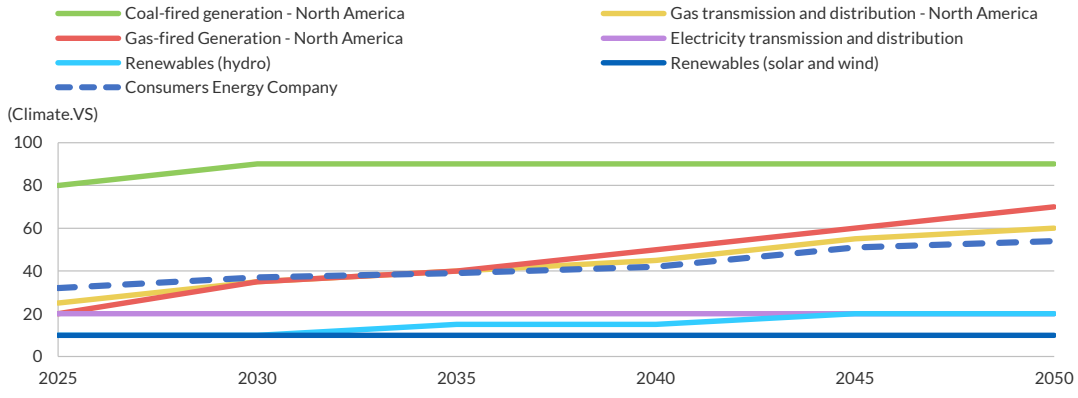
Climate Vulnerability Considerations

Fitch uses Climate Vulnerability Signals (Climate.VS) as a screening tool to identify sectors and Fitch-rated issuers that are potentially most exposed to credit-relevant climate transition risks and, therefore, require additional consideration of these risks in rating reviews. Climate.VS range from 0 (lowest risk) to 100 (highest risk). For more information on Climate.VS, see Fitch's Corporate Rating Criteria. For more detailed, sector-specific information on how Fitch perceives climate-related transition risks, see Climate Vulnerability Signals for Non-Financial Corporate Sectors.

The 2024 asset-weighted Climate.VS for Consumers Energy is 39 for 2035 out of 100. The Climate.VS is a function of ownership of around 1.3 GW of coal-fired generating capacity and 2.5 GW of gas-fired capacity. The score also reflects growing opposition to methane and other greenhouse gas (GHG) emissions in recent years, driven by growing concern about the impact of global climate change and evolving state and federal policies to reduce GHG emissions.

Consumers Energy remains on track to phase out coal generation by 2025. Consumers Energy projects to be net zero in terms of CO2 emissions by 2040 in its electric system and net zero menthane by 2030 in its natural gas distribution system and net zero GHG by 2050 in its overall system. By 2035, Consumers Energy expects to move towards a portfolio supported by around 60% renewable energy generation as it adds solar, wind and storage resources.

Climate.VS Evolution
As of Dec 31, 2024



Source: Fitch Ratings

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Liquidity and Debt Maturities

Cash and Maturities Report

(USD Mil.)	December 31, 2023	December 31, 2024
Total cash and cash equivalents	56	119
Short-term investments	—	—
Less not readily available cash and cash equivalents	21	75
Fitch-defined readily available cash and cash equivalents	**35**	**44**
Availability under committed lines of credit	1,182	1,199
Total liquidity	1,217	1,243
LTM EBITDA after associates and minorities	2,345	2,538
LTM FCF	-1,368	-1,309

Source: Fitch Ratings, Fitch Solutions, Consumers Energy Company

Scheduled Debt Maturities

(USD Mil.)	December 31, 2024
2025	-
2026	115
2027	135
2028	725
2029	-
Thereafter	10,614
Total	**11,589**

Source: Fitch Ratings, Fitch Solutions, Consumers Energy Company

Key Assumptions

- Constructive regulatory environment in Michigan with continuance of authorized ROEs for both electric and gas utility operations;
- Gas rate case decision in 4Q25;
- Annual rate case filings;
- Largely flat annual natural gas sales growth;
- Electric sales growth ranging from 1% to 3% over 2025-2029;
- Total utility capex in line with management's assumptions;
- Dividend growth of 5% per year;
- Normal weather;
- Annual equity issuances of around $500 million near term, and lower subsequently;
- Tax credit transfers of $600 million over 2025-2029.

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Financial Data

(USD Mil.)	2021	2022	2023	2024
Summary income statement				
Gross revenue	6,987	8,116	7,127	7,050
Revenue growth (%)	13.5	16.2	-12.2	-1.1
EBITDA before income from associates	2,195	2,260	2,345	2,538
EBITDA margin (%)	31.4	27.9	32.9	36.0
EBITDA after associates and minorities	2,195	2,260	2,345	2,538
EBIT	1,152	1,212	1,249	1,463
EBIT margin (%)	16.5	14.9	17.5	20.8
Gross interest expense	-291	-316	-416	-467
Pretax income including associate income/loss	1,024	1,085	1,028	1,209
Summary balance sheet				
Readily available cash and equivalents	22	43	35	44
Debt	8,727	10,230	10,613	11,589
Net debt	8,705	10,187	10,578	11,545
Summary cash flow statement				
EBITDA	2,195	2,260	2,345	2,538
Cash interest paid	-277	-290	-401	-445
Cash tax	10	2	-31	19
Dividends received less dividends paid to minorities (inflow/outflow)	—	—	—	—
Other items before FFO	40	73	203	66
FFO	1,974	2,052	2,144	2,223
FFO margin (%)	28.3	25.3	30.1	31.5
Change in working capital	-26	-1,098	243	105
CFO (Fitch-defined)	1,948	954	2,387	2,328
Total non-operating/nonrecurring cash flow	—	—	—	—
Capex	-2,052	-2,239	-3,060	-2,842
Capital intensity (capex/revenue) (%)	29.4	27.6	42.9	40.3
Common dividends	-724	-771	-695	-795
FCF	-828	-2,056	-1,368	-1,309
FCF margin (%)	-11.9	-25.3	-19.2	-18.6
Net acquisitions and divestitures	—	—	—	124
Other investing and financing cash flow items	-131	-87	-121	-367
Net debt proceeds	393	1,474	1,010	880
Net equity proceeds	575	685	475	735
Total change in cash	9	16	-4	63
Calculations for forecast publication				
Capex, dividends, acquisitions and other items before FCF	-2,776	-3,010	-3,755	-3,513
FCF after acquisitions and divestitures	-828	-2,056	-1,368	-1,185
FCF margin after net acquisitions (%)	-11.9	-25.3	-19.2	-16.8
Gross Leverage ratios (x)				
EBITDA leverage	4.0	4.5	4.5	4.6
FFO leverage	3.9	4.4	4.2	4.4
(CFO-capex)/debt	-1.2	-12.6	-6.3	-4.4
Net Leverage ratios (x)				
EBITDA net leverage	4.0	4.5	4.5	4.6
FFO net leverage	3.9	4.4	4.2	4.4
(CFO-capex)/net debt	-1.2	-12.6	-6.4	-4.5
Coverage ratios (x)				
EBITDA interest coverage	7.9	7.8	5.8	5.7

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

FFO interest coverage	8.0	8.1	6.2	5.9
FFO fixed-charge coverage	8.0	8.1	6.2	5.9

CFO – Cash flow from operations
Source: Fitch Ratings, Fitch Solutions

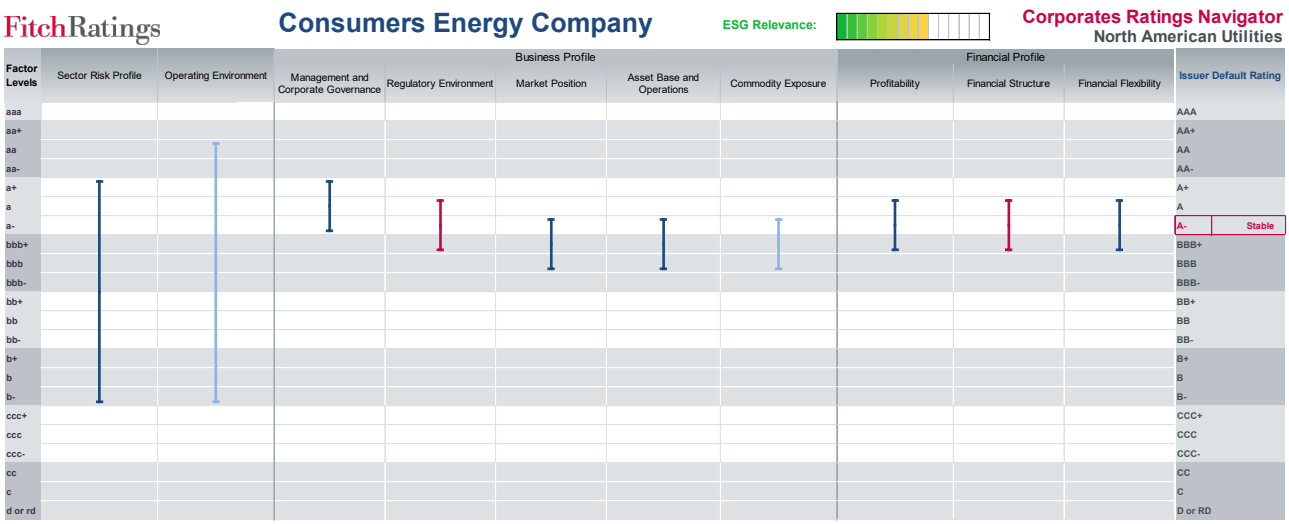
How to Interpret the Forecast Presented
The forecast presented above is based on Fitch Ratings' internally produced, conservative rating case forecast. It does not represent the forecast of the rated issuer. The forecast set out above is only one component used by Fitch Ratings to assign a rating or determine a rating outlook, and the information in the forecast reflects material but not exhaustive elements of Fitch Ratings' rating assumptions for the issuer's financial performance. As such, it cannot be used to establish a rating, and it should not be relied on for that purpose. Fitch Ratings' forecasts are constructed using a proprietary internal forecasting tool, which employs Fitch Ratings' own assumptions on operating and financial performance that may not reflect the assumptions that you would make. Fitch Ratings' own definitions of financial terms such as EBITDA, debt or free cash flow may differ from your own such definitions. Fitch Ratings may be granted access, from time to time, to confidential information on certain elements of the issuer's forward planning. Certain elements of such information may be omitted from this forecast, even where they are included in Fitch Ratings' own internal deliberations, where Fitch Ratings, at its sole discretion, considers the data may be potentially sensitive in a commercial, legal or regulatory context. The forecast (as with the entirety of this report) is produced strictly subject to the disclaimers set out at the end of this report. Fitch Ratings may update the forecast in future reports but assumes no responsibility to do so. Original financial statement data for historical periods is processed by Fitch Solutions on behalf of Fitch Ratings. Key financial adjustments and all financial forecasts credited to Fitch Ratings are generated by rating agency staff.

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

FitchRatings

Corporates
Electric-Corporate
United States

Ratings Navigator



Bar Chart Legend:	
Vertical Bars = Range of Rating Factor	Bar Arrows = Rating Factor Outlook
Bar Colors = Relative Importance	⇧ Positive
Higher Importance	⇩ Negative
Average Importance	⇳ Evolving
Lower Importance	▭ Stable

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

FitchRatings

Corporates
Electric-Corporate
United States

FitchRatings

Consumers Energy Company

Corporates Ratings Navigator
North American Utilities

Operating Environment

Economic Environment	aa+	aa	Very strong combination of countries where economic value is created and where assets are located.
Financial Access	aa	aa	Very strong combination of issuer specific funding characteristics and of the strength of the relevant local financial market.
Systemic Governance		aa	Systemic governance (eg rule of law, corruption; government effectiveness) of the issuer's country of incorporation consistent with 'aa'.
	b-		
	ccc+		

Management and Corporate Governance

Management Strategy	aa-	a	Coherent strategy and good track record in implementation.
Governance Structure	a+	aa	No record of governance failing. Experienced board exercising effective check and balance to management. No ownership concentration.
Group Structure	a	a	Group structure shows some complexity but mitigated by transparent reporting.
Financial Transparency	a-	a	High quality and timely financial reporting.
	bbb+		

Regulatory Environment

Degree of Transparency and Predictability	a+	a	Track record of transparent and predictable regulation.
Timeliness of Cost Recovery	a	a	Minimal lag to recover capital and operating costs.
Trend in Authorized ROEs	a-	a	Above-average authorized ROE.
Mechanisms Available to Stabilize Cash Flows	bbb+	bbb	Revenues partially insulated from variability in consumption.
Mechanisms Supportive of Creditworthiness	bbb	bbb	Effective regulatory ring-fencing or minimum creditworthiness requirements.

Market Position

Market Structure	a	a	Well-established market structure with complete transparency in price-setting mechanisms.
Consumption Growth Trend	a-	bbb	Customer and usage growth in line with industry averages.
Customer Mix	bbb+	a	Favorable customer mix.
Geographic Location	bbb	bbb	Beneficial location or reasonable locational diversity.
Supply Demand Dynamics	bbb-	bbb	Moderately favorable outlook for prices/rates.

Asset Base and Operations

Diversity of Assets	a	bbb	Good quality and/or reasonable scale diversified assets.
Operations Reliability and Cost Competitiveness	a-	a	Track record of reliable, low-cost operations.
Exposure to Environmental Regulations	bbb+	bbb	Limited or manageable exposure to environmental regulations.
Capital and Technological Intensity of Capex	bbb	bbb	Moderate reinvestments requirements in established technologies.
	bbb-		

Commodity Exposure

Ability to Pass Through Changes in Fuel	a	bbb	Limited exposure to changes in commodity costs.
Underlying Supply Mix	a-	bbb	Low variable costs and moderate flexibility of supply.
Hedging Strategy	bbb+	a	Highly captive supply and customer base.
	bbb		
	bbb-		

Profitability

Free Cash Flow	a+	bbb	Structurally neutral to negative FCF across the investment cycle.
Volatility of Profitability	a	a	Higher stability and predictability of profits relative to utility peers.
	a-		
	bbb+		
	bbb		

Financial Structure

EBITDA Leverage	a+	a	3.25x
FFO Leverage	a	a	3.5x
	a-		
	bbb+		
	bbb		

Financial Flexibility

Financial Discipline	a+	a	Clear commitment to maintain a conservative policy with only modest deviations allowed.
Liquidity	a	bbb	One-year liquidity ratio above 1.25x. Well-spread maturity schedule of debt but funding may be less diversified.
FFO Interest Coverage	a-	bbb	4.5x
	bbb+		
	bbb		

How to Read This Page: The left column shows the three-notch band assessment for the overall Factor, illustrated by a bar. The right column breaks down the Factor into Sub-Factors, with a description appropriate for each Sub-Factor and its corresponding category.

Credit-Relevant ESG Derivation

Consumers Energy Company has 12 ESG potential rating drivers

- Emissions from operations
- Fuel use to generate energy and serve load
- Impact of waste from operations
- Plants' and networks' exposure to extreme weather
- Product affordability and access
- Quality and safety of products and services; data security

Showing top 6 issues

			Overall ESG
key driver	0	issues	5
driver	0	issues	4
potential driver	12	issues	3
not a rating driver	2	issues	2
	0	issues	1

For further details on Credit-Relevant ESG scoring, see page 3.

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

FitchRatings

Consumers Energy Company

Corporates Ratings Navigator
North American Utilities

Credit-Relevant ESG Derivation

Consumers Energy Company has 12 ESG potential rating drivers

- Consumers Energy Company has exposure to emissions regulatory risk but this has very low impact on the rating.
- Consumers Energy Company has exposure to energy productivity risk but this has very low impact on the rating.
- Consumers Energy Company has exposure to waste & impact management risk but this has very low impact on the rating.
- Consumers Energy Company has exposure to extreme weather events but this has very low impact on the rating.
- Consumers Energy Company has exposure to access/affordability risk but this has very low impact on the rating.
- Consumers Energy Company has exposure to customer accountability risk but this has very low impact on the rating.

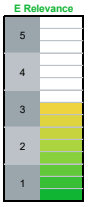
Showing top 6 issues

			ESG Relevance to Credit Rating
key driver	0	issues	5
driver	0	issues	4
potential driver	12	issues	3
not a rating driver	2	issues	2
	0	issues	1

Environmental (E) Relevance Scores

General Issues	E Score	Sector-Specific Issues	Reference
GHG Emissions & Air Quality	3	Emissions from operations	Asset Base and Operations; Commodity Exposure; Regulation; Profitability
Energy Management	3	Fuel use to generate energy and serve load	Asset Base and Operations; Commodity Exposure; Profitability
Water & Wastewater Management	2	Water used by hydro plants or by other generation plants, also effluent management	Asset Base and Operations; Regulation; Profitability
Waste & Hazardous Materials Management; Ecological Impacts	3	Impact of waste from operations	Asset Base and Operations; Regulation; Profitability
Exposure to Environmental Impacts	3	Plants' and networks' exposure to extreme weather	Asset Base and Operations; Regulation; Profitability

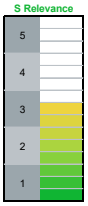
E Relevance



Social (S) Relevance Scores

General Issues	S Score	Sector-Specific Issues	Reference
Human Rights, Community Relations, Access & Affordability	3	Product affordability and access	Asset Base and Operations; Regulation; Profitability; Financial Structure
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Quality and safety of products and services; data security	Regulation; Profitability
Labor Relations & Practices	3	Impact of labor negotiations and employee (dis)satisfaction	Asset Base and Operations; Profitability
Employee Wellbeing	2	Worker safety and accident prevention	Profitability; Asset Base and Operations
Exposure to Social Impacts	3	Social resistance to major projects that leads to delays and cost increases	Asset Base and Operations; Profitability

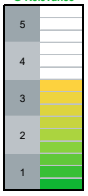
S Relevance



Governance (G) Relevance Scores

General Issues	G Score	Sector-Specific Issues	Reference
Management Strategy	3	Strategy development and implementation	Management and Corporate Governance
Governance Structure	3	Board independence and effectiveness; ownership concentration	Management and Corporate Governance
Group Structure	3	Complexity, transparency and related-party transactions	Management and Corporate Governance
Financial Transparency	3	Quality and timing of financial disclosure	Management and Corporate Governance

G Relevance



How to Read This Page
ESG relevance scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant to the credit rating and green (1) is least relevant.
The Environmental (E), Social (S) and Governance (G) tables break out the ESG general issues and the sector-specific issues that are most relevant to each industry group. Relevance scores are assigned to each sector-specific issue, signaling the credit-relevance of the sector-specific issues to the issuer's overall credit rating. The Criteria Reference column highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis. The vertical color bars are visualizations of the frequency of occurrence of the highest constituent relevance scores. They do not represent an aggregate of the relevance scores or aggregate ESG credit relevance.
The Credit-Relevant ESG Derivation table's far right column is a visualization of the frequency of occurrence of the highest ESG relevance scores across the combined E, S and G categories. The three columns to the left of ESG Relevance to Credit Rating summarize rating relevance and impact to credit from ESG issues. The box on the far left identifies any ESG Relevance Sub-factor issues that are drivers or potential drivers of the issuer's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the relevance score. All scores of '4' and '5' are assumed to reflect a negative impact unless indicated with a '+' sign for positive impact.
Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI), the Sustainability Accounting Standards Board (SASB), and the World Bank.

CREDIT-RELEVANT ESG SCALE
How relevant are E, S and G issues to the overall credit rating?

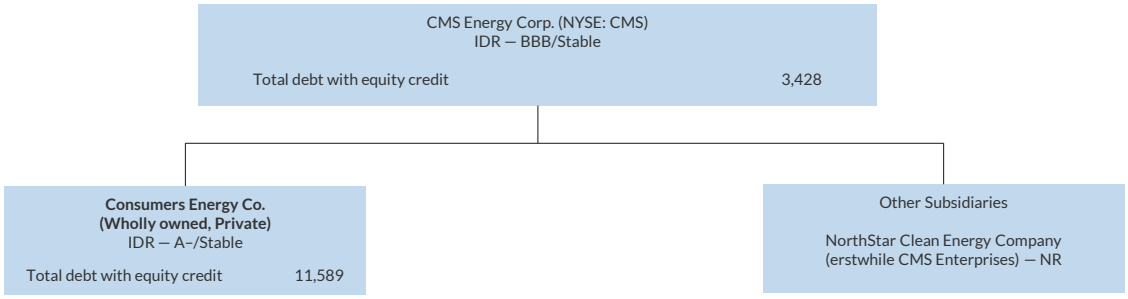
5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector.

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Simplified Group Structure Diagram

CMS Energy is a holding company that owns Consumers Energy (a regulated electric and natural gas utility) and NorthStar Clean Energy Company (NorthStar; an independent power producer and marketer). Consumers Energy issues its own debt through the public debt market, and NorthStar obtains its own financing.

Organizational and Debt Structure — Consumers Energy Company
(USD Mil., as of December 31, 2024)



IDR – Issuer Default Rating. NR – Not rated.
Source: Fitch Ratings, Fitch Solutions, Consumers Energy Company

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Peer Financial Summary

Company	Issuer Default Rating	Financial statement date	Gross revenue (USD mil.)	FFO (USD mil.)	FFO leverage (x)	FFO interest coverage (x)	EBITDA leverage (x)
Consumers Energy Company	A-						
	A-	2024	7,050	2,223	4.4	5.9	4.6
	A-	2023	7,127	2,144	4.2	6.2	4.5
	A-	2022	8,116	2,052	4.4	8.1	4.5
DTE Electric Company	A-						
	A-	2024	6,277	2,537	3.9	6.1	4.2
	A-	2023	5,804	1,968	4.5	5.6	4.1
	A-	2022	6,397	2,463	3.6	7.8	4.0
DTE Gas Company	BBB+						
	BBB+	2024	1,783	507	4.7	5.5	4.4
	BBB+	2023	1,726	560	4.0	6.7	3.9
	BBB+	2022	1,894	695	3.3	9.0	4.1
Northern States Power Company-Minnesota	A-						
	A-	2023	6,043	1,985	3.3	7.3	3.9
	A-	2022	6,684	1,587	3.9	6.7	3.7
	A-	2021	5,756	1,519	3.9	6.9	3.7
Northern States Power Company-Wisconsin	A-						
	A-	2023	1,177	295	3.7	6.8	3.3
	A-	2022	1,201	270	3.7	7.4	3.2
	A-	2021	1,105	254	3.7	7.4	3.4
Public Service Company of Colorado	A-						
	A-	2023	5,519	1,650	4.1	6.4	4.2
	A-	2022	5,708	1,448	4.2	6.2	4.0
	A-	2021	4,815	1,354	4.2	6.3	4.1
Southwestern Public Service Company	BBB						
	BBB	2023	2,152	613	4.6	5.6	4.1
	BBB	2022	2,426	759	3.7	6.5	4.0
	BBB	2021	2,465	554	4.9	6.0	4.9

Source: Fitch Ratings, Fitch Solutions

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Fitch Adjusted Financials

(USD mil., as of December 31, 2024)	Notes and formulas	Standardized values	Fair value and other debt adjustments	Lease treatment	Other adjustments	Adjusted values
Income statement summary						
Revenue		7,200	—	—	-150	7,050
EBITDA	(a)	2,706	—	-18	-150	2,538
Depreciation and amortization		-1,191	—	5	111	-1,075
EBIT		1,515	—	-13	-39	1,463
Balance sheet summary						
Debt	(b)	12,177	112	—	-700	11,589
Of which other off-balance-sheet debt		—	—	—	—	—
Lease-equivalent debt		—	—	—	—	—
Lease-adjusted debt		12,177	112	—	-700	11,589
Readily available cash and equivalents	(c)	44	—	—	—	44
Not readily available cash and equivalents		75	—	—	—	75
Cash flow summary						
EBITDA	(a)	2,706	—	-18	-150	2,538
Dividends received from associates less dividends paid to minorities	(d)	—	—	—	—	—
Interest paid	(e)	-484	—	13	26	-445
Interest received	(f)	47	—	—	—	47
Preferred dividends paid	(g)	-2	—	—	—	-2
Cash tax paid		19	—	—	—	19
Other items before FFO		53	—	—	13	66
FFO	(h)	2,339	—	-5	-111	2,223
Change in working capital		105	—	—	—	105
CFO	(i)	2,444	—	-5	-111	2,328
Non-operating/nonrecurring cash flow		—	—	—	—	—
Capex	(j)	-2,842	—	—	—	-2,842
Common dividends paid		-795	—	—	—	-795
FCF		-1,193	—	-5	-111	-1,309
Gross leverage (x)						
EBITDA leverage	b/(a+d)	4.5	—	—	—	4.6
FFO leverage	b/(h-e-f-g)	4.4	—	—	—	4.4
(CFO-capex)/debt (%)	(i+j)/b	-3.2	—	—	—	-4.4
Net leverage (x)						
EBITDA net leverage	(b-c)/(a+d)	4.5	—	—	—	4.6
FFO net leverage	(b-c)/(h-e-f-g)	4.4	—	—	—	4.4
(CFO-capex)/net debt (%)	(i+j)/(b-c)	-3.3	—	—	—	-4.5
Coverage (x)						
EBITDA interest coverage	(a+d)/(-e)	5.6	—	—	—	5.7
FFO interest coverage	(h-e-f-g)/(-e-g)	5.7	—	—	—	5.9

CFO – Cash flow from operations
Notes: The standardized items presented above are based on Fitch's taxonomy for the given sector and region.
Reported items may not match the Fitch taxonomy, but they are captured into corresponding lines accordingly.
Debt includes other off-balance-sheet debt.
Debt in the standardized values column excludes lease liabilities of USD93 million.
Source: Fitch Ratings, Fitch Solutions, Consumers Energy Company

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

Parent Subsidiary Linkage Analysis

Key Risk Factors and Notching Approach

Parent	CMS Energy Corporation
Parent LT IDR	BBB
Subsidiary	Consumers Energy Company
Subsidiary LT IDR	A–
Path	Stronger Subsidiary
Legal ring-fencing	Porous
Access and control	Porous
Notching matrix outcome	Consolidated+2
Override applied	No
Notching approach	Consolidated +2

LT IDR – Long-Term Issuer Default Rating
Source: Fitch Ratings

Stronger Subsidiary Notching Matrix

Access and control	Open	Porous	Insulated
With open ring-fencing	Consolidated	Consolidated+1	Consolidated+2[b]
With porous ring-fencing	Consolidated+1	Consolidated+2[b]	Consolidated+2[b]
With insulated ring-fencing	[a]	Standalone	Standalone

[a] It is unlikely that considerations for "insulated" legal ring-fencing would coexist with the conditions outlined under "open" for access and control. It is more likely that other factors relevant to legal ring-fencing or access and control, but not within this table, would move either one, or both, of the individual Linkage Factor Assessments (LFAs) to a "porous" level that would lead to a consolidated+1, consolidated+2 or standalone outcome.
[b] Notching is capped at the subsidiary's Standalone Credit Profile.
Source: Fitch Ratings

Exclusively for the use of Heather Wilson at CMS Energy Corporation. Downloaded: 30-May-2025

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.

DISCLAIMER & DISCLOSURES

All Fitch Ratings (Fitch) credit ratings are subject to certain limitations and disclaimers. Please read these limitations and disclaimers by following this link: https://www.fitchratings.com/understandingcreditratings. In addition, the following https://www.fitchratings.com/rating-definitions-document details Fitch's rating definitions for each rating scale and rating categories, including definitions relating to default. Published ratings, criteria, and methodologies are available from this site at all times. Fitch's code of conduct, confidentiality, conflicts of interest, affiliate firewall, compliance, and other relevant policies and procedures are also available from the Code of Conduct section of this site. Directors and shareholders' relevant interests are available at https://www.fitchratings.com/site/regulatory. Fitch may have provided another permissible or ancillary service to the rated entity or its related third parties. Details of permissible or ancillary service(s) for which the lead analyst is based in an ESMA- or FCA-registered Fitch Ratings company (or branch of such a company) can be found on the entity summary page for this issuer on the Fitch Ratings website.

In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third- party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed. Fitch Ratings makes routine, commonly-accepted adjustments to reported financial data in accordance with the relevant criteria and/or industry standards to provide financial metric consistency for entities in the same sector or asset class.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US$1,000 to US$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US$10,000 to US$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see https://www.fitchratings.com/site/regulatory), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

Copyright © 2025 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Peer Company Revolver Capacity Analysis

Source: S&P Capital IQ

Case No.: U-21981
Exhibit No.: A-43 (MRB-20)
Page: 1 of 1
Witness: MRBleckman
Date: December 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)
				Dec 31, 2024 (amounts in $000s)		
Line	Company Name	Ticker	Regulated Subsidiary	Revolver Capacity	PP&E	Revolver Capacity % of PP&E
1	Alliant Energy Corporation	LNT	Interstate Power and Light Company	300,000	9,336,000	
2			Wisconsin Power and Light Company	400,000	8,861,000	
3				700,000	18,197,000	3.8%
4						
5	Ameren Corporation	AEE	Ameren Illinois Company	1,200,000	15,530,000	
6			Union Electric Company	1,400,000	18,857,000	
7				2,600,000	34,387,000	7.6%
8						
9	Dominion Resources, Inc.	D	Dominion Energy South Carolina, Inc.	500,000	11,698,000	
10			Virginia Electric and Power Company	1,750,000	52,927,000	
11				2,250,000	64,625,000	3.5%
12						
13	DTE Energy Company	DTE	DTE Electric Company	800,000	23,060,000	
14			DTE Gas Company	300,000	6,661,000	
15				1,200,000	15,530,000	7.7%
16						
17	Duke Energy Corporation	DUK	Duke Energy Carolinas, LLC	1,400,000	39,390,000	
18			Duke Energy Florida, LLC	875,000	23,117,000	
19			Duke Energy Indiana, LLC	950,000	13,159,000	
20			Duke Energy Kentucky, Inc.	225,000	2,399,546	
21			Duke Energy Ohio, Inc.	1,050,000	10,250,000	
22			Duke Energy Progress, LLC	1,500,000	26,478,000	
23			Piedmont Natural Gas Company, Inc.	950,000	10,352,000	
24			Progress Energy, Inc.	2,375,000	49,599,000	
25				9,325,000	174,744,546	5.3%
26						
27	Entergy Corporation	ETR	Entergy Arkansas, LLC	405,000	10,674,012	
28			Entergy Louisiana, LLC	610,000	19,435,290	
29			Entergy Mississippi, LLC	300,000	5,841,073	
30			Entergy New Orleans, LLC	25,000	1,453,408	
31			Entergy Texas, Inc.	300,000	7,592,834	
32			System Energy Resources, Inc.	120,000	2,394,715	
33				1,760,000	47,391,332	3.7%
34						
35	Evergy, Inc.	EVRG	Evergy Kansas Central, Inc.	1,100,000	13,024,000	
36			Evergy Metro, Inc.	600,000	8,321,700	
37			Evergy Missouri West, Inc.	500,000	3,775,800	
38				2,200,000	25,121,500	8.8%
39						
40	IDACORP, Inc.	IDA	Idaho Power Company	400,000	6,505,685	6.1%
41						
42	NextEra Energy, Inc.	NEE	Florida Power & Light Company	4,500,000	76,166,000	5.9%
43						
44	OGE Energy Corporation	OGE	Oklahoma Gas and Electric Company	550,000	11,531,900	4.8%
45						
46	Pinnacle West Capital Corporation	PNW	Arizona Public Service Company	1,250,000	20,210,913	6.2%
47						
48	TXNM Energy	TXNM	Public Service Company of New Mexico	440,000	5,404,167	
49			Texas-New Mexico Power Company	200,000	3,198,396	
50				640,000	8,602,563	7.4%
51						
52	PPL Corporation	PPL	Kentucky Utilities Company	400,000	8,334,000	
53			Louisville Gas and Electric Company	500,000	6,548,000	
54			PPL Electric Utilities Corporation	650,000	13,315,000	
55			The Narragansett Electric Company	250,000	4,920,000	
56				1,800,000	33,117,000	5.4%
57						
58	Southern Company	SO	Alabama Power Company	1,365,000	26,893,000	
59			Georgia Power Company	2,050,000	45,369,000	
60			Mississippi Power Company	275,000	4,125,000	
61			Southern Company Gas	1,600,000	17,546,000	
62				5,290,000	93,933,000	5.6%
63						
64	Xcel Energy Inc.	XEL	Northern States Power Company - MN	700,000	21,253,000	
65			Northern States Power Company - WI	150,000	3,670,000	
66			Public Service Company of Colorado	700,000	23,609,000	
67			Southwestern Public Service Company	500,000	9,622,000	
68				2,050,000	58,154,000	3.5%
69						
70						
71	Average Proxy Group					5.7%
72						
73						
74			**Consumers Energy**	**1,350,000**	**25,580,000**	**5.3%**

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

LUTHER A. BONNER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Luther A. Bonner, and my business address is 530 West Willow Road, Lansing, Michigan 48906.

Q. In what capacity are you employed?

A. I am employed as Senior Manager of Engineering Support for Consumers Energy Company ("Consumers Energy" or the "Company").

Q. What is your educational background?

A. I earned an Associates of Business Administration from Baker College in 2003. I also hold an associate certificate in Project Management from George Washington University.

Q. What have your job responsibilities entailed with Consumers Energy?

A. I began working for Consumers Energy in 2003 and have held positions of increasing responsibility over my 22 years with the Company. My roles have included Senior Manager Engineering Support, Manager Engineering Support, Senior Engineering Technical Analyst Lead, Senior Business Support Consultant III, Regional Project Coordination Manager, Customer Energy Specialist Principal Team Lead, Customer Energy Specialist Team Leader III, Senior Customer Energy Specialist, Customer Energy Specialist III, Customer Energy Specialist II, and Customer Energy Specialist I. From 2003 through 2014 prior to my leadership roles, my responsibilities included designing electric and natural gas systems, planning customer requested projects, project management, facilitating easements, permitting, and generating costs estimates. These tasks were undertaken in the service of providing natural gas and electric services to residential customers, new developments, commercial and industrial customers, and municipal electric generating facilities from natural gas. From 2014 through 2019, my

experience was in leading teams that designed, planned, and managed those various types of projects. Since 2019, my responsibilities have included developing processes and procedures used across the work management stream, and developing technology platforms for project management.

Q. Please summarize your experience with Rule C8. Customer Attachment Tariff.

A. Since the beginning of my career with the Company in 2003, I have followed and administered Rule C.8, Customer Attachment Tariff. My experience includes running customer requested scenarios through the Gas Engineering Model, and reviewing projects modeled by others to ensure compliance. This modeling involved the determination of any estimated revenue deficiency and determining the amount that a customer requesting service under Rule C8 needed to pay as an upfront contribution in aid of construction based on the model's output.

Q. Please summarize your experience with the use of, administration, and development of the Gas Engineering Model that is used to calculate gas line extension and service contributions for new connecting customers.

A. From 2003 through 2014, part of my responsibilities involved the use of the original Gas Engineering Model to calculate estimates for the natural gas projects I was assigned to as a Customer Energy Specialist in support of customers who requested service, line extensions, and/or new developments and generation facilities. During 2014 through 2022, my responsibilities included reviewing and approving cost estimates to validate compliance with Rule C.8 Customer Attachment Tariff and identifying ways to improve the Gas Engineering Model. In 2022, I was assigned overall responsibility of the Gas

Engineering Model. During 2022, my team and I developed the most current version of the model using a web-based application.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes. In Case No. U-21806, I provided rebuttal testimony regarding the Company's Line Extension policy.

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-44 (LAB-1)	Excess Service Cost Formula;
Exhibit A-45 (LAB-2)	Footage Allowance & Excess Service Charge Trends 2003-2025;
Exhibit A-46 (LAB-3)	Service Lifespan Analysis;
Exhibit A-47 (LAB-4)	Customer Requested Service Retirement Trend;
Exhibit A-48 (LAB-5)	Customer Requested Service Retirement Vintage Year;
Exhibit A-49 (LAB-6)	Consumers Energy Gas Consumption Jan 2009-Jan 2025; and
Exhibit A-50 (LAB-7)	2005 Average Service Example.

Q. Were these exhibits prepared by you or under your supervision?

A. Yes.

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to provide thorough justification of the Company's customer attachment program or gas line extension methodology and the shareability of the Gas Engineering Model.

Q. What is the purpose of the Customer Attachment Program?

A. As described in Rule C.8 Customer Attachment Tariff, the Company proposes to make extension of its gas mains and/or service lines from time to time, at its own cost, to serve applicants whose requirements will not disturb or impair the service to prior users or will not require an expenditure out of proportion to the revenue obtainable.

Q. Is the Customer Attachment Tariff designed to recover the cost of a customer's line extension?

A. Yes, as outlined within my testimony below.

Q. Does the Customer Attachment Tariff subsidize or incentivize customers to connect to the natural gas system?

A. No. The primary objective and design of Rule C.8. Customer Attachment Tariff is to enable the expansion of gas utilities without requiring existing customers to subsidize these expansions. In this program, the costs of installing the necessary equipment for expansion are charged to the requested party. These costs are balanced by the revenue generated by the newly attached services over a period of 20 years through the net present value ("NPV") revenue deficiency calculations.

Q. Is there significant customer risk associated with the Company's administration of its line extension policy relative to new customer connections? Does the Company believe that other customers subsidize new connections?

A. No. The risk of subsidization only exists if the new service is retired prematurely or the volume of customers utilizing these services declines and the Company does not receive the forecasted revenue over the course of the next 20 years. The average age of the services retired over the past five years is 43 years, more than double the period of which revenue

was estimated when the services were attached as referenced in Exhibit A-47 (LAB-4), indicating that the risk is non-existent. The volume of natural gas services is not declining, and the customers who moved in to utilize the attached services is stable as displayed in Exhibit A-49 (LAB-6). The average consumption per service over the past 20 years has stayed consistent ranging from 90-100 mcf per service depending on the severity of the weather as displayed in Exhibit A-49 (LAB-6).

Q. Is an applicant required to contribute to capital expenditures that exceed the revenue obtainable from the service installed to serve new applicants?

A. Yes, under Rule C.8 Customer Attachment Tariff, a contribution shall be required totaling the following components: Connection Fee, any Revenue Deficiency, any Excess Service Line Fee, and any Direct Charges.

Q. Are the assumptions underlying the tariff reasonable and prudent?

A. Yes. As outlined in my testimony, the assumptions are reasonable and prudent. Each year, the Company conducts a review of the model's assumptions and results with the MPSC Staff ("Staff"). This collaborative review provides an opportunity to receive feedback on the reasonableness of the assumptions and outputs, particularly in terms of their impact on customers.

Q. Can you explain the Company's connection fee?

A. Yes, under Rule C.8 Customer Attachment Tariff, the Connection Fee is equal to $200.00 per meter. The Connection Fee is equal to $100.00 per meter for a multiple metered installation on a single structure that is served from a single service line and where all meters are set at one time. The connection fee is separate from the revenue deficiency calculation.

Q. Can you clarify the direct charges under the tariff and why the Company separates those charges from the revenue deficiency calculation?

A. Yes, under Rule C.8 Customer Attachment Tariff, direct charges are any additional expenditures associated with the project which include but are not limited to specific license fees, inspection fees, or right of way fees charged by any political subdivision for any construction provided. Direct charges shall also include an additional charge per foot for winter construction during the period of December 15 to April 15. These expenditures are specific to the site conditions of the applicant requesting service. To ensure these additional expenditures are fully recovered from the requesting applicant, the Company excludes them from the revenue deficiency calculation and charges them directly.

Q. What is the residential Excess Service Line Fee charge?

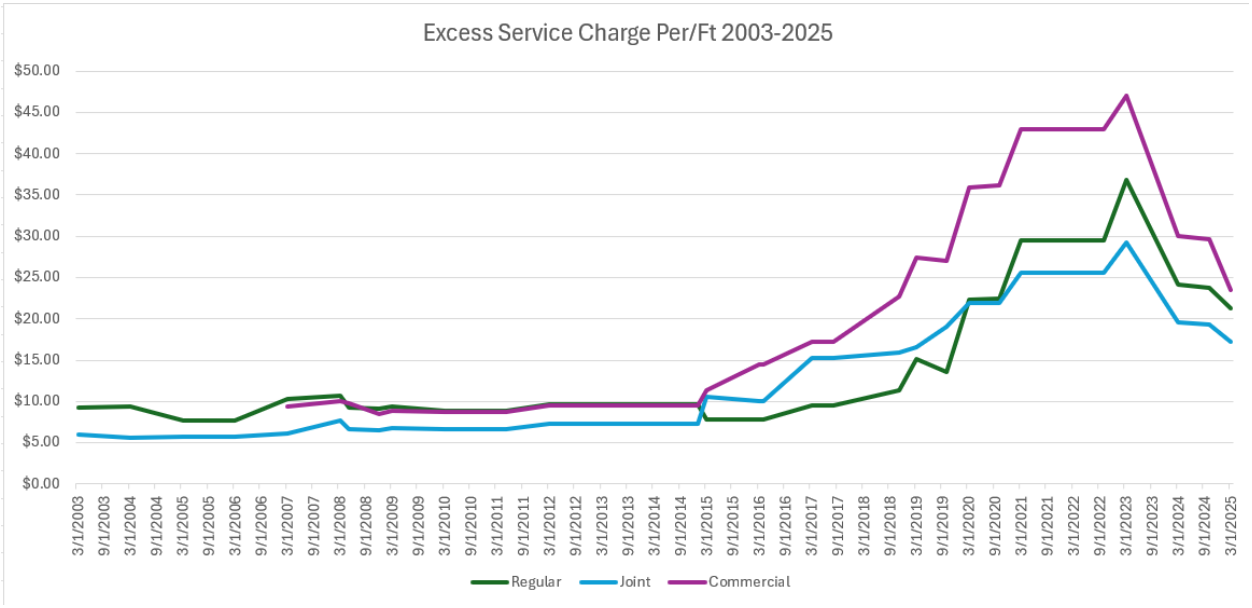
A. The excess service charge is the upfront cost per foot for all additional footage that is to be installed in excess of the most current footage allowance the Company offers, which is 117' for straight gas services and 152' for gas services joint with electric. as of March 1st 2025.

Q Can you clarify the excess service charge calculation and how frequently they are updated?

A. Yes, the current excess service charge is $21.26 per foot. The calculation used to determine the per foot amount of the excess service charge is displayed in Exhibit A-44 (LAB-1). This exhibit provides the formula, values and screenshots of the model used to calculate the current excess service charge. The Company updates the excess footage charges at a minimum annually. However, during Covid, the Company opted not to update excess footage costs to support the building industry during those unprecedented times.

Q. Please describe Exhibit A-xxx (LAB-2) and the conclusions made from this exhibit?

A. In 2023, the excess service charge was at its highest value in the past two decades, as displayed in Exhibit A-45 (LAB-2). The long-range trend of footage allowances and excess footage charges indicates that the Company is increasing upfront costs for the applicants requesting service and reducing the costs that are estimated to be recovered from the expected incremental revenue of that service over 20 years. The chart below demonstrates the trend of excess footage charges from 2003 through 2025 as referenced in Exhibit A-45 (LAB-2).



Q. Please explain how the footage allowance is updated?

A. Annually, the Company uses the Gas Engineering Model to update the footage allowance using the previous three years of historical service installation cost and customer usage data. A three-year average is used within the model to avoid the peaks and valleys that come with the changing weather patterns. The calculated footage allowance is determined to be the point where the Company expects to recover all of its service installation revenue

requirements on a NPV basis from the attaching service over the 20-year period modeled per Rule C.8 Customer Attachment Tariff.

Q. Why, and when, does the Company use a fixed footage allowance and excess footage charge instead of the Gas Engineering Model?

A. The Company uses a fixed footage allowance and excess footage charge model to streamline the NPV calculation process for both applicants requesting typical residential gas service and internal employees preparing invoices. This approach simplifies cost estimation and ensures consistency across standard installations. A typical residential gas service is defined as an installation that meets the following criteria:

a. Equipment Specifications: The service is designed to accommodate standard residential gas usage, with piping requirements not exceeding 1-1/8 inch in diameter and served by a single gas meter rated at 250 CFH or less.

b. Standard Equipment: The residence does not include non-standard or high-demand gas appliances such as tankless water heaters, pool heaters, standby generators, or other equipment that would necessitate atypical service design or capacity.

c. Installation Conditions: The service installation does not involve additional complexities or costs, such as high-pressure regulation, county drain crossings, railroad crossings, or other site-specific challenges that require special engineering or construction considerations.

This fixed model is applied when the service request aligns with the definition of a conventional residential installation. It helps distinguish standard services from those requiring enhanced infrastructure or design due to unique customer needs or site conditions.

Q. Can you provide examples of how the fixed footage allowance and excess service charges are used to determine customer contributions?

A. Yes.

a. An applicant requesting service that requires footage less than the footage allowance will pay a $200 connection fee and any direct charges such as permitting and inspections. For example, an applicant requesting service that is 55 feet long and requires work within a municipal road right-of-way with a permit fee of $320 would be responsible for a $200 connection fee and the permit fee of $320, totaling $520.

b. Applicants that are requesting service that exceeds the footage allowance will pay a $200 connection fee, as well as any excess footage charges (or revenue deficiency) and any other direct charges. For example, an applicant requesting service of 150 feet for gas only, with the same permit costs, would be responsible for a $200 connection fee, an excess service fee of $701.58 (150 feet - 117 feet = 33 feet x $21.26 = $701.58), and a permit fee of $320, totaling $1,221.58.

Q. Do longer footage allowances result in lower costs for applicants requesting a new service and greater costs spread across ratepayers?

A. No. While I can confirm that the footage allowances of 88 feet (for gas only service) and 124 feet (for joint gas and electric service) that were implemented on March 1, 2024 increased to 117 feet and 152 feet, respectively, on March 1, 2025, the Company has significantly decreased its footage allowances since 2003 thereby increasing upfront costs for connecting services and reducing costs that are being recovered through the new service revenue included in the 20-year modeling period. In 2024, the footage allowance was at its lowest point in the past two decades. This is shown in Exhibit A-45 (LAB-2).

From 2003 through 2024, the footage allowance decreased for various classifications of metering. For example, for the most common services with 250 gas meters (for gas only service), there has been a footage allowance decrease of 42.08% (202 ft to 117 ft) from 2003 to its current value and a 65.69% (341 ft to 117 ft) decrease from its highest point in October 2019. For the most common services with 250 class meters (with joint gas/electric service), there has been a footage allowance decrease of 54.35%

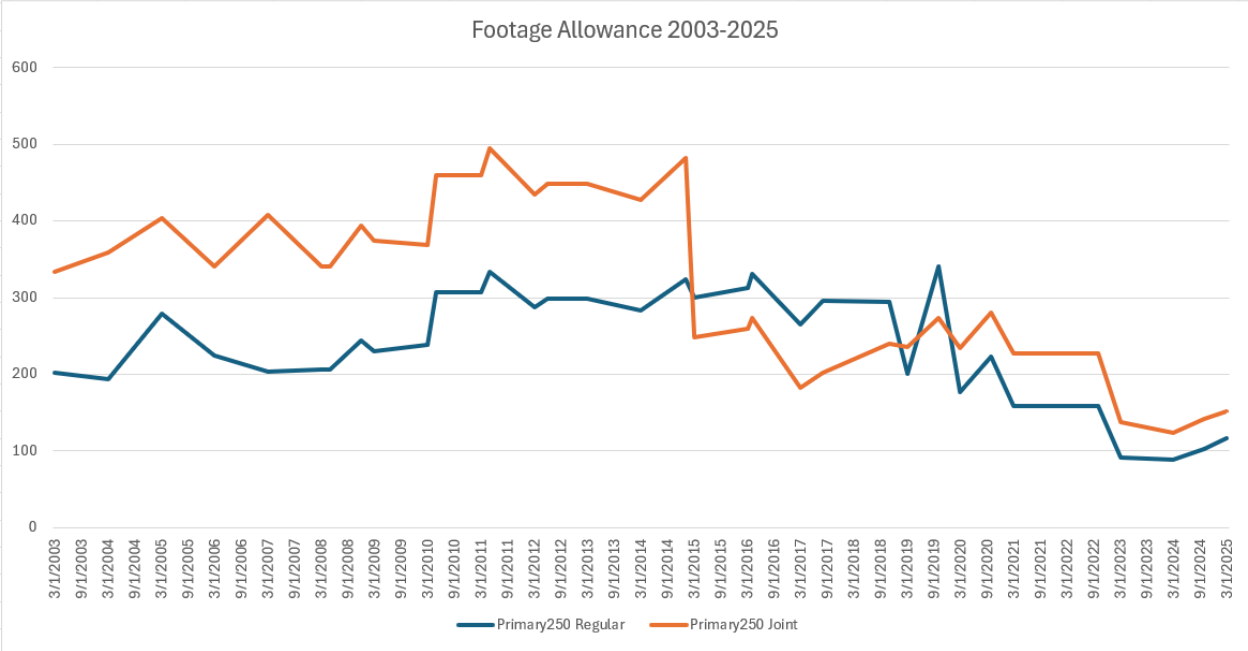
(333 ft to 117 ft) to its current value and a 69.29% (495 ft to 117 ft) decrease from its highest point in May 2011.

Some metering classifications, such as a 3M meter with joint gas/electric service, no longer offer footage allowances based on average revenue. Instead, the customer must provide equipment specifications and hours of use to determine an estimated annual MCF as the input into the model to more accurately calculate the revenue deficiency within the NPV calculation to ensure that the Company will recover its costs using the appropriate amount of revenue over the first 20 years.

Q. Why was there a slight increase in the Company's footage allowance from 2024 to 2025?

A. The recent slight increases in footage allowances reflects, in part, the Company's ongoing efforts to reduce its actual unit costs. This results in a lower plant in service cost amounts input to the model calculations. The plant in service cost is one of multiple inputs to the model that influences the NPV calculation. The Company uses the model to determine the amount of footage allowance that results in a model calculation of NPV that is greater than $0. Reductions in service installations costs over time would cause the footage allowance to increase (based on the previous three years of actual costs incurred).

For example, the most current model update estimates that the Company will recover 100% of the annual revenue requirements from the new service attachment of a 117-foot gas only service based on average annual consumption of 94 mcf over 20 years. In this 117-foot service scenario, the NPV is $5.65. In that scenario, there is no calculated revenue deficiency to recover upfront costs from this attaching service.



The Company has continued to make necessary adjustments to the footage allowances since 2003 to ensure that new service revenues will recover the costs of installing new services as required by Rule C.8.

Q. If the applicant requesting service has requirements that do not meet the definition of a typical residential service, how is the revenue deficiency calculated?

A. The Gas Engineering Model is used to simulate a specific scenario incorporating all relevant variables. These inputs are then used to calculate the NPV of the revenue deficiency, ensuring an accurate and customized financial assessment of the contribution in aid of construction.

Q. The model uses expected incremental revenues and incremental costs associated with a project over a 20-year period in the revenue deficiency calculation. Is this reasonable?

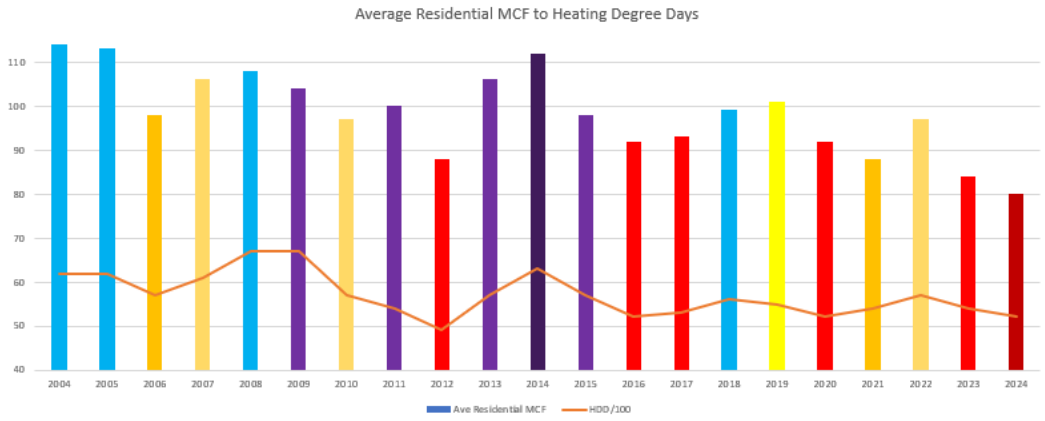
A. Yes. The services installed are staying active throughout the 20-year period of time assumed by the model. The Company is able to calculate an average age of active services

as well as and average age of retired services using information from the Gas GIS database. Based on that historical data, including all gas services regardless of the reason they were installed or retired dating back to 1950, the average age of an active gas service is calculated to be slightly over 35 years, while the average lifespan of retired services is calculated to be just over 30 years, as referenced in Exhibit A-46 (LAB-3). These calculations support the reasonableness of using a 20-year modeling period as a conservative timeframe for estimating the incremental revenues and costs associated with new service installations.

Q. The model uses expected incremental revenues and incremental costs associated with a project over a 20-year period in the revenue deficiency calculation. Can you provide evidence that the consumption values used in the estimates reflect actual revenue the Company is receiving?

A. Yes. The Company's historical average consumption data for residential services from 2004 through 2024 as reported in the "Annual Report of Natural Gas Utilities (Major and Minor)" to the MPSC yearly shows annual usage ranging from a low of 80 Mcf in 2024 to a peak of 114 Mcf in 2004, as referenced in Exhibit A-49 (LAB-6). These fluctuations in consumption closely correlate with variations in Heating Degree Days ("HDD"), which are sourced from the U.S. Energy Information Administration ("EIA"). The average annual consumption over this 16-year period is 94 Mcf, which aligns with the current assumption used in the model—based on the average of the most recent three years. The three-year average is used within the model to avoid the peaks and valleys that come with the changing weather patterns that can be seen in the chart below. This consistency between historical

data and model assumptions supports the conclusion that the consumption values used in the estimates reasonably reflect the actual revenue the Company is receiving.



Year	MCF	HDD/100	AWSSI Severity
2004	114	62	Average/Severe
2005	113	62	Average/Severe
2006	98	57	Mild/Moderate/Average
2007	106	61	Moderate/Average
2008	108	67	Severe
2009	104	67	Severe/Extreme
2010	97	57	Moderate/Average
2011	100	54	Severe/Extreme
2012	88	49	Mild/Record Mild
2013	106	57	Moderate/Average
2014	112	63	**Record Extreme**
2015	98	57	Extreme
2016	92	52	Mild
2017	93	53	Mild
2018	99	56	Average/Extreme
2019	101	55	Moderate/Average/Severe
2020	92	52	Mild
2021	88	54	Moderate
2022	97	57	Moderate/Average
2023	84	54	Mild
2024	80	52	**Record Mild**
16yr Average	96		
21yr Average	99		

Severity Color

AWSSI Table

- Record Extreme
- Extreme
- Severe
- Average
- Moderate
- Mild
- Record Mild

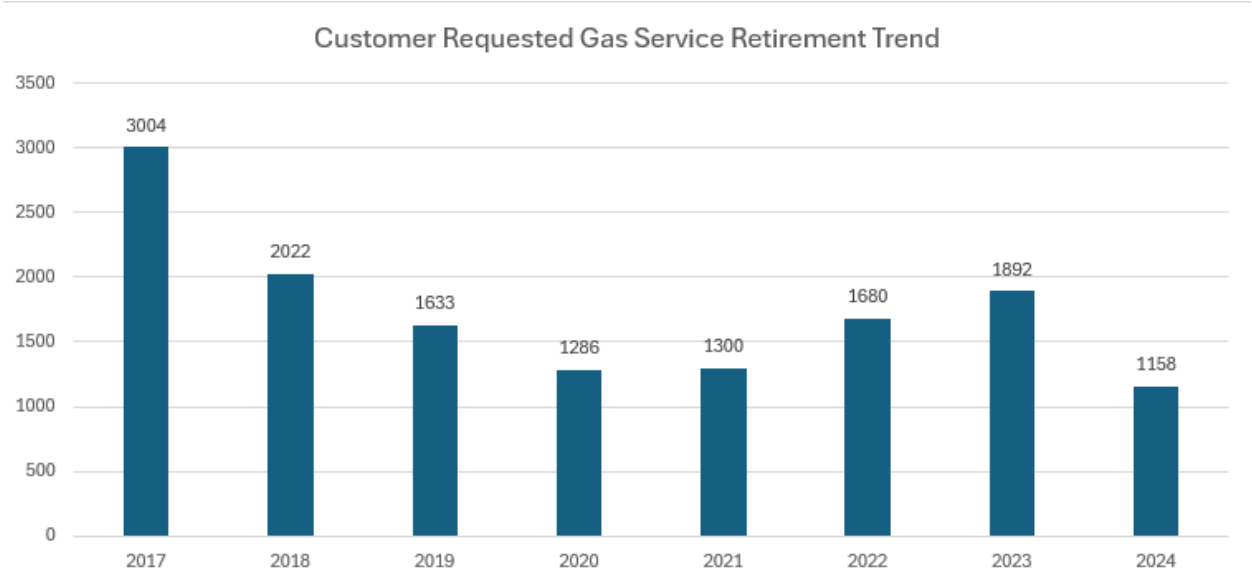
Q. While services often remain active beyond the 20-year modeling period, can you provide insight into the consumption values of those services and whether the Company is truly recovering the costs of service installations over the full period in which the services are active?

A. Yes. Although the revenue deficiency model uses a 20-year period for estimating cost recovery, historical data indicates that most services continue to generate revenue well beyond that timeframe. The Company's records show that the average active service age exceeds 35 years, and retired services average just over 30 years, as referenced in Exhibit A-46 (LAB-3). The Company's records also show that the average consumption values

from 2009-2024 is 94 mcf, as referenced in Exhibit-49 (LAB-6). Over these extended lifespans, cumulative consumption typically results in full recovery of installation costs and a reasonable rate of return. This supports the 20-year model as a conservative and financially sound basis for evaluating new service attachments.

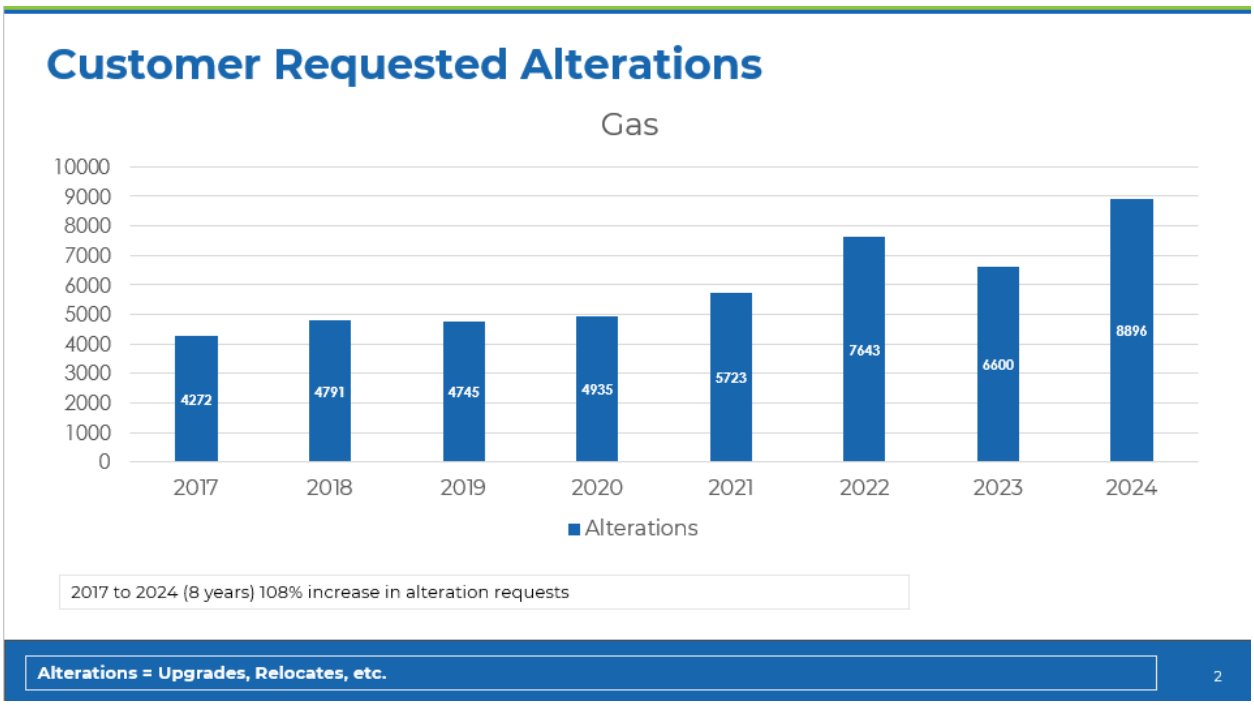
Q. In recent years, are customers requesting natural gas services to be retired, and if so, at what rate is the Company retiring natural gas services? Does it surpass the 20 years of revenue the Company offers when the service was installed?

A. The Company designs the natural gas distribution system for a minimum life span of 50 years and assumes that the service will remain active for a minimum of 20 years in the calculation and the revenue projections used in the model. The model does not estimate future inflation as an additional cost or revenue requirement. The Company has only received requests from customers to retire on average 1463 services annually over the past five years as referenced in Exhibit A-47 (LAB-4) and the average lifespan of those retired services over the past five years has been 43 years based on the vintage year the services were installed when retired as shown in Exhibit A-48 (LAB-5). New service installations consistently exceed service retirements and there is no evidence to suggest that significant numbers of customers are disconnecting existing gas services.



Q. In recent years are customers requesting natural gas services to be upgraded, relocated or otherwise altered indicated existing services are continuing to be utilized by Michigan residents?

A. Yes, the Company has received 8,896 gas service alteration requests in 2024 compared to the 1158 requested service retirements in 2024; these requests are to either relocate the service or upgrade the service due to load increases. This is a 108% increase from the 4,272 alteration requests received in 2017, and the Company has experienced consistent increase in alteration requests year over year as shown in Exhibit A-49 (LAB-6). This is a clear indication that customers continue to utilize natural gas in the state of Michigan and request to utilize more natural gas even though there are alternative options available.



Q. Does the Company's customer contribution model use outdated assumptions for household gas consumption?

A. No, the assumptions within the model are updated annually and the average household consumption used is a rolling three-year historical average for all residential households and all residential multi-units (apartments, condos) using full heating seasons (July through June is an annual total), as shown in Exhibit A-49 (LAB-6). The rolling three-year historical average is used to eliminate the extreme peaks and valleys that occur due to the changes in weather conditions from year to year.

Q. Can you provide an example of a typical residential gas service installed approximately 20 years ago and explain whether the costs associated with that installation have been recovered through revenue?

A. Yes. Using the assumptions from 2005, the model estimated the NPV cost to install an average service length of 102 feet at $1,543.03. At that time, the projected NPV revenue

over a 20-year period—based on a fixed annual consumption of 150 Mcf—was $2,566.12, as referenced in Exhibit A-xxx (LAB-7). The NPV revenue calculation exceeded the NPV cost calculation by $1,023.09. However, when subsequently adjusting the model to reflect lower actual average consumption from 2009 to 2024 (94 Mcf per year), the revised NPV revenue is estimated at $1,701.24, as referenced in Exhibit A-xxx (LAB-7). The reduced NPV revenue calculation of $1,701.24 still exceeds the 2005 NPV cost calculation ($1,543.03) by $158.21, indicating that even at this lower average Mcf consumption, the Company has recovered the installation cost of the average service installed in 2005. Furthermore, since the average lifespan of a gas service is currently averaged at 30 to 35 years, this service is expected to continue generating revenue beyond the initial 20-year recovery period. Therefore, there is no basis to forecast a loss in cost recovery.

Q. Is Consumers Energy prepared to provide and share the model used as evidence in this rate case?

A. Yes.

Q. Do you believe to the best of your ability that you have provided thorough justification of the Company's contribution in aid of construction and customer attachment program methodologies?

A. Yes, for the reasons stated above in my testimony, the Company believes the line extension policy is justified and the methodologies are sound and reasonable. However, if the Commission is interested in examining the Company's line extension policy, this should be done across all utilities through a work group. Using the same model across all utilities will ensure consistency across the industry.

Q. Should the Company revise the assumptions within the gas engineering model to reduce the 20-year modeling period and include declining natural gas demand?

A. No. As stated in my testimony, the Company believes that using a 20-year modeling period along with an annually updated three-year historical average consumption is both reasonable and conservative. This approach provides a stable basis for estimating the rate of return and cost recovery associated with new service installations, ensuring long-term reliability and financial prudence.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

LUTHER A. BONNER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

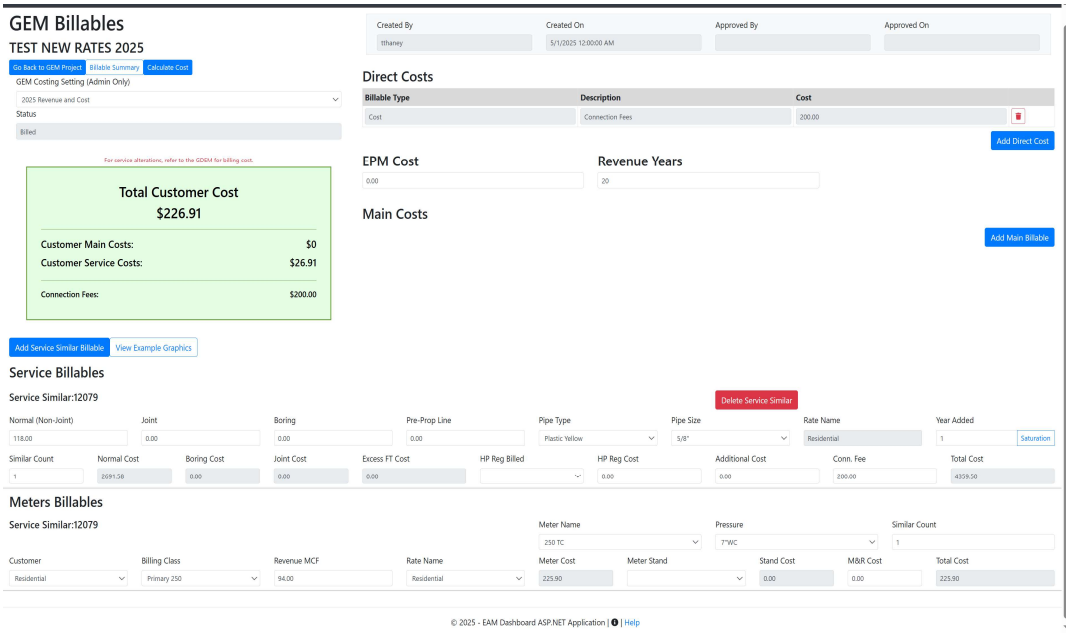
December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Excess Service Cost Formula

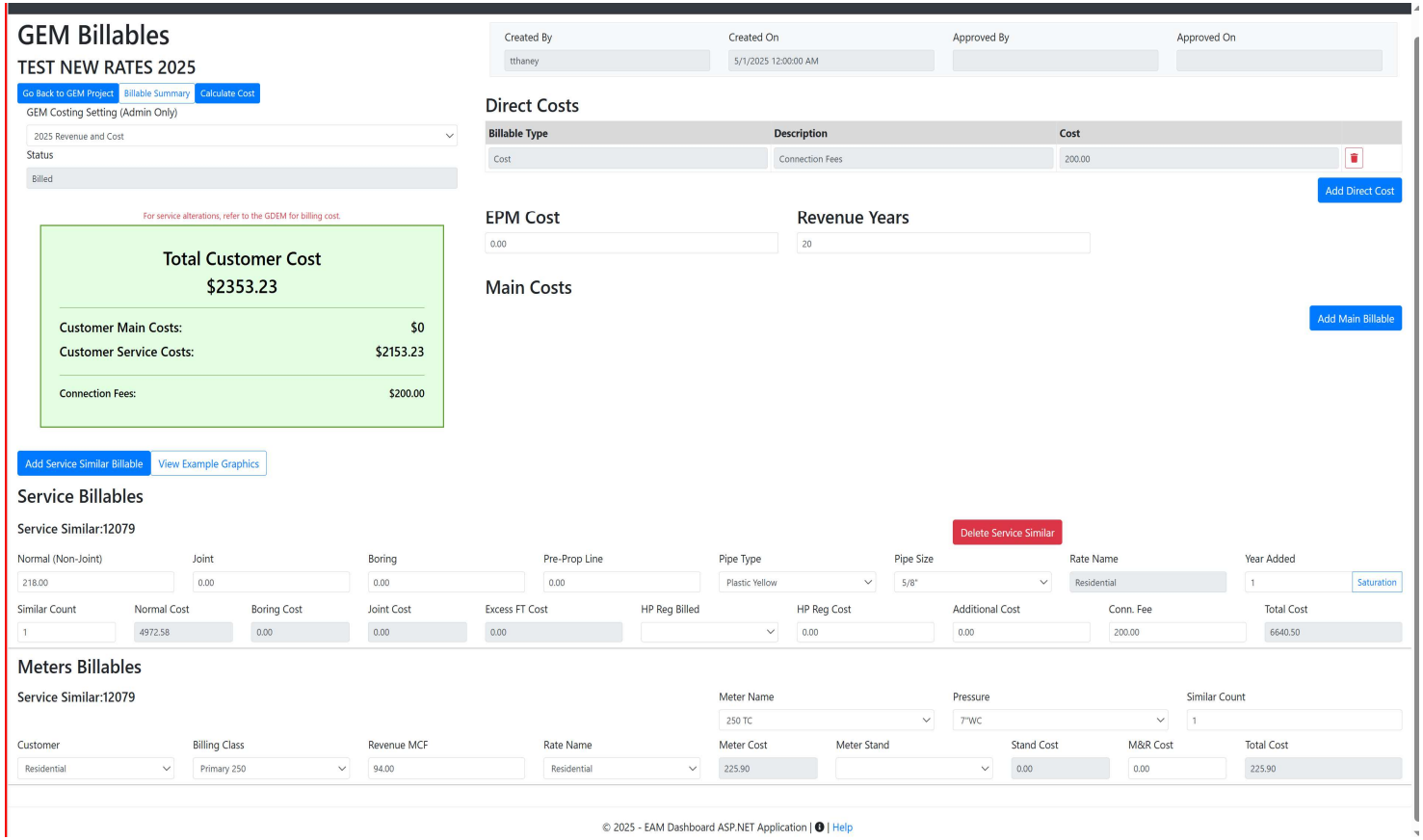
Case No.: U-21981
Exhibit No.: A-44 (LAB-1)
Page: 1 of 3
Witness: LABonner
Date: December 2025

		X		Y	Excess Footage Charge per foot
Project Cost (- $200 connection fee)	NPVPC	$26.91	NPVPC	$2,153.23	$21.26
Footage	Footage	118	Footage	218	

Cell G2 Formula= (NetPresentValueProjectCost at X Feet - NetPresentValueProjectCost at Y Feet) / (X-Y)


GEM Billables
TEST NEW RATES 2025
Go Back to GEM Project
Billable Summary
Calculate Cost
GEM Costing Setting (Admin Only)
2025 Revenue and Cost
Status
Billed
Total Customer Cost
$226.91
Customer Main Costs: $0
Customer Service Costs: $26.91
Connection Fees: $200.00
Add Service Similar Billable
View Example Graphics
Service Billables
Service Similar:12079
Delete Service Similar
Normal (Non-Joint)
Joint
Boring
Pre-Prop Line
Pipe Type
Pipe Size
Rate Name
Year Added
Similar Count
Normal Cost
Boring Cost
Joint Cost
Excess FT Cost
HP Reg Billed
HP Reg Cost
Additional Cost
Conn. Fee
Total Cost
Meters Billables
Service Similar:12079
Meter Name
Pressure
Similar Count
Customer
Billing Class
Revenue MCF
Rate Name
Meter Cost
Meter Stand
Stand Cost
M&R Cost
Total Cost
Created By
Created On
Approved By
Approved On
Direct Costs
Billable Type
Description
Cost
Connection Fees
200.00
Add Direct Cost
EPM Cost
Revenue Years
Main Costs
Add Main Billable
© 2025 - EAM Dashboard ASP.NET Application | Help

Gem Billables Summary
For Internal Use Only
Year 1 Main Cost
0.00
Year 1 Service Cost
4359.50
Year 1 Meter Cost
225.90
Year 1 Direct Cost
200.00
Total Main Cost
0.00
Total Service Cost
4359.50
Total Meter Cost
225.90
Total Direct Cost
200.00
Net Present Value Cost
6381.76
Net Present Value Revenue
6341.64
Net Present Value Difference
40.12
Net Present Value Gross Up
26.91
Total Customer Cost
226.91
Non Recoverable Main Cost
0.00
NPV Per Year
Value ($)
8k
6k
4k
2k
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Revenue
Cost
Highcharts.com
Close

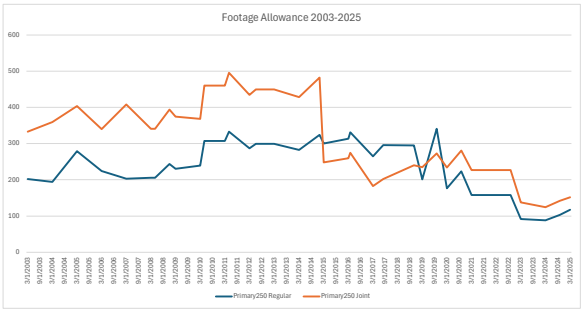

GEM Billables
TEST NEW RATES 2025
Go Back to GEM Project
Billable Summary
Calculate Cost
GEM Costing Setting (Admin Only)
2025 Revenue and Cost
Status
Billed
For service alterations, refer to the GDEM for billing cost.
Total Customer Cost
$2353.23
Customer Main Costs: $0
Customer Service Costs: $2153.23
Connection Fees: $200.00
Add Service Similar Billable
View Example Graphics
Service Billables
Service Similar:12079
Created By
tthaney
Created On
5/1/2025 12:00:00 AM
Approved By
Approved On
Direct Costs
Billable Type
Description
Cost
Cost
Connection Fees
200.00
Add Direct Cost
EPM Cost
0.00
Revenue Years
20
Main Costs
Add Main Billable
Delete Service Similar
Normal (Non-Joint)
218.00
Joint
0.00
Boring
0.00
Pre-Prop Line
0.00
Pipe Type
Plastic Yellow
Pipe Size
5/8"
Rate Name
Residential
Year Added
1
Saturation
Similar Count
1
Normal Cost
4972.58
Boring Cost
0.00
Joint Cost
0.00
Excess FT Cost
0.00
HP Reg Billed
HP Reg Cost
0.00
Additional Cost
0.00
Conn. Fee
200.00
Total Cost
6640.50
Meters Billables
Service Similar:12079
Meter Name
250 TC
Pressure
7"WC
Similar Count
1
Customer
Residential
Billing Class
Primary 250
Revenue MCF
94.00
Rate Name
Residential
Meter Cost
225.90
Meter Stand
Stand Cost
0.00
M&R Cost
0.00
Total Cost
225.90
© 2025 - EAM Dashboard ASP.NET Application | | Help

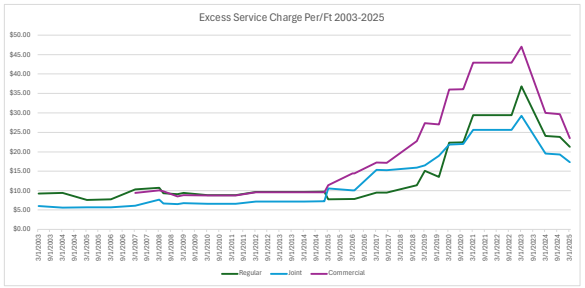
MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Footage Allowance Excess Service Charge Trends 2003-2025

Case No.: U-21981
Exhibit No.: A-45 (LAB-2)
Page: 1 of 1
Witness: LABonner
Date: December 2025

		Service Footage Allowance by Class of Metering									Excess Service Charge per/ft	Additional Directional Bore per/ft
		Primary3M	Primary2M	Primary1.5M	Primary800	Primary 630	Primary425	Primary250	Seasonal	Mobile Home		
March 1st 2025	Regular				117		117	117	117	117	$21.26	$14.91
	Joint				152		152	152	152	152	$17.28	$14.91
	Commercial										$23.46	$14.91
October 1st 2024	Regular				103		103	103	103	103	$23.81	$13.30
	Joint				142		142	142	142	142	$19.31	$13.30
	Commercial										$29.68	$13.30
March 1st 2024	Regular				88		88	88	88	88	$24.10	$13.30
	Joint				124		124	124	124	124	$19.55	$13.30
	Commercial										$30.03	$13.30
March 1st 2023	Regular				92		92	92	92	92	$36.82	$8.80
	Joint				138		138	138	138	138	$29.23	$8.80
	Commercial										$47.01	$8.80
October 1st 2022	Regular				1071		544	158	0	52	$29.47	$8.80
	Joint				1278		672	227	24	105	$25.60	$8.80
	Commercial										$42.90	$8.80
March 1st 2021	Regular				1071		544	158	0	52	$29.47	$8.80
	Joint				1278		672	227	24	105	$25.60	$8.80
	Commercial										$42.90	$8.80
October 1st 2020	Regular				1424		731	223	0	84	$22.41	$8.80
	Joint				1505		799	281	46	140	$21.99	$8.80
	Commercial										$36.12	$8.80
March 1st 2020	Regular				1210		615	177	0	57	$22.31	$8.80
	Joint				1287		681	234	30	111	$21.89	$8.80
	Commercial										$35.96	$8.80
October 1st 2019	Regular				2045		1064	341	11	143	$13.53	$8.80
	Joint				1486		787	273	37	131	$19.00	$8.80
	Commercial										$27.07	$8.80
March 1st 2019	Regular				1337		685	201	0	67	$15.08	$8.80
	Joint				1272		677	235	32	113	$16.52	$8.80
	Commercial										$27.36	$8.80
November 2nd 2018	Regular				1801		937	295	0	117	$11.37	$8.80
	Joint				1313		697	240	29	113	$15.96	$8.80
	Commercial										$22.77	$8.80
August 7th 2017	Regular				1949	1595	1002	296	0	99	$9.47	$8.80
	Joint				1226	1006	639	202	0	80	$15.30	$8.80
	Commercial										$17.18	$8.80
March 1st 2017	Regular				1800	1475	922	265	0	82	$9.49	$8.80
	Joint				1134	932	590	183	0	69	$15.32	$8.80
	Commercial										$17.22	$8.80
April 22nd 2016	Regular				2194	1800	1129	331	0	108	$7.82	$8.80
	Joint				1717	1411	892	274	0	101	$10.09	$8.80
	Commercial										$14.43	$8.80
March 1st 2016	Regular				2110	1733	1084	313	0	98	$7.82	$8.80
	Joint				1652	1359	857	260	0	94	$10.09	$8.80
	Commercial										$14.43	$8.80
March 1st 2015	Regular				2111	1730	1076	300	0	83	$7.76	$8.80
	Joint				1579	1299	819	248	0	89	$10.55	$8.80
	Commercial										$11.37	$8.80
January 21st 2015	Regular	6790	4426	3010	1773	1468	945	324	35	150	$9.70	$8.80
	Joint	9143	5976	4080	2423	2015	1314	482	95	250	$7.24	$8.80
	Commercial										$9.58	$8.80
March 1st 2014	Regular	6280	4085	2771	1625	1345	859	283	15	122	$9.68	$8.80
	Joint	8460	5520	3760	2224	1850	1199	428	68	212	$7.23	$8.80
	Commercial										$9.56	$8.80
March 1st 2013	Regular	6542	4260	2893	1698	1404	899	299	20	132	$9.68	$8.80
	Joint	8811	5754	3924	2323	1929	1253	449	75	225	$7.23	$8.80
	Commercial										$9.56	$8.80
June 8th 2012	Regular	6542	4260	2893	1698	1404	899	299	20	132	$9.68	$8.80
	Joint	8811	5754	3924	2323	1929	1253	449	75	225	$7.23	$8.80
	Commercial										$9.56	$8.80
March 1st 2012	Regular	6327	4117	2794	1639	1356	867	287	17	125	$9.68	$8.80
	Joint	8531	5568	3794	2245	1867	1211	434	71	216	$7.23	$8.80
	Commercial										$9.57	$8.80
May 27th 2011	Regular	7104	4628	3145	1850	1531	984	333	30	152	$8.84	$8.80
	Joint	9572	6253	4265	2528	2102	1367	495	89	252	$6.59	$8.80
	Commercial										$8.73	$8.80
March 1st 2011	Regular	6539	4253	2887	1697	1410	905	307	28	139	$8.84	$8.80
	Joint	8815	5750	3918	2323	1939	1261	460	85	235	$6.59	$8.80
	Commercial										$8.73	$8.80
May 18th 2010	Regular	6539	4253	2887	1697	1410	905	307	28	139	$8.84	$8.80
	Joint	8815	5750	3918	2323	1939	1261	460	85	235	$6.59	$8.80
	Commercial										$8.73	$8.80
March 1st 2010	Regular	5519	3569	2408	1404	1174	743	239	0	95	$8.84	$8.80
	Joint	7448	4833	3276	1931	1622	1044	368	48	176	$6.59	$8.80
	Commercial										$8.73	$8.80
March 1st 2009	Regular	5410	3581	2464	1321	1105	702	230	6	96	$9.44	$8.80
	Joint	7277	4728	3210	1898	1597	1033	374	62	187	$6.76	$8.80
	Commercial										$8.82	$8.80
December 24th 2008	Regular	5624	3725	2565	1378	1153	734	244	12	105	$9.09	$8.80
	Joint	7553	4909	3335	1975	1662	1078	394	71	200	$6.52	$8.80
	Commercial										$8.49	$8.80
May 27th 2008	Regular	5055	3348	2298	1229	1026	648	206	0	81	$9.31	$8.80
	Joint	6797	4414	2995	1768	1485	958	341	50	166	$6.67	$8.80
	Commercial										$9.84	$8.80
March 1st 2008	Regular	5055	3348	2298	1229	1026	648	206	0	81	$10.75	$8.80
	Joint	6797	4414	2995	1768	1485	958	341	50	166	$7.71	$8.80
	Commercial										$10.04	$8.80
March 1st 2007	Regular	5140	3397	2333	1252	1040	656	203	0	76	$10.35	$8.80
	Joint	8408	5463	3706	2183	1825	1173	408	48	192	$6.12	$8.80
	Commercial										$9.43	$8.80
March 1st 2006	Regular				1262	1074	678	224	4	92	$7.74	$8.80
	Joint				1740	1487	952	340	43	162	$5.73	$8.80
	Commercial											$8.80
March 1st 2005	Regular				1408	1079	774	279	37	134	$7.64	$8.80
	Joint				1917	1476	1068	404	81	210	$5.70	$8.80
	Commercial											$8.80
March 1st 2004	Regular				955		532	194	26	93	$9.42	$8.80
	Joint				1636		926	359	78	190	$5.62	$8.80
	Commercial											$8.80
March 1st 2003	Regular				980		547	202	30	98	$9.22	$8.80
	Joint				1528		862	333	70	175	$6.00	$8.80
	Commercial											$8.80

Date	Primary250 Regular	Primary250 Joint	Excess Service Charge Regular	Excess Service Charge Joint	Excess Service Charge Commercial
3/1/2025	117	152	$21.26	$17.28	$23.46
10/1/2024	103	142	$23.81	$19.31	$29.68
3/1/2024	88	124	$24.10	$19.55	$30.03
3/1/2023	92	138	$36.82	$29.23	$47.01
10/1/2022	158	227	$29.47	$25.60	$42.90
3/1/2021	158	227	$29.47	$25.60	$42.90
10/1/2020	223	281	$22.41	$21.99	$36.12
3/1/2020	177	234	$22.31	$21.89	$35.96
10/1/2019	341	273	$13.53	$19.00	$27.07
3/1/2019	201	235	$15.08	$16.52	$27.36
11/2/2018	295	240	$11.37	$15.96	$22.77
8/7/2017	296	202	$9.47	$15.30	$17.18
3/1/2017	265	183	$9.49	$15.32	$17.22
4/22/2016	331	274	$7.82	$10.09	$14.43
3/1/2016	313	260	$7.82	$10.09	$14.43
3/1/2015	300	248	$7.76	$10.55	$11.37
1/21/2015	324	482	$9.70	$7.24	$9.58
3/1/2014	283	428	$9.68	$7.23	$9.56
3/1/2013	299	449	$9.68	$7.23	$9.56
6/8/2012	299	449	$9.68	$7.23	$9.56
3/1/2012	287	434	$9.68	$7.23	$9.57
5/27/2011	333	495	$8.84	$6.59	$8.73
3/1/2011	307	460	$8.84	$6.59	$8.73
5/18/2010	307	460	$8.84	$6.59	$8.73
3/1/2010	239	368	$8.84	$6.59	$8.73
3/1/2009	230	374	$9.44	$6.76	$8.82
12/24/2008	244	394	$9.09	$6.52	$8.49
5/27/2008	206	341	$9.31	$6.67	$9.84
3/1/2008	206	341	$10.75	$7.71	$10.04
3/1/2007	203	408	$10.35	$6.12	$9.43
3/1/2006	224	340	$7.74	$5.73	
3/1/2005	279	404	$7.64	$5.70	
3/1/2004	194	359	$9.42	$5.62	
3/1/2003	202	333	$9.22	$6.00	





MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Service Lifespan Analysis

Case No.: U-21981
Exhibit No.: A-46 (LAB-3)
Page: 1 of 1
Witness: LABonner
Date: December 2025

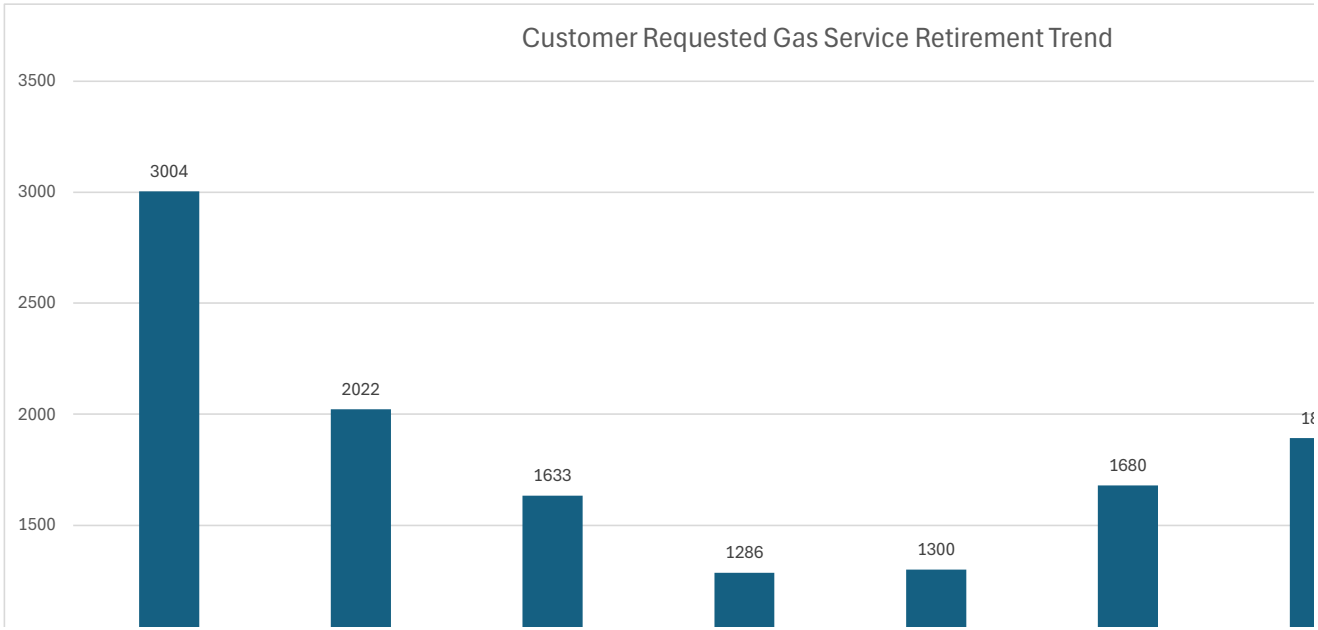
Year	Installed Volume	Retired Volume	Age at 2025	Active Volume	Active Age × Volume	Retired Age × Volume
1950	6014	308	75	5706	427950	23100
1951	5823	680	74	5143	380582	50320
1952	7502	804	73	6698	488954	58692
1953	8775	692	72	8083	581976	49824
1954	10246	577	71	9669	686499	40967
1955	12214	496	70	11718	820260	34720
1956	11051	403	69	10648	734712	27807
1957	11124	835	68	10289	699652	56780
1958	14432	1469	67	12963	868521	98423
1959	17292	1592	66	15700	1036200	105072
1960	20751	1727	65	19024	1236560	112255
1961	20218	1347	64	18871	1207744	86208
1962	19649	1360	63	18289	1152207	85680
1963	20357	1507	62	18850	1168700	93434
1964	19508	1656	61	17852	1088972	101016
1965	19529	1435	60	18094	1085640	86100
1966	20916	1675	59	19241	1135219	98825
1967	22741	1527	58	21214	1230412	88566
1968	20026	1688	57	18338	1045266	96216
1969	20179	1253	56	18926	1059856	70168
1970	20675	1508	55	19167	1054185	82940
1971	23510	590	54	22920	1237680	31860
1972	30326	1377	53	28949	1534297	72981
1973	29321	1826	52	27495	1429740	94952
1974	23831	624	51	23207	1183557	31824
1975	17178	887	50	16291	814550	44350
1976	19322	682	49	18640	913360	33418
1977	23351	517	48	22834	1096032	24816
1978	32722	885	47	31837	1496339	41595
1979	37411	718	46	36693	1687878	33028
1980	28478	583	45	27895	1255275	26235
1981	13633	406	44	13227	581988	17864
1982	8257	406	43	7851	337593	17458
1983	15114	646	42	14468	607656	27132
1984	13770	502	41	13268	543988	20582
1985	17639	488	40	17151	686040	19520
1986	21489	490	39	20999	818961	19110
1987	22941	736	38	22205	843790	27968
1988	22875	684	37	22191	821067	25308
1989	21471	657	36	20814	749304	23652
1990	21472	894	35	20578	720230	31290
1991	21799	959	34	20840	708560	32606
1992	24743	1078	33	23665	780945	35574
1993	26802	1360	32	25442	814144	43520
1994	27725	514	31	27211	843541	15934
1995	29634	678	30	28956	868680	20340
1996	32220	494	29	31726	920054	14326
1997	30164	539	28	29625	829500	15092
1998	30576	639	27	29937	808299	17253
1999	32318	864	26	31454	817804	22464
2000	28618	1692	25	26926	673150	42300
2001	26371	1600	24	24771	594504	38400
2002	25494	1586	23	23908	549884	36478
2003	23040	1702	22	21338	469436	37444
2004	25172	2018	21	23154	486234	42378
2005	22951	2145	20	20806	416120	42900
2006	16445	1771	19	14674	278806	33649
2007	12468	2305	18	10163	182934	41490
2008	11493	1947	17	9546	162282	33099
2009	10021	2248	16	7773	124368	35968
2010	9005	2597	15	6408	96120	38955
2011	10164	2827	14	7337	102718	39578
2012	13975	2562	13	11413	148369	33306
2013	20784	3727	12	17057	204684	44724
2014	25114	2553	11	22561	248171	28083
2015	24956	2612	10	22344	223440	26120
2016	25758	2901	9	22857	205713	26109
2017	30534	2795	8	27739	221912	22360
2018	29904	1762	7	28142	196994	12334
2019	26140	1484	6	24656	147936	8904
2020	26169	1702	5	24467	122335	8510
2021	31814	1429	4	30385	121540	5716
2022	26910	2041	3	24869	74607	6123
2023	18271	2282	2	15989	31978	4564
2024	18706	2669	1	16037	16037	2669
2025	11472	2190	0	9282	0	0
Total	1580863	103409				
% of Services Retired		6.54%				
Average Age of Active Services					35.22356094	
Average Lifespan of Retired Services						30.18427796

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Customer Requested Service Retirement Trend

Case No.: U-21981
Exhibit No.: A-47 (LAB-4)

Witness: LABonner
Date: December 2025

Year	2017	2018	2019	2020	2021	2022	2023	2024	5yr Average
Gas Service Retirements	3004	2022	1633	1286	1300	1680	1892	1158	1463



	Column Labels					
	2020	2021	2022	2023	2024	Grand Total
Average of vintage_year	1980	1981	1983	1984	1982	1982

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1	41984928	GRET	SVC	7/11/2024	1946	RET ABN	UG-SERVICE
2	36424940	GRET	SVC	6/9/2020	1946	RET ABN	UG-SERVICE
3	42706660	GRET	SVC	6/28/2024	1946	RET ABN	UG-SERVICE
4	40545195	GRET	SVC	8/9/2023	1946	RET ABN	UG-SERVICE
5	43526517	GRET	SVC	10/1/2024	1946	RET ABN	UG-SERVICE
6	42957323	GRET	SVC	9/19/2024	1946	RET ABN	UG-SERVICE
7	36204404	GRET	SVC	4/25/2020	1946	RET ABN	UG-SERVICE
8	36260073	GRET	SVC	3/19/2020	1947	RET ABN	UG-SERVICE
9	38879760	GRET	SVC	8/5/2021	1947	RET ABN	UG-SERVICE
10	43675355	GRET	SVC	10/3/2024	1947	RET ABN	UG-SERVICE
11	36559270	GRET	SVC	6/5/2020	1947	RET ABN	UG-SERVICE
12	42916576	GRET	SVC	9/25/2024	1947	RET ABN	UG-SERVICE
13	42916546	GRET	SVC	9/25/2024	1947	RET ABN	UG-SERVICE
14	38604503	GRET	SVC	7/7/2021	1947	RET ABN	UG-SERVICE
15	38346172	GRET	SVC	5/11/2021	1947	RET ABN	UG-SERVICE
16	38451808	GRET	SVC	5/7/2021	1947	RET ABN	UG-SERVICE
17	39417319	GRET	SVC	11/15/2021	1947	RET ABN	UG-SERVICE
18	37810140	GRET	SVC	11/24/2020	1947	RET ABN	UG-SERVICE
19	42524677	GRET	SVC	12/28/2023	1947	RET ABN	UG-SERVICE
20	41006553	GRET	SVC	12/9/2022	1947	RET ABN	UG-SERVICE
21	36748684	GRET	SVC	8/10/2020	1947	RET ABN	UG-SERVICE
22	41082588	GRET	SVC	2/2/2023	1947	RET ABN	UG-SERVICE
23	38550268	GRET	SVC	6/30/2021	1947	RET ABN	UG-SERVICE
24	40637090	GRET	SVC	8/31/2022	1947	RET ABN	UG-SERVICE
25	36699368	GRET	SVC	7/27/2020	1947	RET ABN	UG-SERVICE
26	42524180	GRET	SVC	12/29/2023	1947	RET ABN	UG-SERVICE
27	38365407	GRET	SVC	4/12/2021	1947	RET ABN	UG-SERVICE
28	38635342	GRET	SVC	6/21/2021	1947	RET ABN	UG-SERVICE
29	42815797	GRET	SVC	3/13/2024	1947	RET ABN	UG-SERVICE
30	43459021	GRET	SVC	8/20/2024	1947	RET ABN	UG-SERVICE
31	42957426	GRET	SVC	9/19/2024	1948	RET ABN	UG-SERVICE
32	41669690	GRET	SVC	5/24/2023	1948	RET ABN	UG-SERVICE
33	38175695	GRET	SVC	3/1/2021	1948	RET ABN	UG-SERVICE
34	39362214	GRET	SVC	11/1/2021	1948	RET ABN	UG-SERVICE
35	36028589	GRET	SVC	3/5/2020	1948	RET ABN	UG-SERVICE
36	38185300	GRET	SVC	2/27/2021	1948	RET ABN	UG-SERVICE
37	36109958	GRET	SVC	4/22/2020	1948	RET ABN	UG-SERVICE
38	39791769	GRET	SVC	10/7/2021	1948	RET ABN	UG-SERVICE
39	40564659	GRET	SVC	1/9/2023	1948	RET ABN	UG-SERVICE
40	42518406	GRET	SVC	12/28/2023	1948	RET ABN	UG-SERVICE
41	41241359	GRET	SVC	3/1/2023	1948	RET ABN	UG-SERVICE
42	38593716	GRET	SVC	6/23/2021	1948	RET ABN	UG-SERVICE
43	42481127	GRET	SVC	12/20/2023	1948	RET ABN	UG-SERVICE
44	36947693	GRET	SVC	9/18/2020	1948	RET ABN	UG-SERVICE
45	42213835	GRET	SVC	10/26/2023	1948	RET ABN	UG-SERVICE
46	36558231	GRET	SVC	7/1/2020	1948	RET ABN	UG-SERVICE
47	42587237	GRET	SVC	9/25/2024	1948	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
48	41082944	GRET	SVC	2/2/2023	1948	RET ABN	UG-SERVICE
49	43715957	GRET	SVC	10/4/2024	1948	RET ABN	UG-SERVICE
50	32769563	GRET	SVC	7/8/2020	1948	RET ABN	UG-SERVICE
51	41427677	GRET	SVC	4/14/2023	1948	RET ABN	UG-SERVICE
52	36120608	GRET	SVC	11/5/2020	1948	RET ABN	UG-SERVICE
53	38089277	GRET	SVC	2/3/2021	1948	RET ABN	UG-SERVICE
54	39066726	GRET	SVC	9/27/2021	1948	RET ABN	UG-SERVICE
55	39423756	GRET	SVC	6/27/2022	1948	RET ABN	UG-SERVICE
56	37979767	GRET	SVC	1/5/2021	1948	RET ABN	UG-SERVICE
57	36100989	GRET	SVC	3/10/2020	1948	RET ABN	UG-SERVICE
58	36040593	GRET	SVC	2/18/2020	1948	RET ABN	UG-SERVICE
59	38851928	GRET	SVC	11/8/2021	1948	RET ABN	UG-SERVICE
60	36240447	GRET	SVC	4/29/2020	1948	RET ABN	UG-SERVICE
61	43184801	GRET	SVC	6/17/2024	1949	RET ABN	UG-SERVICE
62	40508724	GRET	SVC	9/23/2022	1949	RET ABN	UG-SERVICE
63	40837783	GRET	SVC	10/17/2022	1949	RET ABN	UG-SERVICE
64	38097111	GRET	SVC	9/2/2021	1949	RET ABN	UG-SERVICE
65	42264554	GRET	SVC	10/23/2023	1949	RET ABN	UG-SERVICE
66	42506606	GRET	SVC	3/28/2024	1949	RET ABN	UG-SERVICE
67	37593735	GRET	SVC	11/23/2020	1949	RET ABN	UG-SERVICE
68	38581221	GRET	SVC	8/24/2021	1949	RET ABN	UG-SERVICE
69	38664596	GRET	SVC	6/24/2021	1949	RET ABN	UG-SERVICE
70	41194275	GRET	SVC	1/23/2023	1949	RET ABN	UG-SERVICE
71	36102515	GRET	SVC	4/23/2020	1949	RET ABN	UG-SERVICE
72	43360848	GRET	SVC	7/29/2024	1949	RET ABN	UG-SERVICE
73	42337562	GRET	SVC	11/6/2023	1949	RET ABN	UG-SERVICE
74	40782283	GRET	SVC	11/7/2022	1949	RET ABN	UG-SERVICE
75	41209796	GRET	SVC	12/11/2023	1949	RET ABN	UG-SERVICE
76	35962536	GRET	SVC	1/29/2020	1949	RET ABN	UG-SERVICE
77	36107368	GRET	SVC	4/23/2020	1949	RET ABN	UG-SERVICE
78	38484519	GRET	SVC	5/12/2021	1949	RET ABN	UG-SERVICE
79	37031968	GRET	SVC	10/7/2020	1949	RET ABN	UG-SERVICE
80	38202573	GRET	SVC	3/9/2021	1949	RET ABN	UG-SERVICE
81	42360719	GRET	SVC	11/15/2023	1949	RET ABN	UG-SERVICE
82	38451952	GRET	SVC	3/24/2021	1949	RET ABN	UG-SERVICE
83	40395242	GRET	SVC	7/7/2022	1949	RET ABN	UG-SERVICE
84	40216874	GRET	SVC	6/7/2022	1949	RET ABN	UG-SERVICE
85	38165419	GRET	SVC	11/9/2021	1949	RET ABN	UG-SERVICE
86	32769560	GRET	SVC	7/8/2020	1949	RET ABN	UG-SERVICE
87	39372955	GRET	SVC	1/25/2022	1949	RET ABN	UG-SERVICE
88	42587235	GRET	SVC	9/25/2024	1949	RET ABN	UG-SERVICE
89	37917098	GRET	SVC	12/14/2020	1949	RET ABN	UG-SERVICE
90	40909882	GRET	SVC	12/20/2022	1949	RET ABN	UG-SERVICE
91	40012507	GRET	SVC	4/20/2022	1949	RET ABN	UG-SERVICE
92	40385383	GRET	SVC	7/17/2022	1949	RET ABN	UG-SERVICE
93	40973247	GRET	SVC	11/29/2022	1949	RET ABN	UG-SERVICE
94	42427396	GRET	SVC	9/19/2024	1949	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
95	43742651	GRET	SVC	10/10/2024	1949	RET ABN	UG-SERVICE
96	37084953	GRET	SVC	10/15/2020	1949	RET ABN	UG-SERVICE
97	42427480	GRET	SVC	9/19/2024	1949	RET ABN	UG-SERVICE
98	41179277	GRET	SVC	1/19/2023	1950	RET ABN	UG-SERVICE
99	41873888	GRET	SVC	7/20/2023	1950	RET ABN	UG-SERVICE
100	37489769	GRET	SVC	11/16/2020	1950	RET ABN	UG-SERVICE
101	40748066	GRET	SVC	10/15/2022	1950	RET ABN	UG-SERVICE
102	43245051	GRET	SVC	9/11/2024	1950	RET ABN	UG-SERVICE
103	38121485	GRET	SVC	2/11/2021	1950	RET ABN	UG-SERVICE
104	38895091	GRET	SVC	8/17/2021	1950	RET ABN	UG-SERVICE
105	41968295	GRET	SVC	8/1/2024	1950	RET ABN	UG-SERVICE
106	38192568	GRET	SVC	3/30/2021	1950	RET ABN	UG-SERVICE
107	38033940	GRET	SVC	1/20/2021	1950	RET ABN	UG-SERVICE
108	43338156	GRET	SVC	7/23/2024	1950	RET ABN	UG-SERVICE
109	40556652	GRET	SVC	8/10/2022	1950	RET ABN	UG-SERVICE
110	41920885	GRET	SVC	7/31/2023	1950	RET ABN	UG-SERVICE
111	40644175	GRET	SVC	9/17/2022	1950	RET ABN	UG-SERVICE
112	40748546	GRET	SVC	9/28/2022	1950	RET ABN	UG-SERVICE
113	40150854	GRET	SVC	5/18/2022	1950	RET ABN	UG-SERVICE
114	41411952	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
115	40749933	GRET	SVC	9/28/2022	1950	RET ABN	UG-SERVICE
116	39380209	GRET	SVC	11/22/2021	1950	RET ABN	UG-SERVICE
117	38122135	GRET	SVC	2/11/2021	1950	RET ABN	UG-SERVICE
118	38814663	GRET	SVC	7/23/2021	1950	RET ABN	UG-SERVICE
119	43752068	GRET	SVC	12/27/2024	1950	RET ABN	UG-SERVICE
120	41082593	GRET	SVC	1/4/2023	1950	RET ABN	UG-SERVICE
121	41015741	GRET	SVC	12/8/2022	1950	RET REM	UG-SERVICE
122	42550981	GRET	SVC	1/8/2024	1950	RET ABN	UG-SERVICE
123	42497616	GRET	SVC	12/18/2023	1950	RET ABN	UG-SERVICE
124	37708593	GRET	SVC	11/25/2020	1950	RET ABN	UG-SERVICE
125	38146659	GRET	SVC	3/9/2021	1950	RET ABN	UG-SERVICE
126	41222690	GRET	SVC	2/2/2023	1950	RET REM	UG-SERVICE
127	43117176	GRET	SVC	6/6/2024	1950	RET ABN	UG-SERVICE
128	41082587	GRET	SVC	1/9/2023	1950	RET ABN	UG-SERVICE
129	41036612	GRET	SVC	12/14/2022	1950	RET REM	UG-SERVICE
130	36371101	GRET	SVC	5/26/2020	1950	RET ABN	UG-SERVICE
131	41407491	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
132	37044751	GRET	SVC	10/9/2020	1950	RET ABN	UG-SERVICE
133	43208932	GRET	SVC	6/24/2024	1950	RET ABN	UG-SERVICE
134	42604690	GRET	SVC	1/25/2024	1950	RET ABN	UG-SERVICE
135	43543397	GRET	SVC	10/4/2024	1950	RET ABN	UG-SERVICE
136	36799890	GRET	SVC	8/20/2020	1950	RET ABN	UG-SERVICE
137	42435905	GRET	SVC	9/19/2024	1950	RET ABN	UG-SERVICE
138	41407382	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
139	41407777	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
140	43324300	GRET	SVC	7/26/2024	1950	RET ABN	UG-SERVICE
141	41064588	GRET	SVC	12/15/2022	1950	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
142	36120792	GRET	SVC	11/5/2020	1950	RET ABN	UG-SERVICE
143	38426623	GRET	SVC	4/26/2021	1950	RET ABN	UG-SERVICE
144	35871722	GRET	SVC	1/7/2020	1950	RET ABN	UG-SERVICE
145	41430212	GRET	SVC	9/13/2023	1950	RET ABN	UG-SERVICE
146	41714290	GRET	SVC	6/5/2023	1950	RET ABN	UG-SERVICE
147	36030678	GRET	SVC	11/5/2020	1950	RET ABN	UG-SERVICE
148	39831460	GRET	SVC	8/3/2022	1950	RET ABN	UG-SERVICE
149	36079297	GRET	SVC	3/2/2020	1950	RET ABN	UG-SERVICE
150	36245397	GRET	SVC	3/7/2020	1950	RET ABN	UG-SERVICE
151	43551131	GRET	SVC	9/18/2024	1950	RET ABN	UG-SERVICE
152	37874484	GRET	SVC	12/4/2020	1950	RET ABN	UG-SERVICE
153	43522945	GRET	SVC	9/11/2024	1950	RET ABN	UG-SERVICE
154	43245050	GRET	SVC	9/11/2024	1950	RET ABN	UG-SERVICE
155	43645279	GRET	SVC	10/4/2024	1950	RET ABN	UG-SERVICE
156	41407395	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
157	36113056	GRET	SVC	11/5/2020	1950	RET ABN	UG-SERVICE
158	43604589	GRET	SVC	9/30/2024	1950	RET ABN	UG-SERVICE
159	37972672	GRET	SVC	1/2/2021	1950	RET ABN	UG-SERVICE
160	39348415	GRET	SVC	10/28/2021	1950	RET ABN	UG-SERVICE
161	42431570	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
162	38034133	GRET	SVC	1/20/2021	1950	RET ABN	UG-SERVICE
163	39679450	GRET	SVC	1/12/2022	1950	RET ABN	UG-SERVICE
164	39791773	GRET	SVC	10/7/2021	1950	RET ABN	UG-SERVICE
165	43245112	GRET	SVC	9/19/2024	1950	RET ABN	UG-SERVICE
166	43600705	GRET	SVC	9/19/2024	1950	RET ABN	UG-SERVICE
167	36712398	GRET	SVC	8/16/2020	1950	RET ABN	UG-SERVICE
168	41411680	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
169	43032273	GRET	SVC	4/29/2024	1950	RET ABN	UG-SERVICE
170	41034947	GRET	SVC	1/12/2023	1950	RET REM	UG-SERVICE
171	41411269	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
172	43543490	GRET	SVC	9/30/2024	1950	RET ABN	UG-SERVICE
173	38561882	GRET	SVC	4/19/2021	1950	RET ABN	UG-SERVICE
174	41411674	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
175	38864555	GRET	SVC	6/25/2021	1950	RET ABN	UG-SERVICE
176	41411918	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
177	37016175	GRET	SVC	9/30/2020	1950	RET ABN	UG-SERVICE
178	36235919	GRET	SVC	3/8/2021	1950	RET ABN	UG-SERVICE
179	41407671	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
180	42209116	GRET	SVC	3/28/2024	1950	RET ABN	UG-SERVICE
181	37918107	GRET	SVC	1/4/2021	1950	RET ABN	UG-SERVICE
182	43060517	GRET	SVC	5/16/2024	1950	RET ABN	UG-SERVICE
183	39831397	GRET	SVC	8/3/2022	1950	RET ABN	UG-SERVICE
184	41411676	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
185	39665946	GRET	SVC	8/3/2022	1950	RET ABN	UG-SERVICE
186	41411422	GRET	SVC	11/2/2023	1950	RET ABN	UG-SERVICE
187	36348136	GRET	SVC	5/19/2020	1950	RET ABN	UG-SERVICE
188	36194898	GRET	SVC	5/7/2020	1950	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
189	41411672	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
190	38033805	GRET	SVC	1/21/2021	1950	RET ABN	UG-SERVICE
191	41407398	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
192	39247044	GRET	SVC	10/11/2021	1950	RET ABN	UG-SERVICE
193	36203838	GRET	SVC	4/22/2020	1950	RET ABN	UG-SERVICE
194	38034050	GRET	SVC	1/20/2021	1950	RET ABN	UG-SERVICE
195	38414186	GRET	SVC	4/29/2021	1950	RET ABN	UG-SERVICE
196	41064589	GRET	SVC	12/15/2022	1950	RET ABN	UG-SERVICE
197	36270604	GRET	SVC	5/6/2020	1950	RET ABN	UG-SERVICE
198	40802654	GRET	SVC	10/14/2022	1950	RET ABN	UG-SERVICE
199	38614330	GRET	SVC	6/21/2021	1950	RET ABN	UG-SERVICE
200	39828249	GRET	SVC	3/16/2022	1950	RET ABN	UG-SERVICE
201	40523707	GRET	SVC	8/9/2022	1950	RET ABN	UG-SERVICE
202	43032275	GRET	SVC	4/29/2024	1950	RET ABN	UG-SERVICE
203	41411671	GRET	SVC	4/2/2024	1950	RET ABN	UG-SERVICE
204	38062034	GRET	SVC	1/28/2021	1951	RET ABN	UG-SERVICE
205	38489221	GRET	SVC	5/28/2021	1951	RET ABN	UG-SERVICE
206	38185531	GRET	SVC	3/1/2021	1951	RET ABN	UG-SERVICE
207	36739921	GRET	SVC	8/3/2020	1951	RET ABN	UG-SERVICE
208	36590739	GRET	SVC	7/8/2020	1951	RET ABN	UG-SERVICE
209	40861220	GRET	SVC	10/24/2022	1951	RET ABN	UG-SERVICE
210	36779224	GRET	SVC	8/26/2020	1951	RET ABN	UG-SERVICE
211	40249192	GRET	SVC	6/7/2022	1951	RET ABN	UG-SERVICE
212	38312480	GRET	SVC	10/5/2021	1951	RET ABN	UG-SERVICE
213	38352969	GRET	SVC	2/14/2023	1951	RET ABN	UG-SERVICE
214	41961169	GRET	SVC	8/8/2023	1951	RET ABN	UG-SERVICE
215	43928937	GRET	SVC	12/13/2024	1951	RET ABN	UG-SERVICE
216	37887821	GRET	SVC	12/8/2020	1951	RET ABN	UG-SERVICE
217	39831386	GRET	SVC	8/3/2022	1951	RET ABN	UG-SERVICE
218	36085668	GRET	SVC	3/2/2020	1951	RET ABN	UG-SERVICE
219	40674903	GRET	SVC	9/29/2022	1951	RET ABN	UG-SERVICE
220	42110067	GRET	SVC	12/20/2023	1951	RET ABN	UG-SERVICE
221	41006869	GRET	SVC	12/7/2022	1951	RET ABN	UG-SERVICE
222	42435910	GRET	SVC	9/19/2024	1951	RET ABN	UG-SERVICE
223	40252646	GRET	SVC	6/6/2022	1951	RET ABN	UG-SERVICE
224	40659708	GRET	SVC	9/3/2022	1951	RET ABN	UG-SERVICE
225	43413518	GRET	SVC	8/13/2024	1951	RET ABN	UG-SERVICE
226	39809564	GRET	SVC	8/3/2022	1951	RET ABN	UG-SERVICE
227	41423885	GRET	SVC	10/18/2023	1951	RET ABN	UG-SERVICE
228	40036632	GRET	SVC	4/25/2022	1951	RET ABN	UG-SERVICE
229	41088767	GRET	SVC	12/21/2022	1951	RET ABN	UG-SERVICE
230	43435495	GRET	SVC	8/21/2024	1951	RET ABN	UG-SERVICE
231	41769950	GRET	SVC	6/19/2023	1951	RET REM	UG-SERVICE
232	38162087	GRET	SVC	2/23/2021	1951	RET ABN	UG-SERVICE
233	43155106	GRET	SVC	6/3/2024	1951	RET ABN	UG-SERVICE
234	38707596	GRET	SVC	7/9/2021	1951	RET ABN	UG-SERVICE
235	38441555	GRET	SVC	1/6/2022	1951	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
236	37919597	GRET	SVC	4/8/2021	1951	RET ABN	UG-SERVICE
237	41411439	GRET	SVC	11/2/2023	1951	RET ABN	UG-SERVICE
238	41556233	GRET	SVC	4/24/2023	1951	RET ABN	UG-SERVICE
239	41430213	GRET	SVC	9/19/2023	1951	RET ABN	UG-SERVICE
240	42150880	GRET	SVC	9/25/2023	1951	RET ABN	UG-SERVICE
241	43156895	GRET	SVC	7/5/2024	1951	RET ABN	UG-SERVICE
242	41423887	GRET	SVC	10/18/2023	1951	RET ABN	UG-SERVICE
243	38423237	GRET	SVC	4/26/2021	1951	RET ABN	UG-SERVICE
244	43614251	GRET	SVC	9/28/2024	1951	RET ABN	UG-SERVICE
245	39417387	GRET	SVC	11/14/2021	1951	RET ABN	UG-SERVICE
246	42538136	GRET	SVC	1/3/2024	1951	RET ABN	UG-SERVICE
247	41660348	GRET	SVC	5/24/2023	1951	RET ABN	UG-SERVICE
248	38164753	GRET	SVC	2/24/2021	1951	RET ABN	UG-SERVICE
249	38567744	GRET	SVC	6/7/2021	1951	RET ABN	UG-SERVICE
250	36760765	GRET	SVC	8/11/2020	1951	RET ABN	UG-SERVICE
251	40249164	GRET	SVC	6/10/2022	1951	RET ABN	UG-SERVICE
252	41034692	GRET	SVC	12/16/2022	1951	RET ABN	UG-SERVICE
253	38000817	GRET	SVC	1/13/2021	1951	RET ABN	UG-SERVICE
254	41832368	GRET	SVC	7/7/2023	1951	RET ABN	UG-SERVICE
255	40989881	GRET	SVC	11/17/2022	1951	RET REM	UG-SERVICE
256	40639460	GRET	SVC	8/31/2022	1951	RET ABN	UG-SERVICE
257	41031343	GRET	SVC	12/9/2022	1951	RET ABN	UG-SERVICE
258	41071955	GRET	SVC	1/3/2023	1951	RET ABN	UG-SERVICE
259	43905357	GRET	SVC	12/9/2024	1951	RET ABN	UG-SERVICE
260	41700174	GRET	SVC	5/30/2023	1951	RET ABN	UG-SERVICE
261	36148001	GRET	SVC	3/14/2020	1951	RET ABN	UG-SERVICE
262	42152819	GRET	SVC	9/25/2023	1951	RET ABN	UG-SERVICE
263	39809563	GRET	SVC	8/3/2022	1951	RET ABN	UG-SERVICE
264	40258718	GRET	SVC	6/6/2022	1951	RET ABN	UG-SERVICE
265	41013436	GRET	SVC	12/7/2022	1951	RET ABN	UG-SERVICE
266	39230073	GRET	SVC	10/26/2021	1951	RET ABN	UG-SERVICE
267	43867865	GRET	SVC	12/30/2024	1951	RET ABN	UG-SERVICE
268	39719134	GRET	SVC	1/25/2022	1951	RET ABN	UG-SERVICE
269	40249360	GRET	SVC	6/6/2022	1951	RET ABN	UG-SERVICE
270	36206659	GRET	SVC	4/23/2020	1951	RET ABN	UG-SERVICE
271	42491845	GRET	SVC	4/2/2024	1951	RET ABN	UG-SERVICE
272	40644729	GRET	SVC	8/31/2022	1951	RET ABN	UG-SERVICE
273	39706229	GRET	SVC	2/28/2022	1951	RET ABN	UG-SERVICE
274	40249057	GRET	SVC	6/7/2022	1951	RET ABN	UG-SERVICE
275	42269957	GRET	SVC	10/23/2023	1951	RET ABN	UG-SERVICE
276	39424067	GRET	SVC	6/27/2022	1951	RET ABN	UG-SERVICE
277	39772866	GRET	SVC	9/29/2021	1951	RET ABN	UG-SERVICE
278	39791768	GRET	SVC	10/6/2021	1951	RET ABN	UG-SERVICE
279	40989592	GRET	SVC	11/17/2022	1951	RET ABN	UG-SERVICE
280	37013066	GRET	SVC	10/20/2020	1951	RET ABN	UG-SERVICE
281	40610203	GRET	SVC	9/17/2022	1951	RET ABN	UG-SERVICE
282	36952791	GRET	SVC	9/16/2020	1951	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
283	38463323	GRET	SVC	5/11/2021	1951	RET ABN	UG-SERVICE
284	38551597	GRET	SVC	6/2/2021	1951	RET ABN	UG-SERVICE
285	38161416	GRET	SVC	2/23/2021	1951	RET ABN	UG-SERVICE
286	41408014	GRET	SVC	4/2/2024	1951	RET ABN	UG-SERVICE
287	41854515	GRET	SVC	7/10/2023	1951	RET ABN	UG-SERVICE
288	42575676	GRET	SVC	1/18/2024	1952	RET ABN	UG-SERVICE
289	38538827	GRET	SVC	5/25/2021	1952	RET ABN	UG-SERVICE
290	42427487	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
291	41712850	GRET	SVC	5/22/2023	1952	RET ABN	UG-SERVICE
292	38595484	GRET	SVC	6/21/2021	1952	RET ABN	UG-SERVICE
293	41411264	GRET	SVC	4/2/2024	1952	RET ABN	UG-SERVICE
294	40636684	GRET	SVC	8/30/2022	1952	RET ABN	UG-SERVICE
295	42683248	GRET	SVC	2/13/2024	1952	RET ABN	UG-SERVICE
296	42742352	GRET	SVC	8/5/2024	1952	RET ABN	UG-SERVICE
297	39847796	GRET	SVC	3/8/2022	1952	RET ABN	UG-SERVICE
298	43231361	GRET	SVC	7/8/2024	1952	RET ABN	UG-SERVICE
299	39831205	GRET	SVC	8/3/2022	1952	RET ABN	UG-SERVICE
300	41258769	GRET	SVC	2/6/2023	1952	RET ABN	UG-SERVICE
301	43245091	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
302	38352923	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
303	38655789	GRET	SVC	6/22/2021	1952	RET ABN	UG-SERVICE
304	37112877	GRET	SVC	10/26/2020	1952	RET ABN	UG-SERVICE
305	39666152	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
306	36809920	GRET	SVC	8/20/2020	1952	RET ABN	UG-SERVICE
307	42427488	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
308	39666241	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
309	39920968	GRET	SVC	4/14/2022	1952	RET ABN	UG-SERVICE
310	39666246	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
311	39831210	GRET	SVC	8/3/2022	1952	RET ABN	UG-SERVICE
312	43240552	GRET	SVC	7/13/2024	1952	RET ABN	UG-SERVICE
313	39831209	GRET	SVC	8/3/2022	1952	RET ABN	UG-SERVICE
314	38097358	GRET	SVC	9/2/2021	1952	RET ABN	UG-SERVICE
315	38097624	GRET	SVC	9/2/2021	1952	RET ABN	UG-SERVICE
316	38240752	GRET	SVC	3/24/2021	1952	RET ABN	UG-SERVICE
317	42427490	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
318	43423336	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
319	42226875	GRET	SVC	10/16/2023	1952	RET ABN	UG-SERVICE
320	40447663	GRET	SVC	7/21/2022	1952	RET ABN	UG-SERVICE
321	38775680	GRET	SVC	8/15/2021	1952	RET ABN	UG-SERVICE
322	38352925	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
323	39384910	GRET	SVC	11/4/2021	1952	RET ABN	UG-SERVICE
324	38432093	GRET	SVC	5/5/2021	1952	RET ABN	UG-SERVICE
325	42252864	GRET	SVC	10/31/2023	1952	RET ABN	UG-SERVICE
326	42427489	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
327	39666243	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
328	40903399	GRET	SVC	11/7/2022	1952	RET ABN	UG-SERVICE
329	38356733	GRET	SVC	2/14/2023	1952	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
330	38610609	GRET	SVC	8/2/2021	1952	RET ABN	UG-SERVICE
331	36122516	GRET	SVC	11/5/2020	1952	RET ABN	UG-SERVICE
332	42250860	GRET	SVC	10/20/2023	1952	RET ABN	UG-SERVICE
333	41731558	GRET	SVC	6/10/2023	1952	RET ABN	UG-SERVICE
334	41277503	GRET	SVC	2/13/2023	1952	RET REM	UG-SERVICE
335	39666249	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
336	42427492	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
337	43245092	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
338	39831211	GRET	SVC	8/3/2022	1952	RET ABN	UG-SERVICE
339	40813279	GRET	SVC	10/14/2022	1952	RET ABN	UG-SERVICE
340	41407597	GRET	SVC	4/2/2024	1952	RET ABN	UG-SERVICE
341	38352926	GRET	SVC	2/14/2023	1952	RET ABN	UG-SERVICE
342	42956741	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
343	41283744	GRET	SVC	2/13/2023	1952	RET ABN	UG-SERVICE
344	39666242	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
345	40473796	GRET	SVC	7/25/2022	1952	RET ABN	UG-SERVICE
346	41121720	GRET	SVC	1/4/2023	1952	RET ABN	UG-SERVICE
347	38162089	GRET	SVC	2/23/2021	1952	RET ABN	UG-SERVICE
348	43245098	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
349	38073256	GRET	SVC	2/1/2021	1952	RET ABN	UG-SERVICE
350	38352935	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
351	41424766	GRET	SVC	10/18/2023	1952	RET ABN	UG-SERVICE
352	38352934	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
353	43477225	GRET	SVC	12/19/2024	1952	RET ABN	UG-SERVICE
354	38441456	GRET	SVC	1/6/2022	1952	RET ABN	UG-SERVICE
355	40919620	GRET	SVC	11/29/2022	1952	RET ABN	UG-SERVICE
356	42427494	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
357	42555260	GRET	SVC	3/25/2024	1952	RET ABN	UG-SERVICE
358	38958979	GRET	SVC	8/30/2021	1952	RET ABN	UG-SERVICE
359	43241923	GRET	SVC	7/27/2024	1952	RET ABN	UG-SERVICE
360	42278991	GRET	SVC	10/25/2023	1952	RET ABN	UG-SERVICE
361	40632169	GRET	SVC	8/29/2022	1952	RET ABN	UG-SERVICE
362	42670289	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
363	36260063	GRET	SVC	3/18/2020	1952	RET ABN	UG-SERVICE
364	42141042	GRET	SVC	9/18/2023	1952	RET ABN	UG-SERVICE
365	39940806	GRET	SVC	5/11/2022	1952	RET ABN	UG-SERVICE
366	36122285	GRET	SVC	11/5/2020	1952	RET ABN	UG-SERVICE
367	38356730	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
368	38280107	GRET	SVC	3/27/2021	1952	RET ABN	UG-SERVICE
369	38352924	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
370	42427491	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
371	38352936	GRET	SVC	2/17/2023	1952	RET ABN	UG-SERVICE
372	38356732	GRET	SVC	2/14/2023	1952	RET ABN	UG-SERVICE
373	38289767	GRET	SVC	4/1/2021	1952	RET ABN	UG-SERVICE
374	39666155	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
375	36136809	GRET	SVC	3/16/2020	1952	RET ABN	UG-SERVICE
376	36119732	GRET	SVC	8/31/2020	1952	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
377	40031651	GRET	SVC	4/18/2022	1952	RET ABN	UG-SERVICE
378	42957680	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
379	38387047	GRET	SVC	4/23/2021	1952	RET ABN	UG-SERVICE
380	39230563	GRET	SVC	10/4/2021	1952	RET ABN	UG-SERVICE
381	36840536	GRET	SVC	9/11/2020	1952	RET ABN	UG-SERVICE
382	36754616	GRET	SVC	8/12/2020	1952	RET ABN	UG-SERVICE
383	43598920	GRET	SVC	9/26/2024	1952	RET ABN	UG-SERVICE
384	41407673	GRET	SVC	4/2/2024	1952	RET ABN	UG-SERVICE
385	38183688	GRET	SVC	2/16/2021	1952	RET ABN	UG-SERVICE
386	42455922	GRET	SVC	12/11/2023	1952	RET ABN	UG-SERVICE
387	42427493	GRET	SVC	9/19/2024	1952	RET ABN	UG-SERVICE
388	41407596	GRET	SVC	4/2/2024	1952	RET ABN	UG-SERVICE
389	43661022	GRET	SVC	10/7/2024	1952	RET ABN	UG-SERVICE
390	40639165	GRET	SVC	9/26/2022	1952	RET ABN	UG-SERVICE
391	41398652	GRET	SVC	3/30/2023	1952	RET REM	UG-SERVICE
392	39666252	GRET	SVC	11/18/2022	1952	RET ABN	UG-SERVICE
393	36432857	GRET	SVC	6/9/2020	1952	RET ABN	UG-SERVICE
394	41052702	GRET	SVC	1/12/2023	1953	RET ABN	UG-SERVICE
395	38608396	GRET	SVC	10/19/2021	1953	RET ABN	UG-SERVICE
396	38190518	GRET	SVC	3/4/2021	1953	RET ABN	UG-SERVICE
397	38571055	GRET	SVC	6/11/2021	1953	RET ABN	UG-SERVICE
398	36122585	GRET	SVC	10/4/2020	1953	RET ABN	UG-SERVICE
399	39993535	GRET	SVC	4/11/2022	1953	RET ABN	UG-SERVICE
400	41052321	GRET	SVC	1/12/2023	1953	RET ABN	UG-SERVICE
401	42116065	GRET	SVC	9/29/2023	1953	RET ABN	UG-SERVICE
402	38507888	GRET	SVC	5/21/2021	1953	RET ABN	UG-SERVICE
403	38097113	GRET	SVC	9/2/2021	1953	RET ABN	UG-SERVICE
404	42138181	GRET	SVC	9/21/2023	1953	RET ABN	UG-SERVICE
405	43637311	GRET	SVC	10/8/2024	1953	RET ABN	UG-SERVICE
406	41121802	GRET	SVC	1/6/2023	1953	RET ABN	UG-SERVICE
407	38582467	GRET	SVC	6/9/2021	1953	RET ABN	UG-SERVICE
408	38571059	GRET	SVC	6/11/2021	1953	RET ABN	UG-SERVICE
409	40158955	GRET	SVC	5/12/2022	1953	RET ABN	UG-SERVICE
410	35873808	GRET	SVC	1/8/2020	1953	RET ABN	UG-SERVICE
411	35850630	GRET	SVC	1/4/2020	1953	RET ABN	UG-SERVICE
412	42051188	GRET	SVC	12/22/2023	1953	RET ABN	UG-SERVICE
413	42879031	GRET	SVC	3/27/2024	1953	RET ABN	UG-SERVICE
414	36255947	GRET	SVC	5/12/2020	1953	RET ABN	UG-SERVICE
415	38461273	GRET	SVC	5/10/2021	1953	RET ABN	UG-SERVICE
416	36419027	GRET	SVC	6/9/2020	1953	RET ABN	UG-SERVICE
417	38348120	GRET	SVC	4/22/2021	1953	RET ABN	UG-SERVICE
418	37032220	GRET	SVC	10/7/2020	1953	RET ABN	UG-SERVICE
419	38538107	GRET	SVC	5/27/2021	1953	RET ABN	UG-SERVICE
420	38033861	GRET	SVC	1/20/2021	1953	RET ABN	UG-SERVICE
421	40327471	GRET	SVC	6/21/2022	1953	RET ABN	UG-SERVICE
422	38352965	GRET	SVC	2/14/2023	1953	RET ABN	UG-SERVICE
423	38097152	GRET	SVC	9/2/2021	1953	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
424	41320907	GRET	SVC	2/27/2023	1953	RET ABN	UG-SERVICE
425	42427240	GRET	SVC	9/19/2024	1953	RET ABN	UG-SERVICE
426	42205143	GRET	SVC	12/22/2023	1953	RET ABN	UG-SERVICE
427	41292554	GRET	SVC	2/20/2023	1953	RET ABN	UG-SERVICE
428	36143376	GRET	SVC	3/12/2020	1953	RET ABN	UG-SERVICE
429	41777457	GRET	SVC	6/15/2023	1953	RET ABN	UG-SERVICE
430	42957321	GRET	SVC	9/19/2024	1953	RET ABN	UG-SERVICE
431	37708828	GRET	SVC	11/20/2020	1953	RET ABN	UG-SERVICE
432	40116164	GRET	SVC	5/2/2022	1953	RET ABN	UG-SERVICE
433	38165030	GRET	SVC	3/5/2021	1953	RET ABN	UG-SERVICE
434	38260938	GRET	SVC	12/17/2021	1953	RET ABN	UG-SERVICE
435	43904395	GRET	SVC	12/30/2024	1953	RET ABN	UG-SERVICE
436	35737712	GRET	SVC	3/18/2020	1953	RET ABN	UG-SERVICE
437	41976814	GRET	SVC	7/11/2024	1953	RET ABN	UG-SERVICE
438	39831398	GRET	SVC	8/3/2022	1953	RET ABN	UG-SERVICE
439	36119405	GRET	SVC	11/5/2020	1953	RET ABN	UG-SERVICE
440	42320967	GRET	SVC	4/2/2024	1953	RET ABN	UG-SERVICE
441	36927452	GRET	SVC	9/12/2020	1953	RET ABN	UG-SERVICE
442	42069649	GRET	SVC	9/5/2023	1953	RET ABN	UG-SERVICE
443	39666416	GRET	SVC	11/18/2022	1953	RET ABN	UG-SERVICE
444	38352966	GRET	SVC	2/14/2023	1953	RET ABN	UG-SERVICE
445	40572029	GRET	SVC	8/16/2022	1953	RET ABN	UG-SERVICE
446	36331088	GRET	SVC	5/7/2020	1953	RET ABN	UG-SERVICE
447	40551928	GRET	SVC	8/9/2022	1953	RET ABN	UG-SERVICE
448	41107697	GRET	SVC	1/10/2023	1953	RET ABN	UG-SERVICE
449	37254383	GRET	SVC	9/21/2020	1953	RET ABN	UG-SERVICE
450	41321705	GRET	SVC	3/2/2023	1953	RET REM	UG-SERVICE
451	38515668	GRET	SVC	3/21/2022	1953	RET ABN	UG-SERVICE
452	36255859	GRET	SVC	7/10/2020	1953	RET ABN	UG-SERVICE
453	38156952	GRET	SVC	7/30/2021	1953	RET ABN	UG-SERVICE
454	39925433	GRET	SVC	5/9/2022	1953	RET ABN	UG-SERVICE
455	42120878	GRET	SVC	9/12/2023	1953	RET ABN	UG-SERVICE
456	41479994	GRET	SVC	4/10/2023	1953	RET ABN	UG-SERVICE
457	38441422	GRET	SVC	1/6/2022	1953	RET ABN	UG-SERVICE
458	36777969	GRET	SVC	8/12/2020	1953	RET ABN	UG-SERVICE
459	42589741	GRET	SVC	1/25/2024	1953	RET ABN	UG-SERVICE
460	39666663	GRET	SVC	11/18/2022	1953	RET ABN	UG-SERVICE
461	36371408	GRET	SVC	5/26/2020	1953	RET ABN	UG-SERVICE
462	36772130	GRET	SVC	8/12/2020	1953	RET ABN	UG-SERVICE
463	43762605	GRET	SVC	10/31/2024	1953	RET ABN	UG-SERVICE
464	40318196	GRET	SVC	6/20/2022	1953	RET ABN	UG-SERVICE
465	41069780	GRET	SVC	1/5/2023	1953	RET ABN	UG-SERVICE
466	42506330	GRET	SVC	1/25/2024	1953	RET ABN	UG-SERVICE
467	40253341	GRET	SVC	6/7/2022	1953	RET ABN	UG-SERVICE
468	38073115	GRET	SVC	2/2/2021	1953	RET ABN	UG-SERVICE
469	39227657	GRET	SVC	10/2/2021	1953	RET ABN	UG-SERVICE
470	39666662	GRET	SVC	11/18/2022	1953	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
471	38034130	GRET	SVC	1/20/2021	1953	RET ABN	UG-SERVICE
472	40832923	GRET	SVC	10/19/2022	1953	RET ABN	UG-SERVICE
473	38693140	GRET	SVC	5/17/2021	1953	RET ABN	UG-SERVICE
474	40472927	GRET	SVC	8/8/2022	1953	RET ABN	UG-SERVICE
475	39786857	GRET	SVC	2/7/2022	1953	RET ABN	UG-SERVICE
476	36927728	GRET	SVC	9/12/2020	1953	RET ABN	UG-SERVICE
477	38486528	GRET	SVC	5/11/2021	1953	RET ABN	UG-SERVICE
478	42575673	GRET	SVC	1/10/2024	1953	RET ABN	UG-SERVICE
479	41755468	GRET	SVC	6/12/2023	1953	RET ABN	UG-SERVICE
480	39759258	GRET	SVC	8/13/2021	1953	RET ABN	UG-SERVICE
481	41480231	GRET	SVC	4/6/2023	1953	RET ABN	UG-SERVICE
482	40346165	GRET	SVC	6/28/2022	1953	RET ABN	UG-SERVICE
483	41407740	GRET	SVC	4/2/2024	1953	RET ABN	UG-SERVICE
484	41162549	GRET	SVC	1/7/2023	1953	RET ABN	UG-SERVICE
485	36119653	GRET	SVC	10/14/2020	1953	RET ABN	UG-SERVICE
486	41052701	GRET	SVC	1/12/2023	1953	RET ABN	UG-SERVICE
487	42077779	GRET	SVC	8/29/2023	1953	RET ABN	UG-SERVICE
488	42257701	GRET	SVC	10/23/2023	1953	RET ABN	UG-SERVICE
489	41672044	GRET	SVC	5/26/2023	1953	RET ABN	UG-SERVICE
490	39753780	GRET	SVC	2/10/2022	1954	RET ABN	UG-SERVICE
491	40685502	GRET	SVC	9/12/2022	1954	RET ABN	UG-SERVICE
492	41036610	GRET	SVC	12/15/2022	1954	RET ABN	UG-SERVICE
493	41119592	GRET	SVC	1/6/2023	1954	RET ABN	UG-SERVICE
494	41035399	GRET	SVC	12/8/2022	1954	RET ABN	UG-SERVICE
495	36118838	GRET	SVC	10/12/2020	1954	RET ABN	UG-SERVICE
496	38820078	GRET	SVC	7/27/2021	1954	RET ABN	UG-SERVICE
497	38153952	GRET	SVC	2/22/2021	1954	RET ABN	UG-SERVICE
498	42741404	GRET	SVC	2/15/2024	1954	RET ABN	UG-SERVICE
499	40505758	GRET	SVC	8/3/2022	1954	RET ABN	UG-SERVICE
500	38097645	GRET	SVC	9/2/2021	1954	RET ABN	UG-SERVICE
501	36771065	GRET	SVC	8/11/2020	1954	RET ABN	UG-SERVICE
502	40919859	GRET	SVC	11/15/2022	1954	RET ABN	UG-SERVICE
503	36992554	GRET	SVC	10/2/2020	1954	RET ABN	UG-SERVICE
504	41017133	GRET	SVC	12/5/2022	1954	RET ABN	UG-SERVICE
505	41411270	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
506	39546358	GRET	SVC	1/3/2022	1954	RET ABN	UG-SERVICE
507	36135000	GRET	SVC	3/16/2020	1954	RET ABN	UG-SERVICE
508	36136116	GRET	SVC	4/20/2020	1954	RET ABN	UG-SERVICE
509	41831454	GRET	SVC	7/6/2023	1954	RET ABN	UG-SERVICE
510	43086584	GRET	SVC	6/5/2024	1954	RET ABN	UG-SERVICE
511	38545096	GRET	SVC	4/10/2021	1954	RET ABN	UG-SERVICE
512	39657146	GRET	SVC	6/28/2022	1954	RET ABN	UG-SERVICE
513	36112441	GRET	SVC	10/12/2020	1954	RET ABN	UG-SERVICE
514	41411073	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
515	41407591	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
516	41628218	GRET	SVC	5/18/2023	1954	RET ABN	UG-SERVICE
517	37088354	GRET	SVC	10/20/2020	1954	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
518	39150316	GRET	SVC	9/12/2021	1954	RET ABN	UG-SERVICE
519	40925026	GRET	SVC	11/15/2022	1954	RET ABN	UG-SERVICE
520	38572300	GRET	SVC	4/21/2021	1954	RET ABN	UG-SERVICE
521	40333087	GRET	SVC	6/23/2022	1954	RET ABN	UG-SERVICE
522	43318165	GRET	SVC	8/13/2024	1954	RET ABN	UG-SERVICE
523	39666419	GRET	SVC	11/18/2022	1954	RET ABN	UG-SERVICE
524	41082948	GRET	SVC	1/5/2023	1954	RET ABN	UG-SERVICE
525	43770278	GRET	SVC	11/21/2024	1954	RET ABN	UG-SERVICE
526	36868321	GRET	SVC	8/29/2020	1954	RET ABN	UG-SERVICE
527	40801830	GRET	SVC	10/28/2022	1954	RET ABN	UG-SERVICE
528	38097643	GRET	SVC	9/2/2021	1954	RET ABN	UG-SERVICE
529	42115264	GRET	SVC	9/7/2023	1954	RET ABN	UG-SERVICE
530	41969064	GRET	SVC	8/1/2024	1954	RET ABN	UG-SERVICE
531	39820961	GRET	SVC	2/22/2022	1954	RET ABN	UG-SERVICE
532	41407752	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
533	38597090	GRET	SVC	6/9/2021	1954	RET ABN	UG-SERVICE
534	42793388	GRET	SVC	3/25/2024	1954	RET ABN	UG-SERVICE
535	41817862	GRET	SVC	6/29/2023	1954	RET ABN	UG-SERVICE
536	41407744	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
537	37959606	GRET	SVC	1/8/2021	1954	RET ABN	UG-SERVICE
538	36112440	GRET	SVC	10/12/2020	1954	RET ABN	UG-SERVICE
539	38108182	GRET	SVC	12/22/2021	1954	RET ABN	UG-SERVICE
540	43770740	GRET	SVC	11/21/2024	1954	RET ABN	UG-SERVICE
541	43073744	GRET	SVC	5/18/2024	1954	RET ABN	UG-SERVICE
542	41119744	GRET	SVC	1/6/2023	1954	RET ABN	UG-SERVICE
543	36348347	GRET	SVC	5/19/2020	1954	RET ABN	UG-SERVICE
544	41568707	GRET	SVC	4/25/2023	1954	RET ABN	UG-SERVICE
545	36487887	GRET	SVC	5/11/2020	1954	RET ABN	UG-SERVICE
546	36914875	GRET	SVC	9/14/2020	1954	RET ABN	UG-SERVICE
547	43752280	GRET	SVC	12/3/2024	1954	RET ABN	UG-SERVICE
548	40743846	GRET	SVC	10/10/2022	1954	RET ABN	UG-SERVICE
549	42451918	GRET	SVC	12/18/2023	1954	RET ABN	UG-SERVICE
550	36118837	GRET	SVC	5/5/2020	1954	RET ABN	UG-SERVICE
551	36302202	GRET	SVC	5/5/2020	1954	RET ABN	UG-SERVICE
552	36119651	GRET	SVC	10/14/2020	1954	RET ABN	UG-SERVICE
553	40363266	GRET	SVC	6/28/2022	1954	RET ABN	UG-SERVICE
554	43244747	GRET	SVC	9/13/2024	1954	RET ABN	UG-SERVICE
555	41411072	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
556	43918995	GRET	SVC	12/11/2024	1954	RET ABN	UG-SERVICE
557	41051913	GRET	SVC	1/12/2023	1954	RET ABN	UG-SERVICE
558	41659508	GRET	SVC	5/22/2023	1954	RET ABN	UG-SERVICE
559	36451893	GRET	SVC	6/16/2020	1954	RET ABN	UG-SERVICE
560	36135788	GRET	SVC	4/21/2020	1954	RET ABN	UG-SERVICE
561	41423630	GRET	SVC	3/21/2023	1954	RET ABN	UG-SERVICE
562	41411076	GRET	SVC	4/2/2024	1954	RET ABN	UG-SERVICE
563	42020389	GRET	SVC	8/21/2023	1954	RET ABN	UG-SERVICE
564	41477206	GRET	SVC	4/10/2023	1954	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
565	35916117	GRET	SVC	1/17/2020	1954	RET ABN	UG-SERVICE
566	42530677	GRET	SVC	12/20/2023	1954	RET ABN	UG-SERVICE
567	39666088	GRET	SVC	8/3/2022	1954	RET ABN	UG-SERVICE
568	42165558	GRET	SVC	9/29/2023	1954	RET ABN	UG-SERVICE
569	36967051	GRET	SVC	9/23/2020	1954	RET ABN	UG-SERVICE
570	40906312	GRET	SVC	11/10/2022	1954	RET ABN	UG-SERVICE
571	39916051	GRET	SVC	4/25/2022	1954	RET ABN	UG-SERVICE
572	39657155	GRET	SVC	6/28/2022	1954	RET ABN	UG-SERVICE
573	39830410	GRET	SVC	8/3/2022	1954	RET ABN	UG-SERVICE
574	37928576	GRET	SVC	1/8/2021	1954	RET ABN	UG-SERVICE
575	40332153	GRET	SVC	6/22/2022	1954	RET ABN	UG-SERVICE
576	42416329	GRET	SVC	12/11/2023	1954	RET ABN	UG-SERVICE
577	38194291	GRET	SVC	3/10/2021	1954	RET ABN	UG-SERVICE
578	39956460	GRET	SVC	4/5/2022	1955	RET ABN	UG-SERVICE
579	36906819	GRET	SVC	10/19/2020	1955	RET ABN	UG-SERVICE
580	40561731	GRET	SVC	10/1/2022	1955	RET ABN	UG-SERVICE
581	39666053	GRET	SVC	8/3/2022	1955	RET ABN	UG-SERVICE
582	42201119	GRET	SVC	10/9/2023	1955	RET ABN	UG-SERVICE
583	41569704	GRET	SVC	4/21/2023	1955	RET ABN	UG-SERVICE
584	43931698	GRET	SVC	12/11/2024	1955	RET ABN	UG-SERVICE
585	38135007	GRET	SVC	2/17/2021	1955	RET ABN	UG-SERVICE
586	39666496	GRET	SVC	11/18/2022	1955	RET ABN	UG-SERVICE
587	41407666	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
588	40883286	GRET	SVC	11/4/2022	1955	RET ABN	UG-SERVICE
589	40657686	GRET	SVC	9/8/2022	1955	RET ABN	UG-SERVICE
590	41082591	GRET	SVC	12/21/2022	1955	RET ABN	UG-SERVICE
591	40113761	GRET	SVC	5/3/2022	1955	RET ABN	UG-SERVICE
592	43624612	GRET	SVC	10/2/2024	1955	RET ABN	UG-SERVICE
593	38040115	GRET	SVC	5/20/2021	1955	RET ABN	UG-SERVICE
594	38658669	GRET	SVC	5/10/2021	1955	RET ABN	UG-SERVICE
595	36349690	GRET	SVC	5/20/2020	1955	RET ABN	UG-SERVICE
596	42833735	GRET	SVC	3/19/2024	1955	RET ABN	UG-SERVICE
597	40754903	GRET	SVC	10/6/2022	1955	RET ABN	UG-SERVICE
598	41411067	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
599	42166120	GRET	SVC	9/19/2023	1955	RET ABN	UG-SERVICE
600	41411836	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
601	41036616	GRET	SVC	12/15/2022	1955	RET ABN	UG-SERVICE
602	41601776	GRET	SVC	6/13/2023	1955	RET ABN	UG-SERVICE
603	41407483	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
604	41411829	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
605	41411261	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
606	42599267	GRET	SVC	2/9/2024	1955	RET ABN	UG-SERVICE
607	39312779	GRET	SVC	11/23/2021	1955	RET ABN	UG-SERVICE
608	36433587	GRET	SVC	6/10/2020	1955	RET ABN	UG-SERVICE
609	42036129	GRET	SVC	8/26/2023	1955	RET ABN	UG-SERVICE
610	38191944	GRET	SVC	3/10/2021	1955	RET ABN	UG-SERVICE
611	39710583	GRET	SVC	1/20/2022	1955	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
612	42122666	GRET	SVC	9/18/2023	1955	RET ABN	UG-SERVICE
613	41000447	GRET	SVC	12/2/2022	1955	RET ABN	UG-SERVICE
614	41411831	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
615	36185243	GRET	SVC	4/15/2020	1955	RET ABN	UG-SERVICE
616	39679664	GRET	SVC	1/12/2022	1955	RET ABN	UG-SERVICE
617	43129636	GRET	SVC	6/3/2024	1955	RET ABN	UG-SERVICE
618	42180321	GRET	SVC	10/2/2023	1955	RET ABN	UG-SERVICE
619	40634931	GRET	SVC	10/10/2022	1955	RET ABN	UG-SERVICE
620	42760744	GRET	SVC	8/1/2024	1955	RET ABN	UG-SERVICE
621	40802643	GRET	SVC	10/12/2022	1955	RET ABN	UG-SERVICE
622	41411485	GRET	SVC	11/2/2023	1955	RET ABN	UG-SERVICE
623	37929847	GRET	SVC	12/17/2020	1955	RET ABN	UG-SERVICE
624	39759440	GRET	SVC	8/16/2021	1955	RET ABN	UG-SERVICE
625	39880123	GRET	SVC	3/14/2022	1955	RET ABN	UG-SERVICE
626	43796684	GRET	SVC	11/13/2024	1955	RET ABN	UG-SERVICE
627	41411830	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
628	36193763	GRET	SVC	4/23/2020	1955	RET ABN	UG-SERVICE
629	40883581	GRET	SVC	11/1/2022	1955	RET ABN	UG-SERVICE
630	41389200	GRET	SVC	3/15/2023	1955	RET ABN	UG-SERVICE
631	36146481	GRET	SVC	5/20/2021	1955	RET ABN	UG-SERVICE
632	41407760	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
633	39317626	GRET	SVC	10/25/2021	1955	RET ABN	UG-SERVICE
634	39830409	GRET	SVC	8/3/2022	1955	RET ABN	UG-SERVICE
635	39658087	GRET	SVC	3/3/2022	1955	RET ABN	UG-SERVICE
636	41407542	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
637	39766735	GRET	SVC	11/2/2021	1955	RET ABN	UG-SERVICE
638	40691834	GRET	SVC	9/14/2022	1955	RET ABN	UG-SERVICE
639	41513774	GRET	SVC	4/25/2023	1955	RET ABN	UG-SERVICE
640	37106589	GRET	SVC	10/27/2020	1955	RET ABN	UG-SERVICE
641	42032092	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
642	37053960	GRET	SVC	4/16/2021	1955	RET ABN	UG-SERVICE
643	41408905	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
644	41409402	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
645	41411481	GRET	SVC	11/2/2023	1955	RET ABN	UG-SERVICE
646	38260281	GRET	SVC	12/14/2021	1955	RET ABN	UG-SERVICE
647	38210868	GRET	SVC	3/11/2021	1955	RET ABN	UG-SERVICE
648	41773718	GRET	SVC	6/19/2023	1955	RET ABN	UG-SERVICE
649	39235481	GRET	SVC	10/10/2021	1955	RET ABN	UG-SERVICE
650	36098971	GRET	SVC	3/12/2020	1955	RET ABN	UG-SERVICE
651	42320966	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
652	41316684	GRET	SVC	2/27/2023	1955	RET ABN	UG-SERVICE
653	40265913	GRET	SVC	6/8/2022	1955	RET ABN	UG-SERVICE
654	38731610	GRET	SVC	7/12/2021	1955	RET ABN	UG-SERVICE
655	41330180	GRET	SVC	3/1/2023	1955	RET ABN	UG-SERVICE
656	41330183	GRET	SVC	3/2/2023	1955	RET ABN	UG-SERVICE
657	37108921	GRET	SVC	10/21/2020	1955	RET ABN	UG-SERVICE
658	41101697	GRET	SVC	1/30/2023	1955	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
659	42270344	GRET	SVC	10/25/2023	1955	RET ABN	UG-SERVICE
660	40754901	GRET	SVC	10/6/2022	1955	RET ABN	UG-SERVICE
661	41408763	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
662	36145206	GRET	SVC	12/14/2020	1955	RET ABN	UG-SERVICE
663	41408902	GRET	SVC	4/2/2024	1955	RET ABN	UG-SERVICE
664	40113887	GRET	SVC	5/2/2022	1955	RET ABN	UG-SERVICE
665	32769561	GRET	SVC	7/8/2020	1955	RET ABN	UG-SERVICE
666	40493095	GRET	SVC	7/25/2022	1955	RET ABN	UG-SERVICE
667	43244942	GRET	SVC	9/11/2024	1955	RET ABN	UG-SERVICE
668	40883282	GRET	SVC	11/2/2022	1956	RET ABN	UG-SERVICE
669	41063358	GRET	SVC	11/30/2022	1956	RET ABN	UG-SERVICE
670	42850084	GRET	SVC	3/25/2024	1956	RET ABN	UG-SERVICE
671	38514863	GRET	SVC	8/5/2021	1956	RET ABN	UG-SERVICE
672	36238532	GRET	SVC	3/2/2020	1956	RET ABN	UG-SERVICE
673	38573397	GRET	SVC	6/9/2021	1956	RET ABN	UG-SERVICE
674	41406921	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
675	39430200	GRET	SVC	11/15/2021	1956	RET ABN	UG-SERVICE
676	42205154	GRET	SVC	11/29/2023	1956	RET ABN	UG-SERVICE
677	38870141	GRET	SVC	8/30/2021	1956	RET ABN	UG-SERVICE
678	40538000	GRET	SVC	8/28/2022	1956	RET ABN	UG-SERVICE
679	36107008	GRET	SVC	4/27/2020	1956	RET ABN	UG-SERVICE
680	40141147	GRET	SVC	5/10/2022	1956	RET ABN	UG-SERVICE
681	41066002	GRET	SVC	12/13/2022	1956	RET ABN	UG-SERVICE
682	38310396	GRET	SVC	4/4/2021	1956	RET ABN	UG-SERVICE
683	41409118	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
684	40644228	GRET	SVC	9/3/2022	1956	RET ABN	UG-SERVICE
685	38315075	GRET	SVC	2/26/2021	1956	RET ABN	UG-SERVICE
686	41510569	GRET	SVC	4/17/2023	1956	RET ABN	UG-SERVICE
687	42337029	GRET	SVC	11/9/2023	1956	RET ABN	UG-SERVICE
688	41406991	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
689	41411754	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
690	36365097	GRET	SVC	6/2/2020	1956	RET ABN	UG-SERVICE
691	41031815	GRET	SVC	12/8/2022	1956	RET ABN	UG-SERVICE
692	38839771	GRET	SVC	8/2/2021	1956	RET ABN	UG-SERVICE
693	40522615	GRET	SVC	8/5/2022	1956	RET ABN	UG-SERVICE
694	38966879	GRET	SVC	8/19/2021	1956	RET ABN	UG-SERVICE
695	41409408	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
696	40026853	GRET	SVC	4/19/2022	1956	RET ABN	UG-SERVICE
697	38240750	GRET	SVC	3/26/2021	1956	RET ABN	UG-SERVICE
698	40360180	GRET	SVC	6/29/2022	1956	RET ABN	UG-SERVICE
699	41063473	GRET	SVC	1/18/2023	1956	RET ABN	UG-SERVICE
700	41409404	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
701	42777461	GRET	SVC	3/1/2024	1956	RET ABN	UG-SERVICE
702	36177531	GRET	SVC	2/14/2020	1956	RET ABN	UG-SERVICE
703	41411746	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
704	41241969	GRET	SVC	2/24/2023	1956	RET ABN	UG-SERVICE
705	41081183	GRET	SVC	12/20/2022	1956	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
706	41408070	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
707	37958391	GRET	SVC	12/28/2020	1956	RET ABN	UG-SERVICE
708	42866881	GRET	SVC	3/22/2024	1956	RET ABN	UG-SERVICE
709	41064595	GRET	SVC	12/13/2022	1956	RET ABN	UG-SERVICE
710	40279586	GRET	SVC	6/8/2022	1956	RET ABN	UG-SERVICE
711	41030765	GRET	SVC	12/7/2022	1956	RET ABN	UG-SERVICE
712	41163173	GRET	SVC	1/13/2023	1956	RET ABN	UG-SERVICE
713	42817001	GRET	SVC	3/13/2024	1956	RET ABN	UG-SERVICE
714	35151972	GRET	SVC	1/7/2020	1956	RET ABN	UG-SERVICE
715	41411747	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
716	42166672	GRET	SVC	10/14/2023	1956	RET ABN	UG-SERVICE
717	42247461	GRET	SVC	11/6/2023	1956	RET ABN	UG-SERVICE
718	37990355	GRET	SVC	1/11/2021	1956	RET ABN	UG-SERVICE
719	36761549	GRET	SVC	8/14/2020	1956	RET ABN	UG-SERVICE
720	42385235	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
721	36839860	GRET	SVC	9/1/2020	1956	RET ABN	UG-SERVICE
722	40492780	GRET	SVC	8/13/2022	1956	RET ABN	UG-SERVICE
723	37874343	GRET	SVC	12/7/2020	1956	RET ABN	UG-SERVICE
724	39830416	GRET	SVC	8/3/2022	1956	RET ABN	UG-SERVICE
725	36525533	GRET	SVC	6/25/2020	1956	RET ABN	UG-SERVICE
726	43632871	GRET	SVC	10/2/2024	1956	RET ABN	UG-SERVICE
727	42435906	GRET	SVC	9/19/2024	1956	RET ABN	UG-SERVICE
728	41289003	GRET	SVC	3/21/2023	1956	RET ABN	UG-SERVICE
729	38314238	GRET	SVC	3/24/2021	1956	RET ABN	UG-SERVICE
730	41441939	GRET	SVC	9/13/2023	1956	RET ABN	UG-SERVICE
731	39477405	GRET	SVC	11/29/2021	1956	RET ABN	UG-SERVICE
732	41411182	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
733	35965175	GRET	SVC	1/30/2020	1956	RET ABN	UG-SERVICE
734	42018667	GRET	SVC	8/21/2023	1956	RET ABN	UG-SERVICE
735	38370185	GRET	SVC	4/15/2021	1956	RET ABN	UG-SERVICE
736	41411907	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
737	38484125	GRET	SVC	5/14/2021	1956	RET ABN	UG-SERVICE
738	39817529	GRET	SVC	2/22/2022	1956	RET ABN	UG-SERVICE
739	41066001	GRET	SVC	1/4/2023	1956	RET ABN	UG-SERVICE
740	38341484	GRET	SVC	4/10/2021	1956	RET ABN	UG-SERVICE
741	42964245	GRET	SVC	9/19/2024	1956	RET ABN	UG-SERVICE
742	36119656	GRET	SVC	10/14/2020	1956	RET ABN	UG-SERVICE
743	40277552	GRET	SVC	4/27/2023	1956	RET ABN	UG-SERVICE
744	42844197	GRET	SVC	3/20/2024	1956	RET ABN	UG-SERVICE
745	37111303	GRET	SVC	10/22/2020	1956	RET ABN	UG-SERVICE
746	39999273	GRET	SVC	4/14/2022	1956	RET ABN	UG-SERVICE
747	40389547	GRET	SVC	12/14/2022	1956	RET ABN	UG-SERVICE
748	36101773	GRET	SVC	4/23/2020	1956	RET ABN	UG-SERVICE
749	41106883	GRET	SVC	12/30/2022	1956	RET ABN	UG-SERVICE
750	38813540	GRET	SVC	7/21/2021	1956	RET ABN	UG-SERVICE
751	41051912	GRET	SVC	1/12/2023	1956	RET ABN	UG-SERVICE
752	38751617	GRET	SVC	8/5/2021	1956	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
753	42208441	GRET	SVC	10/13/2023	1956	RET ABN	UG-SERVICE
754	36741665	GRET	SVC	8/7/2020	1956	RET ABN	UG-SERVICE
755	39908142	GRET	SVC	3/21/2022	1956	RET ABN	UG-SERVICE
756	42373894	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
757	39772873	GRET	SVC	10/1/2021	1956	RET ABN	UG-SERVICE
758	42791921	GRET	SVC	3/4/2024	1956	RET ABN	UG-SERVICE
759	43540093	GRET	SVC	9/23/2024	1956	RET ABN	UG-SERVICE
760	39827711	GRET	SVC	2/24/2022	1956	RET ABN	UG-SERVICE
761	43451804	GRET	SVC	8/19/2024	1956	RET ABN	UG-SERVICE
762	42156401	GRET	SVC	3/28/2024	1956	RET ABN	UG-SERVICE
763	41411757	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
764	41408589	GRET	SVC	4/2/2024	1956	RET ABN	UG-SERVICE
765	40453370	GRET	SVC	7/18/2022	1956	RET ABN	UG-SERVICE
766	38793969	GRET	SVC	7/20/2021	1956	RET ABN	UG-SERVICE
767	38117093	GRET	SVC	2/12/2021	1956	RET ABN	UG-SERVICE
768	37973593	GRET	SVC	1/5/2021	1956	RET ABN	UG-SERVICE
769	39092654	GRET	SVC	9/10/2021	1956	RET ABN	UG-SERVICE
770	39410508	GRET	SVC	11/10/2021	1956	RET ABN	UG-SERVICE
771	43755541	GRET	SVC	11/9/2024	1957	RET ABN	UG-SERVICE
772	41424260	GRET	SVC	10/18/2023	1957	RET ABN	UG-SERVICE
773	41430106	GRET	SVC	9/12/2023	1957	RET ABN	UG-SERVICE
774	37740415	GRET	SVC	11/21/2020	1957	RET ABN	UG-SERVICE
775	36137570	GRET	SVC	4/21/2020	1957	RET ABN	UG-SERVICE
776	41442142	GRET	SVC	9/13/2023	1957	RET ABN	UG-SERVICE
777	39518727	GRET	SVC	12/10/2021	1957	RET ABN	UG-SERVICE
778	38881452	GRET	SVC	8/31/2021	1957	RET ABN	UG-SERVICE
779	39542672	GRET	SVC	12/15/2021	1957	RET ABN	UG-SERVICE
780	41669838	GRET	SVC	6/17/2023	1957	RET ABN	UG-SERVICE
781	36267558	GRET	SVC	3/24/2020	1957	RET ABN	UG-SERVICE
782	36387479	GRET	SVC	7/2/2020	1957	RET ABN	UG-SERVICE
783	41075020	GRET	SVC	12/21/2022	1957	RET ABN	UG-SERVICE
784	41068182	GRET	SVC	1/10/2023	1957	RET ABN	UG-SERVICE
785	41411755	GRET	SVC	4/2/2024	1957	RET ABN	UG-SERVICE
786	42176690	GRET	SVC	10/3/2023	1957	RET ABN	UG-SERVICE
787	36598691	GRET	SVC	7/25/2020	1957	RET ABN	UG-SERVICE
788	41424518	GRET	SVC	10/18/2023	1957	RET ABN	UG-SERVICE
789	41028795	GRET	SVC	12/6/2022	1957	RET ABN	UG-SERVICE
790	39806497	GRET	SVC	2/21/2022	1957	RET ABN	UG-SERVICE
791	41362916	GRET	SVC	3/13/2023	1957	RET ABN	UG-SERVICE
792	36118917	GRET	SVC	10/30/2020	1957	RET ABN	UG-SERVICE
793	41807889	GRET	SVC	6/27/2023	1957	RET ABN	UG-SERVICE
794	40990955	GRET	SVC	12/15/2022	1957	RET ABN	UG-SERVICE
795	36118832	GRET	SVC	10/14/2020	1957	RET ABN	UG-SERVICE
796	36102856	GRET	SVC	4/22/2020	1957	RET ABN	UG-SERVICE
797	41117720	GRET	SVC	1/10/2023	1957	RET ABN	UG-SERVICE
798	41423884	GRET	SVC	10/18/2023	1957	RET ABN	UG-SERVICE
799	38599595	GRET	SVC	6/9/2021	1957	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
800	35837924	GRET	SVC	8/19/2020	1957	RET ABN	UG-SERVICE
801	40131343	GRET	SVC	5/17/2022	1957	RET ABN	UG-SERVICE
802	41442140	GRET	SVC	9/13/2023	1957	RET ABN	UG-SERVICE
803	36108624	GRET	SVC	4/23/2020	1957	RET ABN	UG-SERVICE
804	43303826	GRET	SVC	7/11/2024	1957	RET ABN	UG-SERVICE
805	40137963	GRET	SVC	5/19/2022	1957	RET ABN	UG-SERVICE
806	39606854	GRET	SVC	4/20/2021	1957	RET ABN	UG-SERVICE
807	40082004	GRET	SVC	8/24/2022	1957	RET ABN	UG-SERVICE
808	38568559	GRET	SVC	6/7/2021	1957	RET ABN	UG-SERVICE
809	41430105	GRET	SVC	9/12/2023	1957	RET ABN	UG-SERVICE
810	41969457	GRET	SVC	7/30/2024	1957	RET ABN	UG-SERVICE
811	41409318	GRET	SVC	4/2/2024	1957	RET ABN	UG-SERVICE
812	36170363	GRET	SVC	3/24/2020	1957	RET ABN	UG-SERVICE
813	36119061	GRET	SVC	10/30/2020	1957	RET ABN	UG-SERVICE
814	37639344	GRET	SVC	11/17/2020	1957	RET ABN	UG-SERVICE
815	41969454	GRET	SVC	7/30/2024	1957	RET ABN	UG-SERVICE
816	42898518	GRET	SVC	9/19/2024	1957	RET ABN	UG-SERVICE
817	36425569	GRET	SVC	5/12/2020	1957	RET ABN	UG-SERVICE
818	42137717	GRET	SVC	9/21/2023	1957	RET ABN	UG-SERVICE
819	35838041	GRET	SVC	8/19/2020	1957	RET ABN	UG-SERVICE
820	36580954	GRET	SVC	7/6/2020	1957	RET ABN	UG-SERVICE
821	40973890	GRET	SVC	1/24/2023	1957	RET ABN	UG-SERVICE
822	39578746	GRET	SVC	12/22/2021	1957	RET ABN	UG-SERVICE
823	38033879	GRET	SVC	1/21/2021	1957	RET ABN	UG-SERVICE
824	40865909	GRET	SVC	8/22/2023	1957	RET ABN	UG-SERVICE
825	42995221	GRET	SVC	7/2/2024	1957	RET ABN	UG-SERVICE
826	43945703	GRET	SVC	12/17/2024	1957	RET ABN	UG-SERVICE
827	41424355	GRET	SVC	4/2/2023	1957	RET ABN	UG-SERVICE
828	40583049	GRET	SVC	9/24/2022	1957	RET ABN	UG-SERVICE
829	41117391	GRET	SVC	1/12/2023	1957	RET ABN	UG-SERVICE
830	41691783	GRET	SVC	6/2/2023	1957	RET ABN	UG-SERVICE
831	37183757	GRET	SVC	8/23/2020	1957	RET ABN	UG-SERVICE
832	39665276	GRET	SVC	8/3/2022	1957	RET ABN	UG-SERVICE
833	43208433	GRET	SVC	6/25/2024	1957	RET ABN	UG-SERVICE
834	42247030	GRET	SVC	10/30/2023	1957	RET ABN	UG-SERVICE
835	41430214	GRET	SVC	9/19/2023	1957	RET ABN	UG-SERVICE
836	39830526	GRET	SVC	8/3/2022	1957	RET ABN	UG-SERVICE
837	41287030	GRET	SVC	3/17/2023	1957	RET ABN	UG-SERVICE
838	38541491	GRET	SVC	5/26/2021	1957	RET ABN	UG-SERVICE
839	42701509	GRET	SVC	2/14/2024	1957	RET ABN	UG-SERVICE
840	36121520	GRET	SVC	11/5/2020	1957	RET ABN	UG-SERVICE
841	37415381	GRET	SVC	10/28/2020	1957	RET ABN	UG-SERVICE
842	41068186	GRET	SVC	1/21/2023	1957	RET ABN	UG-SERVICE
843	36118826	GRET	SVC	10/14/2020	1957	RET ABN	UG-SERVICE
844	41088303	GRET	SVC	1/9/2023	1957	RET ABN	UG-SERVICE
845	38611656	GRET	SVC	6/10/2021	1957	RET ABN	UG-SERVICE
846	43621453	GRET	SVC	9/17/2024	1957	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
847	43863443	GRET	SVC	11/23/2024	1957	RET ABN	UG-SERVICE
848	35939239	GRET	SVC	1/28/2020	1957	RET ABN	UG-SERVICE
849	41036611	GRET	SVC	12/13/2022	1957	RET ABN	UG-SERVICE
850	42336427	GRET	SVC	4/2/2024	1957	RET ABN	UG-SERVICE
851	36023387	GRET	SVC	2/17/2020	1957	RET ABN	UG-SERVICE
852	41430211	GRET	SVC	9/13/2023	1957	RET ABN	UG-SERVICE
853	41222696	GRET	SVC	2/2/2023	1957	RET ABN	UG-SERVICE
854	36121611	GRET	SVC	10/30/2020	1957	RET ABN	UG-SERVICE
855	41401747	GRET	SVC	3/15/2023	1957	RET ABN	UG-SERVICE
856	36228629	GRET	SVC	3/8/2021	1957	RET ABN	UG-SERVICE
857	36303557	GRET	SVC	5/6/2020	1957	RET ABN	UG-SERVICE
858	41707019	GRET	SVC	6/12/2023	1957	RET ABN	UG-SERVICE
859	41807579	GRET	SVC	6/28/2023	1957	RET ABN	UG-SERVICE
860	41409106	GRET	SVC	4/2/2024	1957	RET ABN	UG-SERVICE
861	41898750	GRET	SVC	7/24/2023	1957	RET ABN	UG-SERVICE
862	41063474	GRET	SVC	12/17/2022	1957	RET ABN	UG-SERVICE
863	41424263	GRET	SVC	10/18/2023	1957	RET ABN	UG-SERVICE
864	39423526	GRET	SVC	6/27/2022	1957	RET ABN	UG-SERVICE
865	42028594	GRET	SVC	8/24/2023	1957	RET ABN	UG-SERVICE
866	41513777	GRET	SVC	4/25/2023	1957	RET ABN	UG-SERVICE
867	41411416	GRET	SVC	11/2/2023	1957	RET ABN	UG-SERVICE
868	41083730	GRET	SVC	12/21/2022	1957	RET ABN	UG-SERVICE
869	38352975	GRET	SVC	2/14/2023	1958	RET ABN	UG-SERVICE
870	41085609	GRET	SVC	1/13/2023	1958	RET ABN	UG-SERVICE
871	38097172	GRET	SVC	9/2/2021	1958	RET ABN	UG-SERVICE
872	36245398	GRET	SVC	3/7/2020	1958	RET ABN	UG-SERVICE
873	37740543	GRET	SVC	11/25/2020	1958	RET ABN	UG-SERVICE
874	39366490	GRET	SVC	11/4/2021	1958	RET ABN	UG-SERVICE
875	41408227	GRET	SVC	4/2/2024	1958	RET ABN	UG-SERVICE
876	38352973	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
877	40171770	GRET	SVC	5/17/2022	1958	RET ABN	UG-SERVICE
878	41411415	GRET	SVC	11/2/2023	1958	RET ABN	UG-SERVICE
879	41965726	GRET	SVC	8/3/2023	1958	RET ABN	UG-SERVICE
880	41617607	GRET	SVC	4/27/2023	1958	RET ABN	UG-SERVICE
881	36347721	GRET	SVC	6/29/2020	1958	RET ABN	UG-SERVICE
882	41423892	GRET	SVC	10/18/2023	1958	RET ABN	UG-SERVICE
883	38034501	GRET	SVC	12/6/2020	1958	RET ABN	UG-SERVICE
884	35887497	GRET	SVC	1/13/2020	1958	RET ABN	UG-SERVICE
885	36120267	GRET	SVC	10/30/2020	1958	RET ABN	UG-SERVICE
886	38357049	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
887	35995645	GRET	SVC	2/10/2020	1958	RET ABN	UG-SERVICE
888	41423893	GRET	SVC	10/18/2023	1958	RET ABN	UG-SERVICE
889	42979658	GRET	SVC	4/26/2024	1958	RET ABN	UG-SERVICE
890	36106825	GRET	SVC	3/9/2020	1958	RET ABN	UG-SERVICE
891	41148325	GRET	SVC	1/7/2023	1958	RET ABN	UG-SERVICE
892	40035442	GRET	SVC	4/20/2022	1958	RET ABN	UG-SERVICE
893	38522091	GRET	SVC	5/21/2021	1958	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
894	36868685	GRET	SVC	8/31/2020	1958	RET ABN	UG-SERVICE
895	41423894	GRET	SVC	10/18/2023	1958	RET ABN	UG-SERVICE
896	38474291	GRET	SVC	3/30/2021	1958	RET ABN	UG-SERVICE
897	42786964	GRET	SVC	3/4/2024	1958	RET ABN	UG-SERVICE
898	41424762	GRET	SVC	6/20/2023	1958	RET ABN	UG-SERVICE
899	36576709	GRET	SVC	7/6/2020	1958	RET ABN	UG-SERVICE
900	38301100	GRET	SVC	3/31/2021	1958	RET ABN	UG-SERVICE
901	39487072	GRET	SVC	12/2/2021	1958	RET ABN	UG-SERVICE
902	42737790	GRET	SVC	2/19/2024	1958	RET ABN	UG-SERVICE
903	41411414	GRET	SVC	11/2/2023	1958	RET ABN	UG-SERVICE
904	38970342	GRET	SVC	12/9/2021	1958	RET ABN	UG-SERVICE
905	41441929	GRET	SVC	9/13/2023	1958	RET ABN	UG-SERVICE
906	38507101	GRET	SVC	5/3/2021	1958	RET ABN	UG-SERVICE
907	40460466	GRET	SVC	7/25/2022	1958	RET ABN	UG-SERVICE
908	38426008	GRET	SVC	4/28/2021	1958	RET ABN	UG-SERVICE
909	43752107	GRET	SVC	12/10/2024	1958	RET ABN	UG-SERVICE
910	40432962	GRET	SVC	7/22/2022	1958	RET ABN	UG-SERVICE
911	36105787	GRET	SVC	2/13/2020	1958	RET ABN	UG-SERVICE
912	43834420	GRET	SVC	11/18/2024	1958	RET ABN	UG-SERVICE
913	39493537	GRET	SVC	12/22/2021	1958	RET ABN	UG-SERVICE
914	38352458	GRET	SVC	6/10/2021	1958	RET ABN	UG-SERVICE
915	41284186	GRET	SVC	3/15/2023	1958	RET ABN	UG-SERVICE
916	42656588	GRET	SVC	12/19/2024	1958	RET ABN	UG-SERVICE
917	43620926	GRET	SVC	9/20/2024	1958	RET ABN	UG-SERVICE
918	41147849	GRET	SVC	1/9/2023	1958	RET ABN	UG-SERVICE
919	41051916	GRET	SVC	1/12/2023	1958	RET ABN	UG-SERVICE
920	35682119	GRET	SVC	1/9/2020	1958	RET ABN	UG-SERVICE
921	41052320	GRET	SVC	1/12/2023	1958	RET ABN	UG-SERVICE
922	36086679	GRET	SVC	2/27/2020	1958	RET ABN	UG-SERVICE
923	39382160	GRET	SVC	11/5/2021	1958	RET ABN	UG-SERVICE
924	41139506	GRET	SVC	1/9/2023	1958	RET ABN	UG-SERVICE
925	42847072	GRET	SVC	4/1/2024	1958	RET ABN	UG-SERVICE
926	43984868	GRET	SVC	12/12/2024	1958	RET ABN	UG-SERVICE
927	39831388	GRET	SVC	8/3/2022	1958	RET ABN	UG-SERVICE
928	36120268	GRET	SVC	10/30/2020	1958	RET ABN	UG-SERVICE
929	43623434	GRET	SVC	11/25/2024	1958	RET ABN	UG-SERVICE
930	38352968	GRET	SVC	2/14/2023	1958	RET ABN	UG-SERVICE
931	41411432	GRET	SVC	11/2/2023	1958	RET ABN	UG-SERVICE
932	39916054	GRET	SVC	5/2/2022	1958	RET ABN	UG-SERVICE
933	38111180	GRET	SVC	2/9/2021	1958	RET ABN	UG-SERVICE
934	38352977	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
935	37887690	GRET	SVC	12/11/2020	1958	RET ABN	UG-SERVICE
936	39383979	GRET	SVC	11/9/2021	1958	RET ABN	UG-SERVICE
937	38352979	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
938	36120487	GRET	SVC	10/30/2020	1958	RET ABN	UG-SERVICE
939	39806834	GRET	SVC	2/16/2022	1958	RET ABN	UG-SERVICE
940	42586523	GRET	SVC	1/29/2024	1958	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
941	36166301	GRET	SVC	3/23/2020	1958	RET ABN	UG-SERVICE
942	39609259	GRET	SVC	4/27/2021	1958	RET ABN	UG-SERVICE
943	42915278	GRET	SVC	4/15/2024	1958	RET ABN	UG-SERVICE
944	36559263	GRET	SVC	6/4/2020	1958	RET ABN	UG-SERVICE
945	38352976	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
946	38164764	GRET	SVC	2/24/2021	1958	RET ABN	UG-SERVICE
947	38097177	GRET	SVC	9/2/2021	1958	RET ABN	UG-SERVICE
948	37386989	GRET	SVC	11/25/2020	1958	RET ABN	UG-SERVICE
949	39831208	GRET	SVC	8/3/2022	1958	RET ABN	UG-SERVICE
950	39301096	GRET	SVC	10/20/2021	1958	RET ABN	UG-SERVICE
951	36658889	GRET	SVC	7/21/2020	1958	RET ABN	UG-SERVICE
952	38301288	GRET	SVC	5/5/2021	1958	RET ABN	UG-SERVICE
953	40870148	GRET	SVC	10/28/2022	1958	RET ABN	UG-SERVICE
954	40318186	GRET	SVC	6/20/2022	1958	RET ABN	UG-SERVICE
955	36570144	GRET	SVC	7/1/2020	1958	RET ABN	UG-SERVICE
956	38352972	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
957	38089255	GRET	SVC	1/20/2021	1958	RET ABN	UG-SERVICE
958	40495220	GRET	SVC	7/23/2022	1958	RET ABN	UG-SERVICE
959	41424763	GRET	SVC	10/18/2023	1958	RET ABN	UG-SERVICE
960	42957326	GRET	SVC	9/19/2024	1958	RET ABN	UG-SERVICE
961	41441928	GRET	SVC	9/13/2023	1958	RET ABN	UG-SERVICE
962	39721554	GRET	SVC	1/28/2022	1958	RET ABN	UG-SERVICE
963	38357046	GRET	SVC	2/17/2023	1958	RET ABN	UG-SERVICE
964	41408474	GRET	SVC	4/2/2024	1958	RET ABN	UG-SERVICE
965	40399649	GRET	SVC	7/15/2022	1958	RET ABN	UG-SERVICE
966	36107160	GRET	SVC	4/22/2020	1958	RET ABN	UG-SERVICE
967	36122371	GRET	SVC	11/5/2020	1958	RET ABN	UG-SERVICE
968	39353523	GRET	SVC	2/15/2022	1958	RET ABN	UG-SERVICE
969	36149149	GRET	SVC	1/6/2021	1958	RET ABN	UG-SERVICE
970	43011963	GRET	SVC	4/30/2024	1958	RET ABN	UG-SERVICE
971	41411413	GRET	SVC	11/2/2023	1958	RET ABN	UG-SERVICE
972	38205412	GRET	SVC	3/16/2021	1958	RET ABN	UG-SERVICE
973	43353724	GRET	SVC	11/7/2024	1958	RET ABN	UG-SERVICE
974	38791176	GRET	SVC	8/2/2021	1958	RET ABN	UG-SERVICE
975	40492804	GRET	SVC	8/2/2022	1958	RET ABN	UG-SERVICE
976	41286908	GRET	SVC	3/17/2023	1958	RET ABN	UG-SERVICE
977	40036424	GRET	SVC	4/20/2022	1958	RET ABN	UG-SERVICE
978	35958597	GRET	SVC	2/20/2020	1958	RET ABN	UG-SERVICE
979	36992541	GRET	SVC	9/22/2020	1958	RET ABN	UG-SERVICE
980	41148327	GRET	SVC	1/7/2023	1958	RET ABN	UG-SERVICE
981	37948477	GRET	SVC	12/23/2020	1959	RET ABN	UG-SERVICE
982	41398905	GRET	SVC	3/24/2023	1959	RET ABN	UG-SERVICE
983	36121341	GRET	SVC	10/30/2020	1959	RET ABN	UG-SERVICE
984	38659865	GRET	SVC	6/24/2021	1959	RET ABN	UG-SERVICE
985	40487935	GRET	SVC	7/25/2022	1959	RET ABN	UG-SERVICE
986	42353965	GRET	SVC	11/14/2023	1959	RET ABN	UG-SERVICE
987	36893335	GRET	SVC	8/29/2020	1959	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
988	39699185	GRET	SVC	1/18/2022	1959	RET ABN	UG-SERVICE
989	41411078	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
990	41411074	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
991	43151637	GRET	SVC	7/15/2024	1959	RET ABN	UG-SERVICE
992	42208445	GRET	SVC	10/13/2023	1959	RET ABN	UG-SERVICE
993	41408519	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
994	40172804	GRET	SVC	5/16/2022	1959	RET ABN	UG-SERVICE
995	43274816	GRET	SVC	7/6/2024	1959	RET ABN	UG-SERVICE
996	39380921	GRET	SVC	10/21/2021	1959	RET ABN	UG-SERVICE
997	43377183	GRET	SVC	8/6/2024	1959	RET ABN	UG-SERVICE
998	37307282	GRET	SVC	11/5/2020	1959	RET REM	UG-SERVICE
999	37934432	GRET	SVC	12/21/2020	1959	RET ABN	UG-SERVICE
1000	42452951	GRET	SVC	4/26/2024	1959	RET ABN	UG-SERVICE
1001	42168657	GRET	SVC	10/2/2023	1959	RET ABN	UG-SERVICE
1002	36298881	GRET	SVC	5/5/2020	1959	RET ABN	UG-SERVICE
1003	36122368	GRET	SVC	10/30/2020	1959	RET ABN	UG-SERVICE
1004	41409110	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1005	43346976	GRET	SVC	7/25/2024	1959	RET ABN	UG-SERVICE
1006	41409109	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1007	41842797	GRET	SVC	7/8/2023	1959	RET ABN	UG-SERVICE
1008	39780203	GRET	SVC	2/11/2022	1959	RET ABN	UG-SERVICE
1009	41544813	GRET	SVC	12/11/2023	1959	RET ABN	UG-SERVICE
1010	38352931	GRET	SVC	2/17/2023	1959	RET ABN	UG-SERVICE
1011	36927908	GRET	SVC	9/17/2020	1959	RET ABN	UG-SERVICE
1012	36121816	GRET	SVC	10/12/2020	1959	RET ABN	UG-SERVICE
1013	37321680	GRET	SVC	12/1/2020	1959	RET ABN	UG-SERVICE
1014	41411901	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1015	39845055	GRET	SVC	3/4/2022	1959	RET ABN	UG-SERVICE
1016	42670034	GRET	SVC	2/9/2024	1959	RET ABN	UG-SERVICE
1017	36101963	GRET	SVC	3/18/2020	1959	RET ABN	UG-SERVICE
1018	41407232	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1019	41407210	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1020	39611979	GRET	SVC	5/27/2021	1959	RET ABN	UG-SERVICE
1021	40858381	GRET	SVC	10/26/2022	1959	RET ABN	UG-SERVICE
1022	41859889	GRET	SVC	8/11/2023	1959	RET ABN	UG-SERVICE
1023	36035810	GRET	SVC	2/15/2020	1959	RET ABN	UG-SERVICE
1024	40490110	GRET	SVC	5/23/2023	1959	RET ABN	UG-SERVICE
1025	41288533	GRET	SVC	3/1/2023	1959	RET ABN	UG-SERVICE
1026	39666420	GRET	SVC	11/18/2022	1959	RET ABN	UG-SERVICE
1027	37249819	GRET	SVC	11/17/2020	1959	RET ABN	UG-SERVICE
1028	38441389	GRET	SVC	1/6/2022	1959	RET ABN	UG-SERVICE
1029	40338701	GRET	SVC	6/21/2022	1959	RET ABN	UG-SERVICE
1030	41007816	GRET	SVC	12/8/2022	1959	RET ABN	UG-SERVICE
1031	41408461	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1032	40478345	GRET	SVC	7/25/2022	1959	RET ABN	UG-SERVICE
1033	38033756	GRET	SVC	1/22/2021	1959	RET ABN	UG-SERVICE
1034	37019048	GRET	SVC	9/28/2020	1959	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1035	42506338	GRET	SVC	1/4/2024	1959	RET ABN	UG-SERVICE
1036	41273847	GRET	SVC	2/28/2023	1959	RET ABN	UG-SERVICE
1037	36260061	GRET	SVC	3/18/2020	1959	RET ABN	UG-SERVICE
1038	43154437	GRET	SVC	6/10/2024	1959	RET ABN	UG-SERVICE
1039	36254921	GRET	SVC	10/25/2020	1959	RET ABN	UG-SERVICE
1040	36120709	GRET	SVC	10/30/2020	1959	RET ABN	UG-SERVICE
1041	43394312	GRET	SVC	9/19/2024	1959	RET ABN	UG-SERVICE
1042	37869002	GRET	SVC	12/2/2020	1959	RET ABN	UG-SERVICE
1043	42008802	GRET	SVC	8/16/2023	1959	RET ABN	UG-SERVICE
1044	31040393	GRET	SVC	11/10/2022	1959	RET ABN	UG-SERVICE
1045	36336551	GRET	SVC	5/8/2020	1959	RET ABN	UG-SERVICE
1046	39367005	GRET	SVC	11/2/2021	1959	RET ABN	UG-SERVICE
1047	39904815	GRET	SVC	3/24/2022	1959	RET ABN	UG-SERVICE
1048	39745884	GRET	SVC	2/9/2022	1959	RET ABN	UG-SERVICE
1049	42911783	GRET	SVC	4/13/2024	1959	RET ABN	UG-SERVICE
1050	41318360	GRET	SVC	3/3/2023	1959	RET ABN	UG-SERVICE
1051	41411279	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1052	36168654	GRET	SVC	3/23/2020	1959	RET ABN	UG-SERVICE
1053	43318343	GRET	SVC	8/9/2024	1959	RET ABN	UG-SERVICE
1054	41277882	GRET	SVC	2/13/2023	1959	RET ABN	UG-SERVICE
1055	41407806	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1056	38594833	GRET	SVC	6/8/2021	1959	RET ABN	UG-SERVICE
1057	41571592	GRET	SVC	5/1/2023	1959	RET ABN	UG-SERVICE
1058	43614177	GRET	SVC	9/25/2024	1959	RET ABN	UG-SERVICE
1059	36609185	GRET	SVC	7/22/2020	1959	RET ABN	UG-SERVICE
1060	41407230	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1061	38964849	GRET	SVC	9/20/2021	1959	RET ABN	UG-SERVICE
1062	39791766	GRET	SVC	10/5/2021	1959	RET ABN	UG-SERVICE
1063	42752845	GRET	SVC	6/28/2024	1959	RET ABN	UG-SERVICE
1064	41408225	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1065	43473548	GRET	SVC	8/15/2024	1959	RET ABN	UG-SERVICE
1066	42316686	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1067	36121809	GRET	SVC	10/12/2020	1959	RET ABN	UG-SERVICE
1068	41116695	GRET	SVC	2/2/2023	1959	RET ABN	UG-SERVICE
1069	41573846	GRET	SVC	5/10/2023	1959	RET ABN	UG-SERVICE
1070	36609164	GRET	SVC	7/22/2020	1959	RET ABN	UG-SERVICE
1071	41411052	GRET	SVC	4/2/2024	1959	RET ABN	UG-SERVICE
1072	41560331	GRET	SVC	6/10/2024	1959	RET ABN	UG-SERVICE
1073	38575530	GRET	SVC	6/7/2021	1959	RET ABN	UG-SERVICE
1074	41146287	GRET	SVC	1/9/2023	1959	RET ABN	UG-SERVICE
1075	40371078	GRET	SVC	7/6/2022	1959	RET ABN	UG-SERVICE
1076	36121811	GRET	SVC	10/14/2020	1959	RET ABN	UG-SERVICE
1077	40546486	GRET	SVC	8/17/2022	1959	RET ABN	UG-SERVICE
1078	41185868	GRET	SVC	1/20/2023	1959	RET ABN	UG-SERVICE
1079	43469668	GRET	SVC	8/21/2024	1959	RET ABN	UG-SERVICE
1080	39169178	GRET	SVC	9/20/2021	1959	RET ABN	UG-SERVICE
1081	41085611	GRET	SVC	1/13/2023	1959	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1082	42219986	GRET	SVC	10/20/2023	1959	RET ABN	UG-SERVICE
1083	37985467	GRET	SVC	1/5/2021	1959	RET ABN	UG-SERVICE
1084	38731096	GRET	SVC	5/24/2021	1959	RET ABN	UG-SERVICE
1085	40561334	GRET	SVC	8/21/2022	1959	RET ABN	UG-SERVICE
1086	36101523	GRET	SVC	4/24/2020	1959	RET ABN	UG-SERVICE
1087	43245052	GRET	SVC	9/11/2024	1959	RET ABN	UG-SERVICE
1088	37033025	GRET	SVC	10/6/2020	1959	RET ABN	UG-SERVICE
1089	38503996	GRET	SVC	4/1/2021	1959	RET ABN	UG-SERVICE
1090	42493055	GRET	SVC	12/18/2023	1959	RET ABN	UG-SERVICE
1091	36120279	GRET	SVC	10/30/2020	1959	RET ABN	UG-SERVICE
1092	36109951	GRET	SVC	4/22/2020	1959	RET ABN	UG-SERVICE
1093	35926327	GRET	SVC	1/20/2020	1959	RET ABN	UG-SERVICE
1094	40500730	GRET	SVC	8/25/2022	1959	RET ABN	UG-SERVICE
1095	40659494	GRET	SVC	9/7/2022	1959	RET ABN	UG-SERVICE
1096	39814853	GRET	SVC	3/7/2022	1959	RET ABN	UG-SERVICE
1097	43775657	GRET	SVC	10/29/2024	1959	RET ABN	UG-SERVICE
1098	38033758	GRET	SVC	1/22/2021	1959	RET ABN	UG-SERVICE
1099	36102665	GRET	SVC	3/9/2020	1960	RET ABN	UG-SERVICE
1100	41407614	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1101	41035823	GRET	SVC	12/8/2022	1960	RET ABN	UG-SERVICE
1102	36342646	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1103	41411769	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1104	39609135	GRET	SVC	4/26/2021	1960	RET ABN	UG-SERVICE
1105	41411297	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1106	41529304	GRET	SVC	4/17/2023	1960	RET ABN	UG-SERVICE
1107	40425796	GRET	SVC	7/15/2022	1960	RET ABN	UG-SERVICE
1108	39424062	GRET	SVC	6/27/2022	1960	RET ABN	UG-SERVICE
1109	41462844	GRET	SVC	4/17/2023	1960	RET ABN	UG-SERVICE
1110	36241471	GRET	SVC	4/30/2020	1960	RET ABN	UG-SERVICE
1111	42141049	GRET	SVC	8/7/2024	1960	RET ABN	UG-SERVICE
1112	43386121	GRET	SVC	8/7/2024	1960	RET ABN	UG-SERVICE
1113	43353802	GRET	SVC	11/6/2024	1960	RET ABN	UG-SERVICE
1114	41407611	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1115	40608423	GRET	SVC	8/23/2022	1960	RET ABN	UG-SERVICE
1116	41769886	GRET	SVC	7/14/2023	1960	RET ABN	UG-SERVICE
1117	41411343	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1118	37834100	GRET	SVC	12/1/2020	1960	RET ABN	UG-SERVICE
1119	37887893	GRET	SVC	12/7/2020	1960	RET ABN	UG-SERVICE
1120	40139567	GRET	SVC	5/9/2022	1960	RET ABN	UG-SERVICE
1121	41940414	GRET	SVC	7/31/2023	1960	RET ABN	UG-SERVICE
1122	41411298	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1123	36342641	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1124	39469482	GRET	SVC	11/29/2021	1960	RET ABN	UG-SERVICE
1125	42518567	GRET	SVC	12/27/2023	1960	RET ABN	UG-SERVICE
1126	43425597	GRET	SVC	8/15/2024	1960	RET ABN	UG-SERVICE
1127	41441936	GRET	SVC	9/12/2023	1960	RET ABN	UG-SERVICE
1128	36342398	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1129	43353735	GRET	SVC	11/7/2024	1960	RET ABN	UG-SERVICE
1130	40425794	GRET	SVC	7/15/2022	1960	RET ABN	UG-SERVICE
1131	43710834	GRET	SVC	10/16/2024	1960	RET ABN	UG-SERVICE
1132	42801581	GRET	SVC	3/11/2024	1960	RET ABN	UG-SERVICE
1133	36112814	GRET	SVC	10/30/2020	1960	RET ABN	UG-SERVICE
1134	39066318	GRET	SVC	9/1/2021	1960	RET ABN	UG-SERVICE
1135	39077882	GRET	SVC	1/31/2022	1960	RET ABN	UG-SERVICE
1136	36342644	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1137	35997487	GRET	SVC	2/10/2020	1960	RET ABN	UG-SERVICE
1138	41411341	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1139	36112444	GRET	SVC	10/30/2020	1960	RET ABN	UG-SERVICE
1140	42242910	GRET	SVC	10/12/2023	1960	RET ABN	UG-SERVICE
1141	41407612	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1142	41407775	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1143	36769509	GRET	SVC	9/18/2020	1960	RET ABN	UG-SERVICE
1144	42202957	GRET	SVC	10/19/2023	1960	RET ABN	UG-SERVICE
1145	42828842	GRET	SVC	3/18/2024	1960	RET ABN	UG-SERVICE
1146	39199772	GRET	SVC	10/11/2021	1960	RET ABN	UG-SERVICE
1147	38033753	GRET	SVC	1/19/2021	1960	RET ABN	UG-SERVICE
1148	34462276	GRET	SVC	1/30/2020	1960	RET ABN	UG-SERVICE
1149	36102915	GRET	SVC	3/17/2020	1960	RET ABN	UG-SERVICE
1150	41277651	GRET	SVC	2/13/2023	1960	RET ABN	UG-SERVICE
1151	41051919	GRET	SVC	1/12/2023	1960	RET ABN	UG-SERVICE
1152	41254847	GRET	SVC	2/7/2023	1960	RET ABN	UG-SERVICE
1153	38480409	GRET	SVC	5/10/2021	1960	RET ABN	UG-SERVICE
1154	40160145	GRET	SVC	5/22/2022	1960	RET ABN	UG-SERVICE
1155	42021634	GRET	SVC	8/21/2023	1960	RET ABN	UG-SERVICE
1156	38205080	GRET	SVC	3/13/2021	1960	RET ABN	UG-SERVICE
1157	39950874	GRET	SVC	6/17/2022	1960	RET ABN	UG-SERVICE
1158	39657141	GRET	SVC	6/28/2022	1960	RET ABN	UG-SERVICE
1159	41185257	GRET	SVC	1/17/2023	1960	RET ABN	UG-SERVICE
1160	40590475	GRET	SVC	8/18/2022	1960	RET ABN	UG-SERVICE
1161	39543595	GRET	SVC	12/14/2021	1960	RET ABN	UG-SERVICE
1162	43234865	GRET	SVC	7/8/2024	1960	RET ABN	UG-SERVICE
1163	41407768	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1164	39903337	GRET	SVC	3/18/2022	1960	RET ABN	UG-SERVICE
1165	42115267	GRET	SVC	9/15/2023	1960	RET ABN	UG-SERVICE
1166	40171166	GRET	SVC	9/23/2022	1960	RET ABN	UG-SERVICE
1167	36124971	GRET	SVC	3/11/2020	1960	RET ABN	UG-SERVICE
1168	40691314	GRET	SVC	9/13/2022	1960	RET ABN	UG-SERVICE
1169	41407776	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1170	39657092	GRET	SVC	6/28/2022	1960	RET ABN	UG-SERVICE
1171	42364764	GRET	SVC	11/14/2023	1960	RET ABN	UG-SERVICE
1172	43967484	GRET	SVC	12/9/2024	1960	RET ABN	UG-SERVICE
1173	41407767	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1174	41068589	GRET	SVC	12/20/2022	1960	RET ABN	UG-SERVICE
1175	41407882	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1176	36983777	GRET	SVC	9/23/2020	1960	RET ABN	UG-SERVICE
1177	41441937	GRET	SVC	9/13/2023	1960	RET ABN	UG-SERVICE
1178	36112449	GRET	SVC	10/30/2020	1960	RET ABN	UG-SERVICE
1179	42539919	GRET	SVC	1/5/2024	1960	RET ABN	UG-SERVICE
1180	42028371	GRET	SVC	8/24/2023	1960	RET ABN	UG-SERVICE
1181	41407610	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1182	41180788	GRET	SVC	1/4/2023	1960	RET ABN	UG-SERVICE
1183	42862216	GRET	SVC	3/28/2024	1960	RET ABN	UG-SERVICE
1184	38835873	GRET	SVC	8/6/2021	1960	RET ABN	UG-SERVICE
1185	41503458	GRET	SVC	4/24/2023	1960	RET ABN	UG-SERVICE
1186	36876164	GRET	SVC	4/19/2021	1960	RET ABN	UG-SERVICE
1187	36363717	GRET	SVC	5/19/2020	1960	RET ABN	UG-SERVICE
1188	36342645	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1189	36520196	GRET	SVC	6/18/2020	1960	RET ABN	UG-SERVICE
1190	36824153	GRET	SVC	9/14/2020	1960	RET ABN	UG-SERVICE
1191	39657094	GRET	SVC	6/28/2022	1960	RET ABN	UG-SERVICE
1192	39411464	GRET	SVC	11/10/2021	1960	RET ABN	UG-SERVICE
1193	38526147	GRET	SVC	5/15/2021	1960	RET ABN	UG-SERVICE
1194	40749570	GRET	SVC	9/30/2022	1960	RET ABN	UG-SERVICE
1195	40933282	GRET	SVC	12/3/2022	1960	RET ABN	UG-SERVICE
1196	36342396	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1197	42436209	GRET	SVC	12/4/2023	1960	RET ABN	UG-SERVICE
1198	42585048	GRET	SVC	1/23/2024	1960	RET ABN	UG-SERVICE
1199	38849690	GRET	SVC	9/9/2021	1960	RET ABN	UG-SERVICE
1200	39657140	GRET	SVC	6/28/2022	1960	RET ABN	UG-SERVICE
1201	42271538	GRET	SVC	10/23/2023	1960	RET ABN	UG-SERVICE
1202	38594661	GRET	SVC	6/24/2021	1960	RET ABN	UG-SERVICE
1203	39727353	GRET	SVC	1/25/2022	1960	RET ABN	UG-SERVICE
1204	36137561	GRET	SVC	4/20/2020	1960	RET ABN	UG-SERVICE
1205	36495068	GRET	SVC	7/7/2020	1960	RET ABN	UG-SERVICE
1206	41429979	GRET	SVC	9/13/2023	1960	RET ABN	UG-SERVICE
1207	41411344	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1208	35988521	GRET	SVC	3/9/2020	1960	RET ABN	UG-SERVICE
1209	41185580	GRET	SVC	1/20/2023	1960	RET ABN	UG-SERVICE
1210	40751406	GRET	SVC	9/30/2022	1960	RET ABN	UG-SERVICE
1211	37706889	GRET	SVC	11/20/2020	1960	RET ABN	UG-SERVICE
1212	36589015	GRET	SVC	7/8/2020	1960	RET ABN	UG-SERVICE
1213	38624477	GRET	SVC	7/29/2021	1960	RET ABN	UG-SERVICE
1214	42969403	GRET	SVC	4/29/2024	1960	RET ABN	UG-SERVICE
1215	41411340	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1216	39666146	GRET	SVC	8/3/2022	1960	RET ABN	UG-SERVICE
1217	43713131	GRET	SVC	10/21/2024	1960	RET ABN	UG-SERVICE
1218	42069770	GRET	SVC	9/7/2023	1960	RET ABN	UG-SERVICE
1219	36342640	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1220	42888698	GRET	SVC	3/21/2024	1960	RET ABN	UG-SERVICE
1221	40980863	GRET	SVC	11/23/2022	1960	RET ABN	UG-SERVICE
1222	41183641	GRET	SVC	1/20/2023	1960	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1223	36587660	GRET	SVC	6/9/2020	1960	RET ABN	UG-SERVICE
1224	39230077	GRET	SVC	10/27/2021	1960	RET ABN	UG-SERVICE
1225	38236492	GRET	SVC	3/16/2021	1960	RET ABN	UG-SERVICE
1226	39319508	GRET	SVC	11/1/2021	1960	RET ABN	UG-SERVICE
1227	40472862	GRET	SVC	7/26/2022	1960	RET ABN	UG-SERVICE
1228	36068289	GRET	SVC	2/25/2020	1960	RET ABN	UG-SERVICE
1229	43918276	GRET	SVC	12/10/2024	1960	RET ABN	UG-SERVICE
1230	43700394	GRET	SVC	10/18/2024	1960	RET ABN	UG-SERVICE
1231	40505994	GRET	SVC	8/5/2022	1960	RET ABN	UG-SERVICE
1232	38881048	GRET	SVC	8/9/2021	1960	RET ABN	UG-SERVICE
1233	37877948	GRET	SVC	11/30/2020	1960	RET ABN	UG-SERVICE
1234	36056072	GRET	SVC	2/27/2020	1960	RET ABN	UG-SERVICE
1235	40120512	GRET	SVC	5/3/2022	1960	RET ABN	UG-SERVICE
1236	38064373	GRET	SVC	1/22/2021	1960	RET ABN	UG-SERVICE
1237	36077747	GRET	SVC	3/2/2020	1960	RET ABN	UG-SERVICE
1238	40782896	GRET	SVC	10/10/2022	1960	RET ABN	UG-SERVICE
1239	43234773	GRET	SVC	7/11/2024	1960	RET ABN	UG-SERVICE
1240	41243041	GRET	SVC	2/10/2023	1960	RET ABN	UG-SERVICE
1241	36196171	GRET	SVC	6/25/2020	1960	RET ABN	UG-SERVICE
1242	40283051	GRET	SVC	6/10/2022	1960	RET ABN	UG-SERVICE
1243	36342397	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1244	41441933	GRET	SVC	9/12/2023	1960	RET ABN	UG-SERVICE
1245	41407885	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1246	40371452	GRET	SVC	6/29/2022	1960	RET ABN	UG-SERVICE
1247	43445234	GRET	SVC	8/24/2024	1960	RET ABN	UG-SERVICE
1248	32769562	GRET	SVC	7/8/2020	1960	RET ABN	UG-SERVICE
1249	38324999	GRET	SVC	4/7/2021	1960	RET ABN	UG-SERVICE
1250	39783713	GRET	SVC	2/11/2022	1960	RET ABN	UG-SERVICE
1251	38575528	GRET	SVC	6/7/2021	1960	RET ABN	UG-SERVICE
1252	41411345	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1253	39613737	GRET	SVC	1/5/2022	1960	RET ABN	UG-SERVICE
1254	42670288	GRET	SVC	9/19/2024	1960	RET ABN	UG-SERVICE
1255	41411299	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1256	38322497	GRET	SVC	4/3/2021	1960	RET ABN	UG-SERVICE
1257	43184183	GRET	SVC	6/17/2024	1960	RET ABN	UG-SERVICE
1258	41407884	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1259	36342642	GRET	SVC	5/6/2020	1960	RET ABN	UG-SERVICE
1260	41279868	GRET	SVC	2/16/2023	1960	RET REM	UG-SERVICE
1261	36112453	GRET	SVC	10/30/2020	1960	RET ABN	UG-SERVICE
1262	38187139	GRET	SVC	2/26/2021	1960	RET ABN	UG-SERVICE
1263	40100429	GRET	SVC	5/2/2022	1960	RET ABN	UG-SERVICE
1264	35960298	GRET	SVC	1/28/2020	1960	RET ABN	UG-SERVICE
1265	40398607	GRET	SVC	7/15/2022	1960	RET ABN	UG-SERVICE
1266	40265107	GRET	SVC	5/26/2022	1960	RET ABN	UG-SERVICE
1267	37834104	GRET	SVC	12/11/2020	1960	RET ABN	UG-SERVICE
1268	41407769	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1269	37529554	GRET	SVC	11/16/2020	1960	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1270	41441934	GRET	SVC	9/12/2023	1960	RET ABN	UG-SERVICE
1271	39654871	GRET	SVC	6/28/2022	1960	RET ABN	UG-SERVICE
1272	37883994	GRET	SVC	12/8/2020	1960	RET ABN	UG-SERVICE
1273	39379823	GRET	SVC	11/19/2021	1960	RET ABN	UG-SERVICE
1274	42205146	GRET	SVC	10/11/2023	1960	RET ABN	UG-SERVICE
1275	36779260	GRET	SVC	8/17/2020	1960	RET ABN	UG-SERVICE
1276	41879337	GRET	SVC	7/17/2023	1960	RET ABN	UG-SERVICE
1277	37891276	GRET	SVC	12/6/2020	1960	RET ABN	UG-SERVICE
1278	41411342	GRET	SVC	4/2/2024	1960	RET ABN	UG-SERVICE
1279	42299476	GRET	SVC	11/4/2023	1961	RET ABN	UG-SERVICE
1280	40456658	GRET	SVC	7/20/2022	1961	RET ABN	UG-SERVICE
1281	42548670	GRET	SVC	1/5/2024	1961	RET ABN	UG-SERVICE
1282	38415912	GRET	SVC	4/27/2021	1961	RET ABN	UG-SERVICE
1283	39618730	GRET	SVC	1/8/2022	1961	RET ABN	UG-SERVICE
1284	36671619	GRET	SVC	8/21/2020	1961	RET ABN	UG-SERVICE
1285	40230311	GRET	SVC	5/31/2022	1961	RET ABN	UG-SERVICE
1286	37843799	GRET	SVC	11/30/2020	1961	RET ABN	UG-SERVICE
1287	36120496	GRET	SVC	11/5/2020	1961	RET ABN	UG-SERVICE
1288	36122439	GRET	SVC	11/5/2020	1961	RET ABN	UG-SERVICE
1289	43918919	GRET	SVC	12/13/2024	1961	RET ABN	UG-SERVICE
1290	39705919	GRET	SVC	1/18/2022	1961	RET ABN	UG-SERVICE
1291	35960291	GRET	SVC	1/30/2020	1961	RET ABN	UG-SERVICE
1292	40492793	GRET	SVC	7/23/2022	1961	RET ABN	UG-SERVICE
1293	38125275	GRET	SVC	2/18/2021	1961	RET ABN	UG-SERVICE
1294	40500736	GRET	SVC	8/31/2022	1961	RET ABN	UG-SERVICE
1295	40634921	GRET	SVC	9/1/2022	1961	RET ABN	UG-SERVICE
1296	37974006	GRET	SVC	12/23/2020	1961	RET ABN	UG-SERVICE
1297	42185807	GRET	SVC	10/3/2023	1961	RET ABN	UG-SERVICE
1298	43353732	GRET	SVC	11/6/2024	1961	RET ABN	UG-SERVICE
1299	40216360	GRET	SVC	6/13/2022	1961	RET ABN	UG-SERVICE
1300	42007332	GRET	SVC	8/15/2023	1961	RET ABN	UG-SERVICE
1301	36469854	GRET	SVC	7/27/2020	1961	RET ABN	UG-SERVICE
1302	38742158	GRET	SVC	7/12/2021	1961	RET ABN	UG-SERVICE
1303	36893417	GRET	SVC	9/3/2020	1961	RET ABN	UG-SERVICE
1304	37973881	GRET	SVC	1/5/2021	1961	RET ABN	UG-SERVICE
1305	42272384	GRET	SVC	10/25/2023	1961	RET ABN	UG-SERVICE
1306	38561615	GRET	SVC	4/19/2021	1961	RET ABN	UG-SERVICE
1307	40561710	GRET	SVC	8/20/2022	1961	RET ABN	UG-SERVICE
1308	42453885	GRET	SVC	12/7/2023	1961	RET ABN	UG-SERVICE
1309	38142517	GRET	SVC	2/10/2021	1961	RET ABN	UG-SERVICE
1310	40353047	GRET	SVC	6/28/2022	1961	RET ABN	UG-SERVICE
1311	35926372	GRET	SVC	2/13/2020	1961	RET ABN	UG-SERVICE
1312	36977722	GRET	SVC	9/22/2020	1961	RET ABN	UG-SERVICE
1313	40231367	GRET	SVC	6/15/2022	1961	RET ABN	UG-SERVICE
1314	40612130	GRET	SVC	10/27/2022	1961	RET ABN	UG-SERVICE
1315	41119588	GRET	SVC	1/6/2023	1961	RET ABN	UG-SERVICE
1316	40330300	GRET	SVC	6/21/2022	1961	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1317	42410988	GRET	SVC	11/27/2023	1961	RET ABN	UG-SERVICE
1318	39680508	GRET	SVC	1/10/2022	1961	RET ABN	UG-SERVICE
1319	42332980	GRET	SVC	11/3/2023	1961	RET ABN	UG-SERVICE
1320	36164486	GRET	SVC	3/23/2020	1961	RET ABN	UG-SERVICE
1321	41660045	GRET	SVC	5/22/2023	1961	RET ABN	UG-SERVICE
1322	42024678	GRET	SVC	8/22/2023	1961	RET ABN	UG-SERVICE
1323	39994343	GRET	SVC	4/19/2022	1961	RET ABN	UG-SERVICE
1324	41411599	GRET	SVC	4/2/2024	1961	RET ABN	UG-SERVICE
1325	43468927	GRET	SVC	8/26/2024	1961	RET ABN	UG-SERVICE
1326	42284251	GRET	SVC	10/23/2023	1961	RET ABN	UG-SERVICE
1327	35855538	GRET	SVC	1/7/2020	1961	RET ABN	UG-SERVICE
1328	38187547	GRET	SVC	3/2/2021	1961	RET ABN	UG-SERVICE
1329	40727789	GRET	SVC	10/25/2022	1961	RET ABN	UG-SERVICE
1330	38940899	GRET	SVC	8/16/2021	1961	RET ABN	UG-SERVICE
1331	42687136	GRET	SVC	2/13/2024	1961	RET ABN	UG-SERVICE
1332	43511838	GRET	SVC	9/4/2024	1961	RET ABN	UG-SERVICE
1333	35856107	GRET	SVC	1/6/2020	1961	RET ABN	UG-SERVICE
1334	39328380	GRET	SVC	10/18/2021	1961	RET ABN	UG-SERVICE
1335	40645368	GRET	SVC	9/1/2022	1961	RET ABN	UG-SERVICE
1336	39463485	GRET	SVC	11/26/2021	1961	RET ABN	UG-SERVICE
1337	40500727	GRET	SVC	8/20/2022	1961	RET ABN	UG-SERVICE
1338	43058302	GRET	SVC	5/14/2024	1961	RET ABN	UG-SERVICE
1339	39209627	GRET	SVC	9/28/2021	1961	RET ABN	UG-SERVICE
1340	41436801	GRET	SVC	3/30/2023	1961	RET ABN	UG-SERVICE
1341	43290640	GRET	SVC	7/15/2024	1961	RET ABN	UG-SERVICE
1342	42809628	GRET	SVC	3/11/2024	1961	RET ABN	UG-SERVICE
1343	42137713	GRET	SVC	9/21/2023	1961	RET ABN	UG-SERVICE
1344	35862608	GRET	SVC	1/7/2020	1961	RET ABN	UG-SERVICE
1345	43056751	GRET	SVC	5/14/2024	1961	RET ABN	UG-SERVICE
1346	39997913	GRET	SVC	4/18/2022	1961	RET ABN	UG-SERVICE
1347	37925865	GRET	SVC	12/18/2020	1961	RET ABN	UG-SERVICE
1348	36343658	GRET	SVC	5/18/2020	1961	RET ABN	UG-SERVICE
1349	35990782	GRET	SVC	2/8/2020	1961	RET ABN	UG-SERVICE
1350	37955054	GRET	SVC	1/26/2021	1961	RET ABN	UG-SERVICE
1351	40500338	GRET	SVC	8/18/2022	1961	RET ABN	UG-SERVICE
1352	41411659	GRET	SVC	4/2/2024	1961	RET ABN	UG-SERVICE
1353	42956485	GRET	SVC	4/24/2024	1961	RET ABN	UG-SERVICE
1354	43237197	GRET	SVC	7/3/2024	1961	RET ABN	UG-SERVICE
1355	42549369	GRET	SVC	1/4/2024	1961	RET ABN	UG-SERVICE
1356	36210724	GRET	SVC	5/7/2020	1961	RET ABN	UG-SERVICE
1357	41320418	GRET	SVC	3/1/2023	1961	RET ABN	UG-SERVICE
1358	43010772	GRET	SVC	5/9/2024	1961	RET ABN	UG-SERVICE
1359	37048341	GRET	SVC	10/26/2020	1961	RET ABN	UG-SERVICE
1360	42506319	GRET	SVC	1/11/2024	1961	RET ABN	UG-SERVICE
1361	40359852	GRET	SVC	7/1/2022	1961	RET ABN	UG-SERVICE
1362	39613400	GRET	SVC	12/28/2021	1961	RET ABN	UG-SERVICE
1363	35963463	GRET	SVC	1/23/2020	1961	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1364	36428510	GRET	SVC	6/29/2020	1961	RET ABN	UG-SERVICE
1365	40561485	GRET	SVC	8/13/2022	1961	RET ABN	UG-SERVICE
1366	42908244	GRET	SVC	4/13/2024	1961	RET ABN	UG-SERVICE
1367	43480938	GRET	SVC	10/25/2024	1961	RET ABN	UG-SERVICE
1368	41411641	GRET	SVC	4/2/2024	1961	RET ABN	UG-SERVICE
1369	42896545	GRET	SVC	4/5/2024	1961	RET ABN	UG-SERVICE
1370	43486866	GRET	SVC	8/26/2024	1961	RET ABN	UG-SERVICE
1371	38803009	GRET	SVC	6/12/2021	1961	RET ABN	UG-SERVICE
1372	39863174	GRET	SVC	3/9/2022	1961	RET ABN	UG-SERVICE
1373	42169433	GRET	SVC	10/2/2023	1961	RET ABN	UG-SERVICE
1374	36102271	GRET	SVC	4/23/2020	1961	RET ABN	UG-SERVICE
1375	40512943	GRET	SVC	8/17/2022	1961	RET ABN	UG-SERVICE
1376	36433443	GRET	SVC	6/12/2020	1961	RET ABN	UG-SERVICE
1377	43607619	GRET	SVC	10/8/2024	1961	RET ABN	UG-SERVICE
1378	38239128	GRET	SVC	3/15/2021	1961	RET ABN	UG-SERVICE
1379	36947759	GRET	SVC	9/15/2020	1961	RET ABN	UG-SERVICE
1380	43235511	GRET	SVC	7/2/2024	1961	RET ABN	UG-SERVICE
1381	42865263	GRET	SVC	4/11/2024	1961	RET ABN	UG-SERVICE
1382	37081391	GRET	SVC	10/15/2020	1961	RET ABN	UG-SERVICE
1383	38388082	GRET	SVC	4/20/2021	1961	RET ABN	UG-SERVICE
1384	36019872	GRET	SVC	2/14/2020	1961	RET ABN	UG-SERVICE
1385	40667985	GRET	SVC	8/30/2022	1961	RET ABN	UG-SERVICE
1386	35960591	GRET	SVC	2/3/2020	1961	RET ABN	UG-SERVICE
1387	37039874	GRET	SVC	11/6/2020	1961	RET ABN	UG-SERVICE
1388	39759217	GRET	SVC	2/8/2022	1961	RET ABN	UG-SERVICE
1389	41003931	GRET	SVC	11/28/2022	1961	RET ABN	UG-SERVICE
1390	38624151	GRET	SVC	6/15/2021	1961	RET ABN	UG-SERVICE
1391	42680515	GRET	SVC	2/12/2024	1961	RET ABN	UG-SERVICE
1392	43930848	GRET	SVC	12/10/2024	1961	RET ABN	UG-SERVICE
1393	36833518	GRET	SVC	9/2/2020	1961	RET ABN	UG-SERVICE
1394	40463854	GRET	SVC	8/25/2022	1961	RET ABN	UG-SERVICE
1395	36712387	GRET	SVC	8/12/2020	1961	RET ABN	UG-SERVICE
1396	36996912	GRET	SVC	9/28/2020	1961	RET ABN	UG-SERVICE
1397	43870606	GRET	SVC	11/23/2024	1961	RET ABN	UG-SERVICE
1398	41287274	GRET	SVC	2/24/2023	1961	RET ABN	UG-SERVICE
1399	38276274	GRET	SVC	3/25/2021	1961	RET ABN	UG-SERVICE
1400	40416539	GRET	SVC	7/14/2022	1961	RET ABN	UG-SERVICE
1401	36802711	GRET	SVC	9/21/2020	1961	RET ABN	UG-SERVICE
1402	40644179	GRET	SVC	9/14/2022	1961	RET ABN	UG-SERVICE
1403	42595957	GRET	SVC	1/25/2024	1961	RET ABN	UG-SERVICE
1404	42177090	GRET	SVC	10/2/2023	1961	RET ABN	UG-SERVICE
1405	42590284	GRET	SVC	1/29/2024	1961	RET ABN	UG-SERVICE
1406	42246019	GRET	SVC	10/19/2023	1961	RET ABN	UG-SERVICE
1407	42140976	GRET	SVC	10/5/2023	1961	RET ABN	UG-SERVICE
1408	35960288	GRET	SVC	1/28/2020	1961	RET ABN	UG-SERVICE
1409	40670805	GRET	SVC	9/15/2022	1961	RET ABN	UG-SERVICE
1410	43304929	GRET	SVC	7/15/2024	1961	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1411	42380961	GRET	SVC	12/2/2023	1961	RET ABN	UG-SERVICE
1412	38595490	GRET	SVC	6/7/2021	1961	RET ABN	UG-SERVICE
1413	39741942	GRET	SVC	1/31/2022	1961	RET ABN	UG-SERVICE
1414	40612444	GRET	SVC	10/27/2022	1961	RET ABN	UG-SERVICE
1415	36120497	GRET	SVC	11/5/2020	1961	RET ABN	UG-SERVICE
1416	41063457	GRET	SVC	12/15/2022	1961	RET ABN	UG-SERVICE
1417	41634521	GRET	SVC	5/16/2023	1961	RET ABN	UG-SERVICE
1418	43445180	GRET	SVC	8/13/2024	1961	RET ABN	UG-SERVICE
1419	37841630	GRET	SVC	11/30/2020	1961	RET ABN	UG-SERVICE
1420	40701267	GRET	SVC	9/15/2022	1961	RET ABN	UG-SERVICE
1421	42855076	GRET	SVC	3/21/2024	1961	RET ABN	UG-SERVICE
1422	36587825	GRET	SVC	7/23/2020	1961	RET ABN	UG-SERVICE
1423	41577209	GRET	SVC	5/1/2023	1961	RET ABN	UG-SERVICE
1424	38934636	GRET	SVC	8/23/2021	1961	RET ABN	UG-SERVICE
1425	38314468	GRET	SVC	4/6/2021	1961	RET ABN	UG-SERVICE
1426	40498213	GRET	SVC	7/26/2022	1961	RET ABN	UG-SERVICE
1427	43710050	GRET	SVC	10/16/2024	1961	RET ABN	UG-SERVICE
1428	36137410	GRET	SVC	4/21/2020	1961	RET ABN	UG-SERVICE
1429	43036780	GRET	SVC	5/9/2024	1961	RET ABN	UG-SERVICE
1430	42860518	GRET	SVC	3/26/2024	1961	RET ABN	UG-SERVICE
1431	39756199	GRET	SVC	2/10/2022	1961	RET ABN	UG-SERVICE
1432	42409246	GRET	SVC	11/27/2023	1961	RET ABN	UG-SERVICE
1433	43445182	GRET	SVC	8/16/2024	1961	RET ABN	UG-SERVICE
1434	40224351	GRET	SVC	5/29/2022	1961	RET ABN	UG-SERVICE
1435	42651562	GRET	SVC	2/1/2024	1961	RET ABN	UG-SERVICE
1436	42166122	GRET	SVC	9/19/2023	1961	RET ABN	UG-SERVICE
1437	38681627	GRET	SVC	6/28/2021	1961	RET ABN	UG-SERVICE
1438	41436559	GRET	SVC	3/30/2023	1961	RET ABN	UG-SERVICE
1439	36988225	GRET	SVC	9/24/2020	1961	RET ABN	UG-SERVICE
1440	38441546	GRET	SVC	1/3/2022	1961	RET ABN	UG-SERVICE
1441	42248566	GRET	SVC	10/18/2023	1961	RET ABN	UG-SERVICE
1442	40316642	GRET	SVC	6/21/2022	1962	RET ABN	UG-SERVICE
1443	43793521	GRET	SVC	11/6/2024	1962	RET ABN	UG-SERVICE
1444	38441445	GRET	SVC	1/3/2022	1962	RET ABN	UG-SERVICE
1445	42507088	GRET	SVC	1/25/2024	1962	RET ABN	UG-SERVICE
1446	38607202	GRET	SVC	6/11/2021	1962	RET ABN	UG-SERVICE
1447	42138327	GRET	SVC	9/25/2023	1962	RET ABN	UG-SERVICE
1448	40162115	GRET	SVC	5/16/2022	1962	RET ABN	UG-SERVICE
1449	36137880	GRET	SVC	4/20/2020	1962	RET ABN	UG-SERVICE
1450	41775612	GRET	SVC	6/26/2023	1962	RET ABN	UG-SERVICE
1451	40246933	GRET	SVC	6/1/2022	1962	RET ABN	UG-SERVICE
1452	37900933	GRET	SVC	12/11/2020	1962	RET ABN	UG-SERVICE
1453	40514002	GRET	SVC	8/5/2022	1962	RET ABN	UG-SERVICE
1454	36122362	GRET	SVC	10/30/2020	1962	RET ABN	UG-SERVICE
1455	42491328	GRET	SVC	12/19/2023	1962	RET ABN	UG-SERVICE
1456	36419786	GRET	SVC	6/19/2020	1962	RET ABN	UG-SERVICE
1457	38818719	GRET	SVC	7/21/2021	1962	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1458	37023787	GRET	SVC	1/6/2021	1962	RET ABN	UG-SERVICE
1459	41803574	GRET	SVC	6/30/2023	1962	RET ABN	UG-SERVICE
1460	38122575	GRET	SVC	2/20/2021	1962	RET ABN	UG-SERVICE
1461	38943041	GRET	SVC	8/17/2021	1962	RET ABN	UG-SERVICE
1462	37948944	GRET	SVC	3/31/2021	1962	RET ABN	UG-SERVICE
1463	43221438	GRET	SVC	7/3/2024	1962	RET ABN	UG-SERVICE
1464	41106287	GRET	SVC	2/1/2023	1962	RET ABN	UG-SERVICE
1465	42561425	GRET	SVC	1/11/2024	1962	RET ABN	UG-SERVICE
1466	41614906	GRET	SVC	5/10/2023	1962	RET ABN	UG-SERVICE
1467	40561481	GRET	SVC	8/18/2022	1962	RET ABN	UG-SERVICE
1468	40545926	GRET	SVC	8/10/2022	1962	RET ABN	UG-SERVICE
1469	43623488	GRET	SVC	12/4/2024	1962	RET ABN	UG-SERVICE
1470	42043602	GRET	SVC	9/6/2023	1962	RET ABN	UG-SERVICE
1471	36590133	GRET	SVC	9/30/2020	1962	RET ABN	UG-SERVICE
1472	43448067	GRET	SVC	8/15/2024	1962	RET ABN	UG-SERVICE
1473	40181796	GRET	SVC	5/16/2022	1962	RET ABN	UG-SERVICE
1474	39445868	GRET	SVC	12/6/2021	1962	RET ABN	UG-SERVICE
1475	42496456	GRET	SVC	12/21/2023	1962	RET ABN	UG-SERVICE
1476	41018463	GRET	SVC	12/7/2022	1962	RET ABN	UG-SERVICE
1477	40216739	GRET	SVC	6/27/2022	1962	RET ABN	UG-SERVICE
1478	40472860	GRET	SVC	7/26/2022	1962	RET ABN	UG-SERVICE
1479	37045167	GRET	SVC	10/7/2020	1962	RET ABN	UG-SERVICE
1480	36240446	GRET	SVC	5/1/2020	1962	RET ABN	UG-SERVICE
1481	41179267	GRET	SVC	1/18/2023	1962	RET ABN	UG-SERVICE
1482	36141882	GRET	SVC	3/16/2020	1962	RET ABN	UG-SERVICE
1483	40495499	GRET	SVC	8/14/2022	1962	RET ABN	UG-SERVICE
1484	38531968	GRET	SVC	6/25/2021	1962	RET ABN	UG-SERVICE
1485	41114164	GRET	SVC	12/30/2022	1962	RET ABN	UG-SERVICE
1486	42579932	GRET	SVC	1/18/2024	1962	RET ABN	UG-SERVICE
1487	36091006	GRET	SVC	4/30/2020	1962	RET ABN	UG-SERVICE
1488	39448053	GRET	SVC	11/22/2021	1962	RET ABN	UG-SERVICE
1489	41888789	GRET	SVC	7/19/2023	1962	RET ABN	UG-SERVICE
1490	36760768	GRET	SVC	8/12/2020	1962	RET ABN	UG-SERVICE
1491	41338340	GRET	SVC	3/20/2023	1962	RET ABN	UG-SERVICE
1492	39152932	GRET	SVC	9/20/2021	1962	RET ABN	UG-SERVICE
1493	36658261	GRET	SVC	7/20/2020	1962	RET ABN	UG-SERVICE
1494	43975758	GRET	SVC	12/30/2024	1962	RET ABN	UG-SERVICE
1495	38043536	GRET	SVC	1/21/2021	1962	RET ABN	UG-SERVICE
1496	37025413	GRET	SVC	11/13/2020	1962	RET ABN	UG-SERVICE
1497	41106293	GRET	SVC	1/4/2023	1962	RET ABN	UG-SERVICE
1498	36103124	GRET	SVC	3/9/2020	1962	RET ABN	UG-SERVICE
1499	43794870	GRET	SVC	11/12/2024	1962	RET ABN	UG-SERVICE
1500	41573261	GRET	SVC	4/26/2023	1962	RET ABN	UG-SERVICE
1501	40488535	GRET	SVC	7/27/2022	1962	RET ABN	UG-SERVICE
1502	35985632	GRET	SVC	2/3/2020	1962	RET ABN	UG-SERVICE
1503	41590197	GRET	SVC	4/19/2023	1962	RET ABN	UG-SERVICE
1504	43957617	GRET	SVC	12/18/2024	1962	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1505	44025728	GRET	SVC	12/18/2024	1962	RET ABN	UG-SERVICE
1506	43108406	GRET	SVC	5/17/2024	1962	RET ABN	UG-SERVICE
1507	42554645	GRET	SVC	1/10/2024	1962	RET ABN	UG-SERVICE
1508	36540578	GRET	SVC	5/21/2020	1962	RET ABN	UG-SERVICE
1509	36137856	GRET	SVC	4/20/2020	1962	RET ABN	UG-SERVICE
1510	36106423	GRET	SVC	10/30/2020	1962	RET ABN	UG-SERVICE
1511	37103006	GRET	SVC	10/23/2020	1962	RET ABN	UG-SERVICE
1512	38097502	GRET	SVC	9/2/2021	1962	RET ABN	UG-SERVICE
1513	36138115	GRET	SVC	4/21/2020	1962	RET ABN	UG-SERVICE
1514	40924917	GRET	SVC	12/9/2022	1962	RET ABN	UG-SERVICE
1515	38659705	GRET	SVC	6/22/2021	1962	RET ABN	UG-SERVICE
1516	40545905	GRET	SVC	8/10/2022	1962	RET ABN	UG-SERVICE
1517	43620583	GRET	SVC	9/19/2024	1962	RET ABN	UG-SERVICE
1518	42180663	GRET	SVC	9/27/2023	1962	RET ABN	UG-SERVICE
1519	36608884	GRET	SVC	7/13/2020	1962	RET ABN	UG-SERVICE
1520	39459830	GRET	SVC	11/24/2021	1962	RET ABN	UG-SERVICE
1521	37877296	GRET	SVC	12/7/2020	1962	RET ABN	UG-SERVICE
1522	43763661	GRET	SVC	11/1/2024	1962	RET ABN	UG-SERVICE
1523	42278781	GRET	SVC	11/1/2023	1962	RET ABN	UG-SERVICE
1524	36818385	GRET	SVC	11/3/2020	1962	RET ABN	UG-SERVICE
1525	38595701	GRET	SVC	6/9/2021	1962	RET ABN	UG-SERVICE
1526	41429966	GRET	SVC	9/19/2023	1962	RET ABN	UG-SERVICE
1527	41478971	GRET	SVC	4/14/2023	1962	RET ABN	UG-SERVICE
1528	38211695	GRET	SVC	3/9/2021	1962	RET ABN	UG-SERVICE
1529	40963269	GRET	SVC	12/20/2022	1962	RET ABN	UG-SERVICE
1530	38571056	GRET	SVC	6/11/2021	1962	RET ABN	UG-SERVICE
1531	38033745	GRET	SVC	1/22/2021	1962	RET ABN	UG-SERVICE
1532	43656240	GRET	SVC	10/19/2024	1962	RET ABN	UG-SERVICE
1533	41210969	GRET	SVC	12/11/2023	1962	RET ABN	UG-SERVICE
1534	41065859	GRET	SVC	12/15/2022	1962	RET ABN	UG-SERVICE
1535	42982497	GRET	SVC	4/29/2024	1962	RET ABN	UG-SERVICE
1536	40217061	GRET	SVC	5/24/2022	1962	RET ABN	UG-SERVICE
1537	39766939	GRET	SVC	2/8/2022	1962	RET ABN	UG-SERVICE
1538	38396451	GRET	SVC	4/22/2021	1962	RET ABN	UG-SERVICE
1539	37045188	GRET	SVC	10/9/2020	1962	RET ABN	UG-SERVICE
1540	41330546	GRET	SVC	3/1/2023	1962	RET ABN	UG-SERVICE
1541	38097223	GRET	SVC	9/2/2021	1962	RET ABN	UG-SERVICE
1542	36787049	GRET	SVC	8/17/2020	1962	RET ABN	UG-SERVICE
1543	41380228	GRET	SVC	3/14/2023	1962	RET ABN	UG-SERVICE
1544	38185324	GRET	SVC	3/4/2021	1962	RET ABN	UG-SERVICE
1545	43474116	GRET	SVC	8/22/2024	1962	RET ABN	UG-SERVICE
1546	36093024	GRET	SVC	4/27/2020	1962	RET ABN	UG-SERVICE
1547	39254233	GRET	SVC	10/8/2021	1962	RET ABN	UG-SERVICE
1548	41105420	GRET	SVC	1/21/2023	1962	RET ABN	UG-SERVICE
1549	36729952	GRET	SVC	8/4/2020	1962	RET ABN	UG-SERVICE
1550	38976089	GRET	SVC	8/22/2021	1962	RET ABN	UG-SERVICE
1551	37322812	GRET	SVC	11/10/2020	1962	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1552	43596820	GRET	SVC	10/1/2024	1962	RET ABN	UG-SERVICE
1553	40225209	GRET	SVC	6/21/2022	1962	RET ABN	UG-SERVICE
1554	37096383	GRET	SVC	10/20/2020	1962	RET ABN	UG-SERVICE
1555	41052707	GRET	SVC	1/12/2023	1962	RET ABN	UG-SERVICE
1556	39252661	GRET	SVC	6/12/2021	1962	RET ABN	UG-SERVICE
1557	39916059	GRET	SVC	4/25/2022	1962	RET ABN	UG-SERVICE
1558	43245088	GRET	SVC	9/11/2024	1962	RET ABN	UG-SERVICE
1559	41767405	GRET	SVC	6/20/2023	1962	RET ABN	UG-SERVICE
1560	42943003	GRET	SVC	4/16/2024	1962	RET ABN	UG-SERVICE
1561	41236473	GRET	SVC	2/7/2023	1962	RET ABN	UG-SERVICE
1562	42428939	GRET	SVC	11/30/2023	1962	RET ABN	UG-SERVICE
1563	40522780	GRET	SVC	8/5/2022	1962	RET ABN	UG-SERVICE
1564	43092112	GRET	SVC	5/23/2024	1962	RET ABN	UG-SERVICE
1565	36142485	GRET	SVC	3/18/2020	1962	RET ABN	UG-SERVICE
1566	37883992	GRET	SVC	12/9/2020	1962	RET ABN	UG-SERVICE
1567	41114177	GRET	SVC	12/30/2022	1962	RET ABN	UG-SERVICE
1568	42137793	GRET	SVC	9/25/2023	1962	RET ABN	UG-SERVICE
1569	36809613	GRET	SVC	8/23/2020	1962	RET ABN	UG-SERVICE
1570	39064575	GRET	SVC	9/2/2021	1962	RET ABN	UG-SERVICE
1571	36138116	GRET	SVC	4/20/2020	1962	RET ABN	UG-SERVICE
1572	41083868	GRET	SVC	12/20/2022	1962	RET ABN	UG-SERVICE
1573	38741233	GRET	SVC	7/12/2021	1962	RET ABN	UG-SERVICE
1574	42465584	GRET	SVC	12/13/2023	1962	RET ABN	UG-SERVICE
1575	38735429	GRET	SVC	8/24/2021	1962	RET ABN	UG-SERVICE
1576	42344688	GRET	SVC	11/7/2023	1962	RET ABN	UG-SERVICE
1577	37940639	GRET	SVC	1/5/2021	1962	RET ABN	UG-SERVICE
1578	41316690	GRET	SVC	2/27/2023	1963	RET ABN	UG-SERVICE
1579	38534366	GRET	SVC	5/24/2021	1963	RET ABN	UG-SERVICE
1580	36045936	GRET	SVC	2/21/2020	1963	RET ABN	UG-SERVICE
1581	39385318	GRET	SVC	3/28/2022	1963	RET ABN	UG-SERVICE
1582	40912633	GRET	SVC	11/8/2022	1963	RET ABN	UG-SERVICE
1583	42418419	GRET	SVC	11/27/2023	1963	RET ABN	UG-SERVICE
1584	37593076	GRET	SVC	1/21/2021	1963	RET ABN	UG-SERVICE
1585	42956869	GRET	SVC	9/19/2024	1963	RET ABN	UG-SERVICE
1586	42834156	GRET	SVC	7/23/2024	1963	RET ABN	UG-SERVICE
1587	40009604	GRET	SVC	4/19/2022	1963	RET ABN	UG-SERVICE
1588	42681364	GRET	SVC	8/1/2024	1963	RET ABN	UG-SERVICE
1589	42292950	GRET	SVC	11/1/2023	1963	RET ABN	UG-SERVICE
1590	39925585	GRET	SVC	3/9/2022	1963	RET ABN	UG-SERVICE
1591	41853019	GRET	SVC	7/12/2023	1963	RET ABN	UG-SERVICE
1592	37953467	GRET	SVC	12/22/2020	1963	RET ABN	UG-SERVICE
1593	42204578	GRET	SVC	10/9/2023	1963	RET ABN	UG-SERVICE
1594	43524154	GRET	SVC	9/12/2024	1963	RET ABN	UG-SERVICE
1595	42748898	GRET	SVC	2/22/2024	1963	RET ABN	UG-SERVICE
1596	43353625	GRET	SVC	11/4/2024	1963	RET ABN	UG-SERVICE
1597	43625813	GRET	SVC	9/30/2024	1963	RET ABN	UG-SERVICE
1598	38441295	GRET	SVC	1/3/2022	1963	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1599	43675965	GRET	SVC	10/10/2024	1963	RET ABN	UG-SERVICE
1600	42333907	GRET	SVC	11/10/2023	1963	RET ABN	UG-SERVICE
1601	41088832	GRET	SVC	1/6/2023	1963	RET ABN	UG-SERVICE
1602	42196659	GRET	SVC	10/9/2023	1963	RET ABN	UG-SERVICE
1603	43327968	GRET	SVC	7/15/2024	1963	RET ABN	UG-SERVICE
1604	36101971	GRET	SVC	4/23/2020	1963	RET ABN	UG-SERVICE
1605	41411276	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1606	36918200	GRET	SVC	8/17/2020	1963	RET ABN	UG-SERVICE
1607	38172940	GRET	SVC	2/26/2021	1963	RET ABN	UG-SERVICE
1608	42487543	GRET	SVC	11/9/2023	1963	RET ABN	UG-SERVICE
1609	38312531	GRET	SVC	10/5/2021	1963	RET ABN	UG-SERVICE
1610	40883584	GRET	SVC	11/4/2022	1963	RET ABN	UG-SERVICE
1611	40898581	GRET	SVC	11/2/2022	1963	RET ABN	UG-SERVICE
1612	42938326	GRET	SVC	4/16/2024	1963	RET ABN	UG-SERVICE
1613	41408968	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1614	41085606	GRET	SVC	12/21/2022	1963	RET ABN	UG-SERVICE
1615	41079133	GRET	SVC	12/20/2022	1963	RET ABN	UG-SERVICE
1616	40608420	GRET	SVC	8/23/2022	1963	RET ABN	UG-SERVICE
1617	41075030	GRET	SVC	12/29/2022	1963	RET ABN	UG-SERVICE
1618	40443479	GRET	SVC	7/18/2022	1963	RET ABN	UG-SERVICE
1619	40811065	GRET	SVC	10/13/2022	1963	RET ABN	UG-SERVICE
1620	41075023	GRET	SVC	12/20/2022	1963	RET ABN	UG-SERVICE
1621	38312521	GRET	SVC	10/5/2021	1963	RET ABN	UG-SERVICE
1622	40497359	GRET	SVC	7/26/2022	1963	RET ABN	UG-SERVICE
1623	41610030	GRET	SVC	5/8/2023	1963	RET ABN	UG-SERVICE
1624	41298235	GRET	SVC	2/24/2023	1963	RET ABN	UG-SERVICE
1625	41180405	GRET	SVC	1/25/2023	1963	RET ABN	UG-SERVICE
1626	42653894	GRET	SVC	1/29/2024	1963	RET ABN	UG-SERVICE
1627	38736867	GRET	SVC	7/12/2021	1963	RET ABN	UG-SERVICE
1628	38699828	GRET	SVC	6/29/2021	1963	RET ABN	UG-SERVICE
1629	41027616	GRET	SVC	12/14/2022	1963	RET ABN	UG-SERVICE
1630	39879060	GRET	SVC	3/14/2022	1963	RET ABN	UG-SERVICE
1631	43480991	GRET	SVC	11/20/2024	1963	RET ABN	UG-SERVICE
1632	36751503	GRET	SVC	8/12/2020	1963	RET ABN	UG-SERVICE
1633	36047648	GRET	SVC	2/21/2020	1963	RET ABN	UG-SERVICE
1634	40607679	GRET	SVC	8/23/2022	1963	RET ABN	UG-SERVICE
1635	41179264	GRET	SVC	1/23/2023	1963	RET ABN	UG-SERVICE
1636	40315630	GRET	SVC	6/13/2022	1963	RET ABN	UG-SERVICE
1637	36056425	GRET	SVC	2/24/2020	1963	RET ABN	UG-SERVICE
1638	37932659	GRET	SVC	12/16/2020	1963	RET ABN	UG-SERVICE
1639	43627921	GRET	SVC	9/28/2024	1963	RET ABN	UG-SERVICE
1640	36254937	GRET	SVC	3/7/2020	1963	RET ABN	UG-SERVICE
1641	32667123	GRET	SVC	11/1/2020	1963	RET ABN	UG-SERVICE
1642	35996899	GRET	SVC	2/10/2020	1963	RET ABN	UG-SERVICE
1643	37097501	GRET	SVC	12/9/2020	1963	RET ABN	UG-SERVICE
1644	38579872	GRET	SVC	9/28/2021	1963	RET ABN	UG-SERVICE
1645	43063031	GRET	SVC	5/14/2024	1963	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1646	41408006	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1647	41273853	GRET	SVC	2/15/2023	1963	RET ABN	UG-SERVICE
1648	42565052	GRET	SVC	1/10/2024	1963	RET ABN	UG-SERVICE
1649	41593695	GRET	SVC	5/31/2023	1963	RET ABN	UG-SERVICE
1650	37045853	GRET	SVC	10/9/2020	1963	RET ABN	UG-SERVICE
1651	38441299	GRET	SVC	1/3/2022	1963	RET ABN	UG-SERVICE
1652	41411430	GRET	SVC	11/2/2023	1963	RET ABN	UG-SERVICE
1653	42674645	GRET	SVC	2/6/2024	1963	RET ABN	UG-SERVICE
1654	41414945	GRET	SVC	3/21/2023	1963	RET ABN	UG-SERVICE
1655	37025410	GRET	SVC	10/16/2020	1963	RET ABN	UG-SERVICE
1656	40895494	GRET	SVC	10/28/2022	1963	RET ABN	UG-SERVICE
1657	43462069	GRET	SVC	10/7/2024	1963	RET ABN	UG-SERVICE
1658	43100268	GRET	SVC	6/3/2024	1963	RET ABN	UG-SERVICE
1659	41015447	GRET	SVC	12/16/2022	1963	RET ABN	UG-SERVICE
1660	41330542	GRET	SVC	3/3/2023	1963	RET ABN	UG-SERVICE
1661	37387646	GRET	SVC	11/9/2020	1963	RET ABN	UG-SERVICE
1662	41194798	GRET	SVC	1/23/2023	1963	RET ABN	UG-SERVICE
1663	41241964	GRET	SVC	3/1/2023	1963	RET ABN	UG-SERVICE
1664	38726593	GRET	SVC	7/12/2021	1963	RET ABN	UG-SERVICE
1665	39806444	GRET	SVC	3/1/2022	1963	RET ABN	UG-SERVICE
1666	38702005	GRET	SVC	7/14/2021	1963	RET ABN	UG-SERVICE
1667	38179599	GRET	SVC	3/3/2021	1963	RET ABN	UG-SERVICE
1668	42972889	GRET	SVC	4/22/2024	1963	RET ABN	UG-SERVICE
1669	40488325	GRET	SVC	7/27/2022	1963	RET ABN	UG-SERVICE
1670	41074876	GRET	SVC	12/22/2022	1963	RET ABN	UG-SERVICE
1671	38267218	GRET	SVC	3/22/2021	1963	RET ABN	UG-SERVICE
1672	41411224	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1673	41051914	GRET	SVC	1/12/2023	1963	RET ABN	UG-SERVICE
1674	40440351	GRET	SVC	6/30/2022	1963	RET ABN	UG-SERVICE
1675	42792743	GRET	SVC	7/2/2024	1963	RET ABN	UG-SERVICE
1676	41069356	GRET	SVC	1/5/2023	1963	RET ABN	UG-SERVICE
1677	41440482	GRET	SVC	3/27/2023	1963	RET ABN	UG-SERVICE
1678	39545562	GRET	SVC	1/10/2022	1963	RET ABN	UG-SERVICE
1679	37088508	GRET	SVC	10/20/2020	1963	RET ABN	UG-SERVICE
1680	41052710	GRET	SVC	1/12/2023	1963	RET ABN	UG-SERVICE
1681	36121609	GRET	SVC	10/30/2020	1963	RET ABN	UG-SERVICE
1682	37934041	GRET	SVC	12/21/2020	1963	RET ABN	UG-SERVICE
1683	38334678	GRET	SVC	4/7/2021	1963	RET ABN	UG-SERVICE
1684	41969557	GRET	SVC	8/1/2024	1963	RET ABN	UG-SERVICE
1685	38091187	GRET	SVC	2/19/2021	1963	RET ABN	UG-SERVICE
1686	40802173	GRET	SVC	10/12/2022	1963	RET ABN	UG-SERVICE
1687	38543965	GRET	SVC	5/25/2021	1963	RET ABN	UG-SERVICE
1688	43189731	GRET	SVC	6/19/2024	1963	RET ABN	UG-SERVICE
1689	41408065	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1690	43480990	GRET	SVC	11/20/2024	1963	RET ABN	UG-SERVICE
1691	42833355	GRET	SVC	7/22/2024	1963	RET ABN	UG-SERVICE
1692	42910311	GRET	SVC	6/21/2024	1963	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1693	42193964	GRET	SVC	10/10/2023	1963	RET ABN	UG-SERVICE
1694	36740597	GRET	SVC	8/5/2020	1963	RET ABN	UG-SERVICE
1695	41408005	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1696	38441487	GRET	SVC	1/6/2022	1963	RET ABN	UG-SERVICE
1697	42265960	GRET	SVC	10/26/2023	1963	RET ABN	UG-SERVICE
1698	41411266	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1699	41318581	GRET	SVC	3/2/2023	1963	RET ABN	UG-SERVICE
1700	39478139	GRET	SVC	12/3/2021	1963	RET ABN	UG-SERVICE
1701	36685507	GRET	SVC	7/27/2020	1963	RET ABN	UG-SERVICE
1702	38756390	GRET	SVC	10/26/2021	1963	RET ABN	UG-SERVICE
1703	36433567	GRET	SVC	6/10/2020	1963	RET ABN	UG-SERVICE
1704	42297558	GRET	SVC	11/1/2023	1963	RET ABN	UG-SERVICE
1705	41408974	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1706	41104256	GRET	SVC	1/21/2023	1963	RET ABN	UG-SERVICE
1707	40611928	GRET	SVC	8/21/2022	1963	RET ABN	UG-SERVICE
1708	40775287	GRET	SVC	9/26/2022	1963	RET ABN	UG-SERVICE
1709	41410852	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1710	38906164	GRET	SVC	9/17/2021	1963	RET ABN	UG-SERVICE
1711	36122372	GRET	SVC	10/30/2020	1963	RET ABN	UG-SERVICE
1712	38934718	GRET	SVC	8/19/2021	1963	RET ABN	UG-SERVICE
1713	39831656	GRET	SVC	8/3/2022	1963	RET ABN	UG-SERVICE
1714	38593533	GRET	SVC	6/22/2021	1963	RET ABN	UG-SERVICE
1715	43943431	GRET	SVC	12/18/2024	1963	RET ABN	UG-SERVICE
1716	40561494	GRET	SVC	8/27/2022	1963	RET ABN	UG-SERVICE
1717	42944585	GRET	SVC	4/9/2024	1963	RET ABN	UG-SERVICE
1718	37088362	GRET	SVC	10/20/2020	1963	RET ABN	UG-SERVICE
1719	37455519	GRET	SVC	11/23/2020	1963	RET ABN	UG-SERVICE
1720	36014157	GRET	SVC	2/11/2020	1963	RET ABN	UG-SERVICE
1721	42542521	GRET	SVC	4/30/2024	1963	RET ABN	UG-SERVICE
1722	41411419	GRET	SVC	11/2/2023	1963	RET ABN	UG-SERVICE
1723	36152267	GRET	SVC	3/16/2020	1963	RET ABN	UG-SERVICE
1724	43559752	GRET	SVC	10/4/2024	1963	RET ABN	UG-SERVICE
1725	42649991	GRET	SVC	2/1/2024	1963	RET ABN	UG-SERVICE
1726	37387518	GRET	SVC	11/9/2020	1963	RET ABN	UG-SERVICE
1727	41410851	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1728	41817666	GRET	SVC	6/29/2023	1963	RET ABN	UG-SERVICE
1729	41411046	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1730	41321959	GRET	SVC	3/9/2023	1963	RET ABN	UG-SERVICE
1731	39864036	GRET	SVC	3/9/2022	1963	RET ABN	UG-SERVICE
1732	41946657	GRET	SVC	8/8/2023	1963	RET ABN	UG-SERVICE
1733	41825248	GRET	SVC	7/5/2023	1963	RET ABN	UG-SERVICE
1734	36138460	GRET	SVC	3/19/2020	1963	RET ABN	UG-SERVICE
1735	43606797	GRET	SVC	11/15/2024	1963	RET ABN	UG-SERVICE
1736	38861641	GRET	SVC	8/9/2021	1963	RET ABN	UG-SERVICE
1737	40141884	GRET	SVC	5/13/2022	1963	RET ABN	UG-SERVICE
1738	37892183	GRET	SVC	12/10/2020	1963	RET ABN	UG-SERVICE
1739	38441298	GRET	SVC	1/6/2022	1963	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1740	43886024	GRET	SVC	11/25/2024	1963	RET ABN	UG-SERVICE
1741	42197020	GRET	SVC	10/9/2023	1963	RET ABN	UG-SERVICE
1742	39543012	GRET	SVC	12/16/2021	1963	RET ABN	UG-SERVICE
1743	38441289	GRET	SVC	1/6/2022	1963	RET ABN	UG-SERVICE
1744	41408064	GRET	SVC	4/2/2024	1963	RET ABN	UG-SERVICE
1745	40854508	GRET	SVC	10/22/2022	1963	RET ABN	UG-SERVICE
1746	37082696	GRET	SVC	10/15/2020	1963	RET ABN	UG-SERVICE
1747	40066513	GRET	SVC	3/31/2022	1963	RET ABN	UG-SERVICE
1748	42056715	GRET	SVC	8/30/2023	1963	RET ABN	UG-SERVICE
1749	37084631	GRET	SVC	10/15/2020	1963	RET ABN	UG-SERVICE
1750	42956323	GRET	SVC	9/19/2024	1963	RET ABN	UG-SERVICE
1751	36153320	GRET	SVC	3/19/2020	1963	RET ABN	UG-SERVICE
1752	42314563	GRET	SVC	11/7/2023	1963	RET ABN	UG-SERVICE
1753	36137314	GRET	SVC	4/20/2020	1963	RET ABN	UG-SERVICE
1754	39935401	GRET	SVC	6/20/2022	1963	RET ABN	UG-SERVICE
1755	40363435	GRET	SVC	6/28/2022	1963	RET ABN	UG-SERVICE
1756	41741522	GRET	SVC	6/13/2023	1963	RET ABN	UG-SERVICE
1757	36387252	GRET	SVC	6/1/2020	1963	RET ABN	UG-SERVICE
1758	42681362	GRET	SVC	8/1/2024	1963	RET ABN	UG-SERVICE
1759	40432964	GRET	SVC	7/14/2022	1963	RET ABN	UG-SERVICE
1760	43623796	GRET	SVC	9/27/2024	1963	RET ABN	UG-SERVICE
1761	43624005	GRET	SVC	10/1/2024	1963	RET ABN	UG-SERVICE
1762	41052706	GRET	SVC	1/12/2023	1963	RET ABN	UG-SERVICE
1763	43444205	GRET	SVC	8/15/2024	1963	RET ABN	UG-SERVICE
1764	41052709	GRET	SVC	1/12/2023	1963	RET ABN	UG-SERVICE
1765	38959418	GRET	SVC	8/17/2021	1963	RET ABN	UG-SERVICE
1766	40723258	GRET	SVC	10/19/2022	1964	RET ABN	UG-SERVICE
1767	40675411	GRET	SVC	9/15/2022	1964	RET ABN	UG-SERVICE
1768	36110467	GRET	SVC	4/20/2020	1964	RET ABN	UG-SERVICE
1769	36753394	GRET	SVC	4/7/2022	1964	RET ABN	UG-SERVICE
1770	43086207	GRET	SVC	5/17/2024	1964	RET ABN	UG-SERVICE
1771	36081780	GRET	SVC	3/4/2020	1964	RET ABN	UG-SERVICE
1772	39923819	GRET	SVC	3/24/2022	1964	RET ABN	UG-SERVICE
1773	37932977	GRET	SVC	12/17/2020	1964	RET ABN	UG-SERVICE
1774	42833352	GRET	SVC	7/23/2024	1964	RET ABN	UG-SERVICE
1775	38033818	GRET	SVC	1/22/2021	1964	RET ABN	UG-SERVICE
1776	36136180	GRET	SVC	4/23/2020	1964	RET ABN	UG-SERVICE
1777	36121614	GRET	SVC	10/12/2020	1964	RET ABN	UG-SERVICE
1778	41318155	GRET	SVC	3/3/2023	1964	RET ABN	UG-SERVICE
1779	36138305	GRET	SVC	4/20/2020	1964	RET ABN	UG-SERVICE
1780	37917270	GRET	SVC	12/15/2020	1964	RET ABN	UG-SERVICE
1781	36751246	GRET	SVC	8/19/2020	1964	RET ABN	UG-SERVICE
1782	38232314	GRET	SVC	3/16/2021	1964	RET ABN	UG-SERVICE
1783	32667129	GRET	SVC	9/30/2020	1964	RET ABN	UG-SERVICE
1784	43624720	GRET	SVC	9/27/2024	1964	RET ABN	UG-SERVICE
1785	39541262	GRET	SVC	3/9/2022	1964	RET ABN	UG-SERVICE
1786	41079886	GRET	SVC	4/5/2024	1964	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1787	39905417	GRET	SVC	1/9/2023	1964	RET ABN	UG-SERVICE
1788	36137779	GRET	SVC	4/21/2020	1964	RET ABN	UG-SERVICE
1789	41911378	GRET	SVC	7/28/2023	1964	RET ABN	UG-SERVICE
1790	39955662	GRET	SVC	5/18/2022	1964	RET ABN	UG-SERVICE
1791	38312803	GRET	SVC	4/7/2021	1964	RET ABN	UG-SERVICE
1792	39288068	GRET	SVC	10/10/2021	1964	RET ABN	UG-SERVICE
1793	39928987	GRET	SVC	3/22/2022	1964	RET ABN	UG-SERVICE
1794	38489303	GRET	SVC	4/1/2021	1964	RET ABN	UG-SERVICE
1795	42140813	GRET	SVC	9/19/2023	1964	RET ABN	UG-SERVICE
1796	36137882	GRET	SVC	4/22/2020	1964	RET ABN	UG-SERVICE
1797	40654853	GRET	SVC	9/7/2022	1964	RET ABN	UG-SERVICE
1798	39950426	GRET	SVC	3/30/2022	1964	RET ABN	UG-SERVICE
1799	41790202	GRET	SVC	6/28/2023	1964	RET ABN	UG-SERVICE
1800	39875446	GRET	SVC	3/9/2022	1964	RET ABN	UG-SERVICE
1801	42906204	GRET	SVC	4/7/2024	1964	RET ABN	UG-SERVICE
1802	39666616	GRET	SVC	11/18/2022	1964	RET ABN	UG-SERVICE
1803	40315825	GRET	SVC	6/20/2022	1964	RET ABN	UG-SERVICE
1804	41904015	GRET	SVC	7/25/2023	1964	RET ABN	UG-SERVICE
1805	38543492	GRET	SVC	10/20/2021	1964	RET ABN	UG-SERVICE
1806	39125879	GRET	SVC	9/13/2021	1964	RET ABN	UG-SERVICE
1807	39291302	GRET	SVC	10/13/2021	1964	RET ABN	UG-SERVICE
1808	41411646	GRET	SVC	4/2/2024	1964	RET ABN	UG-SERVICE
1809	39830419	GRET	SVC	8/3/2022	1964	RET ABN	UG-SERVICE
1810	41750843	GRET	SVC	6/12/2023	1964	RET ABN	UG-SERVICE
1811	41024535	GRET	SVC	4/4/2023	1964	RET ABN	UG-SERVICE
1812	42620386	GRET	SVC	1/25/2024	1964	RET ABN	UG-SERVICE
1813	39666744	GRET	SVC	11/18/2022	1964	RET ABN	UG-SERVICE
1814	43714036	GRET	SVC	11/12/2024	1964	RET ABN	UG-SERVICE
1815	40517068	GRET	SVC	8/6/2022	1964	RET ABN	UG-SERVICE
1816	36321219	GRET	SVC	7/6/2020	1964	RET ABN	UG-SERVICE
1817	40030349	GRET	SVC	4/20/2022	1964	RET ABN	UG-SERVICE
1818	41541192	GRET	SVC	5/22/2023	1964	RET ABN	UG-SERVICE
1819	39450179	GRET	SVC	11/22/2021	1964	RET ABN	UG-SERVICE
1820	38400028	GRET	SVC	4/21/2021	1964	RET ABN	UG-SERVICE
1821	39804198	GRET	SVC	2/15/2022	1964	RET ABN	UG-SERVICE
1822	38033750	GRET	SVC	1/22/2021	1964	RET ABN	UG-SERVICE
1823	36739208	GRET	SVC	8/3/2020	1964	RET ABN	UG-SERVICE
1824	41877225	GRET	SVC	7/14/2023	1964	RET ABN	UG-SERVICE
1825	42224958	GRET	SVC	7/22/2024	1964	RET ABN	UG-SERVICE
1826	39380912	GRET	SVC	11/11/2021	1964	RET ABN	UG-SERVICE
1827	43612806	GRET	SVC	11/18/2024	1964	RET ABN	UG-SERVICE
1828	38426940	GRET	SVC	3/22/2021	1964	RET ABN	UG-SERVICE
1829	35882772	GRET	SVC	1/13/2020	1964	RET ABN	UG-SERVICE
1830	39224591	GRET	SVC	9/29/2021	1964	RET ABN	UG-SERVICE
1831	36135880	GRET	SVC	4/21/2020	1964	RET ABN	UG-SERVICE
1832	36672270	GRET	SVC	9/28/2020	1964	RET ABN	UG-SERVICE
1833	40727980	GRET	SVC	9/20/2022	1964	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1834	36106819	GRET	SVC	10/12/2020	1964	RET ABN	UG-SERVICE
1835	39496778	GRET	SVC	12/1/2021	1964	RET ABN	UG-SERVICE
1836	42587967	GRET	SVC	8/1/2024	1964	RET ABN	UG-SERVICE
1837	42813703	GRET	SVC	3/8/2024	1964	RET ABN	UG-SERVICE
1838	39078774	GRET	SVC	9/14/2021	1964	RET ABN	UG-SERVICE
1839	42057080	GRET	SVC	10/30/2023	1964	RET ABN	UG-SERVICE
1840	40182832	GRET	SVC	6/7/2022	1964	RET ABN	UG-SERVICE
1841	42586642	GRET	SVC	2/8/2024	1964	RET ABN	UG-SERVICE
1842	36638130	GRET	SVC	7/20/2020	1964	RET ABN	UG-SERVICE
1843	36214903	GRET	SVC	4/28/2020	1964	RET ABN	UG-SERVICE
1844	36259645	GRET	SVC	4/22/2020	1964	RET ABN	UG-SERVICE
1845	42566813	GRET	SVC	1/16/2024	1964	RET ABN	UG-SERVICE
1846	36217513	GRET	SVC	5/4/2020	1964	RET ABN	UG-SERVICE
1847	36821064	GRET	SVC	11/12/2020	1964	RET ABN	UG-SERVICE
1848	42870885	GRET	SVC	5/20/2024	1964	RET ABN	UG-SERVICE
1849	36425578	GRET	SVC	5/14/2020	1964	RET ABN	UG-SERVICE
1850	40513282	GRET	SVC	8/2/2022	1964	RET ABN	UG-SERVICE
1851	38353013	GRET	SVC	2/14/2023	1964	RET ABN	UG-SERVICE
1852	41407665	GRET	SVC	4/2/2024	1964	RET ABN	UG-SERVICE
1853	41969660	GRET	SVC	8/1/2024	1964	RET ABN	UG-SERVICE
1854	38487654	GRET	SVC	5/18/2021	1964	RET ABN	UG-SERVICE
1855	38169140	GRET	SVC	3/9/2021	1964	RET ABN	UG-SERVICE
1856	39304392	GRET	SVC	10/20/2021	1964	RET ABN	UG-SERVICE
1857	41497750	GRET	SVC	5/3/2023	1964	RET ABN	UG-SERVICE
1858	37357286	GRET	SVC	11/10/2020	1964	RET ABN	UG-SERVICE
1859	43643658	GRET	SVC	10/7/2024	1964	RET ABN	UG-SERVICE
1860	37082530	GRET	SVC	10/15/2020	1964	RET ABN	UG-SERVICE
1861	40578228	GRET	SVC	8/26/2022	1964	RET ABN	UG-SERVICE
1862	43229385	GRET	SVC	6/28/2024	1964	RET ABN	UG-SERVICE
1863	40860481	GRET	SVC	10/28/2022	1964	RET ABN	UG-SERVICE
1864	40865919	GRET	SVC	8/22/2023	1964	RET ABN	UG-SERVICE
1865	42068574	GRET	SVC	9/6/2023	1964	RET ABN	UG-SERVICE
1866	43650235	GRET	SVC	10/4/2024	1964	RET ABN	UG-SERVICE
1867	41969652	GRET	SVC	8/1/2024	1964	RET ABN	UG-SERVICE
1868	38221350	GRET	SVC	3/3/2021	1964	RET ABN	UG-SERVICE
1869	39935384	GRET	SVC	5/14/2022	1964	RET ABN	UG-SERVICE
1870	36313897	GRET	SVC	6/8/2020	1964	RET ABN	UG-SERVICE
1871	38352839	GRET	SVC	5/5/2021	1964	RET ABN	UG-SERVICE
1872	40827499	GRET	SVC	11/2/2022	1964	RET ABN	UG-SERVICE
1873	41114168	GRET	SVC	1/12/2023	1964	RET ABN	UG-SERVICE
1874	43715920	GRET	SVC	10/24/2024	1964	RET ABN	UG-SERVICE
1875	41829854	GRET	SVC	7/13/2023	1964	RET ABN	UG-SERVICE
1876	41247067	GRET	SVC	2/8/2023	1964	RET ABN	UG-SERVICE
1877	36766246	GRET	SVC	8/11/2020	1964	RET ABN	UG-SERVICE
1878	42892210	GRET	SVC	4/30/2024	1964	RET ABN	UG-SERVICE
1879	38474292	GRET	SVC	3/30/2021	1964	RET ABN	UG-SERVICE
1880	43244751	GRET	SVC	12/17/2024	1964	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1881	43942523	GRET	SVC	12/17/2024	1964	RET ABN	UG-SERVICE
1882	41821731	GRET	SVC	7/3/2023	1964	RET ABN	UG-SERVICE
1883	42344673	GRET	SVC	11/8/2023	1964	RET ABN	UG-SERVICE
1884	41114059	GRET	SVC	1/4/2023	1964	RET ABN	UG-SERVICE
1885	38697774	GRET	SVC	7/6/2021	1964	RET ABN	UG-SERVICE
1886	40561330	GRET	SVC	8/27/2022	1964	RET ABN	UG-SERVICE
1887	42897389	GRET	SVC	9/11/2024	1964	RET ABN	UG-SERVICE
1888	37142034	GRET	SVC	10/31/2020	1964	RET ABN	UG-SERVICE
1889	41194402	GRET	SVC	1/23/2023	1964	RET ABN	UG-SERVICE
1890	42122263	GRET	SVC	9/14/2023	1964	RET ABN	UG-SERVICE
1891	40389018	GRET	SVC	7/22/2022	1964	RET ABN	UG-SERVICE
1892	40139577	GRET	SVC	5/18/2022	1964	RET ABN	UG-SERVICE
1893	39657982	GRET	SVC	2/18/2022	1964	RET ABN	UG-SERVICE
1894	41262153	GRET	SVC	3/20/2023	1964	RET ABN	UG-SERVICE
1895	40394666	GRET	SVC	7/6/2022	1964	RET ABN	UG-SERVICE
1896	37993927	GRET	SVC	1/11/2021	1964	RET ABN	UG-SERVICE
1897	38390547	GRET	SVC	4/20/2021	1964	RET ABN	UG-SERVICE
1898	43952060	GRET	SVC	12/17/2024	1964	RET ABN	UG-SERVICE
1899	36122502	GRET	SVC	10/30/2020	1964	RET ABN	UG-SERVICE
1900	42952137	GRET	SVC	4/20/2024	1964	RET ABN	UG-SERVICE
1901	39666586	GRET	SVC	1/6/2022	1964	RET ABN	UG-SERVICE
1902	41082589	GRET	SVC	12/21/2022	1964	RET ABN	UG-SERVICE
1903	43379779	GRET	SVC	8/1/2024	1964	RET ABN	UG-SERVICE
1904	41472351	GRET	SVC	5/5/2023	1964	RET ABN	UG-SERVICE
1905	38510812	GRET	SVC	5/17/2021	1964	RET ABN	UG-SERVICE
1906	41222710	GRET	SVC	5/8/2023	1964	RET ABN	UG-SERVICE
1907	40449448	GRET	SVC	7/18/2022	1964	RET ABN	UG-SERVICE
1908	40197873	GRET	SVC	6/6/2022	1964	RET ABN	UG-SERVICE
1909	38109700	GRET	SVC	2/10/2021	1964	RET ABN	UG-SERVICE
1910	36606201	GRET	SVC	7/9/2020	1964	RET ABN	UG-SERVICE
1911	40208810	GRET	SVC	5/26/2022	1964	RET ABN	UG-SERVICE
1912	41223591	GRET	SVC	2/3/2023	1964	RET ABN	UG-SERVICE
1913	38141922	GRET	SVC	2/16/2021	1964	RET ABN	UG-SERVICE
1914	41018644	GRET	SVC	12/8/2022	1964	RET ABN	UG-SERVICE
1915	41411666	GRET	SVC	4/2/2024	1964	RET ABN	UG-SERVICE
1916	38263831	GRET	SVC	3/22/2021	1964	RET ABN	UG-SERVICE
1917	37039775	GRET	SVC	10/5/2020	1964	RET ABN	UG-SERVICE
1918	41830199	GRET	SVC	8/10/2023	1964	RET ABN	UG-SERVICE
1919	41556176	GRET	SVC	4/24/2023	1964	RET ABN	UG-SERVICE
1920	40127065	GRET	SVC	5/5/2022	1964	RET ABN	UG-SERVICE
1921	36366994	GRET	SVC	5/26/2020	1964	RET ABN	UG-SERVICE
1922	36153329	GRET	SVC	3/25/2020	1964	RET ABN	UG-SERVICE
1923	36041230	GRET	SVC	2/19/2020	1964	RET ABN	UG-SERVICE
1924	41424028	GRET	SVC	10/18/2023	1964	RET ABN	UG-SERVICE
1925	36136100	GRET	SVC	4/23/2020	1964	RET ABN	UG-SERVICE
1926	42833920	GRET	SVC	7/22/2024	1964	RET ABN	UG-SERVICE
1927	37014743	GRET	SVC	10/2/2020	1964	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1928	36147555	GRET	SVC	1/6/2021	1964	RET ABN	UG-SERVICE
1929	36135912	GRET	SVC	4/23/2020	1964	RET ABN	UG-SERVICE
1930	39431224	GRET	SVC	11/15/2021	1964	RET ABN	UG-SERVICE
1931	36152340	GRET	SVC	3/19/2020	1964	RET ABN	UG-SERVICE
1932	36881990	GRET	SVC	8/30/2020	1964	RET ABN	UG-SERVICE
1933	36906875	GRET	SVC	9/9/2020	1964	RET ABN	UG-SERVICE
1934	36118901	GRET	SVC	10/12/2020	1964	RET ABN	UG-SERVICE
1935	41802972	GRET	SVC	6/26/2023	1964	RET ABN	UG-SERVICE
1936	36122581	GRET	SVC	10/30/2020	1964	RET ABN	UG-SERVICE
1937	39081585	GRET	SVC	9/8/2021	1964	RET ABN	UG-SERVICE
1938	37122072	GRET	SVC	10/30/2020	1964	RET ABN	UG-SERVICE
1939	38234185	GRET	SVC	8/24/2021	1964	RET ABN	UG-SERVICE
1940	36107011	GRET	SVC	4/27/2020	1964	RET ABN	UG-SERVICE
1941	38569061	GRET	SVC	6/9/2021	1964	RET ABN	UG-SERVICE
1942	36777009	GRET	SVC	8/13/2020	1964	RET ABN	UG-SERVICE
1943	35863545	GRET	SVC	1/23/2020	1964	RET ABN	UG-SERVICE
1944	36102844	GRET	SVC	4/21/2020	1964	RET ABN	UG-SERVICE
1945	40498177	GRET	SVC	9/16/2022	1964	RET ABN	UG-SERVICE
1946	43901494	GRET	SVC	11/19/2024	1965	RET ABN	UG-SERVICE
1947	42427178	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
1948	39211546	GRET	SVC	9/28/2021	1965	RET ABN	UG-SERVICE
1949	36102274	GRET	SVC	4/23/2020	1965	RET ABN	UG-SERVICE
1950	39666604	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
1951	36732666	GRET	SVC	7/30/2020	1965	RET ABN	UG-SERVICE
1952	42224937	GRET	SVC	10/16/2023	1965	RET ABN	UG-SERVICE
1953	42455479	GRET	SVC	12/12/2023	1965	RET ABN	UG-SERVICE
1954	36867895	GRET	SVC	10/11/2020	1965	RET ABN	UG-SERVICE
1955	39721546	GRET	SVC	1/24/2022	1965	RET ABN	UG-SERVICE
1956	38239042	GRET	SVC	3/15/2021	1965	RET ABN	UG-SERVICE
1957	36122366	GRET	SVC	10/30/2020	1965	RET ABN	UG-SERVICE
1958	38057493	GRET	SVC	1/26/2021	1965	RET ABN	UG-SERVICE
1959	38051591	GRET	SVC	1/25/2021	1965	RET ABN	UG-SERVICE
1960	36136110	GRET	SVC	4/21/2020	1965	RET ABN	UG-SERVICE
1961	41106895	GRET	SVC	1/4/2023	1965	RET ABN	UG-SERVICE
1962	41321357	GRET	SVC	3/16/2023	1965	RET ABN	UG-SERVICE
1963	42427221	GRET	SVC	11/20/2023	1965	RET ABN	UG-SERVICE
1964	36103000	GRET	SVC	4/22/2020	1965	RET ABN	UG-SERVICE
1965	37643324	GRET	SVC	11/17/2020	1965	RET ABN	UG-SERVICE
1966	42899874	GRET	SVC	4/9/2024	1965	RET ABN	UG-SERVICE
1967	41140336	GRET	SVC	1/6/2023	1965	RET ABN	UG-SERVICE
1968	42427222	GRET	SVC	11/20/2023	1965	RET ABN	UG-SERVICE
1969	43124066	GRET	SVC	6/3/2024	1965	RET ABN	UG-SERVICE
1970	39858317	GRET	SVC	3/9/2022	1965	RET ABN	UG-SERVICE
1971	42177398	GRET	SVC	10/3/2023	1965	RET ABN	UG-SERVICE
1972	39666609	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
1973	43650230	GRET	SVC	10/10/2024	1965	RET ABN	UG-SERVICE
1974	41083726	GRET	SVC	12/21/2022	1965	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
1975	36108165	GRET	SVC	4/24/2020	1965	RET ABN	UG-SERVICE
1976	38512595	GRET	SVC	5/20/2021	1965	RET ABN	UG-SERVICE
1977	38110997	GRET	SVC	2/11/2021	1965	RET ABN	UG-SERVICE
1978	42196724	GRET	SVC	10/9/2023	1965	RET ABN	UG-SERVICE
1979	33904524	GRET	SVC	7/22/2020	1965	RET ABN	UG-SERVICE
1980	39423499	GRET	SVC	6/27/2022	1965	RET ABN	UG-SERVICE
1981	41398909	GRET	SVC	3/14/2023	1965	RET ABN	UG-SERVICE
1982	36085786	GRET	SVC	2/27/2020	1965	RET ABN	UG-SERVICE
1983	40558512	GRET	SVC	8/20/2022	1965	RET ABN	UG-SERVICE
1984	41277890	GRET	SVC	3/1/2023	1965	RET ABN	UG-SERVICE
1985	41450121	GRET	SVC	3/30/2023	1965	RET ABN	UG-SERVICE
1986	38184601	GRET	SVC	3/12/2021	1965	RET ABN	UG-SERVICE
1987	39791342	GRET	SVC	11/5/2021	1965	RET ABN	UG-SERVICE
1988	42958049	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
1989	38536854	GRET	SVC	6/30/2021	1965	RET ABN	UG-SERVICE
1990	36118404	GRET	SVC	3/11/2020	1965	RET ABN	UG-SERVICE
1991	38658886	GRET	SVC	6/24/2021	1965	RET ABN	UG-SERVICE
1992	40416700	GRET	SVC	12/12/2022	1965	RET ABN	UG-SERVICE
1993	38664243	GRET	SVC	7/7/2021	1965	RET ABN	UG-SERVICE
1994	32784854	GRET	SVC	3/17/2020	1965	RET ABN	UG-SERVICE
1995	39931524	GRET	SVC	4/28/2022	1965	RET ABN	UG-SERVICE
1996	42165247	GRET	SVC	10/10/2023	1965	RET ABN	UG-SERVICE
1997	39337452	GRET	SVC	10/28/2021	1965	RET ABN	UG-SERVICE
1998	41411663	GRET	SVC	4/2/2024	1965	RET ABN	UG-SERVICE
1999	38912991	GRET	SVC	8/11/2021	1965	RET ABN	UG-SERVICE
2000	41423576	GRET	SVC	10/18/2023	1965	RET ABN	UG-SERVICE
2001	39935323	GRET	SVC	5/2/2022	1965	RET ABN	UG-SERVICE
2002	42509259	GRET	SVC	7/31/2024	1965	RET ABN	UG-SERVICE
2003	42293731	GRET	SVC	10/31/2023	1965	RET ABN	UG-SERVICE
2004	36961508	GRET	SVC	9/21/2020	1965	RET ABN	UG-SERVICE
2005	38792416	GRET	SVC	7/20/2021	1965	RET ABN	UG-SERVICE
2006	37529540	GRET	SVC	11/16/2020	1965	RET ABN	UG-SERVICE
2007	43881681	GRET	SVC	11/13/2024	1965	RET ABN	UG-SERVICE
2008	42509256	GRET	SVC	7/18/2024	1965	RET ABN	UG-SERVICE
2009	43881682	GRET	SVC	12/6/2024	1965	RET ABN	UG-SERVICE
2010	40191227	GRET	SVC	5/24/2022	1965	RET ABN	UG-SERVICE
2011	42427119	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2012	43245027	GRET	SVC	9/11/2024	1965	RET ABN	UG-SERVICE
2013	39464875	GRET	SVC	12/12/2021	1965	RET ABN	UG-SERVICE
2014	39484726	GRET	SVC	10/22/2021	1965	RET ABN	UG-SERVICE
2015	36040145	GRET	SVC	2/4/2020	1965	RET ABN	UG-SERVICE
2016	43365686	GRET	SVC	12/3/2024	1965	RET ABN	UG-SERVICE
2017	35859366	GRET	SVC	1/3/2020	1965	RET ABN	UG-SERVICE
2018	43957197	GRET	SVC	12/10/2024	1965	RET ABN	UG-SERVICE
2019	43245010	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2020	37103158	GRET	SVC	10/22/2020	1965	RET ABN	UG-SERVICE
2021	42182890	GRET	SVC	10/3/2023	1965	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2022	42958176	GRET	SVC	4/22/2024	1965	RET ABN	UG-SERVICE
2023	38169073	GRET	SVC	2/25/2021	1965	RET ABN	UG-SERVICE
2024	41423889	GRET	SVC	10/18/2023	1965	RET ABN	UG-SERVICE
2025	38571832	GRET	SVC	6/3/2021	1965	RET ABN	UG-SERVICE
2026	36138311	GRET	SVC	4/20/2020	1965	RET ABN	UG-SERVICE
2027	36108169	GRET	SVC	4/24/2020	1965	RET ABN	UG-SERVICE
2028	39331838	GRET	SVC	10/28/2021	1965	RET ABN	UG-SERVICE
2029	42144500	GRET	SVC	9/26/2023	1965	RET ABN	UG-SERVICE
2030	41330853	GRET	SVC	3/9/2023	1965	RET ABN	UG-SERVICE
2031	39666603	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2032	39581411	GRET	SVC	12/20/2021	1965	RET ABN	UG-SERVICE
2033	43081838	GRET	SVC	5/22/2024	1965	RET ABN	UG-SERVICE
2034	39935336	GRET	SVC	6/21/2022	1965	RET ABN	UG-SERVICE
2035	42957330	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2036	42957223	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2037	39341152	GRET	SVC	10/26/2021	1965	RET ABN	UG-SERVICE
2038	39666608	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2039	39725976	GRET	SVC	1/26/2022	1965	RET ABN	UG-SERVICE
2040	39739149	GRET	SVC	1/31/2022	1965	RET ABN	UG-SERVICE
2041	36885289	GRET	SVC	10/14/2020	1965	RET ABN	UG-SERVICE
2042	40370330	GRET	SVC	7/6/2022	1965	RET ABN	UG-SERVICE
2043	38040097	GRET	SVC	1/28/2021	1965	RET ABN	UG-SERVICE
2044	41237590	GRET	SVC	2/6/2023	1965	RET ABN	UG-SERVICE
2045	36102857	GRET	SVC	4/22/2020	1965	RET ABN	UG-SERVICE
2046	43183971	GRET	SVC	6/18/2024	1965	RET ABN	UG-SERVICE
2047	43646438	GRET	SVC	9/25/2024	1965	RET ABN	UG-SERVICE
2048	43623541	GRET	SVC	12/16/2024	1965	RET ABN	UG-SERVICE
2049	38014261	GRET	SVC	1/11/2021	1965	RET ABN	UG-SERVICE
2050	38311563	GRET	SVC	4/5/2021	1965	RET ABN	UG-SERVICE
2051	42487348	GRET	SVC	7/18/2024	1965	RET ABN	UG-SERVICE
2052	39519787	GRET	SVC	12/12/2021	1965	RET ABN	UG-SERVICE
2053	42008727	GRET	SVC	8/14/2023	1965	RET ABN	UG-SERVICE
2054	42207966	GRET	SVC	7/18/2024	1965	RET ABN	UG-SERVICE
2055	41807608	GRET	SVC	6/27/2023	1965	RET ABN	UG-SERVICE
2056	40313094	GRET	SVC	6/16/2022	1965	RET ABN	UG-SERVICE
2057	36636735	GRET	SVC	7/16/2020	1965	RET ABN	UG-SERVICE
2058	43245061	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2059	36839167	GRET	SVC	9/1/2020	1965	RET ABN	UG-SERVICE
2060	36108161	GRET	SVC	4/24/2020	1965	RET ABN	UG-SERVICE
2061	39666605	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2062	40726492	GRET	SVC	9/23/2022	1965	RET ABN	UG-SERVICE
2063	36136185	GRET	SVC	4/28/2020	1965	RET ABN	UG-SERVICE
2064	42957943	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2065	39423535	GRET	SVC	6/27/2022	1965	RET ABN	UG-SERVICE
2066	43423330	GRET	SVC	9/11/2024	1965	RET ABN	UG-SERVICE
2067	42812485	GRET	SVC	3/12/2024	1965	RET ABN	UG-SERVICE
2068	36122121	GRET	SVC	10/14/2020	1965	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2069	39730825	GRET	SVC	4/29/2021	1965	RET ABN	UG-SERVICE
2070	38712739	GRET	SVC	7/2/2021	1965	RET ABN	UG-SERVICE
2071	41274141	GRET	SVC	2/15/2023	1965	RET ABN	UG-SERVICE
2072	41427598	GRET	SVC	4/14/2023	1965	RET ABN	UG-SERVICE
2073	36743332	GRET	SVC	8/21/2020	1965	RET ABN	UG-SERVICE
2074	42202951	GRET	SVC	10/9/2023	1965	RET ABN	UG-SERVICE
2075	36829577	GRET	SVC	8/26/2020	1965	RET ABN	UG-SERVICE
2076	42409061	GRET	SVC	11/22/2023	1965	RET ABN	UG-SERVICE
2077	39666601	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2078	42473588	GRET	SVC	12/12/2023	1965	RET ABN	UG-SERVICE
2079	41211356	GRET	SVC	12/11/2023	1965	RET ABN	UG-SERVICE
2080	39423741	GRET	SVC	6/27/2022	1965	RET ABN	UG-SERVICE
2081	41989714	GRET	SVC	8/18/2023	1965	RET ABN	UG-SERVICE
2082	37900138	GRET	SVC	12/11/2020	1965	RET ABN	UG-SERVICE
2083	42363567	GRET	SVC	11/28/2023	1965	RET ABN	UG-SERVICE
2084	41472419	GRET	SVC	10/6/2023	1965	RET ABN	UG-SERVICE
2085	36878133	GRET	SVC	9/1/2020	1965	RET ABN	UG-SERVICE
2086	39928912	GRET	SVC	4/12/2022	1965	RET ABN	UG-SERVICE
2087	42522466	GRET	SVC	12/28/2023	1965	RET ABN	UG-SERVICE
2088	39952104	GRET	SVC	5/13/2022	1965	RET ABN	UG-SERVICE
2089	36228453	GRET	SVC	4/22/2020	1965	RET ABN	UG-SERVICE
2090	36795121	GRET	SVC	8/18/2020	1965	RET ABN	UG-SERVICE
2091	36670564	GRET	SVC	7/22/2020	1965	RET ABN	UG-SERVICE
2092	40359182	GRET	SVC	6/30/2022	1965	RET ABN	UG-SERVICE
2093	43365684	GRET	SVC	11/20/2024	1965	RET ABN	UG-SERVICE
2094	38577087	GRET	SVC	6/7/2021	1965	RET ABN	UG-SERVICE
2095	42029486	GRET	SVC	8/24/2023	1965	RET ABN	UG-SERVICE
2096	39666671	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2097	43245060	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2098	36260068	GRET	SVC	3/19/2020	1965	RET ABN	UG-SERVICE
2099	41411649	GRET	SVC	4/2/2024	1965	RET ABN	UG-SERVICE
2100	42427176	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2101	36177520	GRET	SVC	2/14/2020	1965	RET ABN	UG-SERVICE
2102	39666606	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2103	40420598	GRET	SVC	7/22/2022	1965	RET ABN	UG-SERVICE
2104	39725934	GRET	SVC	1/26/2022	1965	RET ABN	UG-SERVICE
2105	36473508	GRET	SVC	6/22/2020	1965	RET ABN	UG-SERVICE
2106	38740519	GRET	SVC	7/12/2021	1965	RET ABN	UG-SERVICE
2107	39666494	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2108	39220431	GRET	SVC	9/29/2021	1965	RET ABN	UG-SERVICE
2109	41534819	GRET	SVC	4/18/2023	1965	RET ABN	UG-SERVICE
2110	43881519	GRET	SVC	11/13/2024	1965	RET ABN	UG-SERVICE
2111	39858318	GRET	SVC	3/9/2022	1965	RET ABN	UG-SERVICE
2112	43766464	GRET	SVC	10/29/2024	1965	RET ABN	UG-SERVICE
2113	40103536	GRET	SVC	4/27/2022	1965	RET ABN	UG-SERVICE
2114	41088830	GRET	SVC	1/31/2023	1965	RET ABN	UG-SERVICE
2115	39666493	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2116	36137647	GRET	SVC	4/20/2020	1965	RET ABN	UG-SERVICE
2117	41693775	GRET	SVC	6/1/2023	1965	RET ABN	UG-SERVICE
2118	43423334	GRET	SVC	9/11/2024	1965	RET ABN	UG-SERVICE
2119	39536549	GRET	SVC	12/13/2021	1965	RET ABN	UG-SERVICE
2120	39395625	GRET	SVC	11/7/2021	1965	RET ABN	UG-SERVICE
2121	41505539	GRET	SVC	4/12/2023	1965	RET ABN	UG-SERVICE
2122	39656535	GRET	SVC	3/1/2022	1965	RET ABN	UG-SERVICE
2123	37707219	GRET	SVC	12/8/2020	1965	RET ABN	UG-SERVICE
2124	41423577	GRET	SVC	10/18/2023	1965	RET ABN	UG-SERVICE
2125	41830302	GRET	SVC	8/11/2023	1965	RET ABN	UG-SERVICE
2126	42363564	GRET	SVC	11/28/2023	1965	RET ABN	UG-SERVICE
2127	42427223	GRET	SVC	11/20/2023	1965	RET ABN	UG-SERVICE
2128	36122373	GRET	SVC	10/14/2020	1965	RET ABN	UG-SERVICE
2129	37045733	GRET	SVC	10/14/2020	1965	RET ABN	UG-SERVICE
2130	39666498	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2131	42957392	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2132	39661046	GRET	SVC	1/28/2022	1965	RET ABN	UG-SERVICE
2133	42337726	GRET	SVC	1/26/2024	1965	RET ABN	UG-SERVICE
2134	42833356	GRET	SVC	7/22/2024	1965	RET ABN	UG-SERVICE
2135	39935372	GRET	SVC	5/14/2022	1965	RET ABN	UG-SERVICE
2136	39725933	GRET	SVC	1/26/2022	1965	RET ABN	UG-SERVICE
2137	40979415	GRET	SVC	11/28/2022	1965	RET ABN	UG-SERVICE
2138	39225182	GRET	SVC	10/8/2021	1965	RET ABN	UG-SERVICE
2139	41742291	GRET	SVC	7/25/2023	1965	RET ABN	UG-SERVICE
2140	38496924	GRET	SVC	4/2/2021	1965	RET ABN	UG-SERVICE
2141	42958101	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2142	38617543	GRET	SVC	6/13/2021	1965	RET ABN	UG-SERVICE
2143	37706318	GRET	SVC	11/20/2020	1965	RET ABN	UG-SERVICE
2144	43646437	GRET	SVC	10/2/2024	1965	RET ABN	UG-SERVICE
2145	42363560	GRET	SVC	11/28/2023	1965	RET ABN	UG-SERVICE
2146	42957329	GRET	SVC	9/19/2024	1965	RET ABN	UG-SERVICE
2147	36260066	GRET	SVC	3/19/2020	1965	RET ABN	UG-SERVICE
2148	39654865	GRET	SVC	6/28/2022	1965	RET ABN	UG-SERVICE
2149	42270107	GRET	SVC	11/2/2023	1965	RET ABN	UG-SERVICE
2150	37978600	GRET	SVC	1/6/2021	1965	RET ABN	UG-SERVICE
2151	37983192	GRET	SVC	1/6/2021	1965	RET ABN	UG-SERVICE
2152	40266802	GRET	SVC	6/8/2022	1965	RET ABN	UG-SERVICE
2153	39725954	GRET	SVC	1/26/2022	1965	RET ABN	UG-SERVICE
2154	39666661	GRET	SVC	11/18/2022	1965	RET ABN	UG-SERVICE
2155	40283204	GRET	SVC	6/7/2022	1965	RET ABN	UG-SERVICE
2156	36080248	GRET	SVC	3/3/2020	1965	RET ABN	UG-SERVICE
2157	38638023	GRET	SVC	6/16/2021	1965	RET ABN	UG-SERVICE
2158	41052708	GRET	SVC	1/12/2023	1965	RET ABN	UG-SERVICE
2159	42848846	GRET	SVC	3/19/2024	1965	RET ABN	UG-SERVICE
2160	36152601	GRET	SVC	3/10/2020	1965	RET ABN	UG-SERVICE
2161	36241878	GRET	SVC	6/2/2020	1965	RET ABN	UG-SERVICE
2162	41655789	GRET	SVC	5/22/2023	1966	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2163	36838877	GRET	SVC	9/1/2020	1966	RET ABN	UG-SERVICE
2164	42376902	GRET	SVC	11/22/2023	1966	RET ABN	UG-SERVICE
2165	40978938	GRET	SVC	12/2/2022	1966	RET ABN	UG-SERVICE
2166	38918860	GRET	SVC	8/17/2021	1966	RET ABN	UG-SERVICE
2167	41204072	GRET	SVC	1/24/2023	1966	RET ABN	UG-SERVICE
2168	41224415	GRET	SVC	2/3/2023	1966	RET REM	UG-SERVICE
2169	41442094	GRET	SVC	3/28/2024	1966	RET ABN	UG-SERVICE
2170	42870398	GRET	SVC	6/5/2024	1966	RET ABN	UG-SERVICE
2171	40527282	GRET	SVC	8/8/2022	1966	RET ABN	UG-SERVICE
2172	36330662	GRET	SVC	5/21/2020	1966	RET ABN	UG-SERVICE
2173	40654496	GRET	SVC	9/6/2022	1966	RET ABN	UG-SERVICE
2174	41273674	GRET	SVC	3/13/2023	1966	RET ABN	UG-SERVICE
2175	36485524	GRET	SVC	6/23/2020	1966	RET ABN	UG-SERVICE
2176	43330049	GRET	SVC	7/18/2024	1966	RET ABN	UG-SERVICE
2177	36120845	GRET	SVC	10/12/2020	1966	RET ABN	UG-SERVICE
2178	43423331	GRET	SVC	10/1/2024	1966	RET ABN	UG-SERVICE
2179	37052009	GRET	SVC	10/12/2020	1966	RET ABN	UG-SERVICE
2180	42273032	GRET	SVC	11/3/2023	1966	RET ABN	UG-SERVICE
2181	40230897	GRET	SVC	5/31/2022	1966	RET ABN	UG-SERVICE
2182	38909909	GRET	SVC	8/7/2021	1966	RET ABN	UG-SERVICE
2183	40448088	GRET	SVC	7/12/2022	1966	RET ABN	UG-SERVICE
2184	38193068	GRET	SVC	6/11/2021	1966	RET ABN	UG-SERVICE
2185	41111500	GRET	SVC	1/4/2023	1966	RET ABN	UG-SERVICE
2186	42388694	GRET	SVC	12/6/2023	1966	RET ABN	UG-SERVICE
2187	41407590	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2188	37866261	GRET	SVC	11/21/2020	1966	RET ABN	UG-SERVICE
2189	43245037	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2190	38992456	GRET	SVC	8/31/2021	1966	RET ABN	UG-SERVICE
2191	41052711	GRET	SVC	1/12/2023	1966	RET ABN	UG-SERVICE
2192	36951629	GRET	SVC	9/24/2020	1966	RET ABN	UG-SERVICE
2193	40128247	GRET	SVC	7/6/2022	1966	RET ABN	UG-SERVICE
2194	42910237	GRET	SVC	4/9/2024	1966	RET ABN	UG-SERVICE
2195	41830303	GRET	SVC	8/11/2023	1966	RET ABN	UG-SERVICE
2196	36157802	GRET	SVC	3/24/2020	1966	RET ABN	UG-SERVICE
2197	42282770	GRET	SVC	10/24/2023	1966	RET ABN	UG-SERVICE
2198	39725755	GRET	SVC	1/26/2022	1966	RET ABN	UG-SERVICE
2199	39116215	GRET	SVC	9/13/2021	1966	RET ABN	UG-SERVICE
2200	38391849	GRET	SVC	4/23/2021	1966	RET ABN	UG-SERVICE
2201	37638488	GRET	SVC	11/17/2020	1966	RET ABN	UG-SERVICE
2202	42580401	GRET	SVC	1/22/2024	1966	RET ABN	UG-SERVICE
2203	36711652	GRET	SVC	8/5/2020	1966	RET ABN	UG-SERVICE
2204	36058177	GRET	SVC	2/24/2020	1966	RET ABN	UG-SERVICE
2205	43903742	GRET	SVC	11/20/2024	1966	RET ABN	UG-SERVICE
2206	36136182	GRET	SVC	4/22/2020	1966	RET ABN	UG-SERVICE
2207	42353554	GRET	SVC	11/14/2023	1966	RET ABN	UG-SERVICE
2208	40426965	GRET	SVC	7/22/2022	1966	RET ABN	UG-SERVICE
2209	43252353	GRET	SVC	6/27/2024	1966	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2210	41273672	GRET	SVC	2/15/2023	1966	RET ABN	UG-SERVICE
2211	43446242	GRET	SVC	8/15/2024	1966	RET ABN	UG-SERVICE
2212	42320774	GRET	SVC	11/6/2023	1966	RET ABN	UG-SERVICE
2213	38356365	GRET	SVC	4/23/2021	1966	RET ABN	UG-SERVICE
2214	41407589	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2215	42276565	GRET	SVC	10/30/2023	1966	RET ABN	UG-SERVICE
2216	39423750	GRET	SVC	6/27/2022	1966	RET ABN	UG-SERVICE
2217	43523502	GRET	SVC	9/11/2024	1966	RET ABN	UG-SERVICE
2218	36107792	GRET	SVC	4/24/2020	1966	RET ABN	UG-SERVICE
2219	41388767	GRET	SVC	3/16/2023	1966	RET ABN	UG-SERVICE
2220	43257608	GRET	SVC	7/2/2024	1966	RET ABN	UG-SERVICE
2221	36915301	GRET	SVC	9/10/2020	1966	RET ABN	UG-SERVICE
2222	36247036	GRET	SVC	4/3/2020	1966	RET ABN	UG-SERVICE
2223	38401486	GRET	SVC	8/31/2021	1966	RET ABN	UG-SERVICE
2224	43245032	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2225	41407584	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2226	39935350	GRET	SVC	5/14/2022	1966	RET ABN	UG-SERVICE
2227	39831381	GRET	SVC	8/3/2022	1966	RET ABN	UG-SERVICE
2228	40991241	GRET	SVC	12/3/2022	1966	RET ABN	UG-SERVICE
2229	41349222	GRET	SVC	4/17/2023	1966	RET ABN	UG-SERVICE
2230	40979006	GRET	SVC	12/2/2022	1966	RET ABN	UG-SERVICE
2231	42956945	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2232	36145871	GRET	SVC	3/17/2020	1966	RET ABN	UG-SERVICE
2233	39513499	GRET	SVC	12/6/2021	1966	RET ABN	UG-SERVICE
2234	40498178	GRET	SVC	8/17/2022	1966	RET ABN	UG-SERVICE
2235	36122126	GRET	SVC	10/30/2020	1966	RET ABN	UG-SERVICE
2236	36136193	GRET	SVC	4/20/2020	1966	RET ABN	UG-SERVICE
2237	39153977	GRET	SVC	8/2/2021	1966	RET ABN	UG-SERVICE
2238	36109957	GRET	SVC	4/22/2020	1966	RET ABN	UG-SERVICE
2239	43522786	GRET	SVC	9/3/2024	1966	RET ABN	UG-SERVICE
2240	36183828	GRET	SVC	3/30/2020	1966	RET ABN	UG-SERVICE
2241	43256912	GRET	SVC	7/17/2024	1966	RET ABN	UG-SERVICE
2242	36751428	GRET	SVC	10/5/2020	1966	RET ABN	UG-SERVICE
2243	41062433	GRET	SVC	12/14/2022	1966	RET ABN	UG-SERVICE
2244	38912078	GRET	SVC	11/4/2021	1966	RET ABN	UG-SERVICE
2245	43245040	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2246	38741028	GRET	SVC	7/28/2021	1966	RET ABN	UG-SERVICE
2247	39353378	GRET	SVC	11/1/2021	1966	RET ABN	UG-SERVICE
2248	43481242	GRET	SVC	10/25/2024	1966	RET ABN	UG-SERVICE
2249	38378981	GRET	SVC	6/28/2021	1966	RET ABN	UG-SERVICE
2250	36107163	GRET	SVC	4/23/2020	1966	RET ABN	UG-SERVICE
2251	41407545	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2252	38305182	GRET	SVC	4/5/2021	1966	RET ABN	UG-SERVICE
2253	36122125	GRET	SVC	10/30/2020	1966	RET ABN	UG-SERVICE
2254	39319507	GRET	SVC	10/20/2021	1966	RET ABN	UG-SERVICE
2255	40332412	GRET	SVC	6/28/2022	1966	RET ABN	UG-SERVICE
2256	40284142	GRET	SVC	6/13/2022	1966	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2257	40500613	GRET	SVC	8/20/2022	1966	RET ABN	UG-SERVICE
2258	41408288	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2259	41407875	GRET	SVC	4/6/2023	1966	RET ABN	UG-SERVICE
2260	37047386	GRET	SVC	4/15/2021	1966	RET ABN	UG-SERVICE
2261	38564394	GRET	SVC	6/21/2021	1966	RET ABN	UG-SERVICE
2262	42898274	GRET	SVC	4/8/2024	1966	RET ABN	UG-SERVICE
2263	36177521	GRET	SVC	2/14/2020	1966	RET ABN	UG-SERVICE
2264	38416170	GRET	SVC	4/27/2021	1966	RET ABN	UG-SERVICE
2265	43171328	GRET	SVC	6/11/2024	1966	RET ABN	UG-SERVICE
2266	39875729	GRET	SVC	5/18/2022	1966	RET ABN	UG-SERVICE
2267	43245044	GRET	SVC	9/11/2024	1966	RET ABN	UG-SERVICE
2268	43245049	GRET	SVC	9/11/2024	1966	RET ABN	UG-SERVICE
2269	40654907	GRET	SVC	9/4/2022	1966	RET ABN	UG-SERVICE
2270	43529749	GRET	SVC	10/21/2024	1966	RET ABN	UG-SERVICE
2271	36797243	GRET	SVC	8/17/2020	1966	RET ABN	UG-SERVICE
2272	40717084	GRET	SVC	9/20/2022	1966	RET ABN	UG-SERVICE
2273	43245048	GRET	SVC	9/11/2024	1966	RET ABN	UG-SERVICE
2274	41179359	GRET	SVC	1/20/2023	1966	RET ABN	UG-SERVICE
2275	36406483	GRET	SVC	6/22/2020	1966	RET ABN	UG-SERVICE
2276	43005042	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2277	43474345	GRET	SVC	8/22/2024	1966	RET ABN	UG-SERVICE
2278	41283639	GRET	SVC	2/21/2023	1966	RET ABN	UG-SERVICE
2279	36107796	GRET	SVC	4/24/2020	1966	RET ABN	UG-SERVICE
2280	42549484	GRET	SVC	1/4/2024	1966	RET ABN	UG-SERVICE
2281	41407592	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2282	42046170	GRET	SVC	8/28/2023	1966	RET ABN	UG-SERVICE
2283	39231670	GRET	SVC	9/30/2021	1966	RET ABN	UG-SERVICE
2284	38407207	GRET	SVC	3/19/2021	1966	RET ABN	UG-SERVICE
2285	40798417	GRET	SVC	10/10/2022	1966	RET ABN	UG-SERVICE
2286	36107783	GRET	SVC	4/24/2020	1966	RET ABN	UG-SERVICE
2287	39324017	GRET	SVC	10/19/2021	1966	RET ABN	UG-SERVICE
2288	41472721	GRET	SVC	7/12/2023	1966	RET ABN	UG-SERVICE
2289	40691456	GRET	SVC	9/14/2022	1966	RET ABN	UG-SERVICE
2290	43318163	GRET	SVC	8/5/2024	1966	RET ABN	UG-SERVICE
2291	39831374	GRET	SVC	8/3/2022	1966	RET ABN	UG-SERVICE
2292	40798329	GRET	SVC	10/10/2022	1966	RET ABN	UG-SERVICE
2293	43229977	GRET	SVC	6/25/2024	1966	RET ABN	UG-SERVICE
2294	39192329	GRET	SVC	9/30/2021	1966	RET ABN	UG-SERVICE
2295	41697290	GRET	SVC	4/21/2023	1966	RET ABN	UG-SERVICE
2296	39423859	GRET	SVC	6/27/2022	1966	RET ABN	UG-SERVICE
2297	41124022	GRET	SVC	1/4/2023	1966	RET ABN	UG-SERVICE
2298	42957221	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2299	38844638	GRET	SVC	7/27/2021	1966	RET ABN	UG-SERVICE
2300	38470298	GRET	SVC	3/29/2021	1966	RET ABN	UG-SERVICE
2301	36107790	GRET	SVC	4/24/2020	1966	RET ABN	UG-SERVICE
2302	43423332	GRET	SVC	10/1/2024	1966	RET ABN	UG-SERVICE
2303	39614518	GRET	SVC	12/29/2021	1966	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2304	42885139	GRET	SVC	4/5/2024	1966	RET ABN	UG-SERVICE
2305	38390575	GRET	SVC	4/20/2021	1966	RET ABN	UG-SERVICE
2306	38443004	GRET	SVC	5/4/2021	1966	RET ABN	UG-SERVICE
2307	40806281	GRET	SVC	10/13/2022	1966	RET ABN	UG-SERVICE
2308	36107788	GRET	SVC	4/24/2020	1966	RET ABN	UG-SERVICE
2309	41407548	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2310	40493050	GRET	SVC	7/26/2022	1966	RET ABN	UG-SERVICE
2311	37110282	GRET	SVC	10/21/2020	1966	RET ABN	UG-SERVICE
2312	42678874	GRET	SVC	2/6/2024	1966	RET ABN	UG-SERVICE
2313	36287104	GRET	SVC	5/5/2020	1966	RET ABN	UG-SERVICE
2314	43330681	GRET	SVC	8/13/2024	1966	RET ABN	UG-SERVICE
2315	38936703	GRET	SVC	8/4/2021	1966	RET ABN	UG-SERVICE
2316	43060420	GRET	SVC	6/4/2024	1966	RET ABN	UG-SERVICE
2317	36201750	GRET	SVC	4/20/2020	1966	RET ABN	UG-SERVICE
2318	36599915	GRET	SVC	7/2/2020	1966	RET ABN	UG-SERVICE
2319	38492277	GRET	SVC	5/13/2021	1966	RET ABN	UG-SERVICE
2320	36980369	GRET	SVC	9/23/2020	1966	RET ABN	UG-SERVICE
2321	40484247	GRET	SVC	7/26/2022	1966	RET ABN	UG-SERVICE
2322	36695968	GRET	SVC	9/17/2020	1966	RET ABN	UG-SERVICE
2323	36109251	GRET	SVC	3/10/2020	1966	RET ABN	UG-SERVICE
2324	43245033	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2325	36109949	GRET	SVC	4/22/2020	1966	RET ABN	UG-SERVICE
2326	38474293	GRET	SVC	3/30/2021	1966	RET ABN	UG-SERVICE
2327	43408117	GRET	SVC	8/13/2024	1966	RET ABN	UG-SERVICE
2328	35874783	GRET	SVC	1/8/2020	1966	RET ABN	UG-SERVICE
2329	38309004	GRET	SVC	4/5/2021	1966	RET ABN	UG-SERVICE
2330	42225324	GRET	SVC	6/14/2024	1966	RET ABN	UG-SERVICE
2331	41441932	GRET	SVC	9/12/2023	1966	RET ABN	UG-SERVICE
2332	42165916	GRET	SVC	9/19/2023	1966	RET ABN	UG-SERVICE
2333	40396182	GRET	SVC	7/7/2022	1966	RET ABN	UG-SERVICE
2334	43719270	GRET	SVC	10/21/2024	1966	RET ABN	UG-SERVICE
2335	41934591	GRET	SVC	7/31/2023	1966	RET ABN	UG-SERVICE
2336	41001867	GRET	SVC	11/28/2022	1966	RET ABN	UG-SERVICE
2337	41035829	GRET	SVC	12/8/2022	1966	RET ABN	UG-SERVICE
2338	39819175	GRET	SVC	3/3/2022	1966	RET ABN	UG-SERVICE
2339	41035826	GRET	SVC	12/8/2022	1966	RET ABN	UG-SERVICE
2340	43529750	GRET	SVC	10/21/2024	1966	RET ABN	UG-SERVICE
2341	42957222	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2342	42154361	GRET	SVC	9/21/2023	1966	RET ABN	UG-SERVICE
2343	43366073	GRET	SVC	12/19/2024	1966	RET ABN	UG-SERVICE
2344	39868516	GRET	SVC	3/9/2022	1966	RET ABN	UG-SERVICE
2345	38067134	GRET	SVC	1/27/2021	1966	RET ABN	UG-SERVICE
2346	42943660	GRET	SVC	7/17/2024	1966	RET ABN	UG-SERVICE
2347	32785206	GRET	SVC	3/5/2020	1966	RET ABN	UG-SERVICE
2348	36881998	GRET	SVC	9/2/2020	1966	RET ABN	UG-SERVICE
2349	43401010	GRET	SVC	8/12/2024	1966	RET ABN	UG-SERVICE
2350	37958746	GRET	SVC	12/29/2020	1966	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2351	42327270	GRET	SVC	11/6/2023	1966	RET ABN	UG-SERVICE
2352	42517348	GRET	SVC	12/28/2023	1966	RET ABN	UG-SERVICE
2353	36137641	GRET	SVC	4/20/2020	1966	RET ABN	UG-SERVICE
2354	41051918	GRET	SVC	1/12/2023	1966	RET ABN	UG-SERVICE
2355	42844721	GRET	SVC	3/6/2024	1966	RET ABN	UG-SERVICE
2356	39831379	GRET	SVC	8/3/2022	1966	RET ABN	UG-SERVICE
2357	36734672	GRET	SVC	8/3/2020	1966	RET ABN	UG-SERVICE
2358	36137138	GRET	SVC	4/21/2020	1966	RET ABN	UG-SERVICE
2359	41411141	GRET	SVC	4/2/2024	1966	RET ABN	UG-SERVICE
2360	38470224	GRET	SVC	5/11/2021	1966	RET ABN	UG-SERVICE
2361	41020776	GRET	SVC	12/14/2022	1966	RET ABN	UG-SERVICE
2362	41213128	GRET	SVC	1/30/2023	1966	RET ABN	UG-SERVICE
2363	42956943	GRET	SVC	9/19/2024	1966	RET ABN	UG-SERVICE
2364	40187487	GRET	SVC	5/18/2022	1966	RET ABN	UG-SERVICE
2365	36349695	GRET	SVC	5/20/2020	1966	RET ABN	UG-SERVICE
2366	37927124	GRET	SVC	12/15/2020	1966	RET ABN	UG-SERVICE
2367	41913456	GRET	SVC	7/26/2023	1966	RET ABN	UG-SERVICE
2368	43869730	GRET	SVC	11/26/2024	1966	RET ABN	UG-SERVICE
2369	40050122	GRET	SVC	4/26/2022	1966	RET ABN	UG-SERVICE
2370	36596780	GRET	SVC	7/9/2020	1966	RET ABN	UG-SERVICE
2371	40976897	GRET	SVC	11/23/2022	1966	RET ABN	UG-SERVICE
2372	39168281	GRET	SVC	9/22/2021	1966	RET ABN	UG-SERVICE
2373	39814288	GRET	SVC	2/21/2022	1966	RET ABN	UG-SERVICE
2374	41564104	GRET	SVC	4/24/2023	1966	RET ABN	UG-SERVICE
2375	38379345	GRET	SVC	6/26/2021	1966	RET ABN	UG-SERVICE
2376	36150722	GRET	SVC	3/23/2020	1967	RET ABN	UG-SERVICE
2377	42605867	GRET	SVC	1/18/2024	1967	RET ABN	UG-SERVICE
2378	41411749	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2379	41898045	GRET	SVC	9/15/2023	1967	RET ABN	UG-SERVICE
2380	38088945	GRET	SVC	2/3/2021	1967	RET ABN	UG-SERVICE
2381	43593171	GRET	SVC	9/23/2024	1967	RET ABN	UG-SERVICE
2382	39126411	GRET	SVC	9/13/2021	1967	RET ABN	UG-SERVICE
2383	38713600	GRET	SVC	7/15/2021	1967	RET ABN	UG-SERVICE
2384	36107419	GRET	SVC	3/9/2020	1967	RET ABN	UG-SERVICE
2385	38804672	GRET	SVC	8/2/2021	1967	RET ABN	UG-SERVICE
2386	38441366	GRET	SVC	1/6/2022	1967	RET ABN	UG-SERVICE
2387	41402745	GRET	SVC	11/2/2023	1967	RET ABN	UG-SERVICE
2388	43010129	GRET	SVC	5/9/2024	1967	RET ABN	UG-SERVICE
2389	36880787	GRET	SVC	9/3/2020	1967	RET ABN	UG-SERVICE
2390	40662648	GRET	SVC	9/16/2022	1967	RET ABN	UG-SERVICE
2391	39665818	GRET	SVC	8/3/2022	1967	RET ABN	UG-SERVICE
2392	41572254	GRET	SVC	5/1/2023	1967	RET ABN	UG-SERVICE
2393	41679178	GRET	SVC	6/18/2023	1967	RET ABN	UG-SERVICE
2394	42385646	GRET	SVC	11/18/2023	1967	RET ABN	UG-SERVICE
2395	40469555	GRET	SVC	7/26/2022	1967	RET ABN	UG-SERVICE
2396	36078166	GRET	SVC	3/2/2020	1967	RET ABN	UG-SERVICE
2397	41324411	GRET	SVC	3/1/2023	1967	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2398	40691857	GRET	SVC	9/16/2022	1967	RET ABN	UG-SERVICE
2399	36122365	GRET	SVC	11/5/2020	1967	RET ABN	UG-SERVICE
2400	41407817	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2401	38206545	GRET	SVC	3/19/2021	1967	RET ABN	UG-SERVICE
2402	41144028	GRET	SVC	1/11/2023	1967	RET ABN	UG-SERVICE
2403	39998576	GRET	SVC	4/12/2022	1967	RET ABN	UG-SERVICE
2404	43318491	GRET	SVC	8/9/2024	1967	RET ABN	UG-SERVICE
2405	40496050	GRET	SVC	7/23/2022	1967	RET ABN	UG-SERVICE
2406	41297878	GRET	SVC	2/21/2023	1967	RET ABN	UG-SERVICE
2407	41307330	GRET	SVC	3/29/2023	1967	RET ABN	UG-SERVICE
2408	40973101	GRET	SVC	12/12/2022	1967	RET ABN	UG-SERVICE
2409	39665098	GRET	SVC	1/5/2022	1967	RET ABN	UG-SERVICE
2410	36672714	GRET	SVC	7/18/2020	1967	RET ABN	UG-SERVICE
2411	38541493	GRET	SVC	6/5/2021	1967	RET ABN	UG-SERVICE
2412	40471339	GRET	SVC	7/23/2022	1967	RET ABN	UG-SERVICE
2413	39971688	GRET	SVC	4/7/2022	1967	RET ABN	UG-SERVICE
2414	39971299	GRET	SVC	4/18/2022	1967	RET ABN	UG-SERVICE
2415	41534176	GRET	SVC	4/27/2023	1967	RET ABN	UG-SERVICE
2416	39914955	GRET	SVC	3/31/2022	1967	RET ABN	UG-SERVICE
2417	42161243	GRET	SVC	10/2/2023	1967	RET ABN	UG-SERVICE
2418	39520336	GRET	SVC	12/10/2021	1967	RET ABN	UG-SERVICE
2419	39576513	GRET	SVC	12/27/2021	1967	RET ABN	UG-SERVICE
2420	38910763	GRET	SVC	8/16/2021	1967	RET ABN	UG-SERVICE
2421	36422233	GRET	SVC	6/26/2020	1967	RET ABN	UG-SERVICE
2422	43084020	GRET	SVC	7/30/2024	1967	RET ABN	UG-SERVICE
2423	37525669	GRET	SVC	11/9/2020	1967	RET ABN	UG-SERVICE
2424	42750555	GRET	SVC	2/20/2024	1967	RET ABN	UG-SERVICE
2425	40091166	GRET	SVC	5/2/2022	1967	RET ABN	UG-SERVICE
2426	41323426	GRET	SVC	2/28/2023	1967	RET ABN	UG-SERVICE
2427	42925448	GRET	SVC	4/16/2024	1967	RET ABN	UG-SERVICE
2428	41052705	GRET	SVC	1/12/2023	1967	RET ABN	UG-SERVICE
2429	43869026	GRET	SVC	11/25/2024	1967	RET ABN	UG-SERVICE
2430	36345887	GRET	SVC	5/13/2020	1967	RET ABN	UG-SERVICE
2431	38896259	GRET	SVC	8/16/2021	1967	RET ABN	UG-SERVICE
2432	41143510	GRET	SVC	7/31/2023	1967	RET ABN	UG-SERVICE
2433	42023624	GRET	SVC	8/22/2023	1967	RET ABN	UG-SERVICE
2434	43134071	GRET	SVC	6/8/2024	1967	RET ABN	UG-SERVICE
2435	40685461	GRET	SVC	9/24/2022	1967	RET ABN	UG-SERVICE
2436	43596416	GRET	SVC	9/18/2024	1967	RET ABN	UG-SERVICE
2437	41719026	GRET	SVC	6/6/2023	1967	RET ABN	UG-SERVICE
2438	41194829	GRET	SVC	1/22/2023	1967	RET ABN	UG-SERVICE
2439	43919197	GRET	SVC	12/23/2024	1967	RET ABN	UG-SERVICE
2440	40425791	GRET	SVC	7/11/2022	1967	RET ABN	UG-SERVICE
2441	42205157	GRET	SVC	10/13/2023	1967	RET ABN	UG-SERVICE
2442	36715856	GRET	SVC	9/30/2020	1967	RET ABN	UG-SERVICE
2443	41407487	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2444	38265300	GRET	SVC	3/24/2021	1967	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2445	43476336	GRET	SVC	8/15/2024	1967	RET ABN	UG-SERVICE
2446	43892478	GRET	SVC	12/6/2024	1967	RET ABN	UG-SERVICE
2447	41318153	GRET	SVC	3/2/2023	1967	RET ABN	UG-SERVICE
2448	41052704	GRET	SVC	1/12/2023	1967	RET ABN	UG-SERVICE
2449	39437495	GRET	SVC	11/19/2021	1967	RET ABN	UG-SERVICE
2450	37415212	GRET	SVC	11/11/2020	1967	RET ABN	UG-SERVICE
2451	36142352	GRET	SVC	3/17/2020	1967	RET ABN	UG-SERVICE
2452	38012930	GRET	SVC	1/13/2021	1967	RET ABN	UG-SERVICE
2453	43343955	GRET	SVC	7/30/2024	1967	RET ABN	UG-SERVICE
2454	41194824	GRET	SVC	1/21/2023	1967	RET ABN	UG-SERVICE
2455	40962280	GRET	SVC	11/21/2022	1967	RET ABN	UG-SERVICE
2456	39331817	GRET	SVC	10/23/2021	1967	RET ABN	UG-SERVICE
2457	41728314	GRET	SVC	6/12/2023	1967	RET ABN	UG-SERVICE
2458	38479658	GRET	SVC	5/12/2021	1967	RET ABN	UG-SERVICE
2459	41101695	GRET	SVC	12/29/2022	1967	RET ABN	UG-SERVICE
2460	43477194	GRET	SVC	8/20/2024	1967	RET ABN	UG-SERVICE
2461	39935367	GRET	SVC	6/27/2022	1967	RET ABN	UG-SERVICE
2462	39503379	GRET	SVC	12/14/2021	1967	RET ABN	UG-SERVICE
2463	42336409	GRET	SVC	7/18/2024	1967	RET ABN	UG-SERVICE
2464	40636489	GRET	SVC	8/29/2022	1967	RET ABN	UG-SERVICE
2465	39621712	GRET	SVC	1/3/2022	1967	RET ABN	UG-SERVICE
2466	38217713	GRET	SVC	3/11/2021	1967	RET ABN	UG-SERVICE
2467	42953077	GRET	SVC	4/18/2024	1967	RET ABN	UG-SERVICE
2468	36102276	GRET	SVC	4/23/2020	1967	RET ABN	UG-SERVICE
2469	43063958	GRET	SVC	5/13/2024	1967	RET ABN	UG-SERVICE
2470	38955711	GRET	SVC	8/24/2021	1967	RET ABN	UG-SERVICE
2471	40522528	GRET	SVC	8/4/2022	1967	RET ABN	UG-SERVICE
2472	36240479	GRET	SVC	6/1/2020	1967	RET ABN	UG-SERVICE
2473	36095277	GRET	SVC	3/6/2020	1967	RET ABN	UG-SERVICE
2474	37896726	GRET	SVC	12/9/2020	1967	RET ABN	UG-SERVICE
2475	37867316	GRET	SVC	12/3/2020	1967	RET ABN	UG-SERVICE
2476	37673730	GRET	SVC	12/2/2020	1967	RET ABN	UG-SERVICE
2477	43289879	GRET	SVC	7/12/2024	1967	RET ABN	UG-SERVICE
2478	39831011	GRET	SVC	7/27/2020	1967	RET ABN	UG-SERVICE
2479	43236421	GRET	SVC	6/28/2024	1967	RET ABN	UG-SERVICE
2480	40771417	GRET	SVC	10/4/2022	1967	RET ABN	UG-SERVICE
2481	36153162	GRET	SVC	8/17/2020	1967	RET ABN	UG-SERVICE
2482	41409258	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2483	43795188	GRET	SVC	11/8/2024	1967	RET ABN	UG-SERVICE
2484	40478176	GRET	SVC	7/27/2022	1967	RET ABN	UG-SERVICE
2485	38571058	GRET	SVC	6/11/2021	1967	RET ABN	UG-SERVICE
2486	37035951	GRET	SVC	10/8/2020	1967	RET ABN	UG-SERVICE
2487	40237837	GRET	SVC	6/1/2022	1967	RET ABN	UG-SERVICE
2488	40729723	GRET	SVC	9/27/2022	1967	RET ABN	UG-SERVICE
2489	42487579	GRET	SVC	7/18/2024	1967	RET ABN	UG-SERVICE
2490	42534645	GRET	SVC	1/8/2024	1967	RET ABN	UG-SERVICE
2491	43746369	GRET	SVC	10/28/2024	1967	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2492	42097609	GRET	SVC	11/27/2023	1967	RET ABN	UG-SERVICE
2493	36927420	GRET	SVC	9/16/2020	1967	RET ABN	UG-SERVICE
2494	42145313	GRET	SVC	9/8/2023	1967	RET ABN	UG-SERVICE
2495	40976611	GRET	SVC	11/23/2022	1967	RET ABN	UG-SERVICE
2496	42995767	GRET	SVC	4/29/2024	1967	RET ABN	UG-SERVICE
2497	39388230	GRET	SVC	11/4/2021	1967	RET ABN	UG-SERVICE
2498	39371727	GRET	SVC	11/2/2021	1967	RET ABN	UG-SERVICE
2499	38150614	GRET	SVC	2/22/2021	1967	RET ABN	UG-SERVICE
2500	41577519	GRET	SVC	5/3/2023	1967	RET ABN	UG-SERVICE
2501	41035391	GRET	SVC	12/15/2022	1967	RET ABN	UG-SERVICE
2502	41408969	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2503	43177756	GRET	SVC	6/13/2024	1967	RET ABN	UG-SERVICE
2504	41057844	GRET	SVC	12/14/2022	1967	RET ABN	UG-SERVICE
2505	41411190	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2506	37043301	GRET	SVC	11/18/2020	1967	RET ABN	UG-SERVICE
2507	36407170	GRET	SVC	6/15/2020	1967	RET ABN	UG-SERVICE
2508	43346007	GRET	SVC	12/11/2024	1967	RET ABN	UG-SERVICE
2509	38516612	GRET	SVC	5/18/2021	1967	RET ABN	UG-SERVICE
2510	41143575	GRET	SVC	4/26/2023	1967	RET ABN	UG-SERVICE
2511	42813116	GRET	SVC	3/11/2024	1967	RET ABN	UG-SERVICE
2512	36779223	GRET	SVC	9/8/2020	1967	RET ABN	UG-SERVICE
2513	35445166	GRET	SVC	3/11/2020	1967	RET ABN	UG-SERVICE
2514	41407486	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2515	39498221	GRET	SVC	12/10/2021	1967	RET ABN	UG-SERVICE
2516	41404770	GRET	SVC	3/29/2023	1967	RET ABN	UG-SERVICE
2517	41410858	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2518	43610002	GRET	SVC	10/16/2024	1967	RET ABN	UG-SERVICE
2519	41321851	GRET	SVC	3/9/2023	1967	RET ABN	UG-SERVICE
2520	43341407	GRET	SVC	7/22/2024	1967	RET ABN	UG-SERVICE
2521	36265740	GRET	SVC	4/22/2020	1967	RET ABN	UG-SERVICE
2522	38844123	GRET	SVC	7/30/2021	1967	RET ABN	UG-SERVICE
2523	40447716	GRET	SVC	7/20/2022	1967	RET ABN	UG-SERVICE
2524	39424071	GRET	SVC	6/27/2022	1967	RET ABN	UG-SERVICE
2525	41424037	GRET	SVC	10/18/2023	1967	RET ABN	UG-SERVICE
2526	37146547	GRET	SVC	12/7/2020	1967	RET ABN	UG-SERVICE
2527	43403341	GRET	SVC	8/12/2024	1967	RET ABN	UG-SERVICE
2528	43116813	GRET	SVC	6/13/2024	1967	RET ABN	UG-SERVICE
2529	36146773	GRET	SVC	3/14/2020	1967	RET ABN	UG-SERVICE
2530	37415099	GRET	SVC	11/11/2020	1967	RET ABN	UG-SERVICE
2531	39666485	GRET	SVC	11/18/2022	1967	RET ABN	UG-SERVICE
2532	43854347	GRET	SVC	11/22/2024	1967	RET ABN	UG-SERVICE
2533	39666047	GRET	SVC	8/3/2022	1967	RET ABN	UG-SERVICE
2534	35928748	GRET	SVC	1/21/2020	1967	RET ABN	UG-SERVICE
2535	41411425	GRET	SVC	11/2/2023	1967	RET ABN	UG-SERVICE
2536	38076254	GRET	SVC	2/16/2021	1967	RET ABN	UG-SERVICE
2537	36203943	GRET	SVC	4/22/2020	1967	RET ABN	UG-SERVICE
2538	43416966	GRET	SVC	8/14/2024	1967	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2539	38749018	GRET	SVC	7/15/2021	1967	RET ABN	UG-SERVICE
2540	43281813	GRET	SVC	7/15/2024	1967	RET ABN	UG-SERVICE
2541	42247685	GRET	SVC	9/7/2023	1967	RET ABN	UG-SERVICE
2542	41185862	GRET	SVC	1/20/2023	1967	RET ABN	UG-SERVICE
2543	38486936	GRET	SVC	5/13/2021	1967	RET ABN	UG-SERVICE
2544	36931800	GRET	SVC	9/15/2020	1967	RET ABN	UG-SERVICE
2545	36153979	GRET	SVC	7/20/2020	1967	RET ABN	UG-SERVICE
2546	41409111	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2547	41327517	GRET	SVC	2/15/2023	1967	RET ABN	UG-SERVICE
2548	41503656	GRET	SVC	4/17/2023	1967	RET ABN	UG-SERVICE
2549	38382521	GRET	SVC	4/22/2021	1967	RET ABN	UG-SERVICE
2550	42894876	GRET	SVC	11/19/2024	1967	RET ABN	UG-SERVICE
2551	41143711	GRET	SVC	7/31/2023	1967	RET ABN	UG-SERVICE
2552	36137855	GRET	SVC	4/20/2020	1967	RET ABN	UG-SERVICE
2553	38660377	GRET	SVC	6/24/2021	1967	RET ABN	UG-SERVICE
2554	36214579	GRET	SVC	4/30/2020	1967	RET ABN	UG-SERVICE
2555	41330184	GRET	SVC	3/1/2023	1967	RET ABN	UG-SERVICE
2556	43642438	GRET	SVC	10/4/2024	1967	RET ABN	UG-SERVICE
2557	40537458	GRET	SVC	8/10/2022	1967	RET ABN	UG-SERVICE
2558	38242131	GRET	SVC	3/16/2021	1967	RET ABN	UG-SERVICE
2559	42895601	GRET	SVC	4/8/2024	1967	RET ABN	UG-SERVICE
2560	43365791	GRET	SVC	11/7/2024	1967	RET ABN	UG-SERVICE
2561	36106407	GRET	SVC	4/23/2020	1967	RET ABN	UG-SERVICE
2562	36278024	GRET	SVC	6/11/2020	1967	RET ABN	UG-SERVICE
2563	41903924	GRET	SVC	11/3/2023	1967	RET ABN	UG-SERVICE
2564	36750482	GRET	SVC	9/14/2020	1967	RET ABN	UG-SERVICE
2565	39831378	GRET	SVC	8/3/2022	1967	RET ABN	UG-SERVICE
2566	39609974	GRET	SVC	4/28/2021	1967	RET ABN	UG-SERVICE
2567	36022114	GRET	SVC	2/18/2020	1967	RET ABN	UG-SERVICE
2568	36342128	GRET	SVC	12/23/2020	1967	RET ABN	UG-SERVICE
2569	36269698	GRET	SVC	4/27/2020	1967	RET ABN	UG-SERVICE
2570	36304097	GRET	SVC	4/23/2020	1967	RET ABN	UG-SERVICE
2571	42124244	GRET	SVC	9/19/2023	1967	RET ABN	UG-SERVICE
2572	43757513	GRET	SVC	10/28/2024	1967	RET ABN	UG-SERVICE
2573	40231470	GRET	SVC	5/31/2022	1967	RET ABN	UG-SERVICE
2574	40524324	GRET	SVC	8/3/2022	1967	RET ABN	UG-SERVICE
2575	36817871	GRET	SVC	9/2/2020	1967	RET ABN	UG-SERVICE
2576	39370519	GRET	SVC	11/1/2021	1967	RET ABN	UG-SERVICE
2577	37030982	GRET	SVC	10/9/2020	1967	RET ABN	UG-SERVICE
2578	41675753	GRET	SVC	5/31/2023	1967	RET ABN	UG-SERVICE
2579	41594980	GRET	SVC	5/2/2023	1967	RET ABN	UG-SERVICE
2580	38052185	GRET	SVC	1/27/2021	1967	RET ABN	UG-SERVICE
2581	43628685	GRET	SVC	9/30/2024	1967	RET ABN	UG-SERVICE
2582	43112167	GRET	SVC	5/29/2024	1967	RET ABN	UG-SERVICE
2583	42405621	GRET	SVC	11/22/2023	1967	RET ABN	UG-SERVICE
2584	40536285	GRET	SVC	8/18/2022	1967	RET ABN	UG-SERVICE
2585	41052712	GRET	SVC	1/12/2023	1967	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2586	36138366	GRET	SVC	4/23/2020	1967	RET ABN	UG-SERVICE
2587	36091940	GRET	SVC	10/30/2020	1967	RET ABN	UG-SERVICE
2588	41411775	GRET	SVC	4/2/2024	1967	RET ABN	UG-SERVICE
2589	41083734	GRET	SVC	12/22/2022	1967	RET ABN	UG-SERVICE
2590	41306994	GRET	SVC	2/20/2023	1967	RET ABN	UG-SERVICE
2591	41084268	GRET	SVC	1/11/2023	1967	RET ABN	UG-SERVICE
2592	42216807	GRET	SVC	12/6/2023	1968	RET ABN	UG-SERVICE
2593	40858841	GRET	SVC	10/27/2022	1968	RET ABN	UG-SERVICE
2594	40985081	GRET	SVC	11/14/2022	1968	RET ABN	UG-SERVICE
2595	39831465	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2596	42036340	GRET	SVC	9/11/2023	1968	RET ABN	UG-SERVICE
2597	39554488	GRET	SVC	12/23/2021	1968	RET ABN	UG-SERVICE
2598	36121681	GRET	SVC	10/12/2020	1968	RET ABN	UG-SERVICE
2599	43669442	GRET	SVC	10/9/2024	1968	RET ABN	UG-SERVICE
2600	38165515	GRET	SVC	2/23/2021	1968	RET ABN	UG-SERVICE
2601	42542323	GRET	SVC	1/25/2024	1968	RET ABN	UG-SERVICE
2602	41920619	GRET	SVC	7/31/2023	1968	RET ABN	UG-SERVICE
2603	40395535	GRET	SVC	7/6/2022	1968	RET ABN	UG-SERVICE
2604	40301513	GRET	SVC	6/16/2022	1968	RET ABN	UG-SERVICE
2605	36951735	GRET	SVC	9/17/2020	1968	RET ABN	UG-SERVICE
2606	40203722	GRET	SVC	5/23/2022	1968	RET ABN	UG-SERVICE
2607	42216801	GRET	SVC	12/5/2023	1968	RET ABN	UG-SERVICE
2608	43632098	GRET	SVC	10/4/2024	1968	RET ABN	UG-SERVICE
2609	42425465	GRET	SVC	11/30/2023	1968	RET ABN	UG-SERVICE
2610	36120954	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2611	40748840	GRET	SVC	9/14/2022	1968	RET ABN	UG-SERVICE
2612	43364874	GRET	SVC	12/2/2024	1968	RET ABN	UG-SERVICE
2613	40237978	GRET	SVC	6/2/2022	1968	RET ABN	UG-SERVICE
2614	43365795	GRET	SVC	10/30/2024	1968	RET ABN	UG-SERVICE
2615	38373630	GRET	SVC	4/14/2021	1968	RET ABN	UG-SERVICE
2616	42520394	GRET	SVC	1/25/2024	1968	RET ABN	UG-SERVICE
2617	38589148	GRET	SVC	10/5/2021	1968	RET ABN	UG-SERVICE
2618	43610586	GRET	SVC	11/21/2024	1968	RET ABN	UG-SERVICE
2619	33866282	GRET	SVC	10/16/2021	1968	RET ABN	UG-SERVICE
2620	36611386	GRET	SVC	7/16/2020	1968	RET ABN	UG-SERVICE
2621	36122580	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2622	41697783	GRET	SVC	6/2/2023	1968	RET ABN	UG-SERVICE
2623	42841037	GRET	SVC	3/19/2024	1968	RET ABN	UG-SERVICE
2624	39935477	GRET	SVC	6/24/2022	1968	RET ABN	UG-SERVICE
2625	39995703	GRET	SVC	4/14/2022	1968	RET ABN	UG-SERVICE
2626	36048860	GRET	SVC	2/26/2020	1968	RET ABN	UG-SERVICE
2627	43481195	GRET	SVC	10/23/2024	1968	RET ABN	UG-SERVICE
2628	37149310	GRET	SVC	10/31/2020	1968	RET ABN	UG-SERVICE
2629	41429991	GRET	SVC	9/12/2023	1968	RET ABN	UG-SERVICE
2630	39554486	GRET	SVC	12/23/2021	1968	RET ABN	UG-SERVICE
2631	39665944	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2632	39367962	GRET	SVC	11/4/2021	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2633	38658043	GRET	SVC	7/8/2021	1968	RET ABN	UG-SERVICE
2634	38594108	GRET	SVC	9/9/2021	1968	RET ABN	UG-SERVICE
2635	39374095	GRET	SVC	11/2/2021	1968	RET ABN	UG-SERVICE
2636	43610588	GRET	SVC	12/11/2024	1968	RET ABN	UG-SERVICE
2637	40669808	GRET	SVC	10/4/2022	1968	RET ABN	UG-SERVICE
2638	36613098	GRET	SVC	7/11/2020	1968	RET ABN	UG-SERVICE
2639	42450330	GRET	SVC	12/2/2023	1968	RET ABN	UG-SERVICE
2640	41318143	GRET	SVC	3/2/2023	1968	RET ABN	UG-SERVICE
2641	42427950	GRET	SVC	11/30/2023	1968	RET ABN	UG-SERVICE
2642	36107003	GRET	SVC	4/24/2020	1968	RET ABN	UG-SERVICE
2643	38608782	GRET	SVC	12/23/2021	1968	RET ABN	UG-SERVICE
2644	39423116	GRET	SVC	6/27/2022	1968	RET ABN	UG-SERVICE
2645	42564472	GRET	SVC	1/10/2024	1968	RET ABN	UG-SERVICE
2646	36396246	GRET	SVC	6/2/2020	1968	RET ABN	UG-SERVICE
2647	36613097	GRET	SVC	7/11/2020	1968	RET ABN	UG-SERVICE
2648	42622530	GRET	SVC	2/12/2024	1968	RET ABN	UG-SERVICE
2649	41088836	GRET	SVC	1/13/2023	1968	RET ABN	UG-SERVICE
2650	36345899	GRET	SVC	5/20/2020	1968	RET ABN	UG-SERVICE
2651	42774105	GRET	SVC	2/26/2024	1968	RET ABN	UG-SERVICE
2652	38588933	GRET	SVC	9/29/2021	1968	RET ABN	UG-SERVICE
2653	41074934	GRET	SVC	12/19/2022	1968	RET ABN	UG-SERVICE
2654	35924711	GRET	SVC	1/16/2020	1968	RET ABN	UG-SERVICE
2655	36062451	GRET	SVC	2/26/2020	1968	RET ABN	UG-SERVICE
2656	37975722	GRET	SVC	1/4/2021	1968	RET ABN	UG-SERVICE
2657	39499905	GRET	SVC	12/2/2021	1968	RET ABN	UG-SERVICE
2658	42833341	GRET	SVC	7/22/2024	1968	RET ABN	UG-SERVICE
2659	41411827	GRET	SVC	4/2/2024	1968	RET ABN	UG-SERVICE
2660	43586515	GRET	SVC	9/9/2024	1968	RET ABN	UG-SERVICE
2661	38589321	GRET	SVC	8/3/2021	1968	RET ABN	UG-SERVICE
2662	41572927	GRET	SVC	6/10/2024	1968	RET ABN	UG-SERVICE
2663	38642560	GRET	SVC	6/29/2021	1968	RET ABN	UG-SERVICE
2664	37811156	GRET	SVC	12/4/2020	1968	RET ABN	UG-SERVICE
2665	43524136	GRET	SVC	10/15/2024	1968	RET ABN	UG-SERVICE
2666	39665953	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2667	36749021	GRET	SVC	8/17/2020	1968	RET ABN	UG-SERVICE
2668	36613382	GRET	SVC	7/10/2020	1968	RET ABN	UG-SERVICE
2669	39666145	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2670	42575791	GRET	SVC	1/13/2024	1968	RET ABN	UG-SERVICE
2671	36241112	GRET	SVC	5/5/2020	1968	RET ABN	UG-SERVICE
2672	41969542	GRET	SVC	8/1/2024	1968	RET ABN	UG-SERVICE
2673	40126087	GRET	SVC	5/5/2022	1968	RET ABN	UG-SERVICE
2674	40985080	GRET	SVC	11/14/2022	1968	RET ABN	UG-SERVICE
2675	42050868	GRET	SVC	8/30/2023	1968	RET ABN	UG-SERVICE
2676	39666056	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2677	36137881	GRET	SVC	4/22/2020	1968	RET ABN	UG-SERVICE
2678	40802552	GRET	SVC	10/6/2022	1968	RET ABN	UG-SERVICE
2679	43623499	GRET	SVC	12/3/2024	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2680	41922423	GRET	SVC	7/31/2023	1968	RET ABN	UG-SERVICE
2681	41817953	GRET	SVC	6/26/2023	1968	RET ABN	UG-SERVICE
2682	36613084	GRET	SVC	7/14/2020	1968	RET ABN	UG-SERVICE
2683	42336406	GRET	SVC	7/18/2024	1968	RET ABN	UG-SERVICE
2684	42833094	GRET	SVC	7/22/2024	1968	RET ABN	UG-SERVICE
2685	43481193	GRET	SVC	10/22/2024	1968	RET ABN	UG-SERVICE
2686	43493942	GRET	SVC	8/29/2024	1968	RET ABN	UG-SERVICE
2687	39665954	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2688	36486231	GRET	SVC	6/25/2020	1968	RET ABN	UG-SERVICE
2689	39666099	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2690	38991541	GRET	SVC	8/22/2021	1968	RET ABN	UG-SERVICE
2691	40615036	GRET	SVC	8/22/2022	1968	RET ABN	UG-SERVICE
2692	39831462	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2693	43365798	GRET	SVC	10/9/2024	1968	RET ABN	UG-SERVICE
2694	40024220	GRET	SVC	4/18/2022	1968	RET ABN	UG-SERVICE
2695	39666097	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2696	40114951	GRET	SVC	5/4/2022	1968	RET ABN	UG-SERVICE
2697	36612857	GRET	SVC	7/14/2020	1968	RET ABN	UG-SERVICE
2698	39831563	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2699	41411483	GRET	SVC	11/2/2023	1968	RET ABN	UG-SERVICE
2700	43371533	GRET	SVC	7/29/2024	1968	RET ABN	UG-SERVICE
2701	43857603	GRET	SVC	11/21/2024	1968	RET ABN	UG-SERVICE
2702	43642855	GRET	SVC	10/1/2024	1968	RET ABN	UG-SERVICE
2703	41158181	GRET	SVC	1/10/2023	1968	RET ABN	UG-SERVICE
2704	38479663	GRET	SVC	5/12/2021	1968	RET ABN	UG-SERVICE
2705	36966510	GRET	SVC	9/22/2020	1968	RET ABN	UG-SERVICE
2706	36544029	GRET	SVC	7/26/2020	1968	RET ABN	UG-SERVICE
2707	36893331	GRET	SVC	9/14/2020	1968	RET ABN	UG-SERVICE
2708	43581817	GRET	SVC	9/19/2024	1968	RET ABN	UG-SERVICE
2709	39666045	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2710	39423748	GRET	SVC	6/27/2022	1968	RET ABN	UG-SERVICE
2711	37709864	GRET	SVC	11/23/2020	1968	RET ABN	UG-SERVICE
2712	36613380	GRET	SVC	7/10/2020	1968	RET ABN	UG-SERVICE
2713	42861578	GRET	SVC	3/27/2024	1968	RET ABN	UG-SERVICE
2714	39543432	GRET	SVC	12/14/2021	1968	RET ABN	UG-SERVICE
2715	41913822	GRET	SVC	7/31/2023	1968	RET ABN	UG-SERVICE
2716	41654468	GRET	SVC	5/18/2023	1968	RET ABN	UG-SERVICE
2717	40577998	GRET	SVC	8/15/2022	1968	RET ABN	UG-SERVICE
2718	40538368	GRET	SVC	8/12/2022	1968	RET ABN	UG-SERVICE
2719	43365687	GRET	SVC	12/3/2024	1968	RET ABN	UG-SERVICE
2720	42219601	GRET	SVC	10/11/2023	1968	RET ABN	UG-SERVICE
2721	39417345	GRET	SVC	11/15/2021	1968	RET ABN	UG-SERVICE
2722	41165474	GRET	SVC	1/17/2023	1968	RET ABN	UG-SERVICE
2723	37943019	GRET	SVC	12/23/2020	1968	RET ABN	UG-SERVICE
2724	41180518	GRET	SVC	1/20/2023	1968	RET ABN	UG-SERVICE
2725	39666040	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2726	41969499	GRET	SVC	8/1/2024	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2727	41807875	GRET	SVC	6/27/2023	1968	RET ABN	UG-SERVICE
2728	37741359	GRET	SVC	11/25/2020	1968	RET ABN	UG-SERVICE
2729	43543033	GRET	SVC	10/4/2024	1968	RET ABN	UG-SERVICE
2730	42207904	GRET	SVC	6/19/2024	1968	RET ABN	UG-SERVICE
2731	39114628	GRET	SVC	9/27/2021	1968	RET ABN	UG-SERVICE
2732	39666050	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2733	40886920	GRET	SVC	10/27/2022	1968	RET ABN	UG-SERVICE
2734	36121099	GRET	SVC	10/16/2020	1968	RET ABN	UG-SERVICE
2735	38885601	GRET	SVC	9/2/2021	1968	RET ABN	UG-SERVICE
2736	39906692	GRET	SVC	3/21/2022	1968	RET ABN	UG-SERVICE
2737	42670281	GRET	SVC	9/19/2024	1968	RET ABN	UG-SERVICE
2738	43443557	GRET	SVC	8/19/2024	1968	RET ABN	UG-SERVICE
2739	41834506	GRET	SVC	7/21/2023	1968	RET ABN	UG-SERVICE
2740	39665941	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2741	41469768	GRET	SVC	4/5/2023	1968	RET ABN	UG-SERVICE
2742	36113086	GRET	SVC	10/12/2020	1968	RET ABN	UG-SERVICE
2743	38512266	GRET	SVC	5/20/2021	1968	RET ABN	UG-SERVICE
2744	42803974	GRET	SVC	3/15/2024	1968	RET ABN	UG-SERVICE
2745	39665943	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2746	36119905	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2747	41844783	GRET	SVC	7/24/2023	1968	RET ABN	UG-SERVICE
2748	39831467	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2749	38213089	GRET	SVC	3/11/2021	1968	RET ABN	UG-SERVICE
2750	41316670	GRET	SVC	3/6/2023	1968	RET ABN	UG-SERVICE
2751	42833351	GRET	SVC	7/23/2024	1968	RET ABN	UG-SERVICE
2752	37994208	GRET	SVC	1/11/2021	1968	RET ABN	UG-SERVICE
2753	38819878	GRET	SVC	8/2/2021	1968	RET ABN	UG-SERVICE
2754	38732091	GRET	SVC	7/7/2021	1968	RET ABN	UG-SERVICE
2755	41318463	GRET	SVC	3/6/2023	1968	RET ABN	UG-SERVICE
2756	43749346	GRET	SVC	10/28/2024	1968	RET ABN	UG-SERVICE
2757	38284395	GRET	SVC	3/29/2021	1968	RET ABN	UG-SERVICE
2758	36119808	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2759	39524063	GRET	SVC	12/11/2021	1968	RET ABN	UG-SERVICE
2760	41452960	GRET	SVC	10/25/2023	1968	RET ABN	UG-SERVICE
2761	40604652	GRET	SVC	8/24/2022	1968	RET ABN	UG-SERVICE
2762	36122582	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2763	43547204	GRET	SVC	9/11/2024	1968	RET ABN	UG-SERVICE
2764	41429992	GRET	SVC	9/13/2023	1968	RET ABN	UG-SERVICE
2765	42027511	GRET	SVC	8/28/2023	1968	RET ABN	UG-SERVICE
2766	38593808	GRET	SVC	8/18/2021	1968	RET ABN	UG-SERVICE
2767	39665723	GRET	SVC	1/5/2022	1968	RET ABN	UG-SERVICE
2768	38353012	GRET	SVC	2/17/2023	1968	RET ABN	UG-SERVICE
2769	43489848	GRET	SVC	8/26/2024	1968	RET ABN	UG-SERVICE
2770	40189505	GRET	SVC	5/27/2022	1968	RET ABN	UG-SERVICE
2771	36172660	GRET	SVC	2/12/2020	1968	RET ABN	UG-SERVICE
2772	36119903	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2773	43648966	GRET	SVC	12/5/2024	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2774	36613099	GRET	SVC	7/10/2020	1968	RET ABN	UG-SERVICE
2775	41353367	GRET	SVC	3/9/2023	1968	RET ABN	UG-SERVICE
2776	43675735	GRET	SVC	10/16/2024	1968	RET ABN	UG-SERVICE
2777	36107018	GRET	SVC	4/22/2020	1968	RET ABN	UG-SERVICE
2778	41572958	GRET	SVC	5/1/2023	1968	RET ABN	UG-SERVICE
2779	42551425	GRET	SVC	1/9/2024	1968	RET ABN	UG-SERVICE
2780	39292643	GRET	SVC	10/15/2021	1968	RET ABN	UG-SERVICE
2781	41965714	GRET	SVC	8/7/2023	1968	RET ABN	UG-SERVICE
2782	41965641	GRET	SVC	7/26/2023	1968	RET ABN	UG-SERVICE
2783	36613394	GRET	SVC	7/10/2020	1968	RET ABN	UG-SERVICE
2784	43677914	GRET	SVC	10/18/2024	1968	RET ABN	UG-SERVICE
2785	39666080	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2786	43644025	GRET	SVC	10/1/2024	1968	RET ABN	UG-SERVICE
2787	41485246	GRET	SVC	3/24/2023	1968	RET ABN	UG-SERVICE
2788	40948343	GRET	SVC	11/21/2022	1968	RET ABN	UG-SERVICE
2789	38793786	GRET	SVC	7/20/2021	1968	RET ABN	UG-SERVICE
2790	39424066	GRET	SVC	6/27/2022	1968	RET ABN	UG-SERVICE
2791	38237695	GRET	SVC	3/16/2021	1968	RET ABN	UG-SERVICE
2792	39830446	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2793	36613389	GRET	SVC	7/8/2020	1968	RET ABN	UG-SERVICE
2794	42135353	GRET	SVC	9/6/2023	1968	RET ABN	UG-SERVICE
2795	38593157	GRET	SVC	10/26/2021	1968	RET ABN	UG-SERVICE
2796	43484868	GRET	SVC	8/26/2024	1968	RET ABN	UG-SERVICE
2797	38677200	GRET	SVC	6/24/2021	1968	RET ABN	UG-SERVICE
2798	43223748	GRET	SVC	6/13/2024	1968	RET ABN	UG-SERVICE
2799	38268742	GRET	SVC	10/20/2021	1968	RET ABN	UG-SERVICE
2800	43141082	GRET	SVC	6/5/2024	1968	RET ABN	UG-SERVICE
2801	38589154	GRET	SVC	10/27/2021	1968	RET ABN	UG-SERVICE
2802	36649706	GRET	SVC	7/20/2020	1968	RET ABN	UG-SERVICE
2803	43503585	GRET	SVC	8/28/2024	1968	RET ABN	UG-SERVICE
2804	42216808	GRET	SVC	12/6/2023	1968	RET ABN	UG-SERVICE
2805	38720230	GRET	SVC	7/16/2021	1968	RET ABN	UG-SERVICE
2806	41407558	GRET	SVC	4/2/2024	1968	RET ABN	UG-SERVICE
2807	39666042	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2808	41699621	GRET	SVC	6/1/2023	1968	RET ABN	UG-SERVICE
2809	43732057	GRET	SVC	12/11/2024	1968	RET ABN	UG-SERVICE
2810	36419429	GRET	SVC	6/8/2020	1968	RET ABN	UG-SERVICE
2811	43490540	GRET	SVC	8/22/2024	1968	RET ABN	UG-SERVICE
2812	40830319	GRET	SVC	9/8/2022	1968	RET ABN	UG-SERVICE
2813	39423202	GRET	SVC	11/8/2021	1968	RET ABN	UG-SERVICE
2814	43028509	GRET	SVC	8/1/2024	1968	RET ABN	UG-SERVICE
2815	42136772	GRET	SVC	9/20/2023	1968	RET ABN	UG-SERVICE
2816	39376581	GRET	SVC	3/22/2022	1968	RET ABN	UG-SERVICE
2817	38417926	GRET	SVC	5/11/2021	1968	RET ABN	UG-SERVICE
2818	38593804	GRET	SVC	10/7/2021	1968	RET ABN	UG-SERVICE
2819	41245804	GRET	SVC	2/10/2023	1968	RET ABN	UG-SERVICE
2820	41819913	GRET	SVC	7/3/2023	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2821	39863321	GRET	SVC	1/25/2022	1968	RET ABN	UG-SERVICE
2822	41472415	GRET	SVC	9/1/2023	1968	RET ABN	UG-SERVICE
2823	39508225	GRET	SVC	11/21/2021	1968	RET ABN	UG-SERVICE
2824	39619116	GRET	SVC	1/3/2022	1968	RET ABN	UG-SERVICE
2825	39921034	GRET	SVC	3/21/2022	1968	RET ABN	UG-SERVICE
2826	38589200	GRET	SVC	10/1/2021	1968	RET ABN	UG-SERVICE
2827	38589159	GRET	SVC	9/9/2021	1968	RET ABN	UG-SERVICE
2828	39423746	GRET	SVC	6/27/2022	1968	RET ABN	UG-SERVICE
2829	41273846	GRET	SVC	2/14/2023	1968	RET ABN	UG-SERVICE
2830	42012218	GRET	SVC	8/18/2023	1968	RET ABN	UG-SERVICE
2831	36673187	GRET	SVC	7/20/2020	1968	RET ABN	UG-SERVICE
2832	38608389	GRET	SVC	8/9/2021	1968	RET ABN	UG-SERVICE
2833	39956345	GRET	SVC	4/11/2022	1968	RET ABN	UG-SERVICE
2834	39554487	GRET	SVC	12/23/2021	1968	RET ABN	UG-SERVICE
2835	36121008	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2836	37116189	GRET	SVC	10/29/2020	1968	RET ABN	UG-SERVICE
2837	39554489	GRET	SVC	12/23/2021	1968	RET ABN	UG-SERVICE
2838	43837910	GRET	SVC	11/21/2024	1968	RET ABN	UG-SERVICE
2839	39532682	GRET	SVC	12/13/2021	1968	RET ABN	UG-SERVICE
2840	39665940	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2841	40207181	GRET	SVC	6/2/2022	1968	RET ABN	UG-SERVICE
2842	43179538	GRET	SVC	5/30/2024	1968	RET ABN	UG-SERVICE
2843	39666051	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2844	36157809	GRET	SVC	3/24/2020	1968	RET ABN	UG-SERVICE
2845	39666059	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2846	36485742	GRET	SVC	6/24/2020	1968	RET ABN	UG-SERVICE
2847	42419710	GRET	SVC	12/6/2023	1968	RET ABN	UG-SERVICE
2848	38589146	GRET	SVC	10/5/2021	1968	RET ABN	UG-SERVICE
2849	41454523	GRET	SVC	2/20/2023	1968	RET ABN	UG-SERVICE
2850	40768323	GRET	SVC	11/1/2022	1968	RET ABN	UG-SERVICE
2851	39740639	GRET	SVC	2/14/2022	1968	RET ABN	UG-SERVICE
2852	40707705	GRET	SVC	9/24/2022	1968	RET ABN	UG-SERVICE
2853	40738247	GRET	SVC	9/28/2022	1968	RET ABN	UG-SERVICE
2854	39665950	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2855	39809494	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2856	36119904	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2857	36153651	GRET	SVC	7/15/2020	1968	RET ABN	UG-SERVICE
2858	36367966	GRET	SVC	5/27/2020	1968	RET ABN	UG-SERVICE
2859	38655449	GRET	SVC	6/24/2021	1968	RET ABN	UG-SERVICE
2860	36120704	GRET	SVC	10/30/2020	1968	RET ABN	UG-SERVICE
2861	39666057	GRET	SVC	8/3/2022	1968	RET ABN	UG-SERVICE
2862	41082945	GRET	SVC	12/21/2022	1968	RET ABN	UG-SERVICE
2863	40724354	GRET	SVC	9/21/2022	1968	RET ABN	UG-SERVICE
2864	41760939	GRET	SVC	6/24/2023	1968	RET ABN	UG-SERVICE
2865	41411143	GRET	SVC	4/2/2024	1968	RET ABN	UG-SERVICE
2866	42812054	GRET	SVC	3/26/2024	1968	RET ABN	UG-SERVICE
2867	38589317	GRET	SVC	11/2/2021	1968	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2868	42247377	GRET	SVC	10/16/2023	1968	RET ABN	UG-SERVICE
2869	36609968	GRET	SVC	7/8/2020	1968	RET ABN	UG-SERVICE
2870	43366068	GRET	SVC	10/29/2024	1968	RET ABN	UG-SERVICE
2871	43648970	GRET	SVC	12/6/2024	1968	RET ABN	UG-SERVICE
2872	39935324	GRET	SVC	5/2/2022	1968	RET ABN	UG-SERVICE
2873	40868725	GRET	SVC	10/27/2022	1968	RET ABN	UG-SERVICE
2874	43616973	GRET	SVC	10/14/2024	1968	RET ABN	UG-SERVICE
2875	36750113	GRET	SVC	8/17/2020	1968	RET ABN	UG-SERVICE
2876	38676978	GRET	SVC	6/20/2021	1968	RET ABN	UG-SERVICE
2877	38593811	GRET	SVC	8/19/2021	1968	RET ABN	UG-SERVICE
2878	39424072	GRET	SVC	6/27/2022	1968	RET ABN	UG-SERVICE
2879	42498209	GRET	SVC	12/20/2023	1968	RET ABN	UG-SERVICE
2880	36108032	GRET	SVC	3/10/2020	1968	RET ABN	UG-SERVICE
2881	42214997	GRET	SVC	10/9/2023	1968	RET ABN	UG-SERVICE
2882	43362654	GRET	SVC	8/9/2024	1968	RET ABN	UG-SERVICE
2883	41424185	GRET	SVC	10/18/2023	1968	RET ABN	UG-SERVICE
2884	41779584	GRET	SVC	6/23/2023	1968	RET ABN	UG-SERVICE
2885	38593156	GRET	SVC	11/3/2021	1968	RET ABN	UG-SERVICE
2886	39346037	GRET	SVC	11/2/2021	1969	RET ABN	UG-SERVICE
2887	42135426	GRET	SVC	9/21/2023	1969	RET ABN	UG-SERVICE
2888	38987685	GRET	SVC	8/24/2021	1969	RET ABN	UG-SERVICE
2889	43318346	GRET	SVC	7/17/2024	1969	RET ABN	UG-SERVICE
2890	40526784	GRET	SVC	8/9/2022	1969	RET ABN	UG-SERVICE
2891	39665666	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2892	43760796	GRET	SVC	10/29/2024	1969	RET ABN	UG-SERVICE
2893	39657778	GRET	SVC	2/9/2022	1969	RET ABN	UG-SERVICE
2894	42216598	GRET	SVC	12/5/2023	1969	RET ABN	UG-SERVICE
2895	38379359	GRET	SVC	8/2/2021	1969	RET ABN	UG-SERVICE
2896	38200599	GRET	SVC	3/12/2021	1969	RET ABN	UG-SERVICE
2897	36885293	GRET	SVC	10/15/2020	1969	RET ABN	UG-SERVICE
2898	39665271	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2899	36396224	GRET	SVC	6/3/2020	1969	RET ABN	UG-SERVICE
2900	36314386	GRET	SVC	5/11/2020	1969	RET ABN	UG-SERVICE
2901	36867931	GRET	SVC	8/31/2020	1969	RET ABN	UG-SERVICE
2902	35934605	GRET	SVC	1/10/2020	1969	RET ABN	UG-SERVICE
2903	39830404	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2904	43477846	GRET	SVC	9/5/2024	1969	RET ABN	UG-SERVICE
2905	42014810	GRET	SVC	8/21/2023	1969	RET ABN	UG-SERVICE
2906	41303790	GRET	SVC	2/23/2023	1969	RET ABN	UG-SERVICE
2907	42834157	GRET	SVC	8/12/2024	1969	RET ABN	UG-SERVICE
2908	39831568	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2909	43610471	GRET	SVC	9/23/2024	1969	RET ABN	UG-SERVICE
2910	40354414	GRET	SVC	6/25/2022	1969	RET ABN	UG-SERVICE
2911	39830441	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2912	37122616	GRET	SVC	10/28/2020	1969	RET ABN	UG-SERVICE
2913	38394494	GRET	SVC	5/10/2021	1969	RET ABN	UG-SERVICE
2914	40561834	GRET	SVC	8/10/2022	1969	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2915	41242617	GRET	SVC	3/24/2023	1969	RET ABN	UG-SERVICE
2916	42833774	GRET	SVC	7/22/2024	1969	RET ABN	UG-SERVICE
2917	41408295	GRET	SVC	4/2/2024	1969	RET ABN	UG-SERVICE
2918	39421588	GRET	SVC	11/7/2021	1969	RET ABN	UG-SERVICE
2919	38967762	GRET	SVC	9/1/2021	1969	RET ABN	UG-SERVICE
2920	38942478	GRET	SVC	8/22/2021	1969	RET ABN	UG-SERVICE
2921	39041591	GRET	SVC	8/31/2021	1969	RET ABN	UG-SERVICE
2922	42666380	GRET	SVC	2/16/2024	1969	RET ABN	UG-SERVICE
2923	39522259	GRET	SVC	12/13/2021	1969	RET ABN	UG-SERVICE
2924	43320398	GRET	SVC	7/18/2024	1969	RET ABN	UG-SERVICE
2925	39389661	GRET	SVC	11/23/2021	1969	RET ABN	UG-SERVICE
2926	42386658	GRET	SVC	11/20/2023	1969	RET ABN	UG-SERVICE
2927	43904972	GRET	SVC	12/9/2024	1969	RET ABN	UG-SERVICE
2928	39741134	GRET	SVC	2/7/2022	1969	RET ABN	UG-SERVICE
2929	40359859	GRET	SVC	6/29/2022	1969	RET ABN	UG-SERVICE
2930	41194178	GRET	SVC	1/27/2023	1969	RET ABN	UG-SERVICE
2931	38392184	GRET	SVC	4/19/2021	1969	RET ABN	UG-SERVICE
2932	36260064	GRET	SVC	3/18/2020	1969	RET ABN	UG-SERVICE
2933	38746118	GRET	SVC	7/12/2021	1969	RET ABN	UG-SERVICE
2934	43116179	GRET	SVC	5/29/2024	1969	RET ABN	UG-SERVICE
2935	41436457	GRET	SVC	3/30/2023	1969	RET ABN	UG-SERVICE
2936	41323230	GRET	SVC	3/20/2023	1969	RET ABN	UG-SERVICE
2937	41214310	GRET	SVC	1/31/2023	1969	RET ABN	UG-SERVICE
2938	40744383	GRET	SVC	9/28/2022	1969	RET ABN	UG-SERVICE
2939	38738847	GRET	SVC	7/12/2021	1969	RET ABN	UG-SERVICE
2940	43064607	GRET	SVC	5/16/2024	1969	RET ABN	UG-SERVICE
2941	39437430	GRET	SVC	11/18/2021	1969	RET ABN	UG-SERVICE
2942	36704920	GRET	SVC	8/18/2020	1969	RET ABN	UG-SERVICE
2943	43324306	GRET	SVC	10/18/2024	1969	RET ABN	UG-SERVICE
2944	41914102	GRET	SVC	7/27/2023	1969	RET ABN	UG-SERVICE
2945	37387655	GRET	SVC	11/9/2020	1969	RET ABN	UG-SERVICE
2946	36396462	GRET	SVC	6/3/2020	1969	RET ABN	UG-SERVICE
2947	41053076	GRET	SVC	12/15/2022	1969	RET ABN	UG-SERVICE
2948	43258991	GRET	SVC	9/19/2024	1969	RET ABN	UG-SERVICE
2949	39830405	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2950	40280048	GRET	SVC	4/27/2023	1969	RET ABN	UG-SERVICE
2951	39665672	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2952	39830413	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2953	36591056	GRET	SVC	7/7/2020	1969	RET ABN	UG-SERVICE
2954	36135786	GRET	SVC	4/21/2020	1969	RET ABN	UG-SERVICE
2955	39665667	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2956	39350621	GRET	SVC	12/3/2021	1969	RET ABN	UG-SERVICE
2957	39665270	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2958	36002346	GRET	SVC	2/11/2020	1969	RET ABN	UG-SERVICE
2959	43013320	GRET	SVC	5/6/2024	1969	RET ABN	UG-SERVICE
2960	40980504	GRET	SVC	11/23/2022	1969	RET ABN	UG-SERVICE
2961	39247280	GRET	SVC	10/22/2021	1969	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
2962	39830440	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2963	35882477	GRET	SVC	1/13/2020	1969	RET ABN	UG-SERVICE
2964	39757031	GRET	SVC	6/17/2021	1969	RET ABN	UG-SERVICE
2965	42389810	GRET	SVC	11/20/2023	1969	RET ABN	UG-SERVICE
2966	39665668	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2967	39830458	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2968	42564737	GRET	SVC	1/10/2024	1969	RET ABN	UG-SERVICE
2969	43461018	GRET	SVC	8/21/2024	1969	RET ABN	UG-SERVICE
2970	41348969	GRET	SVC	3/8/2023	1969	RET ABN	UG-SERVICE
2971	43592518	GRET	SVC	9/23/2024	1969	RET ABN	UG-SERVICE
2972	35925105	GRET	SVC	1/18/2020	1969	RET ABN	UG-SERVICE
2973	42216812	GRET	SVC	12/6/2023	1969	RET ABN	UG-SERVICE
2974	39274159	GRET	SVC	10/12/2021	1969	RET ABN	UG-SERVICE
2975	40933264	GRET	SVC	11/16/2022	1969	RET ABN	UG-SERVICE
2976	42216814	GRET	SVC	12/6/2023	1969	RET ABN	UG-SERVICE
2977	41065454	GRET	SVC	12/13/2022	1969	RET ABN	UG-SERVICE
2978	38314467	GRET	SVC	4/5/2021	1969	RET ABN	UG-SERVICE
2979	36121688	GRET	SVC	10/12/2020	1969	RET ABN	UG-SERVICE
2980	36314075	GRET	SVC	5/7/2020	1969	RET ABN	UG-SERVICE
2981	38267999	GRET	SVC	3/20/2021	1969	RET ABN	UG-SERVICE
2982	39654867	GRET	SVC	6/28/2022	1969	RET ABN	UG-SERVICE
2983	42744009	GRET	SVC	2/21/2024	1969	RET ABN	UG-SERVICE
2984	42165831	GRET	SVC	10/11/2023	1969	RET ABN	UG-SERVICE
2985	43614043	GRET	SVC	9/23/2024	1969	RET ABN	UG-SERVICE
2986	38413340	GRET	SVC	5/6/2021	1969	RET ABN	UG-SERVICE
2987	36876148	GRET	SVC	9/2/2020	1969	RET ABN	UG-SERVICE
2988	36106836	GRET	SVC	4/24/2020	1969	RET ABN	UG-SERVICE
2989	42433001	GRET	SVC	12/6/2023	1969	RET ABN	UG-SERVICE
2990	40469915	GRET	SVC	7/20/2022	1969	RET ABN	UG-SERVICE
2991	39665811	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
2992	43610593	GRET	SVC	11/21/2024	1969	RET ABN	UG-SERVICE
2993	43610595	GRET	SVC	11/21/2024	1969	RET ABN	UG-SERVICE
2994	36370503	GRET	SVC	5/28/2020	1969	RET ABN	UG-SERVICE
2995	39571086	GRET	SVC	12/17/2021	1969	RET ABN	UG-SERVICE
2996	40609436	GRET	SVC	8/24/2022	1969	RET ABN	UG-SERVICE
2997	38607906	GRET	SVC	12/23/2021	1969	RET ABN	UG-SERVICE
2998	38896185	GRET	SVC	8/3/2021	1969	RET ABN	UG-SERVICE
2999	40619595	GRET	SVC	8/22/2022	1969	RET ABN	UG-SERVICE
3000	43344390	GRET	SVC	7/23/2024	1969	RET ABN	UG-SERVICE
3001	35936783	GRET	SVC	1/23/2020	1969	RET ABN	UG-SERVICE
3002	41786378	GRET	SVC	6/19/2023	1969	RET ABN	UG-SERVICE
3003	40616868	GRET	SVC	9/10/2022	1969	RET ABN	UG-SERVICE
3004	42833096	GRET	SVC	7/22/2024	1969	RET ABN	UG-SERVICE
3005	41253079	GRET	SVC	2/3/2023	1969	RET ABN	UG-SERVICE
3006	41068027	GRET	SVC	12/15/2022	1969	RET ABN	UG-SERVICE
3007	39703967	GRET	SVC	1/18/2022	1969	RET ABN	UG-SERVICE
3008	39665277	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3009	38435783	GRET	SVC	5/4/2021	1969	RET ABN	UG-SERVICE
3010	42216815	GRET	SVC	12/7/2023	1969	RET ABN	UG-SERVICE
3011	42249677	GRET	SVC	12/20/2023	1969	RET ABN	UG-SERVICE
3012	39983346	GRET	SVC	4/11/2022	1969	RET ABN	UG-SERVICE
3013	39423637	GRET	SVC	11/15/2021	1969	RET ABN	UG-SERVICE
3014	36122438	GRET	SVC	10/14/2020	1969	RET ABN	UG-SERVICE
3015	37641860	GRET	SVC	11/19/2020	1969	RET ABN	UG-SERVICE
3016	40472616	GRET	SVC	9/15/2022	1969	RET ABN	UG-SERVICE
3017	39665814	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3018	41853474	GRET	SVC	7/12/2023	1969	RET ABN	UG-SERVICE
3019	36106830	GRET	SVC	4/21/2020	1969	RET ABN	UG-SERVICE
3020	39303367	GRET	SVC	10/19/2021	1969	RET ABN	UG-SERVICE
3021	38194547	GRET	SVC	3/12/2021	1969	RET ABN	UG-SERVICE
3022	42122256	GRET	SVC	9/18/2023	1969	RET ABN	UG-SERVICE
3023	41844253	GRET	SVC	7/11/2023	1969	RET ABN	UG-SERVICE
3024	41188318	GRET	SVC	1/24/2023	1969	RET ABN	UG-SERVICE
3025	39665800	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3026	35678083	GRET	SVC	1/23/2020	1969	RET ABN	UG-SERVICE
3027	40558767	GRET	SVC	8/10/2022	1969	RET ABN	UG-SERVICE
3028	36751465	GRET	SVC	8/13/2020	1969	RET ABN	UG-SERVICE
3029	41411153	GRET	SVC	4/2/2024	1969	RET ABN	UG-SERVICE
3030	39691660	GRET	SVC	1/15/2022	1969	RET ABN	UG-SERVICE
3031	37065553	GRET	SVC	10/20/2020	1969	RET ABN	UG-SERVICE
3032	41896886	GRET	SVC	7/30/2023	1969	RET ABN	UG-SERVICE
3033	38593802	GRET	SVC	8/31/2021	1969	RET ABN	UG-SERVICE
3034	39665673	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3035	41245576	GRET	SVC	2/10/2023	1969	RET ABN	UG-SERVICE
3036	39830451	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3037	37387501	GRET	SVC	11/5/2020	1969	RET ABN	UG-SERVICE
3038	43365680	GRET	SVC	10/30/2024	1969	RET ABN	UG-SERVICE
3039	43448533	GRET	SVC	8/19/2024	1969	RET ABN	UG-SERVICE
3040	42600180	GRET	SVC	1/26/2024	1969	RET ABN	UG-SERVICE
3041	37098911	GRET	SVC	10/29/2020	1969	RET ABN	UG-SERVICE
3042	36885292	GRET	SVC	10/15/2020	1969	RET ABN	UG-SERVICE
3043	36121359	GRET	SVC	10/16/2020	1969	RET ABN	UG-SERVICE
3044	41411045	GRET	SVC	4/2/2024	1969	RET ABN	UG-SERVICE
3045	39830449	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3046	41409244	GRET	SVC	4/2/2024	1969	RET ABN	UG-SERVICE
3047	40498170	GRET	SVC	7/25/2022	1969	RET ABN	UG-SERVICE
3048	38795282	GRET	SVC	7/1/2021	1969	RET ABN	UG-SERVICE
3049	39830402	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3050	43365682	GRET	SVC	12/19/2024	1969	RET ABN	UG-SERVICE
3051	42331726	GRET	SVC	11/6/2023	1969	RET ABN	UG-SERVICE
3052	39831365	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3053	40324802	GRET	SVC	6/21/2022	1969	RET ABN	UG-SERVICE
3054	35968036	GRET	SVC	2/25/2020	1969	RET ABN	UG-SERVICE
3055	36121692	GRET	SVC	10/12/2020	1969	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3056	41497333	GRET	SVC	4/24/2023	1969	RET ABN	UG-SERVICE
3057	39665815	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3058	41141851	GRET	SVC	1/9/2023	1969	RET ABN	UG-SERVICE
3059	39250840	GRET	SVC	10/11/2021	1969	RET ABN	UG-SERVICE
3060	43493320	GRET	SVC	12/19/2024	1969	RET ABN	UG-SERVICE
3061	36647011	GRET	SVC	7/13/2020	1969	RET ABN	UG-SERVICE
3062	41436454	GRET	SVC	4/30/2023	1969	RET ABN	UG-SERVICE
3063	39903460	GRET	SVC	3/29/2022	1969	RET ABN	UG-SERVICE
3064	42314951	GRET	SVC	11/20/2023	1969	RET ABN	UG-SERVICE
3065	42297446	GRET	SVC	11/1/2023	1969	RET ABN	UG-SERVICE
3066	36396472	GRET	SVC	6/3/2020	1969	RET ABN	UG-SERVICE
3067	39830352	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3068	36666324	GRET	SVC	7/22/2020	1969	RET ABN	UG-SERVICE
3069	42984750	GRET	SVC	4/22/2024	1969	RET ABN	UG-SERVICE
3070	38322242	GRET	SVC	12/21/2021	1969	RET ABN	UG-SERVICE
3071	39771827	GRET	SVC	2/8/2022	1969	RET ABN	UG-SERVICE
3072	39665805	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3073	40671208	GRET	SVC	9/17/2022	1969	RET ABN	UG-SERVICE
3074	39830448	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3075	41223154	GRET	SVC	1/30/2023	1969	RET ABN	UG-SERVICE
3076	41969489	GRET	SVC	7/31/2024	1969	RET ABN	UG-SERVICE
3077	36485659	GRET	SVC	6/23/2020	1969	RET ABN	UG-SERVICE
3078	40987260	GRET	SVC	11/29/2022	1969	RET ABN	UG-SERVICE
3079	40478413	GRET	SVC	7/26/2022	1969	RET ABN	UG-SERVICE
3080	40910571	GRET	SVC	11/8/2022	1969	RET ABN	UG-SERVICE
3081	41230526	GRET	SVC	2/2/2023	1969	RET ABN	UG-SERVICE
3082	41752183	GRET	SVC	6/13/2023	1969	RET ABN	UG-SERVICE
3083	40234274	GRET	SVC	5/31/2022	1969	RET ABN	UG-SERVICE
3084	42784509	GRET	SVC	4/16/2024	1969	RET ABN	UG-SERVICE
3085	42404814	GRET	SVC	12/12/2023	1969	RET ABN	UG-SERVICE
3086	36989293	GRET	SVC	8/11/2020	1969	RET ABN	UG-SERVICE
3087	38875278	GRET	SVC	1/3/2022	1969	RET ABN	UG-SERVICE
3088	36235878	GRET	SVC	12/16/2020	1969	RET ABN	UG-SERVICE
3089	41436452	GRET	SVC	3/31/2023	1969	RET ABN	UG-SERVICE
3090	38677037	GRET	SVC	7/7/2021	1969	RET ABN	UG-SERVICE
3091	43323971	GRET	SVC	7/22/2024	1969	RET ABN	UG-SERVICE
3092	37597540	GRET	SVC	11/17/2020	1969	RET ABN	UG-SERVICE
3093	41968714	GRET	SVC	8/7/2023	1969	RET ABN	UG-SERVICE
3094	38670221	GRET	SVC	6/23/2021	1969	RET ABN	UG-SERVICE
3095	40111686	GRET	SVC	5/4/2022	1969	RET ABN	UG-SERVICE
3096	38257099	GRET	SVC	3/22/2021	1969	RET ABN	UG-SERVICE
3097	39935328	GRET	SVC	5/2/2022	1969	RET ABN	UG-SERVICE
3098	41288083	GRET	SVC	3/17/2023	1969	RET ABN	UG-SERVICE
3099	39830346	GRET	SVC	8/3/2022	1969	RET ABN	UG-SERVICE
3100	38524218	GRET	SVC	6/15/2021	1969	RET ABN	UG-SERVICE
3101	43203572	GRET	SVC	6/18/2024	1969	RET ABN	UG-SERVICE
3102	36030739	GRET	SVC	2/14/2020	1969	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3103	42216803	GRET	SVC	12/6/2023	1969	RET ABN	UG-SERVICE
3104	36751436	GRET	SVC	10/5/2020	1969	RET ABN	UG-SERVICE
3105	35876804	GRET	SVC	1/8/2020	1969	RET ABN	UG-SERVICE
3106	38256808	GRET	SVC	4/1/2021	1969	RET ABN	UG-SERVICE
3107	43274525	GRET	SVC	7/13/2024	1969	RET ABN	UG-SERVICE
3108	36460197	GRET	SVC	6/18/2020	1969	RET ABN	UG-SERVICE
3109	36670730	GRET	SVC	7/29/2020	1969	RET ABN	UG-SERVICE
3110	42879026	GRET	SVC	4/2/2024	1969	RET ABN	UG-SERVICE
3111	40500724	GRET	SVC	9/14/2022	1970	RET ABN	UG-SERVICE
3112	41119748	GRET	SVC	1/3/2023	1970	RET ABN	UG-SERVICE
3113	36183154	GRET	SVC	4/21/2020	1970	RET ABN	UG-SERVICE
3114	39873582	GRET	SVC	3/14/2022	1970	RET ABN	UG-SERVICE
3115	41401742	GRET	SVC	3/14/2023	1970	RET ABN	UG-SERVICE
3116	43892423	GRET	SVC	12/3/2024	1970	RET ABN	UG-SERVICE
3117	43799633	GRET	SVC	11/20/2024	1970	RET ABN	UG-SERVICE
3118	39680096	GRET	SVC	1/12/2022	1970	RET ABN	UG-SERVICE
3119	39450194	GRET	SVC	12/9/2021	1970	RET ABN	UG-SERVICE
3120	41052713	GRET	SVC	1/12/2023	1970	RET ABN	UG-SERVICE
3121	36350272	GRET	SVC	5/15/2020	1970	RET ABN	UG-SERVICE
3122	40179803	GRET	SVC	5/18/2022	1970	RET ABN	UG-SERVICE
3123	36283385	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3124	39831475	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3125	41075028	GRET	SVC	12/30/2022	1970	RET ABN	UG-SERVICE
3126	42423918	GRET	SVC	11/28/2023	1970	RET ABN	UG-SERVICE
3127	43353627	GRET	SVC	11/7/2024	1970	RET ABN	UG-SERVICE
3128	41317159	GRET	SVC	3/4/2023	1970	RET ABN	UG-SERVICE
3129	38441542	GRET	SVC	1/3/2022	1970	RET ABN	UG-SERVICE
3130	36163049	GRET	SVC	3/24/2020	1970	RET ABN	UG-SERVICE
3131	36118828	GRET	SVC	10/14/2020	1970	RET ABN	UG-SERVICE
3132	41818696	GRET	SVC	7/22/2023	1970	RET ABN	UG-SERVICE
3133	40963335	GRET	SVC	12/12/2022	1970	RET ABN	UG-SERVICE
3134	36090177	GRET	SVC	3/6/2020	1970	RET ABN	UG-SERVICE
3135	36057532	GRET	SVC	2/21/2020	1970	RET ABN	UG-SERVICE
3136	43203666	GRET	SVC	6/19/2024	1970	RET ABN	UG-SERVICE
3137	41659816	GRET	SVC	5/23/2023	1970	RET ABN	UG-SERVICE
3138	41870478	GRET	SVC	7/18/2023	1970	RET ABN	UG-SERVICE
3139	41052714	GRET	SVC	1/12/2023	1970	RET ABN	UG-SERVICE
3140	39666317	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3141	36122378	GRET	SVC	10/14/2020	1970	RET ABN	UG-SERVICE
3142	37055416	GRET	SVC	11/4/2020	1970	RET ABN	UG-SERVICE
3143	42234544	GRET	SVC	10/17/2023	1970	RET ABN	UG-SERVICE
3144	37324160	GRET	SVC	11/9/2020	1970	RET ABN	UG-SERVICE
3145	43412674	GRET	SVC	8/14/2024	1970	RET ABN	UG-SERVICE
3146	41473584	GRET	SVC	4/19/2023	1970	RET ABN	UG-SERVICE
3147	40780609	GRET	SVC	10/13/2022	1970	RET ABN	UG-SERVICE
3148	41882464	GRET	SVC	6/23/2023	1970	RET ABN	UG-SERVICE
3149	36121770	GRET	SVC	10/12/2020	1970	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3150	41330345	GRET	SVC	3/2/2023	1970	RET ABN	UG-SERVICE
3151	42489092	GRET	SVC	12/18/2023	1970	RET ABN	UG-SERVICE
3152	36283384	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3153	36121348	GRET	SVC	11/5/2020	1970	RET ABN	UG-SERVICE
3154	39716936	GRET	SVC	1/6/2022	1970	RET ABN	UG-SERVICE
3155	43525078	GRET	SVC	10/15/2024	1970	RET ABN	UG-SERVICE
3156	36283388	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3157	40332367	GRET	SVC	6/22/2022	1970	RET ABN	UG-SERVICE
3158	36702203	GRET	SVC	7/29/2020	1970	RET ABN	UG-SERVICE
3159	40658153	GRET	SVC	9/14/2022	1970	RET ABN	UG-SERVICE
3160	43807180	GRET	SVC	11/22/2024	1970	RET ABN	UG-SERVICE
3161	40639350	GRET	SVC	8/31/2022	1970	RET ABN	UG-SERVICE
3162	39550691	GRET	SVC	12/20/2021	1970	RET ABN	UG-SERVICE
3163	39666400	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3164	41803298	GRET	SVC	6/26/2023	1970	RET ABN	UG-SERVICE
3165	36282716	GRET	SVC	6/23/2020	1970	RET ABN	UG-SERVICE
3166	39666404	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3167	36110443	GRET	SVC	3/9/2020	1970	RET ABN	UG-SERVICE
3168	41229864	GRET	SVC	2/1/2023	1970	RET ABN	UG-SERVICE
3169	39434287	GRET	SVC	11/19/2021	1970	RET ABN	UG-SERVICE
3170	39666421	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3171	36122422	GRET	SVC	10/14/2020	1970	RET ABN	UG-SERVICE
3172	43480939	GRET	SVC	10/25/2024	1970	RET ABN	UG-SERVICE
3173	39666438	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3174	41279866	GRET	SVC	2/16/2023	1970	RET ABN	UG-SERVICE
3175	38539150	GRET	SVC	6/28/2021	1970	RET ABN	UG-SERVICE
3176	38608929	GRET	SVC	12/23/2021	1970	RET ABN	UG-SERVICE
3177	43676679	GRET	SVC	10/15/2024	1970	RET ABN	UG-SERVICE
3178	41916578	GRET	SVC	7/25/2023	1970	RET ABN	UG-SERVICE
3179	37104386	GRET	SVC	10/26/2020	1970	RET ABN	UG-SERVICE
3180	39666240	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3181	39666425	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3182	38772860	GRET	SVC	7/30/2021	1970	RET ABN	UG-SERVICE
3183	39831477	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3184	38407515	GRET	SVC	4/26/2021	1970	RET ABN	UG-SERVICE
3185	43347408	GRET	SVC	7/24/2024	1970	RET ABN	UG-SERVICE
3186	43789058	GRET	SVC	12/14/2024	1970	RET ABN	UG-SERVICE
3187	42386287	GRET	SVC	11/14/2023	1970	RET ABN	UG-SERVICE
3188	39809487	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3189	40490995	GRET	SVC	7/29/2022	1970	RET ABN	UG-SERVICE
3190	41408062	GRET	SVC	4/2/2024	1970	RET ABN	UG-SERVICE
3191	36701300	GRET	SVC	7/30/2020	1970	RET ABN	UG-SERVICE
3192	39424068	GRET	SVC	6/27/2022	1970	RET ABN	UG-SERVICE
3193	40749589	GRET	SVC	5/13/2024	1970	RET ABN	UG-SERVICE
3194	36142348	GRET	SVC	3/17/2020	1970	RET ABN	UG-SERVICE
3195	38537594	GRET	SVC	4/13/2021	1970	RET ABN	UG-SERVICE
3196	35918148	GRET	SVC	1/20/2020	1970	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3197	42378966	GRET	SVC	11/14/2023	1970	RET ABN	UG-SERVICE
3198	39892775	GRET	SVC	6/2/2022	1970	RET ABN	UG-SERVICE
3199	38107943	GRET	SVC	2/24/2021	1970	RET ABN	UG-SERVICE
3200	40118767	GRET	SVC	5/9/2022	1970	RET ABN	UG-SERVICE
3201	43151327	GRET	SVC	9/19/2024	1970	RET ABN	UG-SERVICE
3202	40806481	GRET	SVC	10/10/2022	1970	RET ABN	UG-SERVICE
3203	37957641	GRET	SVC	2/18/2021	1970	RET ABN	UG-SERVICE
3204	42412181	GRET	SVC	11/20/2023	1970	RET ABN	UG-SERVICE
3205	36283383	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3206	42759492	GRET	SVC	2/27/2024	1970	RET ABN	UG-SERVICE
3207	42833938	GRET	SVC	7/23/2024	1970	RET ABN	UG-SERVICE
3208	42833934	GRET	SVC	7/23/2024	1970	RET ABN	UG-SERVICE
3209	40808302	GRET	SVC	11/11/2022	1970	RET ABN	UG-SERVICE
3210	38676767	GRET	SVC	8/2/2021	1970	RET ABN	UG-SERVICE
3211	42487684	GRET	SVC	7/18/2024	1970	RET ABN	UG-SERVICE
3212	42834145	GRET	SVC	8/5/2024	1970	RET ABN	UG-SERVICE
3213	39935386	GRET	SVC	5/14/2022	1970	RET ABN	UG-SERVICE
3214	36122434	GRET	SVC	10/14/2020	1970	RET ABN	UG-SERVICE
3215	41407613	GRET	SVC	4/2/2024	1970	RET ABN	UG-SERVICE
3216	41291591	GRET	SVC	2/20/2023	1970	RET ABN	UG-SERVICE
3217	43280667	GRET	SVC	12/3/2024	1970	RET ABN	UG-SERVICE
3218	43640980	GRET	SVC	10/1/2024	1970	RET ABN	UG-SERVICE
3219	40318264	GRET	SVC	6/22/2022	1970	RET ABN	UG-SERVICE
3220	43506838	GRET	SVC	9/27/2024	1970	RET ABN	UG-SERVICE
3221	36701074	GRET	SVC	7/29/2020	1970	RET ABN	UG-SERVICE
3222	38912205	GRET	SVC	7/7/2022	1970	RET ABN	UG-SERVICE
3223	43705149	GRET	SVC	10/16/2024	1970	RET ABN	UG-SERVICE
3224	41837155	GRET	SVC	7/7/2023	1970	RET ABN	UG-SERVICE
3225	43649294	GRET	SVC	12/4/2024	1970	RET ABN	UG-SERVICE
3226	42073738	GRET	SVC	9/29/2023	1970	RET ABN	UG-SERVICE
3227	39666740	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3228	39666402	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3229	38545124	GRET	SVC	5/25/2021	1970	RET ABN	UG-SERVICE
3230	39666481	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3231	43649292	GRET	SVC	12/5/2024	1970	RET ABN	UG-SERVICE
3232	36122421	GRET	SVC	10/14/2020	1970	RET ABN	UG-SERVICE
3233	42791899	GRET	SVC	3/5/2024	1970	RET ABN	UG-SERVICE
3234	42956336	GRET	SVC	9/19/2024	1970	RET ABN	UG-SERVICE
3235	39666439	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3236	40747501	GRET	SVC	9/28/2022	1970	RET ABN	UG-SERVICE
3237	42487781	GRET	SVC	7/18/2024	1970	RET ABN	UG-SERVICE
3238	36283387	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3239	42381320	GRET	SVC	11/15/2023	1970	RET ABN	UG-SERVICE
3240	36283382	GRET	SVC	6/15/2020	1970	RET ABN	UG-SERVICE
3241	36122379	GRET	SVC	4/30/2020	1970	RET ABN	UG-SERVICE
3242	39423524	GRET	SVC	6/27/2022	1970	RET ABN	UG-SERVICE
3243	40947077	GRET	SVC	11/25/2022	1970	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3244	36085532	GRET	SVC	3/4/2020	1970	RET ABN	UG-SERVICE
3245	42824972	GRET	SVC	3/12/2024	1970	RET ABN	UG-SERVICE
3246	42514799	GRET	SVC	12/15/2023	1970	RET ABN	UG-SERVICE
3247	40811497	GRET	SVC	3/8/2023	1970	RET ABN	UG-SERVICE
3248	43481199	GRET	SVC	10/24/2024	1970	RET ABN	UG-SERVICE
3249	35960294	GRET	SVC	1/29/2020	1970	RET ABN	UG-SERVICE
3250	42760335	GRET	SVC	7/30/2024	1970	RET ABN	UG-SERVICE
3251	40556773	GRET	SVC	8/12/2022	1970	RET ABN	UG-SERVICE
3252	40977040	GRET	SVC	11/28/2022	1970	RET ABN	UG-SERVICE
3253	39831652	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3254	41298680	GRET	SVC	2/21/2023	1970	RET ABN	UG-SERVICE
3255	43650227	GRET	SVC	12/9/2024	1970	RET ABN	UG-SERVICE
3256	40770432	GRET	SVC	9/29/2022	1970	RET ABN	UG-SERVICE
3257	41296147	GRET	SVC	2/20/2023	1970	RET ABN	UG-SERVICE
3258	41401435	GRET	SVC	3/24/2023	1970	RET ABN	UG-SERVICE
3259	39666423	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3260	36391042	GRET	SVC	6/4/2020	1970	RET ABN	UG-SERVICE
3261	40780612	GRET	SVC	10/10/2022	1970	RET ABN	UG-SERVICE
3262	39831645	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3263	41911980	GRET	SVC	8/1/2023	1970	RET ABN	UG-SERVICE
3264	42494200	GRET	SVC	8/1/2024	1970	RET ABN	UG-SERVICE
3265	40655699	GRET	SVC	8/31/2022	1970	RET ABN	UG-SERVICE
3266	43648971	GRET	SVC	12/6/2024	1970	RET ABN	UG-SERVICE
3267	41838366	GRET	SVC	7/7/2023	1970	RET ABN	UG-SERVICE
3268	39831575	GRET	SVC	8/3/2022	1970	RET ABN	UG-SERVICE
3269	36136190	GRET	SVC	4/23/2020	1970	RET ABN	UG-SERVICE
3270	40338237	GRET	SVC	6/21/2022	1970	RET ABN	UG-SERVICE
3271	43578156	GRET	SVC	9/17/2024	1970	RET ABN	UG-SERVICE
3272	36077428	GRET	SVC	3/2/2020	1970	RET ABN	UG-SERVICE
3273	38106693	GRET	SVC	2/10/2021	1970	RET ABN	UG-SERVICE
3274	36992559	GRET	SVC	9/30/2020	1970	RET ABN	UG-SERVICE
3275	36704451	GRET	SVC	7/30/2020	1970	RET ABN	UG-SERVICE
3276	39423215	GRET	SVC	6/27/2022	1970	RET ABN	UG-SERVICE
3277	38692662	GRET	SVC	7/2/2021	1970	RET ABN	UG-SERVICE
3278	39649243	GRET	SVC	2/15/2022	1970	RET ABN	UG-SERVICE
3279	39654870	GRET	SVC	6/28/2022	1970	RET ABN	UG-SERVICE
3280	40231463	GRET	SVC	5/31/2022	1970	RET ABN	UG-SERVICE
3281	40358943	GRET	SVC	6/28/2022	1970	RET ABN	UG-SERVICE
3282	37741510	GRET	SVC	11/24/2020	1970	RET ABN	UG-SERVICE
3283	40359856	GRET	SVC	6/28/2022	1970	RET ABN	UG-SERVICE
3284	42321636	GRET	SVC	11/6/2023	1970	RET ABN	UG-SERVICE
3285	36110213	GRET	SVC	10/12/2020	1970	RET ABN	UG-SERVICE
3286	38966217	GRET	SVC	8/30/2021	1970	RET ABN	UG-SERVICE
3287	38051914	GRET	SVC	1/25/2021	1970	RET ABN	UG-SERVICE
3288	37098508	GRET	SVC	10/19/2020	1970	RET ABN	UG-SERVICE
3289	42833937	GRET	SVC	7/23/2024	1970	RET ABN	UG-SERVICE
3290	43365688	GRET	SVC	10/21/2024	1970	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3291	42029728	GRET	SVC	8/25/2023	1970	RET ABN	UG-SERVICE
3292	39666422	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3293	39666426	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3294	35846431	GRET	SVC	1/2/2020	1970	RET ABN	UG-SERVICE
3295	39880056	GRET	SVC	3/14/2022	1970	RET ABN	UG-SERVICE
3296	38110647	GRET	SVC	2/25/2021	1970	RET ABN	UG-SERVICE
3297	43648976	GRET	SVC	12/5/2024	1970	RET ABN	UG-SERVICE
3298	41411154	GRET	SVC	4/2/2024	1970	RET ABN	UG-SERVICE
3299	36108480	GRET	SVC	10/12/2020	1970	RET ABN	UG-SERVICE
3300	42487682	GRET	SVC	7/18/2024	1970	RET ABN	UG-SERVICE
3301	41067833	GRET	SVC	12/22/2022	1970	RET ABN	UG-SERVICE
3302	40205533	GRET	SVC	6/11/2022	1970	RET ABN	UG-SERVICE
3303	39666427	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3304	39424069	GRET	SVC	6/27/2022	1970	RET ABN	UG-SERVICE
3305	37011547	GRET	SVC	10/1/2020	1970	RET ABN	UG-SERVICE
3306	41401740	GRET	SVC	3/14/2023	1970	RET ABN	UG-SERVICE
3307	40273945	GRET	SVC	6/8/2022	1970	RET ABN	UG-SERVICE
3308	38537392	GRET	SVC	5/27/2021	1970	RET ABN	UG-SERVICE
3309	36877039	GRET	SVC	8/25/2020	1970	RET ABN	UG-SERVICE
3310	35970045	GRET	SVC	2/3/2020	1970	RET ABN	UG-SERVICE
3311	42956846	GRET	SVC	7/18/2024	1970	RET ABN	UG-SERVICE
3312	41401961	GRET	SVC	3/9/2023	1970	RET ABN	UG-SERVICE
3313	40356392	GRET	SVC	6/27/2022	1970	RET ABN	UG-SERVICE
3314	42469443	GRET	SVC	12/12/2023	1970	RET ABN	UG-SERVICE
3315	39666431	GRET	SVC	11/18/2022	1970	RET ABN	UG-SERVICE
3316	36252638	GRET	SVC	5/1/2020	1970	RET ABN	UG-SERVICE
3317	43649298	GRET	SVC	12/6/2024	1970	RET ABN	UG-SERVICE
3318	41279146	GRET	SVC	3/24/2023	1971	RET ABN	UG-SERVICE
3319	39079965	GRET	SVC	9/2/2021	1971	RET ABN	UG-SERVICE
3320	39819166	GRET	SVC	2/28/2022	1971	RET ABN	UG-SERVICE
3321	42002925	GRET	SVC	8/15/2023	1971	RET ABN	UG-SERVICE
3322	38441323	GRET	SVC	1/3/2022	1971	RET ABN	UG-SERVICE
3323	38356367	GRET	SVC	4/15/2021	1971	RET ABN	UG-SERVICE
3324	42956324	GRET	SVC	9/19/2024	1971	RET ABN	UG-SERVICE
3325	39920971	GRET	SVC	4/5/2022	1971	RET ABN	UG-SERVICE
3326	35856442	GRET	SVC	1/9/2020	1971	RET ABN	UG-SERVICE
3327	43904906	GRET	SVC	12/4/2024	1971	RET ABN	UG-SERVICE
3328	36711290	GRET	SVC	7/28/2020	1971	RET ABN	UG-SERVICE
3329	41222691	GRET	SVC	1/20/2023	1971	RET ABN	UG-SERVICE
3330	43151329	GRET	SVC	9/19/2024	1971	RET ABN	UG-SERVICE
3331	41450269	GRET	SVC	4/10/2023	1971	RET ABN	UG-SERVICE
3332	41411223	GRET	SVC	4/2/2024	1971	RET ABN	UG-SERVICE
3333	39090216	GRET	SVC	9/8/2021	1971	RET ABN	UG-SERVICE
3334	42902428	GRET	SVC	4/10/2024	1971	RET ABN	UG-SERVICE
3335	41083627	GRET	SVC	2/13/2023	1971	RET ABN	UG-SERVICE
3336	41775070	GRET	SVC	6/27/2023	1971	RET ABN	UG-SERVICE
3337	37425042	GRET	SVC	11/11/2020	1971	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3338	41411189	GRET	SVC	4/2/2024	1971	RET ABN	UG-SERVICE
3339	36319078	GRET	SVC	4/27/2020	1971	RET ABN	UG-SERVICE
3340	42534170	GRET	SVC	1/2/2024	1971	RET ABN	UG-SERVICE
3341	41436886	GRET	SVC	3/27/2023	1971	RET ABN	UG-SERVICE
3342	42448121	GRET	SVC	12/4/2023	1971	RET ABN	UG-SERVICE
3343	41591360	GRET	SVC	5/2/2023	1971	RET ABN	UG-SERVICE
3344	42327602	GRET	SVC	12/7/2023	1971	RET ABN	UG-SERVICE
3345	36035401	GRET	SVC	2/17/2020	1971	RET ABN	UG-SERVICE
3346	42320646	GRET	SVC	11/7/2023	1971	RET ABN	UG-SERVICE
3347	38457555	GRET	SVC	5/7/2021	1971	RET ABN	UG-SERVICE
3348	43267508	GRET	SVC	7/18/2024	1971	RET ABN	UG-SERVICE
3349	41429913	GRET	SVC	3/21/2023	1971	RET ABN	UG-SERVICE
3350	38097220	GRET	SVC	9/2/2021	1971	RET ABN	UG-SERVICE
3351	41244030	GRET	SVC	3/20/2023	1971	RET ABN	UG-SERVICE
3352	41029976	GRET	SVC	1/21/2023	1971	RET ABN	UG-SERVICE
3353	41807843	GRET	SVC	6/26/2023	1971	RET ABN	UG-SERVICE
3354	43364879	GRET	SVC	12/17/2024	1971	RET ABN	UG-SERVICE
3355	41179619	GRET	SVC	1/18/2023	1971	RET ABN	UG-SERVICE
3356	40938774	GRET	SVC	10/5/2022	1971	RET ABN	UG-SERVICE
3357	36122498	GRET	SVC	10/30/2020	1971	RET ABN	UG-SERVICE
3358	41411226	GRET	SVC	4/2/2024	1971	RET ABN	UG-SERVICE
3359	39078482	GRET	SVC	9/7/2021	1971	RET ABN	UG-SERVICE
3360	38252169	GRET	SVC	3/18/2021	1971	RET ABN	UG-SERVICE
3361	41411427	GRET	SVC	11/2/2023	1971	RET ABN	UG-SERVICE
3362	43480497	GRET	SVC	9/14/2024	1971	RET ABN	UG-SERVICE
3363	42132870	GRET	SVC	9/20/2023	1971	RET ABN	UG-SERVICE
3364	40618057	GRET	SVC	8/24/2022	1971	RET ABN	UG-SERVICE
3365	38507684	GRET	SVC	5/18/2021	1971	RET ABN	UG-SERVICE
3366	42314997	GRET	SVC	11/6/2023	1971	RET ABN	UG-SERVICE
3367	36939018	GRET	SVC	9/22/2020	1971	RET ABN	UG-SERVICE
3368	39312873	GRET	SVC	10/9/2021	1971	RET ABN	UG-SERVICE
3369	43325228	GRET	SVC	7/16/2024	1971	RET ABN	UG-SERVICE
3370	42328017	GRET	SVC	12/8/2023	1971	RET ABN	UG-SERVICE
3371	43591096	GRET	SVC	9/16/2024	1971	RET ABN	UG-SERVICE
3372	43506889	GRET	SVC	10/11/2024	1971	RET ABN	UG-SERVICE
3373	37982149	GRET	SVC	1/6/2021	1971	RET ABN	UG-SERVICE
3374	42192947	GRET	SVC	10/6/2023	1971	RET ABN	UG-SERVICE
3375	39574845	GRET	SVC	12/22/2021	1971	RET ABN	UG-SERVICE
3376	42522981	GRET	SVC	12/29/2023	1971	RET ABN	UG-SERVICE
3377	38014263	GRET	SVC	1/14/2021	1971	RET ABN	UG-SERVICE
3378	36105786	GRET	SVC	2/10/2020	1971	RET ABN	UG-SERVICE
3379	41785520	GRET	SVC	6/19/2023	1971	RET ABN	UG-SERVICE
3380	36710986	GRET	SVC	8/3/2020	1971	RET ABN	UG-SERVICE
3381	39405134	GRET	SVC	12/7/2021	1971	RET ABN	UG-SERVICE
3382	41870461	GRET	SVC	7/8/2023	1971	RET ABN	UG-SERVICE
3383	38521824	GRET	SVC	5/20/2021	1971	RET ABN	UG-SERVICE
3384	37025090	GRET	SVC	8/21/2020	1971	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3385	35767016	GRET	SVC	1/8/2020	1971	RET ABN	UG-SERVICE
3386	36120705	GRET	SVC	11/5/2020	1971	RET ABN	UG-SERVICE
3387	39535924	GRET	SVC	12/14/2021	1971	RET ABN	UG-SERVICE
3388	36255035	GRET	SVC	5/5/2020	1971	RET ABN	UG-SERVICE
3389	43168069	GRET	SVC	6/28/2024	1971	RET ABN	UG-SERVICE
3390	41741982	GRET	SVC	6/14/2023	1971	RET ABN	UG-SERVICE
3391	41860747	GRET	SVC	8/16/2023	1971	RET ABN	UG-SERVICE
3392	40521713	GRET	SVC	8/23/2022	1971	RET ABN	UG-SERVICE
3393	40129808	GRET	SVC	5/10/2022	1971	RET ABN	UG-SERVICE
3394	38547807	GRET	SVC	5/27/2021	1971	RET ABN	UG-SERVICE
3395	43344403	GRET	SVC	7/23/2024	1971	RET ABN	UG-SERVICE
3396	38260421	GRET	SVC	12/14/2021	1971	RET ABN	UG-SERVICE
3397	41242161	GRET	SVC	2/24/2023	1971	RET ABN	UG-SERVICE
3398	43584359	GRET	SVC	9/25/2024	1971	RET ABN	UG-SERVICE
3399	36795096	GRET	SVC	9/1/2020	1971	RET ABN	UG-SERVICE
3400	39990979	GRET	SVC	4/8/2022	1971	RET ABN	UG-SERVICE
3401	39759178	GRET	SVC	8/16/2021	1971	RET ABN	UG-SERVICE
3402	41009755	GRET	SVC	12/1/2022	1971	RET ABN	UG-SERVICE
3403	43399718	GRET	SVC	8/9/2024	1971	RET ABN	UG-SERVICE
3404	43347538	GRET	SVC	7/22/2024	1971	RET ABN	UG-SERVICE
3405	42438487	GRET	SVC	12/5/2023	1971	RET ABN	UG-SERVICE
3406	40251452	GRET	SVC	7/19/2022	1971	RET ABN	UG-SERVICE
3407	37948598	GRET	SVC	12/22/2020	1971	RET ABN	UG-SERVICE
3408	41317537	GRET	SVC	3/3/2023	1971	RET ABN	UG-SERVICE
3409	41083628	GRET	SVC	1/11/2023	1971	RET ABN	UG-SERVICE
3410	39223946	GRET	SVC	9/29/2021	1971	RET ABN	UG-SERVICE
3411	37094270	GRET	SVC	10/30/2020	1971	RET ABN	UG-SERVICE
3412	40249263	GRET	SVC	6/6/2022	1971	RET ABN	UG-SERVICE
3413	35967994	GRET	SVC	2/28/2020	1971	RET ABN	UG-SERVICE
3414	42670286	GRET	SVC	9/19/2024	1971	RET ABN	UG-SERVICE
3415	39786506	GRET	SVC	2/14/2022	1971	RET ABN	UG-SERVICE
3416	36259917	GRET	SVC	4/16/2020	1971	RET ABN	UG-SERVICE
3417	38094297	GRET	SVC	2/8/2021	1971	RET ABN	UG-SERVICE
3418	38441371	GRET	SVC	1/6/2022	1971	RET ABN	UG-SERVICE
3419	41411664	GRET	SVC	4/2/2024	1971	RET ABN	UG-SERVICE
3420	40341445	GRET	SVC	6/24/2022	1971	RET ABN	UG-SERVICE
3421	43464130	GRET	SVC	8/20/2024	1971	RET ABN	UG-SERVICE
3422	42437069	GRET	SVC	11/29/2023	1971	RET ABN	UG-SERVICE
3423	36918266	GRET	SVC	9/14/2020	1971	RET ABN	UG-SERVICE
3424	36592936	GRET	SVC	7/8/2020	1971	RET ABN	UG-SERVICE
3425	39922193	GRET	SVC	3/24/2022	1971	RET ABN	UG-SERVICE
3426	43364925	GRET	SVC	10/18/2024	1971	RET ABN	UG-SERVICE
3427	42589542	GRET	SVC	1/24/2024	1971	RET ABN	UG-SERVICE
3428	43480931	GRET	SVC	9/14/2024	1971	RET ABN	UG-SERVICE
3429	38609629	GRET	SVC	6/9/2021	1971	RET ABN	UG-SERVICE
3430	36283571	GRET	SVC	4/30/2020	1971	RET ABN	UG-SERVICE
3431	40624086	GRET	SVC	8/30/2022	1971	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3432	36709410	GRET	SVC	7/28/2020	1971	RET ABN	UG-SERVICE
3433	43565122	GRET	SVC	9/9/2024	1971	RET ABN	UG-SERVICE
3434	42330509	GRET	SVC	11/6/2023	1971	RET ABN	UG-SERVICE
3435	36248250	GRET	SVC	5/6/2020	1971	RET ABN	UG-SERVICE
3436	41584265	GRET	SVC	5/1/2023	1971	RET ABN	UG-SERVICE
3437	38042126	GRET	SVC	1/22/2021	1971	RET ABN	UG-SERVICE
3438	40341396	GRET	SVC	6/24/2022	1971	RET ABN	UG-SERVICE
3439	37994124	GRET	SVC	1/11/2021	1971	RET ABN	UG-SERVICE
3440	43480499	GRET	SVC	9/14/2024	1971	RET ABN	UG-SERVICE
3441	36314805	GRET	SVC	5/8/2020	1971	RET ABN	UG-SERVICE
3442	41411267	GRET	SVC	4/2/2024	1971	RET ABN	UG-SERVICE
3443	40737724	GRET	SVC	9/27/2022	1971	RET ABN	UG-SERVICE
3444	42138574	GRET	SVC	9/19/2023	1971	RET ABN	UG-SERVICE
3445	40675869	GRET	SVC	9/13/2022	1971	RET ABN	UG-SERVICE
3446	38707309	GRET	SVC	8/9/2021	1971	RET ABN	UG-SERVICE
3447	42014187	GRET	SVC	8/21/2023	1971	RET ABN	UG-SERVICE
3448	40917638	GRET	SVC	11/16/2022	1971	RET ABN	UG-SERVICE
3449	43460131	GRET	SVC	8/27/2024	1971	RET ABN	UG-SERVICE
3450	40700097	GRET	SVC	9/14/2022	1972	RET ABN	UG-SERVICE
3451	41414154	GRET	SVC	3/20/2023	1972	RET ABN	UG-SERVICE
3452	42514066	GRET	SVC	12/26/2023	1972	RET ABN	UG-SERVICE
3453	43480932	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3454	41918341	GRET	SVC	8/16/2023	1972	RET ABN	UG-SERVICE
3455	41182817	GRET	SVC	3/1/2023	1972	RET ABN	UG-SERVICE
3456	41139253	GRET	SVC	1/27/2023	1972	RET ABN	UG-SERVICE
3457	40273700	GRET	SVC	6/9/2022	1972	RET ABN	UG-SERVICE
3458	39475344	GRET	SVC	11/29/2021	1972	RET ABN	UG-SERVICE
3459	42956850	GRET	SVC	7/18/2024	1972	RET ABN	UG-SERVICE
3460	37898340	GRET	SVC	12/7/2020	1972	RET ABN	UG-SERVICE
3461	40462865	GRET	SVC	7/14/2022	1972	RET ABN	UG-SERVICE
3462	41402221	GRET	SVC	3/15/2023	1972	RET ABN	UG-SERVICE
3463	43081215	GRET	SVC	5/17/2024	1972	RET ABN	UG-SERVICE
3464	40991106	GRET	SVC	11/21/2022	1972	RET ABN	UG-SERVICE
3465	43554625	GRET	SVC	9/13/2024	1972	RET ABN	UG-SERVICE
3466	35993848	GRET	SVC	6/16/2020	1972	RET ABN	UG-SERVICE
3467	41429935	GRET	SVC	9/19/2023	1972	RET ABN	UG-SERVICE
3468	36194997	GRET	SVC	4/28/2020	1972	RET ABN	UG-SERVICE
3469	43699979	GRET	SVC	10/15/2024	1972	RET ABN	UG-SERVICE
3470	37914376	GRET	SVC	12/6/2020	1972	RET ABN	UG-SERVICE
3471	41411410	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3472	42438334	GRET	SVC	12/5/2023	1972	RET ABN	UG-SERVICE
3473	42520328	GRET	SVC	12/18/2023	1972	RET ABN	UG-SERVICE
3474	41407880	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3475	41242165	GRET	SVC	3/2/2023	1972	RET ABN	UG-SERVICE
3476	38960829	GRET	SVC	8/24/2021	1972	RET ABN	UG-SERVICE
3477	40325248	GRET	SVC	7/13/2022	1972	RET ABN	UG-SERVICE
3478	42122080	GRET	SVC	9/16/2023	1972	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3479	36164807	GRET	SVC	3/23/2020	1972	RET ABN	UG-SERVICE
3480	42156649	GRET	SVC	9/26/2023	1972	RET ABN	UG-SERVICE
3481	41430060	GRET	SVC	9/12/2023	1972	RET ABN	UG-SERVICE
3482	41430069	GRET	SVC	9/13/2023	1972	RET ABN	UG-SERVICE
3483	39849156	GRET	SVC	2/28/2022	1972	RET ABN	UG-SERVICE
3484	40881642	GRET	SVC	11/1/2022	1972	RET ABN	UG-SERVICE
3485	41407390	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3486	40896029	GRET	SVC	11/10/2022	1972	RET ABN	UG-SERVICE
3487	36695038	GRET	SVC	8/5/2020	1972	RET ABN	UG-SERVICE
3488	43679955	GRET	SVC	11/1/2024	1972	RET ABN	UG-SERVICE
3489	42487785	GRET	SVC	7/31/2024	1972	RET ABN	UG-SERVICE
3490	41402232	GRET	SVC	3/15/2023	1972	RET ABN	UG-SERVICE
3491	42435907	GRET	SVC	9/19/2024	1972	RET ABN	UG-SERVICE
3492	38363161	GRET	SVC	4/19/2021	1972	RET ABN	UG-SERVICE
3493	42405710	GRET	SVC	12/8/2023	1972	RET ABN	UG-SERVICE
3494	41214288	GRET	SVC	12/11/2023	1972	RET ABN	UG-SERVICE
3495	40492259	GRET	SVC	8/14/2022	1972	RET ABN	UG-SERVICE
3496	41411281	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3497	42214614	GRET	SVC	10/11/2023	1972	RET ABN	UG-SERVICE
3498	38909290	GRET	SVC	8/16/2021	1972	RET ABN	UG-SERVICE
3499	42300904	GRET	SVC	11/1/2023	1972	RET ABN	UG-SERVICE
3500	43746155	GRET	SVC	12/11/2024	1972	RET ABN	UG-SERVICE
3501	43868498	GRET	SVC	11/26/2024	1972	RET ABN	UG-SERVICE
3502	43740061	GRET	SVC	12/4/2024	1972	RET ABN	UG-SERVICE
3503	43739938	GRET	SVC	12/4/2024	1972	RET ABN	UG-SERVICE
3504	42049249	GRET	SVC	8/30/2023	1972	RET ABN	UG-SERVICE
3505	36199035	GRET	SVC	4/23/2020	1972	RET ABN	UG-SERVICE
3506	41253576	GRET	SVC	2/10/2023	1972	RET ABN	UG-SERVICE
3507	41677672	GRET	SVC	5/27/2023	1972	RET ABN	UG-SERVICE
3508	41839631	GRET	SVC	7/6/2023	1972	RET ABN	UG-SERVICE
3509	39759516	GRET	SVC	2/7/2022	1972	RET ABN	UG-SERVICE
3510	39926695	GRET	SVC	4/9/2022	1972	RET ABN	UG-SERVICE
3511	39532710	GRET	SVC	12/14/2021	1972	RET ABN	UG-SERVICE
3512	41654517	GRET	SVC	5/18/2023	1972	RET ABN	UG-SERVICE
3513	39346682	GRET	SVC	10/28/2021	1972	RET ABN	UG-SERVICE
3514	37070751	GRET	SVC	10/13/2020	1972	RET ABN	UG-SERVICE
3515	37926012	GRET	SVC	12/16/2020	1972	RET ABN	UG-SERVICE
3516	42834341	GRET	SVC	7/23/2024	1972	RET ABN	UG-SERVICE
3517	42833380	GRET	SVC	7/22/2024	1972	RET ABN	UG-SERVICE
3518	43480658	GRET	SVC	9/11/2024	1972	RET ABN	UG-SERVICE
3519	36672292	GRET	SVC	7/23/2020	1972	RET ABN	UG-SERVICE
3520	40552246	GRET	SVC	8/11/2022	1972	RET ABN	UG-SERVICE
3521	38469249	GRET	SVC	6/1/2021	1972	RET ABN	UG-SERVICE
3522	41273360	GRET	SVC	2/16/2023	1972	RET ABN	UG-SERVICE
3523	43760724	GRET	SVC	10/23/2024	1972	RET ABN	UG-SERVICE
3524	40333213	GRET	SVC	6/23/2022	1972	RET ABN	UG-SERVICE
3525	43480998	GRET	SVC	11/16/2024	1972	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3526	37926212	GRET	SVC	12/15/2020	1972	RET ABN	UG-SERVICE
3527	41411234	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3528	41448025	GRET	SVC	3/26/2023	1972	RET ABN	UG-SERVICE
3529	41188560	GRET	SVC	2/13/2023	1972	RET ABN	UG-SERVICE
3530	39930272	GRET	SVC	3/31/2022	1972	RET ABN	UG-SERVICE
3531	43739936	GRET	SVC	12/4/2024	1972	RET ABN	UG-SERVICE
3532	39947193	GRET	SVC	3/29/2022	1972	RET ABN	UG-SERVICE
3533	40418092	GRET	SVC	7/14/2022	1972	RET ABN	UG-SERVICE
3534	43120516	GRET	SVC	5/21/2024	1972	RET ABN	UG-SERVICE
3535	41411268	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3536	40933307	GRET	SVC	11/15/2022	1972	RET ABN	UG-SERVICE
3537	39797719	GRET	SVC	2/15/2022	1972	RET ABN	UG-SERVICE
3538	42381531	GRET	SVC	11/17/2023	1972	RET ABN	UG-SERVICE
3539	43862097	GRET	SVC	12/9/2024	1972	RET ABN	UG-SERVICE
3540	39935371	GRET	SVC	6/2/2022	1972	RET ABN	UG-SERVICE
3541	42072075	GRET	SVC	9/5/2023	1972	RET ABN	UG-SERVICE
3542	43342129	GRET	SVC	7/29/2024	1972	RET ABN	UG-SERVICE
3543	41411275	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3544	35772295	GRET	SVC	1/2/2020	1972	RET ABN	UG-SERVICE
3545	43480928	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3546	38432241	GRET	SVC	4/29/2021	1972	RET ABN	UG-SERVICE
3547	41740533	GRET	SVC	6/13/2023	1972	RET ABN	UG-SERVICE
3548	43740062	GRET	SVC	12/4/2024	1972	RET ABN	UG-SERVICE
3549	43186501	GRET	SVC	6/17/2024	1972	RET ABN	UG-SERVICE
3550	41860698	GRET	SVC	7/13/2023	1972	RET ABN	UG-SERVICE
3551	38343815	GRET	SVC	4/10/2021	1972	RET ABN	UG-SERVICE
3552	41273211	GRET	SVC	2/16/2023	1972	RET ABN	UG-SERVICE
3553	38703736	GRET	SVC	7/7/2021	1972	RET ABN	UG-SERVICE
3554	39016838	GRET	SVC	8/16/2021	1972	RET ABN	UG-SERVICE
3555	42412478	GRET	SVC	11/28/2023	1972	RET ABN	UG-SERVICE
3556	41284187	GRET	SVC	3/15/2023	1972	RET ABN	UG-SERVICE
3557	42294230	GRET	SVC	10/30/2023	1972	RET ABN	UG-SERVICE
3558	36339718	GRET	SVC	5/20/2020	1972	RET ABN	UG-SERVICE
3559	42286974	GRET	SVC	10/30/2023	1972	RET ABN	UG-SERVICE
3560	39243683	GRET	SVC	11/19/2021	1972	RET ABN	UG-SERVICE
3561	39830345	GRET	SVC	8/3/2022	1972	RET ABN	UG-SERVICE
3562	41424508	GRET	SVC	10/18/2023	1972	RET ABN	UG-SERVICE
3563	38557501	GRET	SVC	6/2/2021	1972	RET ABN	UG-SERVICE
3564	38795268	GRET	SVC	7/17/2021	1972	RET ABN	UG-SERVICE
3565	43480927	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3566	42427053	GRET	SVC	9/19/2024	1972	RET ABN	UG-SERVICE
3567	43156137	GRET	SVC	6/1/2024	1972	RET ABN	UG-SERVICE
3568	43008937	GRET	SVC	5/3/2024	1972	RET ABN	UG-SERVICE
3569	40394919	GRET	SVC	7/7/2022	1972	RET ABN	UG-SERVICE
3570	39830356	GRET	SVC	8/3/2022	1972	RET ABN	UG-SERVICE
3571	42833350	GRET	SVC	7/22/2024	1972	RET ABN	UG-SERVICE
3572	38776468	GRET	SVC	8/2/2021	1972	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3573	41032552	GRET	SVC	12/15/2022	1972	RET ABN	UG-SERVICE
3574	39848783	GRET	SVC	3/4/2022	1972	RET ABN	UG-SERVICE
3575	42585505	GRET	SVC	1/29/2024	1972	RET ABN	UG-SERVICE
3576	41887706	GRET	SVC	7/17/2023	1972	RET ABN	UG-SERVICE
3577	43678698	GRET	SVC	10/16/2024	1972	RET ABN	UG-SERVICE
3578	43649102	GRET	SVC	10/8/2024	1972	RET ABN	UG-SERVICE
3579	43529723	GRET	SVC	12/16/2024	1972	RET ABN	UG-SERVICE
3580	40245550	GRET	SVC	9/9/2022	1972	RET ABN	UG-SERVICE
3581	38490941	GRET	SVC	5/17/2021	1972	RET ABN	UG-SERVICE
3582	42487347	GRET	SVC	7/18/2024	1972	RET ABN	UG-SERVICE
3583	43739939	GRET	SVC	12/4/2024	1972	RET ABN	UG-SERVICE
3584	41279525	GRET	SVC	2/15/2023	1972	RET ABN	UG-SERVICE
3585	41008615	GRET	SVC	12/8/2022	1972	RET ABN	UG-SERVICE
3586	38525559	GRET	SVC	5/24/2021	1972	RET ABN	UG-SERVICE
3587	43189275	GRET	SVC	6/17/2024	1972	RET ABN	UG-SERVICE
3588	40340999	GRET	SVC	6/23/2022	1972	RET ABN	UG-SERVICE
3589	39916056	GRET	SVC	5/2/2022	1972	RET ABN	UG-SERVICE
3590	39471032	GRET	SVC	12/2/2021	1972	RET ABN	UG-SERVICE
3591	37052222	GRET	SVC	8/29/2020	1972	RET ABN	UG-SERVICE
3592	41223060	GRET	SVC	1/30/2023	1972	RET ABN	UG-SERVICE
3593	42833349	GRET	SVC	7/22/2024	1972	RET ABN	UG-SERVICE
3594	37141842	GRET	SVC	11/17/2020	1972	RET ABN	UG-SERVICE
3595	41411273	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3596	41411280	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3597	40019113	GRET	SVC	5/27/2022	1972	RET ABN	UG-SERVICE
3598	43223752	GRET	SVC	6/13/2024	1972	RET ABN	UG-SERVICE
3599	36701097	GRET	SVC	9/8/2020	1972	RET ABN	UG-SERVICE
3600	41411079	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3601	41423578	GRET	SVC	10/18/2023	1972	RET ABN	UG-SERVICE
3602	41242610	GRET	SVC	3/13/2023	1972	RET ABN	UG-SERVICE
3603	36335575	GRET	SVC	5/19/2020	1972	RET ABN	UG-SERVICE
3604	41407816	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3605	43480929	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3606	43480930	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3607	39668979	GRET	SVC	1/19/2022	1972	RET ABN	UG-SERVICE
3608	38622330	GRET	SVC	8/23/2021	1972	RET ABN	UG-SERVICE
3609	41255101	GRET	SVC	2/15/2023	1972	RET ABN	UG-SERVICE
3610	36786482	GRET	SVC	8/17/2020	1972	RET ABN	UG-SERVICE
3611	42584903	GRET	SVC	1/25/2024	1972	RET ABN	UG-SERVICE
3612	42006056	GRET	SVC	8/14/2023	1972	RET ABN	UG-SERVICE
3613	37887072	GRET	SVC	12/10/2020	1972	RET ABN	UG-SERVICE
3614	36709891	GRET	SVC	8/5/2020	1972	RET ABN	UG-SERVICE
3615	41411286	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3616	43295385	GRET	SVC	7/12/2024	1972	RET ABN	UG-SERVICE
3617	43481241	GRET	SVC	10/23/2024	1972	RET ABN	UG-SERVICE
3618	38041014	GRET	SVC	1/15/2021	1972	RET ABN	UG-SERVICE
3619	41006872	GRET	SVC	12/7/2022	1972	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3620	40308701	GRET	SVC	6/27/2022	1972	RET ABN	UG-SERVICE
3621	42284433	GRET	SVC	10/26/2023	1972	RET ABN	UG-SERVICE
3622	36820378	GRET	SVC	8/25/2020	1972	RET ABN	UG-SERVICE
3623	38179976	GRET	SVC	4/28/2021	1972	RET ABN	UG-SERVICE
3624	41614118	GRET	SVC	5/9/2023	1972	RET ABN	UG-SERVICE
3625	43620359	GRET	SVC	9/23/2024	1972	RET ABN	UG-SERVICE
3626	41411277	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3627	42566873	GRET	SVC	2/2/2024	1972	RET ABN	UG-SERVICE
3628	36366705	GRET	SVC	6/16/2020	1972	RET ABN	UG-SERVICE
3629	43946099	GRET	SVC	12/30/2024	1972	RET ABN	UG-SERVICE
3630	38327111	GRET	SVC	4/8/2021	1972	RET ABN	UG-SERVICE
3631	42970529	GRET	SVC	4/24/2024	1972	RET ABN	UG-SERVICE
3632	43365789	GRET	SVC	12/19/2024	1972	RET ABN	UG-SERVICE
3633	43063274	GRET	SVC	5/13/2024	1972	RET ABN	UG-SERVICE
3634	42150870	GRET	SVC	10/13/2023	1972	RET ABN	UG-SERVICE
3635	37898091	GRET	SVC	12/10/2020	1972	RET ABN	UG-SERVICE
3636	43481250	GRET	SVC	9/10/2024	1972	RET ABN	UG-SERVICE
3637	41258757	GRET	SVC	3/14/2023	1972	RET ABN	UG-SERVICE
3638	38278785	GRET	SVC	4/28/2021	1972	RET ABN	UG-SERVICE
3639	40953284	GRET	SVC	11/29/2022	1972	RET ABN	UG-SERVICE
3640	40895627	GRET	SVC	11/7/2022	1972	RET ABN	UG-SERVICE
3641	40916562	GRET	SVC	11/8/2022	1972	RET ABN	UG-SERVICE
3642	40265392	GRET	SVC	6/7/2022	1972	RET ABN	UG-SERVICE
3643	42166121	GRET	SVC	9/19/2023	1972	RET ABN	UG-SERVICE
3644	43173863	GRET	SVC	7/17/2024	1972	RET ABN	UG-SERVICE
3645	38427776	GRET	SVC	4/29/2021	1972	RET ABN	UG-SERVICE
3646	42435908	GRET	SVC	9/19/2024	1972	RET ABN	UG-SERVICE
3647	39570775	GRET	SVC	12/13/2021	1972	RET ABN	UG-SERVICE
3648	40699291	GRET	SVC	9/29/2022	1972	RET ABN	UG-SERVICE
3649	43217425	GRET	SVC	6/24/2024	1972	RET ABN	UG-SERVICE
3650	37887986	GRET	SVC	12/9/2020	1972	RET ABN	UG-SERVICE
3651	35868335	GRET	SVC	1/7/2020	1972	RET ABN	UG-SERVICE
3652	39570921	GRET	SVC	12/13/2021	1972	RET ABN	UG-SERVICE
3653	37036908	GRET	SVC	10/7/2020	1972	RET ABN	UG-SERVICE
3654	38082511	GRET	SVC	2/2/2021	1972	RET ABN	UG-SERVICE
3655	43480920	GRET	SVC	9/14/2024	1972	RET ABN	UG-SERVICE
3656	41932791	GRET	SVC	9/18/2023	1972	RET ABN	UG-SERVICE
3657	42227175	GRET	SVC	10/31/2023	1972	RET ABN	UG-SERVICE
3658	38322528	GRET	SVC	11/3/2021	1972	RET ABN	UG-SERVICE
3659	43120561	GRET	SVC	7/15/2024	1972	RET ABN	UG-SERVICE
3660	42833359	GRET	SVC	7/23/2024	1972	RET ABN	UG-SERVICE
3661	42579294	GRET	SVC	1/19/2024	1972	RET ABN	UG-SERVICE
3662	41407749	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3663	41411271	GRET	SVC	4/2/2024	1972	RET ABN	UG-SERVICE
3664	40514385	GRET	SVC	8/2/2022	1973	RET ABN	UG-SERVICE
3665	42957430	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3666	43477543	GRET	SVC	8/26/2024	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3667	43346735	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3668	42956758	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3669	42227366	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3670	42956467	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3671	42098663	GRET	SVC	9/14/2023	1973	RET ABN	UG-SERVICE
3672	42228021	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3673	42957959	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3674	41721134	GRET	SVC	6/8/2023	1973	RET ABN	UG-SERVICE
3675	42487710	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3676	42227957	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3677	41277765	GRET	SVC	2/14/2023	1973	RET ABN	UG-SERVICE
3678	41279351	GRET	SVC	3/15/2023	1973	RET ABN	UG-SERVICE
3679	39257945	GRET	SVC	10/11/2021	1973	RET ABN	UG-SERVICE
3680	42227364	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3681	42957390	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3682	42155783	GRET	SVC	9/27/2023	1973	RET ABN	UG-SERVICE
3683	43554106	GRET	SVC	9/12/2024	1973	RET ABN	UG-SERVICE
3684	38955723	GRET	SVC	8/22/2021	1973	RET ABN	UG-SERVICE
3685	42487716	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3686	41922366	GRET	SVC	7/27/2023	1973	RET ABN	UG-SERVICE
3687	43529736	GRET	SVC	12/6/2024	1973	RET ABN	UG-SERVICE
3688	40581035	GRET	SVC	8/15/2022	1973	RET ABN	UG-SERVICE
3689	40784117	GRET	SVC	10/10/2022	1973	RET ABN	UG-SERVICE
3690	39544059	GRET	SVC	12/13/2021	1973	RET ABN	UG-SERVICE
3691	41969570	GRET	SVC	8/1/2024	1973	RET ABN	UG-SERVICE
3692	42227177	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3693	36839682	GRET	SVC	7/15/2020	1973	RET ABN	UG-SERVICE
3694	42956332	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3695	41273667	GRET	SVC	3/2/2023	1973	RET ABN	UG-SERVICE
3696	42956845	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3697	42767218	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3698	36192099	GRET	SVC	4/23/2020	1973	RET ABN	UG-SERVICE
3699	42228023	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3700	38662181	GRET	SVC	6/24/2021	1973	RET ABN	UG-SERVICE
3701	43245014	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3702	42487724	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3703	42227833	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3704	43480926	GRET	SVC	9/14/2024	1973	RET ABN	UG-SERVICE
3705	42956477	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3706	41722788	GRET	SVC	6/12/2023	1973	RET ABN	UG-SERVICE
3707	42956759	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3708	41277884	GRET	SVC	2/14/2023	1973	RET ABN	UG-SERVICE
3709	42227319	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3710	42227945	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3711	42509340	GRET	SVC	7/31/2024	1973	RET ABN	UG-SERVICE
3712	42227302	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3713	42530678	GRET	SVC	12/20/2023	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3714	41969077	GRET	SVC	8/1/2024	1973	RET ABN	UG-SERVICE
3715	40528003	GRET	SVC	8/9/2022	1973	RET ABN	UG-SERVICE
3716	42957332	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3717	42227735	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3718	42227550	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3719	40140878	GRET	SVC	5/11/2022	1973	RET ABN	UG-SERVICE
3720	42227317	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3721	38637830	GRET	SVC	7/23/2021	1973	RET ABN	UG-SERVICE
3722	43613267	GRET	SVC	9/13/2024	1973	RET ABN	UG-SERVICE
3723	41340689	GRET	SVC	3/18/2023	1973	RET ABN	UG-SERVICE
3724	43480924	GRET	SVC	9/14/2024	1973	RET ABN	UG-SERVICE
3725	43318481	GRET	SVC	8/15/2024	1973	RET ABN	UG-SERVICE
3726	42227375	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3727	39970244	GRET	SVC	5/11/2022	1973	RET ABN	UG-SERVICE
3728	42957394	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3729	41316693	GRET	SVC	3/6/2023	1973	RET ABN	UG-SERVICE
3730	42600438	GRET	SVC	1/25/2024	1973	RET ABN	UG-SERVICE
3731	36003455	GRET	SVC	2/10/2020	1973	RET ABN	UG-SERVICE
3732	42228028	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3733	42227949	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3734	41414916	GRET	SVC	3/20/2023	1973	RET ABN	UG-SERVICE
3735	36268686	GRET	SVC	5/4/2020	1973	RET ABN	UG-SERVICE
3736	41027618	GRET	SVC	12/14/2022	1973	RET ABN	UG-SERVICE
3737	41774608	GRET	SVC	6/23/2023	1973	RET ABN	UG-SERVICE
3738	35934476	GRET	SVC	1/22/2020	1973	RET ABN	UG-SERVICE
3739	39438659	GRET	SVC	11/18/2021	1973	RET ABN	UG-SERVICE
3740	43423329	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3741	42228027	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3742	41273369	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3743	39904817	GRET	SVC	4/11/2022	1973	RET ABN	UG-SERVICE
3744	43244990	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3745	41969340	GRET	SVC	7/30/2024	1973	RET ABN	UG-SERVICE
3746	41414175	GRET	SVC	4/2/2024	1973	RET ABN	UG-SERVICE
3747	38469920	GRET	SVC	5/10/2021	1973	RET ABN	UG-SERVICE
3748	42283973	GRET	SVC	10/21/2023	1973	RET ABN	UG-SERVICE
3749	42227316	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3750	42227315	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3751	42957684	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3752	40372244	GRET	SVC	7/18/2022	1973	RET ABN	UG-SERVICE
3753	42227303	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3754	39576175	GRET	SVC	7/8/2021	1973	RET ABN	UG-SERVICE
3755	42227850	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3756	36208642	GRET	SVC	4/7/2021	1973	RET ABN	UG-SERVICE
3757	41486042	GRET	SVC	4/11/2023	1973	RET ABN	UG-SERVICE
3758	42956755	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3759	43245007	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3760	40338689	GRET	SVC	7/8/2022	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3761	42957391	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3762	36331192	GRET	SVC	5/15/2020	1973	RET ABN	UG-SERVICE
3763	35936301	GRET	SVC	1/23/2020	1973	RET ABN	UG-SERVICE
3764	36728962	GRET	SVC	8/3/2020	1973	RET ABN	UG-SERVICE
3765	43365793	GRET	SVC	12/6/2024	1973	RET ABN	UG-SERVICE
3766	42227737	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3767	36450481	GRET	SVC	6/16/2020	1973	RET ABN	UG-SERVICE
3768	41273560	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3769	42227955	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3770	40360389	GRET	SVC	6/22/2022	1973	RET ABN	UG-SERVICE
3771	40309193	GRET	SVC	8/12/2022	1973	RET ABN	UG-SERVICE
3772	42227176	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3773	36839691	GRET	SVC	7/15/2020	1973	RET ABN	UG-SERVICE
3774	41101699	GRET	SVC	12/29/2022	1973	RET ABN	UG-SERVICE
3775	42389920	GRET	SVC	11/18/2023	1973	RET ABN	UG-SERVICE
3776	42956338	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3777	42957337	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3778	42020459	GRET	SVC	11/1/2023	1973	RET ABN	UG-SERVICE
3779	43347824	GRET	SVC	7/22/2024	1973	RET ABN	UG-SERVICE
3780	40015632	GRET	SVC	4/17/2022	1973	RET ABN	UG-SERVICE
3781	43465891	GRET	SVC	8/16/2024	1973	RET ABN	UG-SERVICE
3782	41242859	GRET	SVC	2/10/2023	1973	RET ABN	UG-SERVICE
3783	40054754	GRET	SVC	12/23/2021	1973	RET ABN	UG-SERVICE
3784	41241968	GRET	SVC	3/2/2023	1973	RET ABN	UG-SERVICE
3785	36495864	GRET	SVC	7/7/2020	1973	RET ABN	UG-SERVICE
3786	41211685	GRET	SVC	12/11/2023	1973	RET ABN	UG-SERVICE
3787	42227736	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3788	39929212	GRET	SVC	3/10/2022	1973	RET ABN	UG-SERVICE
3789	41963559	GRET	SVC	8/9/2023	1973	RET ABN	UG-SERVICE
3790	42227360	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3791	42227314	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3792	42227551	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3793	41246612	GRET	SVC	2/6/2023	1973	RET ABN	UG-SERVICE
3794	41243052	GRET	SVC	3/17/2023	1973	RET ABN	UG-SERVICE
3795	42520550	GRET	SVC	12/27/2023	1973	RET ABN	UG-SERVICE
3796	37896433	GRET	SVC	12/23/2020	1973	RET ABN	UG-SERVICE
3797	41774602	GRET	SVC	6/27/2023	1973	RET ABN	UG-SERVICE
3798	42509250	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3799	42227840	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3800	42227856	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3801	39211483	GRET	SVC	9/27/2021	1973	RET ABN	UG-SERVICE
3802	41273574	GRET	SVC	2/19/2023	1973	RET ABN	UG-SERVICE
3803	35926924	GRET	SVC	1/22/2020	1973	RET ABN	UG-SERVICE
3804	43589203	GRET	SVC	9/24/2024	1973	RET ABN	UG-SERVICE
3805	42228030	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3806	41279002	GRET	SVC	2/16/2023	1973	RET ABN	UG-SERVICE
3807	42956841	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3808	42487344	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3809	42487351	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3810	41247242	GRET	SVC	3/6/2023	1973	RET ABN	UG-SERVICE
3811	38561880	GRET	SVC	4/17/2021	1973	RET ABN	UG-SERVICE
3812	43155559	GRET	SVC	6/10/2024	1973	RET ABN	UG-SERVICE
3813	42227365	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3814	42227844	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3815	42957683	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3816	37094886	GRET	SVC	10/20/2020	1973	RET ABN	UG-SERVICE
3817	41279350	GRET	SVC	2/16/2023	1973	RET ABN	UG-SERVICE
3818	40671557	GRET	SVC	9/13/2022	1973	RET ABN	UG-SERVICE
3819	40418545	GRET	SVC	7/13/2022	1973	RET ABN	UG-SERVICE
3820	42227739	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3821	42957389	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3822	42227954	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3823	39293408	GRET	SVC	10/12/2021	1973	RET ABN	UG-SERVICE
3824	42227300	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3825	43245107	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3826	40756551	GRET	SVC	10/4/2022	1973	RET ABN	UG-SERVICE
3827	42227853	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3828	43244992	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3829	42487720	GRET	SVC	7/31/2024	1973	RET ABN	UG-SERVICE
3830	42483428	GRET	SVC	4/15/2024	1973	RET ABN	UG-SERVICE
3831	43347635	GRET	SVC	7/22/2024	1973	RET ABN	UG-SERVICE
3832	41818864	GRET	SVC	7/21/2023	1973	RET ABN	UG-SERVICE
3833	41247078	GRET	SVC	3/7/2023	1973	RET ABN	UG-SERVICE
3834	42483430	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3835	38272431	GRET	SVC	2/25/2021	1973	RET ABN	UG-SERVICE
3836	39728731	GRET	SVC	1/28/2022	1973	RET ABN	UG-SERVICE
3837	42227721	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3838	42227953	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3839	42846212	GRET	SVC	7/30/2024	1973	RET ABN	UG-SERVICE
3840	41304277	GRET	SVC	9/18/2023	1973	RET ABN	UG-SERVICE
3841	43480923	GRET	SVC	9/14/2024	1973	RET ABN	UG-SERVICE
3842	36153326	GRET	SVC	3/19/2020	1973	RET ABN	UG-SERVICE
3843	43122877	GRET	SVC	5/28/2024	1973	RET ABN	UG-SERVICE
3844	41243177	GRET	SVC	2/10/2023	1973	RET ABN	UG-SERVICE
3845	43506831	GRET	SVC	10/4/2024	1973	RET ABN	UG-SERVICE
3846	38162884	GRET	SVC	2/22/2021	1973	RET ABN	UG-SERVICE
3847	39665660	GRET	SVC	8/3/2022	1973	RET ABN	UG-SERVICE
3848	43004209	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3849	35960589	GRET	SVC	1/28/2020	1973	RET ABN	UG-SERVICE
3850	42228032	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3851	41245808	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3852	39570884	GRET	SVC	12/7/2021	1973	RET ABN	UG-SERVICE
3853	41245801	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3854	42551744	GRET	SVC	1/8/2024	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3855	43663930	GRET	SVC	10/7/2024	1973	RET ABN	UG-SERVICE
3856	37094896	GRET	SVC	10/23/2020	1973	RET ABN	UG-SERVICE
3857	43205044	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3858	40989015	GRET	SVC	11/29/2022	1973	RET ABN	UG-SERVICE
3859	42487701	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3860	42228025	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3861	38397396	GRET	SVC	4/20/2021	1973	RET ABN	UG-SERVICE
3862	42956474	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3863	42227942	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3864	38894836	GRET	SVC	8/13/2021	1973	RET ABN	UG-SERVICE
3865	38427246	GRET	SVC	4/27/2021	1973	RET ABN	UG-SERVICE
3866	42227720	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3867	42227841	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3868	41277767	GRET	SVC	2/13/2023	1973	RET ABN	UG-SERVICE
3869	36392249	GRET	SVC	6/4/2020	1973	RET ABN	UG-SERVICE
3870	42227763	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3871	42958052	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3872	41273374	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3873	41279262	GRET	SVC	2/14/2023	1973	RET ABN	UG-SERVICE
3874	38561619	GRET	SVC	4/19/2021	1973	RET ABN	UG-SERVICE
3875	43480925	GRET	SVC	9/14/2024	1973	RET ABN	UG-SERVICE
3876	42380984	GRET	SVC	11/17/2023	1973	RET ABN	UG-SERVICE
3877	41247074	GRET	SVC	3/7/2023	1973	RET ABN	UG-SERVICE
3878	40388837	GRET	SVC	10/24/2022	1973	RET ABN	UG-SERVICE
3879	42227843	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3880	41179138	GRET	SVC	1/18/2023	1973	RET ABN	UG-SERVICE
3881	42228029	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3882	42227664	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3883	38396306	GRET	SVC	4/20/2021	1973	RET ABN	UG-SERVICE
3884	42627232	GRET	SVC	1/29/2024	1973	RET ABN	UG-SERVICE
3885	40498641	GRET	SVC	7/28/2022	1973	RET ABN	UG-SERVICE
3886	43005058	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3887	36960587	GRET	SVC	9/22/2020	1973	RET ABN	UG-SERVICE
3888	41279156	GRET	SVC	2/16/2023	1973	RET ABN	UG-SERVICE
3889	42958051	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3890	43245012	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3891	42227178	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3892	36741661	GRET	SVC	8/5/2020	1973	RET ABN	UG-SERVICE
3893	43705442	GRET	SVC	10/18/2024	1973	RET ABN	UG-SERVICE
3894	42228022	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3895	39284203	GRET	SVC	10/12/2021	1973	RET ABN	UG-SERVICE
3896	41273567	GRET	SVC	2/19/2023	1973	RET ABN	UG-SERVICE
3897	39093693	GRET	SVC	9/7/2021	1973	RET ABN	UG-SERVICE
3898	42227172	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3899	41427448	GRET	SVC	3/21/2023	1973	RET ABN	UG-SERVICE
3900	43974668	GRET	SVC	11/16/2024	1973	RET ABN	UG-SERVICE
3901	43711580	GRET	SVC	11/22/2024	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3902	42228031	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3903	42487754	GRET	SVC	7/31/2024	1973	RET ABN	UG-SERVICE
3904	40558487	GRET	SVC	8/13/2022	1973	RET ABN	UG-SERVICE
3905	41247244	GRET	SVC	3/6/2023	1973	RET ABN	UG-SERVICE
3906	36363719	GRET	SVC	5/19/2020	1973	RET ABN	UG-SERVICE
3907	38839899	GRET	SVC	7/26/2021	1973	RET ABN	UG-SERVICE
3908	38156971	GRET	SVC	2/20/2021	1973	RET ABN	UG-SERVICE
3909	41247068	GRET	SVC	2/8/2023	1973	RET ABN	UG-SERVICE
3910	42227958	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3911	42509251	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3912	40022949	GRET	SVC	4/11/2022	1973	RET ABN	UG-SERVICE
3913	43282341	GRET	SVC	7/23/2024	1973	RET ABN	UG-SERVICE
3914	41279141	GRET	SVC	3/24/2023	1973	RET ABN	UG-SERVICE
3915	36876466	GRET	SVC	8/31/2020	1973	RET ABN	UG-SERVICE
3916	41277772	GRET	SVC	3/1/2023	1973	RET ABN	UG-SERVICE
3917	42956468	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3918	42227306	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3919	42833097	GRET	SVC	7/22/2024	1973	RET ABN	UG-SERVICE
3920	43868699	GRET	SVC	11/26/2024	1973	RET ABN	UG-SERVICE
3921	39901915	GRET	SVC	3/17/2022	1973	RET ABN	UG-SERVICE
3922	42227956	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3923	42227845	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3924	42227760	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3925	42227944	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3926	43115657	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3927	41479996	GRET	SVC	4/6/2023	1973	RET ABN	UG-SERVICE
3928	40054753	GRET	SVC	12/23/2021	1973	RET ABN	UG-SERVICE
3929	41279540	GRET	SVC	3/8/2023	1973	RET ABN	UG-SERVICE
3930	36007595	GRET	SVC	2/12/2020	1973	RET ABN	UG-SERVICE
3931	42227959	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3932	42227679	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3933	42227761	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3934	42679360	GRET	SVC	2/6/2024	1973	RET ABN	UG-SERVICE
3935	42054745	GRET	SVC	8/29/2023	1973	RET ABN	UG-SERVICE
3936	42487443	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3937	42227834	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3938	41245805	GRET	SVC	2/11/2023	1973	RET ABN	UG-SERVICE
3939	43480921	GRET	SVC	9/14/2024	1973	RET ABN	UG-SERVICE
3940	42227820	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3941	42833358	GRET	SVC	7/23/2024	1973	RET ABN	UG-SERVICE
3942	42227738	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3943	41242858	GRET	SVC	3/21/2023	1973	RET ABN	UG-SERVICE
3944	42227842	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3945	42227943	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3946	41436540	GRET	SVC	3/29/2023	1973	RET ABN	UG-SERVICE
3947	43145111	GRET	SVC	6/7/2024	1973	RET ABN	UG-SERVICE
3948	43729863	GRET	SVC	10/22/2024	1973	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3949	37973580	GRET	SVC	1/4/2021	1973	RET ABN	UG-SERVICE
3950	41818653	GRET	SVC	7/27/2023	1973	RET ABN	UG-SERVICE
3951	42670284	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3952	42483434	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3953	40847419	GRET	SVC	10/24/2022	1973	RET ABN	UG-SERVICE
3954	42487711	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3955	36260075	GRET	SVC	3/20/2020	1973	RET ABN	UG-SERVICE
3956	42509258	GRET	SVC	7/18/2024	1973	RET ABN	UG-SERVICE
3957	42227304	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3958	43613521	GRET	SVC	9/30/2024	1973	RET ABN	UG-SERVICE
3959	42957338	GRET	SVC	9/19/2024	1973	RET ABN	UG-SERVICE
3960	42227313	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3961	43318350	GRET	SVC	8/5/2024	1973	RET ABN	UG-SERVICE
3962	40683501	GRET	SVC	9/24/2022	1973	RET ABN	UG-SERVICE
3963	42227835	GRET	SVC	10/31/2023	1973	RET ABN	UG-SERVICE
3964	42509257	GRET	SVC	7/31/2024	1974	RET ABN	UG-SERVICE
3965	42228034	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3966	42227732	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3967	42227549	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3968	37782096	GRET	SVC	11/25/2020	1974	RET ABN	UG-SERVICE
3969	42227837	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3970	43369052	GRET	SVC	8/19/2024	1974	RET ABN	UG-SERVICE
3971	36194666	GRET	SVC	4/23/2020	1974	RET ABN	UG-SERVICE
3972	41407766	GRET	SVC	10/19/2023	1974	RET ABN	UG-SERVICE
3973	38301295	GRET	SVC	5/18/2021	1974	RET ABN	UG-SERVICE
3974	39844903	GRET	SVC	2/28/2022	1974	RET ABN	UG-SERVICE
3975	42227773	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3976	37216516	GRET	SVC	11/2/2020	1974	RET ABN	UG-SERVICE
3977	39090763	GRET	SVC	9/21/2021	1974	RET ABN	UG-SERVICE
3978	41533537	GRET	SVC	9/8/2023	1974	RET ABN	UG-SERVICE
3979	40959691	GRET	SVC	11/21/2022	1974	RET ABN	UG-SERVICE
3980	43667743	GRET	SVC	10/9/2024	1974	RET ABN	UG-SERVICE
3981	42227821	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3982	36072400	GRET	SVC	6/2/2020	1974	RET ABN	UG-SERVICE
3983	42227824	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3984	42227363	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3985	36036482	GRET	SVC	2/25/2020	1974	RET ABN	UG-SERVICE
3986	42227307	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3987	40801836	GRET	SVC	10/14/2022	1974	RET ABN	UG-SERVICE
3988	42227839	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3989	43380802	GRET	SVC	7/25/2024	1974	RET ABN	UG-SERVICE
3990	42227830	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3991	42227669	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3992	40595812	GRET	SVC	8/22/2022	1974	RET ABN	UG-SERVICE
3993	43318352	GRET	SVC	11/6/2024	1974	RET ABN	UG-SERVICE
3994	42227662	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
3995	40156382	GRET	SVC	5/3/2022	1974	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
3996	38453815	GRET	SVC	5/4/2021	1974	RET ABN	UG-SERVICE
3997	41428615	GRET	SVC	3/22/2023	1974	RET ABN	UG-SERVICE
3998	38014215	GRET	SVC	1/12/2021	1974	RET ABN	UG-SERVICE
3999	42227545	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4000	38156953	GRET	SVC	7/30/2021	1974	RET ABN	UG-SERVICE
4001	43711732	GRET	SVC	10/15/2024	1974	RET ABN	UG-SERVICE
4002	42227731	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4003	42227671	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4004	42956849	GRET	SVC	7/18/2024	1974	RET ABN	UG-SERVICE
4005	39551371	GRET	SVC	12/16/2021	1974	RET ABN	UG-SERVICE
4006	42227727	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4007	35888215	GRET	SVC	1/13/2020	1974	RET ABN	UG-SERVICE
4008	38052297	GRET	SVC	1/25/2021	1974	RET ABN	UG-SERVICE
4009	42227733	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4010	42227776	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4011	43226784	GRET	SVC	6/25/2024	1974	RET ABN	UG-SERVICE
4012	42915049	GRET	SVC	4/18/2024	1974	RET ABN	UG-SERVICE
4013	42678881	GRET	SVC	2/5/2024	1974	RET ABN	UG-SERVICE
4014	38934857	GRET	SVC	8/23/2021	1974	RET ABN	UG-SERVICE
4015	42227318	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4016	36946724	GRET	SVC	9/14/2020	1974	RET ABN	UG-SERVICE
4017	35941119	GRET	SVC	1/27/2020	1974	RET ABN	UG-SERVICE
4018	42227769	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4019	43592553	GRET	SVC	9/25/2024	1974	RET ABN	UG-SERVICE
4020	43324302	GRET	SVC	8/2/2024	1974	RET ABN	UG-SERVICE
4021	42227765	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4022	42571143	GRET	SVC	2/21/2024	1974	RET ABN	UG-SERVICE
4023	42284186	GRET	SVC	10/23/2023	1974	RET ABN	UG-SERVICE
4024	42781675	GRET	SVC	3/6/2024	1974	RET ABN	UG-SERVICE
4025	42227723	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4026	38287708	GRET	SVC	3/30/2021	1974	RET ABN	UG-SERVICE
4027	41969806	GRET	SVC	8/7/2023	1974	RET ABN	UG-SERVICE
4028	38881005	GRET	SVC	8/11/2021	1974	RET ABN	UG-SERVICE
4029	42227722	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4030	37957971	GRET	SVC	12/27/2020	1974	RET ABN	UG-SERVICE
4031	38042123	GRET	SVC	1/25/2021	1974	RET ABN	UG-SERVICE
4032	42227855	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4033	42227728	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4034	43674680	GRET	SVC	10/11/2024	1974	RET ABN	UG-SERVICE
4035	41917199	GRET	SVC	7/28/2023	1974	RET ABN	UG-SERVICE
4036	39436536	GRET	SVC	12/4/2021	1974	RET ABN	UG-SERVICE
4037	42227730	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4038	42055908	GRET	SVC	8/29/2023	1974	RET ABN	UG-SERVICE
4039	39388355	GRET	SVC	11/5/2021	1974	RET ABN	UG-SERVICE
4040	37811150	GRET	SVC	12/4/2020	1974	RET ABN	UG-SERVICE
4041	38975815	GRET	SVC	8/31/2021	1974	RET ABN	UG-SERVICE
4042	37891114	GRET	SVC	12/8/2020	1974	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4043	42227557	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4044	42227854	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4045	35861892	GRET	SVC	1/8/2020	1974	RET ABN	UG-SERVICE
4046	38217834	GRET	SVC	3/10/2021	1974	RET ABN	UG-SERVICE
4047	42227374	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4048	42227554	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4049	42227822	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4050	36736359	GRET	SVC	8/6/2020	1974	RET ABN	UG-SERVICE
4051	42227829	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4052	42227310	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4053	35958586	GRET	SVC	1/28/2020	1974	RET ABN	UG-SERVICE
4054	42227377	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4055	40113542	GRET	SVC	5/4/2022	1974	RET ABN	UG-SERVICE
4056	37053180	GRET	SVC	10/12/2020	1974	RET ABN	UG-SERVICE
4057	42549252	GRET	SVC	1/8/2024	1974	RET ABN	UG-SERVICE
4058	43030227	GRET	SVC	5/15/2024	1974	RET ABN	UG-SERVICE
4059	42227729	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4060	42227376	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4061	42227556	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4062	42227548	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4063	42227940	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4064	40819779	GRET	SVC	10/18/2022	1974	RET ABN	UG-SERVICE
4065	42227543	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4066	43464646	GRET	SVC	8/20/2024	1974	RET ABN	UG-SERVICE
4067	38447998	GRET	SVC	5/3/2021	1974	RET ABN	UG-SERVICE
4068	42227768	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4069	36992975	GRET	SVC	9/29/2020	1974	RET ABN	UG-SERVICE
4070	39489548	GRET	SVC	12/11/2021	1974	RET ABN	UG-SERVICE
4071	42227674	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4072	35316596	GRET	SVC	1/22/2021	1974	RET ABN	UG-SERVICE
4073	42227725	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4074	41243542	GRET	SVC	2/7/2023	1974	RET ABN	UG-SERVICE
4075	42227309	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4076	41922368	GRET	SVC	7/27/2023	1974	RET ABN	UG-SERVICE
4077	42227777	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4078	42227672	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4079	42227670	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4080	42227673	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4081	41834898	GRET	SVC	7/10/2023	1974	RET ABN	UG-SERVICE
4082	42227676	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4083	43598257	GRET	SVC	9/23/2024	1974	RET ABN	UG-SERVICE
4084	36315324	GRET	SVC	5/12/2020	1974	RET ABN	UG-SERVICE
4085	40724321	GRET	SVC	9/20/2022	1974	RET ABN	UG-SERVICE
4086	42227858	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4087	42227774	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4088	43282149	GRET	SVC	12/2/2024	1974	RET ABN	UG-SERVICE
4089	42227851	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4090	43515343	GRET	SVC	9/5/2024	1974	RET ABN	UG-SERVICE
4091	36835404	GRET	SVC	8/26/2020	1974	RET ABN	UG-SERVICE
4092	42227724	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4093	38499443	GRET	SVC	4/2/2021	1974	RET ABN	UG-SERVICE
4094	43608047	GRET	SVC	10/1/2024	1974	RET ABN	UG-SERVICE
4095	42227779	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4096	42670283	GRET	SVC	9/19/2024	1974	RET ABN	UG-SERVICE
4097	42227827	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4098	42227726	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4099	39803711	GRET	SVC	2/16/2022	1974	RET ABN	UG-SERVICE
4100	36471396	GRET	SVC	7/11/2020	1974	RET ABN	UG-SERVICE
4101	42227663	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4102	42227675	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4103	38324623	GRET	SVC	4/6/2021	1974	RET ABN	UG-SERVICE
4104	43282145	GRET	SVC	12/2/2024	1974	RET ABN	UG-SERVICE
4105	43862285	GRET	SVC	11/22/2024	1974	RET ABN	UG-SERVICE
4106	42227859	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4107	42227771	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4108	38122752	GRET	SVC	2/12/2021	1974	RET ABN	UG-SERVICE
4109	37094277	GRET	SVC	10/20/2020	1974	RET ABN	UG-SERVICE
4110	42227546	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4111	42227775	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4112	42227941	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4113	43963064	GRET	SVC	12/19/2024	1974	RET ABN	UG-SERVICE
4114	42227553	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4115	40254567	GRET	SVC	9/12/2022	1974	RET ABN	UG-SERVICE
4116	42227836	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4117	40091749	GRET	SVC	5/13/2022	1974	RET ABN	UG-SERVICE
4118	37041461	GRET	SVC	10/8/2020	1974	RET ABN	UG-SERVICE
4119	42227362	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4120	36031274	GRET	SVC	2/17/2020	1974	RET ABN	UG-SERVICE
4121	42227857	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4122	35919174	GRET	SVC	2/19/2020	1974	RET ABN	UG-SERVICE
4123	42227778	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4124	42227828	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4125	42227823	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4126	41706827	GRET	SVC	8/21/2023	1974	RET ABN	UG-SERVICE
4127	43205303	GRET	SVC	6/15/2024	1974	RET ABN	UG-SERVICE
4128	42227552	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4129	42227174	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4130	42227734	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4131	43530074	GRET	SVC	9/6/2024	1974	RET ABN	UG-SERVICE
4132	42227544	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4133	42227825	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4134	42227555	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4135	35945529	GRET	SVC	1/26/2020	1974	RET ABN	UG-SERVICE
4136	39233301	GRET	SVC	9/30/2021	1974	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4137	42227308	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4138	42227838	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4139	40754061	GRET	SVC	9/28/2022	1974	RET ABN	UG-SERVICE
4140	42227678	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4141	43109290	GRET	SVC	5/30/2024	1974	RET ABN	UG-SERVICE
4142	42227667	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4143	42227831	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4144	42227179	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4145	42227311	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4146	40900806	GRET	SVC	12/6/2022	1974	RET ABN	UG-SERVICE
4147	40357997	GRET	SVC	8/2/2022	1974	RET ABN	UG-SERVICE
4148	42227666	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4149	38640384	GRET	SVC	6/21/2021	1974	RET ABN	UG-SERVICE
4150	42227764	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4151	36730703	GRET	SVC	9/8/2020	1974	RET ABN	UG-SERVICE
4152	40572525	GRET	SVC	8/15/2022	1974	RET ABN	UG-SERVICE
4153	42828610	GRET	SVC	3/18/2024	1974	RET ABN	UG-SERVICE
4154	42227173	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4155	42227767	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4156	43327222	GRET	SVC	7/30/2024	1974	RET ABN	UG-SERVICE
4157	38638881	GRET	SVC	8/2/2021	1974	RET ABN	UG-SERVICE
4158	42227661	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4159	42227660	GRET	SVC	10/31/2023	1974	RET ABN	UG-SERVICE
4160	42899349	GRET	SVC	4/15/2024	1974	RET ABN	UG-SERVICE
4161	41888298	GRET	SVC	7/18/2023	1974	RET ABN	UG-SERVICE
4162	42177761	GRET	SVC	11/16/2023	1975	RET ABN	UG-SERVICE
4163	37869004	GRET	SVC	12/2/2020	1975	RET ABN	UG-SERVICE
4164	40751251	GRET	SVC	9/30/2022	1975	RET ABN	UG-SERVICE
4165	41279008	GRET	SVC	2/15/2023	1975	RET ABN	UG-SERVICE
4166	43448530	GRET	SVC	12/11/2024	1975	RET ABN	UG-SERVICE
4167	38591974	GRET	SVC	4/20/2021	1975	RET ABN	UG-SERVICE
4168	39835902	GRET	SVC	2/28/2022	1975	RET ABN	UG-SERVICE
4169	40078415	GRET	SVC	4/27/2022	1975	RET ABN	UG-SERVICE
4170	38571057	GRET	SVC	6/11/2021	1975	RET ABN	UG-SERVICE
4171	39550151	GRET	SVC	12/17/2021	1975	RET ABN	UG-SERVICE
4172	43867068	GRET	SVC	11/25/2024	1975	RET ABN	UG-SERVICE
4173	43631731	GRET	SVC	9/30/2024	1975	RET ABN	UG-SERVICE
4174	36165982	GRET	SVC	3/24/2020	1975	RET ABN	UG-SERVICE
4175	42584864	GRET	SVC	1/22/2024	1975	RET ABN	UG-SERVICE
4176	41426040	GRET	SVC	3/22/2023	1975	RET ABN	UG-SERVICE
4177	41528449	GRET	SVC	4/26/2023	1975	RET ABN	UG-SERVICE
4178	38053254	GRET	SVC	1/25/2021	1975	RET ABN	UG-SERVICE
4179	36029864	GRET	SVC	2/18/2020	1975	RET ABN	UG-SERVICE
4180	40507365	GRET	SVC	7/30/2022	1975	RET ABN	UG-SERVICE
4181	36298477	GRET	SVC	4/8/2020	1975	RET ABN	UG-SERVICE
4182	40062912	GRET	SVC	4/25/2022	1975	RET ABN	UG-SERVICE
4183	39824976	GRET	SVC	2/23/2022	1975	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4184	38192814	GRET	SVC	3/3/2021	1975	RET ABN	UG-SERVICE
4185	38886010	GRET	SVC	8/9/2021	1975	RET ABN	UG-SERVICE
4186	36882321	GRET	SVC	9/1/2020	1975	RET ABN	UG-SERVICE
4187	41283333	GRET	SVC	2/16/2023	1975	RET ABN	UG-SERVICE
4188	43905665	GRET	SVC	12/4/2024	1975	RET ABN	UG-SERVICE
4189	42584534	GRET	SVC	1/22/2024	1975	RET ABN	UG-SERVICE
4190	42052653	GRET	SVC	8/31/2023	1975	RET ABN	UG-SERVICE
4191	41162248	GRET	SVC	1/12/2023	1975	RET ABN	UG-SERVICE
4192	42760336	GRET	SVC	8/1/2024	1975	RET ABN	UG-SERVICE
4193	41277769	GRET	SVC	2/14/2023	1975	RET ABN	UG-SERVICE
4194	41498695	GRET	SVC	4/21/2023	1975	RET ABN	UG-SERVICE
4195	38582326	GRET	SVC	6/15/2021	1975	RET ABN	UG-SERVICE
4196	41279152	GRET	SVC	2/15/2023	1975	RET ABN	UG-SERVICE
4197	36119482	GRET	SVC	11/5/2020	1975	RET ABN	UG-SERVICE
4198	37926339	GRET	SVC	12/13/2020	1975	RET ABN	UG-SERVICE
4199	40561480	GRET	SVC	8/15/2022	1975	RET ABN	UG-SERVICE
4200	43228186	GRET	SVC	9/19/2024	1975	RET ABN	UG-SERVICE
4201	40669708	GRET	SVC	10/22/2022	1975	RET ABN	UG-SERVICE
4202	40328415	GRET	SVC	8/2/2022	1975	RET ABN	UG-SERVICE
4203	43820162	GRET	SVC	11/12/2024	1975	RET ABN	UG-SERVICE
4204	43473374	GRET	SVC	9/7/2024	1975	RET ABN	UG-SERVICE
4205	41283327	GRET	SVC	2/16/2023	1975	RET ABN	UG-SERVICE
4206	37064875	GRET	SVC	10/12/2020	1975	RET ABN	UG-SERVICE
4207	37099276	GRET	SVC	9/9/2020	1975	RET ABN	UG-SERVICE
4208	43240063	GRET	SVC	6/30/2024	1975	RET ABN	UG-SERVICE
4209	41342698	GRET	SVC	3/7/2023	1975	RET ABN	UG-SERVICE
4210	43743877	GRET	SVC	10/23/2024	1975	RET ABN	UG-SERVICE
4211	40352832	GRET	SVC	6/28/2022	1975	RET ABN	UG-SERVICE
4212	41279013	GRET	SVC	2/15/2023	1975	RET ABN	UG-SERVICE
4213	36701068	GRET	SVC	7/28/2020	1975	RET ABN	UG-SERVICE
4214	39560483	GRET	SVC	12/20/2021	1975	RET ABN	UG-SERVICE
4215	42252699	GRET	SVC	10/20/2023	1975	RET ABN	UG-SERVICE
4216	41497631	GRET	SVC	4/21/2023	1975	RET ABN	UG-SERVICE
4217	41033159	GRET	SVC	12/15/2022	1975	RET ABN	UG-SERVICE
4218	39657981	GRET	SVC	2/10/2022	1975	RET ABN	UG-SERVICE
4219	40431528	GRET	SVC	7/14/2022	1975	RET ABN	UG-SERVICE
4220	42956743	GRET	SVC	9/19/2024	1975	RET ABN	UG-SERVICE
4221	41646104	GRET	SVC	5/17/2023	1975	RET ABN	UG-SERVICE
4222	36882136	GRET	SVC	9/1/2020	1975	RET ABN	UG-SERVICE
4223	39281140	GRET	SVC	10/7/2021	1975	RET ABN	UG-SERVICE
4224	36735967	GRET	SVC	8/3/2020	1975	RET ABN	UG-SERVICE
4225	40218720	GRET	SVC	6/7/2022	1975	RET ABN	UG-SERVICE
4226	38930274	GRET	SVC	8/23/2021	1975	RET ABN	UG-SERVICE
4227	41906711	GRET	SVC	7/24/2023	1975	RET ABN	UG-SERVICE
4228	39619526	GRET	SVC	1/3/2022	1975	RET ABN	UG-SERVICE
4229	39251887	GRET	SVC	10/6/2021	1975	RET ABN	UG-SERVICE
4230	40431115	GRET	SVC	7/15/2022	1975	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4231	43929086	GRET	SVC	12/13/2024	1975	RET ABN	UG-SERVICE
4232	37926322	GRET	SVC	12/16/2020	1975	RET ABN	UG-SERVICE
4233	43309760	GRET	SVC	7/13/2024	1975	RET ABN	UG-SERVICE
4234	38884105	GRET	SVC	8/18/2021	1975	RET ABN	UG-SERVICE
4235	41423574	GRET	SVC	10/18/2023	1975	RET ABN	UG-SERVICE
4236	38749947	GRET	SVC	7/22/2021	1975	RET ABN	UG-SERVICE
4237	41636672	GRET	SVC	5/14/2023	1975	RET ABN	UG-SERVICE
4238	42834267	GRET	SVC	7/23/2024	1975	RET ABN	UG-SERVICE
4239	36580064	GRET	SVC	7/6/2020	1975	RET ABN	UG-SERVICE
4240	36040618	GRET	SVC	2/19/2020	1975	RET ABN	UG-SERVICE
4241	41580112	GRET	SVC	5/3/2023	1975	RET ABN	UG-SERVICE
4242	36662570	GRET	SVC	7/20/2020	1975	RET ABN	UG-SERVICE
4243	40497358	GRET	SVC	7/26/2022	1975	RET ABN	UG-SERVICE
4244	39960894	GRET	SVC	5/25/2022	1975	RET ABN	UG-SERVICE
4245	40327034	GRET	SVC	6/20/2022	1975	RET ABN	UG-SERVICE
4246	37875936	GRET	SVC	12/3/2020	1975	RET ABN	UG-SERVICE
4247	42584519	GRET	SVC	1/22/2024	1975	RET ABN	UG-SERVICE
4248	41182816	GRET	SVC	1/19/2023	1975	RET ABN	UG-SERVICE
4249	41287921	GRET	SVC	3/16/2023	1975	RET ABN	UG-SERVICE
4250	41411231	GRET	SVC	4/2/2024	1975	RET ABN	UG-SERVICE
4251	42379497	GRET	SVC	11/28/2023	1975	RET ABN	UG-SERVICE
4252	41445566	GRET	SVC	3/28/2023	1975	RET ABN	UG-SERVICE
4253	40900676	GRET	SVC	11/12/2022	1975	RET ABN	UG-SERVICE
4254	40062210	GRET	SVC	5/2/2022	1975	RET ABN	UG-SERVICE
4255	38212855	GRET	SVC	3/7/2021	1975	RET ABN	UG-SERVICE
4256	38534582	GRET	SVC	5/25/2021	1975	RET ABN	UG-SERVICE
4257	43469767	GRET	SVC	8/21/2024	1975	RET ABN	UG-SERVICE
4258	41606960	GRET	SVC	5/8/2023	1975	RET ABN	UG-SERVICE
4259	38200998	GRET	SVC	3/6/2021	1975	RET ABN	UG-SERVICE
4260	41567772	GRET	SVC	5/2/2023	1975	RET ABN	UG-SERVICE
4261	41467224	GRET	SVC	4/27/2023	1975	RET ABN	UG-SERVICE
4262	41316863	GRET	SVC	2/28/2023	1975	RET ABN	UG-SERVICE
4263	39236000	GRET	SVC	9/30/2021	1975	RET ABN	UG-SERVICE
4264	40419741	GRET	SVC	8/31/2022	1975	RET ABN	UG-SERVICE
4265	38160985	GRET	SVC	2/27/2021	1975	RET ABN	UG-SERVICE
4266	42509254	GRET	SVC	7/18/2024	1975	RET ABN	UG-SERVICE
4267	38455304	GRET	SVC	5/7/2021	1975	RET ABN	UG-SERVICE
4268	38492184	GRET	SVC	5/13/2021	1975	RET ABN	UG-SERVICE
4269	38865047	GRET	SVC	8/4/2021	1975	RET ABN	UG-SERVICE
4270	39395577	GRET	SVC	11/23/2021	1975	RET ABN	UG-SERVICE
4271	37067280	GRET	SVC	10/27/2020	1976	RET ABN	UG-SERVICE
4272	42530674	GRET	SVC	12/20/2023	1976	RET ABN	UG-SERVICE
4273	40761856	GRET	SVC	10/18/2022	1976	RET ABN	UG-SERVICE
4274	42626212	GRET	SVC	1/29/2024	1976	RET ABN	UG-SERVICE
4275	36980370	GRET	SVC	9/23/2020	1976	RET ABN	UG-SERVICE
4276	40990267	GRET	SVC	11/17/2022	1976	RET ABN	UG-SERVICE
4277	41450915	GRET	SVC	3/29/2023	1976	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4278	38397906	GRET	SVC	4/26/2021	1976	RET ABN	UG-SERVICE
4279	41520905	GRET	SVC	4/27/2023	1976	RET ABN	UG-SERVICE
4280	42509255	GRET	SVC	7/18/2024	1976	RET ABN	UG-SERVICE
4281	41482053	GRET	SVC	4/9/2023	1976	RET ABN	UG-SERVICE
4282	39547480	GRET	SVC	12/12/2021	1976	RET ABN	UG-SERVICE
4283	42004203	GRET	SVC	8/13/2023	1976	RET ABN	UG-SERVICE
4284	42744659	GRET	SVC	2/17/2024	1976	RET ABN	UG-SERVICE
4285	37936716	GRET	SVC	12/20/2020	1976	RET ABN	UG-SERVICE
4286	38744414	GRET	SVC	7/12/2021	1976	RET ABN	UG-SERVICE
4287	37971323	GRET	SVC	12/28/2020	1976	RET ABN	UG-SERVICE
4288	40656087	GRET	SVC	8/30/2022	1976	RET ABN	UG-SERVICE
4289	38601905	GRET	SVC	7/7/2021	1976	RET ABN	UG-SERVICE
4290	36672285	GRET	SVC	7/22/2020	1976	RET ABN	UG-SERVICE
4291	35151335	GRET	SVC	1/6/2020	1976	RET ABN	UG-SERVICE
4292	41860024	GRET	SVC	7/8/2023	1976	RET ABN	UG-SERVICE
4293	39369426	GRET	SVC	11/1/2021	1976	RET ABN	UG-SERVICE
4294	41041907	GRET	SVC	11/1/2022	1976	RET ABN	UG-SERVICE
4295	36656230	GRET	SVC	7/21/2020	1976	RET ABN	UG-SERVICE
4296	37142284	GRET	SVC	10/29/2020	1976	RET ABN	UG-SERVICE
4297	40512849	GRET	SVC	8/5/2022	1976	RET ABN	UG-SERVICE
4298	37926328	GRET	SVC	12/13/2020	1976	RET ABN	UG-SERVICE
4299	36041151	GRET	SVC	2/17/2020	1976	RET ABN	UG-SERVICE
4300	38707020	GRET	SVC	8/3/2021	1976	RET ABN	UG-SERVICE
4301	42391940	GRET	SVC	11/20/2023	1976	RET ABN	UG-SERVICE
4302	37952658	GRET	SVC	12/22/2020	1976	RET ABN	UG-SERVICE
4303	39515604	GRET	SVC	12/23/2021	1976	RET ABN	UG-SERVICE
4304	39143438	GRET	SVC	9/20/2021	1976	RET ABN	UG-SERVICE
4305	36178247	GRET	SVC	3/2/2020	1976	RET ABN	UG-SERVICE
4306	38441449	GRET	SVC	1/3/2022	1976	RET ABN	UG-SERVICE
4307	40963331	GRET	SVC	11/19/2022	1976	RET ABN	UG-SERVICE
4308	39580230	GRET	SVC	12/27/2021	1976	RET ABN	UG-SERVICE
4309	41759598	GRET	SVC	7/13/2023	1976	RET ABN	UG-SERVICE
4310	38098602	GRET	SVC	2/8/2021	1976	RET ABN	UG-SERVICE
4311	42612164	GRET	SVC	1/29/2024	1976	RET ABN	UG-SERVICE
4312	40488326	GRET	SVC	8/11/2022	1976	RET ABN	UG-SERVICE
4313	41411294	GRET	SVC	4/2/2024	1976	RET ABN	UG-SERVICE
4314	43694923	GRET	SVC	10/24/2024	1976	RET ABN	UG-SERVICE
4315	42115195	GRET	SVC	9/11/2023	1976	RET ABN	UG-SERVICE
4316	43582448	GRET	SVC	9/16/2024	1976	RET ABN	UG-SERVICE
4317	42555015	GRET	SVC	1/6/2024	1976	RET ABN	UG-SERVICE
4318	40492798	GRET	SVC	8/3/2022	1976	RET ABN	UG-SERVICE
4319	43624063	GRET	SVC	9/27/2024	1976	RET ABN	UG-SERVICE
4320	41439585	GRET	SVC	3/29/2023	1976	RET ABN	UG-SERVICE
4321	37214711	GRET	SVC	12/8/2020	1976	RET ABN	UG-SERVICE
4322	42221082	GRET	SVC	10/11/2023	1976	RET ABN	UG-SERVICE
4323	36612956	GRET	SVC	7/13/2020	1976	RET ABN	UG-SERVICE
4324	42107582	GRET	SVC	9/12/2023	1976	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4325	37998238	GRET	SVC	1/11/2021	1976	RET ABN	UG-SERVICE
4326	41424229	GRET	SVC	6/21/2023	1976	RET ABN	UG-SERVICE
4327	37674075	GRET	SVC	12/29/2020	1976	RET ABN	UG-SERVICE
4328	38140474	GRET	SVC	2/18/2021	1976	RET ABN	UG-SERVICE
4329	36200170	GRET	SVC	5/6/2020	1976	RET ABN	UG-SERVICE
4330	35986883	GRET	SVC	2/17/2020	1976	RET ABN	UG-SERVICE
4331	42794394	GRET	SVC	3/4/2024	1976	RET ABN	UG-SERVICE
4332	43364930	GRET	SVC	10/15/2024	1976	RET ABN	UG-SERVICE
4333	36309007	GRET	SVC	5/12/2020	1976	RET ABN	UG-SERVICE
4334	42584912	GRET	SVC	1/22/2024	1976	RET ABN	UG-SERVICE
4335	41979984	GRET	SVC	8/18/2023	1976	RET ABN	UG-SERVICE
4336	41411766	GRET	SVC	4/2/2024	1976	RET ABN	UG-SERVICE
4337	36883686	GRET	SVC	8/30/2020	1976	RET ABN	UG-SERVICE
4338	38441378	GRET	SVC	1/6/2022	1976	RET ABN	UG-SERVICE
4339	39242981	GRET	SVC	9/29/2021	1976	RET ABN	UG-SERVICE
4340	39660249	GRET	SVC	1/28/2022	1976	RET ABN	UG-SERVICE
4341	43758690	GRET	SVC	11/7/2024	1977	RET ABN	UG-SERVICE
4342	43923634	GRET	SVC	12/11/2024	1977	RET ABN	UG-SERVICE
4343	40492802	GRET	SVC	7/26/2022	1977	RET ABN	UG-SERVICE
4344	43767472	GRET	SVC	10/28/2024	1977	RET ABN	UG-SERVICE
4345	43107587	GRET	SVC	5/28/2024	1977	RET ABN	UG-SERVICE
4346	43976845	GRET	SVC	11/15/2024	1977	RET ABN	UG-SERVICE
4347	42026562	GRET	SVC	8/24/2023	1977	RET ABN	UG-SERVICE
4348	42950784	GRET	SVC	4/26/2024	1977	RET ABN	UG-SERVICE
4349	40879585	GRET	SVC	11/11/2022	1977	RET ABN	UG-SERVICE
4350	41273664	GRET	SVC	3/15/2023	1977	RET ABN	UG-SERVICE
4351	42590191	GRET	SVC	1/24/2024	1977	RET ABN	UG-SERVICE
4352	43909859	GRET	SVC	12/2/2024	1977	RET ABN	UG-SERVICE
4353	42567332	GRET	SVC	1/17/2024	1977	RET ABN	UG-SERVICE
4354	39552045	GRET	SVC	12/3/2021	1977	RET ABN	UG-SERVICE
4355	40675412	GRET	SVC	11/15/2022	1977	RET ABN	UG-SERVICE
4356	38637747	GRET	SVC	6/16/2021	1977	RET ABN	UG-SERVICE
4357	43800154	GRET	SVC	11/12/2024	1977	RET ABN	UG-SERVICE
4358	37886408	GRET	SVC	12/5/2020	1977	RET ABN	UG-SERVICE
4359	38181886	GRET	SVC	3/2/2021	1977	RET ABN	UG-SERVICE
4360	37052904	GRET	SVC	10/14/2020	1977	RET ABN	UG-SERVICE
4361	36918090	GRET	SVC	9/15/2020	1977	RET ABN	UG-SERVICE
4362	37887387	GRET	SVC	12/8/2020	1977	RET ABN	UG-SERVICE
4363	38364546	GRET	SVC	4/12/2021	1977	RET ABN	UG-SERVICE
4364	42837425	GRET	SVC	3/20/2024	1977	RET ABN	UG-SERVICE
4365	36146405	GRET	SVC	3/16/2020	1977	RET ABN	UG-SERVICE
4366	42949532	GRET	SVC	4/26/2024	1977	RET ABN	UG-SERVICE
4367	35844806	GRET	SVC	1/2/2020	1977	RET ABN	UG-SERVICE
4368	41331746	GRET	SVC	3/1/2023	1977	RET ABN	UG-SERVICE
4369	38089364	GRET	SVC	1/29/2021	1977	RET ABN	UG-SERVICE
4370	38034709	GRET	SVC	1/19/2021	1977	RET ABN	UG-SERVICE
4371	38352723	GRET	SVC	7/27/2021	1977	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4372	43654659	GRET	SVC	10/18/2024	1977	RET ABN	UG-SERVICE
4373	36472441	GRET	SVC	6/22/2020	1977	RET ABN	UG-SERVICE
4374	40395627	GRET	SVC	6/30/2022	1977	RET ABN	UG-SERVICE
4375	38171193	GRET	SVC	2/26/2021	1977	RET ABN	UG-SERVICE
4376	41556508	GRET	SVC	4/25/2023	1977	RET ABN	UG-SERVICE
4377	36566413	GRET	SVC	7/1/2020	1977	RET ABN	UG-SERVICE
4378	40561488	GRET	SVC	8/27/2022	1977	RET ABN	UG-SERVICE
4379	41099636	GRET	SVC	12/30/2022	1977	RET ABN	UG-SERVICE
4380	36915179	GRET	SVC	7/30/2020	1977	RET ABN	UG-SERVICE
4381	40702313	GRET	SVC	9/14/2022	1977	RET ABN	UG-SERVICE
4382	38268372	GRET	SVC	3/23/2021	1977	RET ABN	UG-SERVICE
4383	37926236	GRET	SVC	12/13/2020	1977	RET ABN	UG-SERVICE
4384	41411229	GRET	SVC	4/2/2024	1977	RET ABN	UG-SERVICE
4385	36727255	GRET	SVC	8/4/2020	1977	RET ABN	UG-SERVICE
4386	39552046	GRET	SVC	12/29/2021	1977	RET ABN	UG-SERVICE
4387	42427484	GRET	SVC	9/19/2024	1977	RET ABN	UG-SERVICE
4388	40692811	GRET	SVC	9/30/2022	1977	RET ABN	UG-SERVICE
4389	41411763	GRET	SVC	4/2/2024	1977	RET ABN	UG-SERVICE
4390	38107383	GRET	SVC	2/8/2021	1977	RET ABN	UG-SERVICE
4391	41084050	GRET	SVC	12/21/2022	1977	RET ABN	UG-SERVICE
4392	42277299	GRET	SVC	10/24/2023	1977	RET ABN	UG-SERVICE
4393	43442180	GRET	SVC	8/14/2024	1977	RET ABN	UG-SERVICE
4394	38352929	GRET	SVC	2/17/2023	1977	RET ABN	UG-SERVICE
4395	36345939	GRET	SVC	5/18/2020	1977	RET ABN	UG-SERVICE
4396	42650726	GRET	SVC	1/29/2024	1977	RET ABN	UG-SERVICE
4397	39492215	GRET	SVC	12/7/2021	1977	RET ABN	UG-SERVICE
4398	42020567	GRET	SVC	8/23/2023	1977	RET ABN	UG-SERVICE
4399	42461273	GRET	SVC	12/14/2023	1977	RET ABN	UG-SERVICE
4400	41242715	GRET	SVC	2/4/2023	1977	RET ABN	UG-SERVICE
4401	43650299	GRET	SVC	10/2/2024	1977	RET ABN	UG-SERVICE
4402	39299100	GRET	SVC	10/14/2021	1977	RET ABN	UG-SERVICE
4403	37642997	GRET	SVC	11/18/2020	1977	RET ABN	UG-SERVICE
4404	36202016	GRET	SVC	4/23/2020	1977	RET ABN	UG-SERVICE
4405	43525354	GRET	SVC	10/15/2024	1977	RET ABN	UG-SERVICE
4406	41859267	GRET	SVC	7/10/2023	1977	RET ABN	UG-SERVICE
4407	42065386	GRET	SVC	9/7/2023	1977	RET ABN	UG-SERVICE
4408	36451833	GRET	SVC	6/16/2020	1977	RET ABN	UG-SERVICE
4409	38148103	GRET	SVC	2/21/2021	1977	RET ABN	UG-SERVICE
4410	40708496	GRET	SVC	9/16/2022	1977	RET ABN	UG-SERVICE
4411	43281289	GRET	SVC	7/9/2024	1977	RET ABN	UG-SERVICE
4412	43007247	GRET	SVC	4/29/2024	1977	RET ABN	UG-SERVICE
4413	42025488	GRET	SVC	8/22/2023	1977	RET ABN	UG-SERVICE
4414	35151134	GRET	SVC	1/6/2020	1977	RET ABN	UG-SERVICE
4415	41009656	GRET	SVC	12/5/2022	1977	RET ABN	UG-SERVICE
4416	38845329	GRET	SVC	8/2/2021	1977	RET ABN	UG-SERVICE
4417	40996102	GRET	SVC	12/28/2022	1977	RET ABN	UG-SERVICE
4418	36185404	GRET	SVC	5/28/2020	1977	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4419	38441174	GRET	SVC	1/3/2022	1977	RET ABN	UG-SERVICE
4420	38441399	GRET	SVC	12/22/2021	1977	RET ABN	UG-SERVICE
4421	41834503	GRET	SVC	7/21/2023	1977	RET ABN	UG-SERVICE
4422	42903278	GRET	SVC	4/9/2024	1978	RET ABN	UG-SERVICE
4423	35872099	GRET	SVC	1/7/2020	1978	RET ABN	UG-SERVICE
4424	39518355	GRET	SVC	1/3/2022	1978	RET ABN	UG-SERVICE
4425	43086904	GRET	SVC	8/5/2024	1978	RET ABN	UG-SERVICE
4426	41051001	GRET	SVC	6/16/2023	1978	RET ABN	UG-SERVICE
4427	43876310	GRET	SVC	11/27/2024	1978	RET ABN	UG-SERVICE
4428	37149839	GRET	SVC	10/29/2020	1978	RET ABN	UG-SERVICE
4429	43151675	GRET	SVC	7/18/2024	1978	RET ABN	UG-SERVICE
4430	41182813	GRET	SVC	1/18/2023	1978	RET ABN	UG-SERVICE
4431	41482107	GRET	SVC	4/11/2023	1978	RET ABN	UG-SERVICE
4432	39705070	GRET	SVC	2/5/2024	1978	RET ABN	UG-SERVICE
4433	41330349	GRET	SVC	3/3/2023	1978	RET ABN	UG-SERVICE
4434	39599855	GRET	SVC	1/12/2022	1978	RET ABN	UG-SERVICE
4435	41424707	GRET	SVC	10/18/2023	1978	RET ABN	UG-SERVICE
4436	38407205	GRET	SVC	3/17/2021	1978	RET ABN	UG-SERVICE
4437	36197812	GRET	SVC	4/22/2020	1978	RET ABN	UG-SERVICE
4438	37415010	GRET	SVC	11/9/2020	1978	RET ABN	UG-SERVICE
4439	39532048	GRET	SVC	12/14/2021	1978	RET ABN	UG-SERVICE
4440	38278377	GRET	SVC	4/28/2021	1978	RET ABN	UG-SERVICE
4441	39705136	GRET	SVC	2/6/2024	1978	RET ABN	UG-SERVICE
4442	39983692	GRET	SVC	3/25/2022	1978	RET ABN	UG-SERVICE
4443	36218763	GRET	SVC	4/24/2020	1978	RET ABN	UG-SERVICE
4444	42707518	GRET	SVC	3/13/2024	1978	RET ABN	UG-SERVICE
4445	36148266	GRET	SVC	3/17/2020	1978	RET ABN	UG-SERVICE
4446	41860453	GRET	SVC	7/12/2023	1978	RET ABN	UG-SERVICE
4447	41050845	GRET	SVC	6/16/2023	1978	RET ABN	UG-SERVICE
4448	40753033	GRET	SVC	10/10/2022	1978	RET ABN	UG-SERVICE
4449	38621996	GRET	SVC	6/15/2021	1978	RET ABN	UG-SERVICE
4450	42021084	GRET	SVC	8/21/2023	1978	RET ABN	UG-SERVICE
4451	43612739	GRET	SVC	9/24/2024	1978	RET ABN	UG-SERVICE
4452	41213038	GRET	SVC	1/31/2023	1978	RET ABN	UG-SERVICE
4453	39745751	GRET	SVC	2/11/2022	1978	RET ABN	UG-SERVICE
4454	40371186	GRET	SVC	7/6/2022	1978	RET ABN	UG-SERVICE
4455	43543531	GRET	SVC	10/1/2024	1978	RET ABN	UG-SERVICE
4456	43370684	GRET	SVC	11/9/2024	1978	RET ABN	UG-SERVICE
4457	43005602	GRET	SVC	5/9/2024	1978	RET ABN	UG-SERVICE
4458	37809859	GRET	SVC	11/24/2020	1978	RET ABN	UG-SERVICE
4459	41119459	GRET	SVC	1/5/2023	1978	RET ABN	UG-SERVICE
4460	40889164	GRET	SVC	11/14/2022	1978	RET ABN	UG-SERVICE
4461	43542641	GRET	SVC	10/1/2024	1978	RET ABN	UG-SERVICE
4462	42644685	GRET	SVC	1/31/2024	1978	RET ABN	UG-SERVICE
4463	43700500	GRET	SVC	11/1/2024	1978	RET ABN	UG-SERVICE
4464	43951709	GRET	SVC	12/26/2024	1978	RET ABN	UG-SERVICE
4465	39705079	GRET	SVC	2/6/2024	1978	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4466	42300614	GRET	SVC	10/30/2023	1978	RET ABN	UG-SERVICE
4467	39234653	GRET	SVC	10/20/2021	1978	RET ABN	UG-SERVICE
4468	41330352	GRET	SVC	3/3/2023	1978	RET ABN	UG-SERVICE
4469	40499687	GRET	SVC	8/3/2022	1978	RET ABN	UG-SERVICE
4470	39998868	GRET	SVC	4/13/2022	1978	RET ABN	UG-SERVICE
4471	39022826	GRET	SVC	8/18/2021	1978	RET ABN	UG-SERVICE
4472	36519628	GRET	SVC	6/27/2020	1978	RET ABN	UG-SERVICE
4473	41424183	GRET	SVC	10/18/2023	1978	RET ABN	UG-SERVICE
4474	40301430	GRET	SVC	6/13/2022	1978	RET ABN	UG-SERVICE
4475	43370804	GRET	SVC	11/9/2024	1978	RET ABN	UG-SERVICE
4476	41335186	GRET	SVC	3/8/2023	1978	RET ABN	UG-SERVICE
4477	37953916	GRET	SVC	12/28/2020	1978	RET ABN	UG-SERVICE
4478	41318361	GRET	SVC	3/3/2023	1978	RET ABN	UG-SERVICE
4479	36040243	GRET	SVC	2/18/2020	1978	RET ABN	UG-SERVICE
4480	41423881	GRET	SVC	10/18/2023	1978	RET ABN	UG-SERVICE
4481	40009217	GRET	SVC	3/3/2022	1978	RET ABN	UG-SERVICE
4482	38203369	GRET	SVC	3/9/2021	1978	RET ABN	UG-SERVICE
4483	38504593	GRET	SVC	4/5/2021	1978	RET ABN	UG-SERVICE
4484	39413160	GRET	SVC	11/13/2021	1978	RET ABN	UG-SERVICE
4485	36988771	GRET	SVC	10/2/2020	1978	RET ABN	UG-SERVICE
4486	43825011	GRET	SVC	11/18/2024	1978	RET ABN	UG-SERVICE
4487	41411750	GRET	SVC	4/2/2024	1978	RET ABN	UG-SERVICE
4488	41330357	GRET	SVC	3/5/2023	1978	RET ABN	UG-SERVICE
4489	41471842	GRET	SVC	3/29/2023	1978	RET ABN	UG-SERVICE
4490	43245141	GRET	SVC	9/11/2024	1978	RET ABN	UG-SERVICE
4491	39475295	GRET	SVC	12/6/2021	1978	RET ABN	UG-SERVICE
4492	40897251	GRET	SVC	10/29/2022	1978	RET ABN	UG-SERVICE
4493	41954710	GRET	SVC	8/6/2023	1978	RET ABN	UG-SERVICE
4494	36440772	GRET	SVC	7/20/2020	1978	RET ABN	UG-SERVICE
4495	39391060	GRET	SVC	11/7/2021	1978	RET ABN	UG-SERVICE
4496	40277150	GRET	SVC	4/27/2023	1978	RET ABN	UG-SERVICE
4497	39336889	GRET	SVC	12/21/2021	1978	RET ABN	UG-SERVICE
4498	43364929	GRET	SVC	10/18/2024	1978	RET ABN	UG-SERVICE
4499	36878600	GRET	SVC	8/29/2020	1978	RET ABN	UG-SERVICE
4500	40513379	GRET	SVC	8/2/2022	1978	RET ABN	UG-SERVICE
4501	39741831	GRET	SVC	2/23/2022	1978	RET ABN	UG-SERVICE
4502	41342922	GRET	SVC	3/7/2023	1978	RET ABN	UG-SERVICE
4503	43947177	GRET	SVC	12/23/2024	1978	RET ABN	UG-SERVICE
4504	40793579	GRET	SVC	10/10/2022	1978	RET ABN	UG-SERVICE
4505	40492819	GRET	SVC	7/25/2022	1978	RET ABN	UG-SERVICE
4506	43371414	GRET	SVC	7/31/2024	1978	RET ABN	UG-SERVICE
4507	43774808	GRET	SVC	11/1/2024	1978	RET ABN	UG-SERVICE
4508	39721125	GRET	SVC	1/24/2022	1978	RET ABN	UG-SERVICE
4509	41182811	GRET	SVC	1/18/2023	1978	RET ABN	UG-SERVICE
4510	43923876	GRET	SVC	12/9/2024	1978	RET ABN	UG-SERVICE
4511	41408200	GRET	SVC	4/2/2024	1978	RET ABN	UG-SERVICE
4512	39894611	GRET	SVC	3/15/2022	1978	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4513	43244991	GRET	SVC	9/19/2024	1978	RET ABN	UG-SERVICE
4514	36074093	GRET	SVC	3/2/2020	1978	RET ABN	UG-SERVICE
4515	41622981	GRET	SVC	5/12/2023	1978	RET ABN	UG-SERVICE
4516	39552038	GRET	SVC	12/16/2021	1978	RET ABN	UG-SERVICE
4517	38441388	GRET	SVC	1/6/2022	1978	RET ABN	UG-SERVICE
4518	43245062	GRET	SVC	9/19/2024	1978	RET ABN	UG-SERVICE
4519	41049774	GRET	SVC	2/20/2023	1978	RET ABN	UG-SERVICE
4520	38252172	GRET	SVC	3/18/2021	1978	RET ABN	UG-SERVICE
4521	42480931	GRET	SVC	12/14/2023	1978	RET ABN	UG-SERVICE
4522	41222788	GRET	SVC	1/31/2023	1978	RET ABN	UG-SERVICE
4523	36203639	GRET	SVC	4/23/2020	1978	RET ABN	UG-SERVICE
4524	43680139	GRET	SVC	12/11/2024	1978	RET ABN	UG-SERVICE
4525	43860695	GRET	SVC	11/21/2024	1978	RET ABN	UG-SERVICE
4526	39413281	GRET	SVC	11/10/2021	1978	RET ABN	UG-SERVICE
4527	41569451	GRET	SVC	4/25/2023	1978	RET ABN	UG-SERVICE
4528	41099611	GRET	SVC	1/12/2023	1978	RET ABN	UG-SERVICE
4529	35843287	GRET	SVC	1/2/2020	1978	RET ABN	UG-SERVICE
4530	39757423	GRET	SVC	2/1/2022	1978	RET ABN	UG-SERVICE
4531	43680103	GRET	SVC	10/29/2024	1978	RET ABN	UG-SERVICE
4532	40744233	GRET	SVC	9/24/2022	1978	RET ABN	UG-SERVICE
4533	43468973	GRET	SVC	8/22/2024	1978	RET ABN	UG-SERVICE
4534	37982150	GRET	SVC	12/28/2020	1978	RET ABN	UG-SERVICE
4535	41916724	GRET	SVC	7/26/2023	1978	RET ABN	UG-SERVICE
4536	36180723	GRET	SVC	5/4/2020	1978	RET ABN	UG-SERVICE
4537	41080842	GRET	SVC	12/19/2022	1978	RET ABN	UG-SERVICE
4538	43680027	GRET	SVC	10/29/2024	1978	RET ABN	UG-SERVICE
4539	35888172	GRET	SVC	1/14/2020	1978	RET ABN	UG-SERVICE
4540	40707534	GRET	SVC	10/10/2022	1978	RET ABN	UG-SERVICE
4541	36087638	GRET	SVC	3/4/2020	1978	RET ABN	UG-SERVICE
4542	36122136	GRET	SVC	11/5/2020	1978	RET ABN	UG-SERVICE
4543	39570477	GRET	SVC	12/13/2021	1978	RET ABN	UG-SERVICE
4544	43245144	GRET	SVC	9/11/2024	1978	RET ABN	UG-SERVICE
4545	42295854	GRET	SVC	10/31/2023	1978	RET ABN	UG-SERVICE
4546	36038974	GRET	SVC	2/18/2020	1978	RET ABN	UG-SERVICE
4547	39705128	GRET	SVC	2/6/2024	1978	RET ABN	UG-SERVICE
4548	41182814	GRET	SVC	1/18/2023	1978	RET ABN	UG-SERVICE
4549	40046866	GRET	SVC	12/17/2021	1978	RET ABN	UG-SERVICE
4550	41913837	GRET	SVC	7/21/2023	1978	RET ABN	UG-SERVICE
4551	42745903	GRET	SVC	2/20/2024	1978	RET ABN	UG-SERVICE
4552	41423793	GRET	SVC	9/12/2023	1978	RET ABN	UG-SERVICE
4553	38113503	GRET	SVC	2/9/2021	1978	RET ABN	UG-SERVICE
4554	40111760	GRET	SVC	4/27/2022	1978	RET ABN	UG-SERVICE
4555	39666667	GRET	SVC	11/18/2022	1978	RET ABN	UG-SERVICE
4556	38362961	GRET	SVC	4/13/2021	1978	RET ABN	UG-SERVICE
4557	38565188	GRET	SVC	6/1/2021	1978	RET ABN	UG-SERVICE
4558	37070642	GRET	SVC	10/12/2020	1978	RET ABN	UG-SERVICE
4559	43573408	GRET	SVC	9/17/2024	1978	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4560	43250335	GRET	SVC	12/11/2024	1978	RET ABN	UG-SERVICE
4561	42487756	GRET	SVC	7/18/2024	1978	RET ABN	UG-SERVICE
4562	32667132	GRET	SVC	9/30/2020	1978	RET ABN	UG-SERVICE
4563	43245142	GRET	SVC	9/11/2024	1978	RET ABN	UG-SERVICE
4564	39717292	GRET	SVC	1/25/2022	1978	RET ABN	UG-SERVICE
4565	36119409	GRET	SVC	11/5/2020	1978	RET ABN	UG-SERVICE
4566	43407213	GRET	SVC	10/21/2024	1978	RET ABN	UG-SERVICE
4567	40352826	GRET	SVC	7/1/2022	1978	RET ABN	UG-SERVICE
4568	41140321	GRET	SVC	1/5/2023	1978	RET ABN	UG-SERVICE
4569	36425707	GRET	SVC	6/26/2020	1978	RET ABN	UG-SERVICE
4570	39727358	GRET	SVC	2/16/2022	1978	RET ABN	UG-SERVICE
4571	40488448	GRET	SVC	7/26/2022	1978	RET ABN	UG-SERVICE
4572	38446270	GRET	SVC	5/7/2021	1978	RET ABN	UG-SERVICE
4573	36017684	GRET	SVC	3/11/2020	1978	RET ABN	UG-SERVICE
4574	39067277	GRET	SVC	2/12/2022	1978	RET ABN	UG-SERVICE
4575	41347207	GRET	SVC	3/11/2023	1978	RET ABN	UG-SERVICE
4576	41969349	GRET	SVC	7/30/2024	1978	RET ABN	UG-SERVICE
4577	36916408	GRET	SVC	9/10/2020	1978	RET ABN	UG-SERVICE
4578	36173900	GRET	SVC	6/16/2020	1978	RET ABN	UG-SERVICE
4579	43339919	GRET	SVC	7/23/2024	1978	RET ABN	UG-SERVICE
4580	40840408	GRET	SVC	10/26/2022	1978	RET ABN	UG-SERVICE
4581	39413164	GRET	SVC	11/13/2021	1978	RET ABN	UG-SERVICE
4582	36698675	GRET	SVC	7/21/2020	1979	RET ABN	UG-SERVICE
4583	42413837	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4584	39466825	GRET	SVC	11/27/2021	1979	RET ABN	UG-SERVICE
4585	39520886	GRET	SVC	12/14/2021	1979	RET ABN	UG-SERVICE
4586	42376801	GRET	SVC	11/16/2023	1979	RET ABN	UG-SERVICE
4587	41429216	GRET	SVC	3/22/2023	1979	RET ABN	UG-SERVICE
4588	38070432	GRET	SVC	2/1/2021	1979	RET ABN	UG-SERVICE
4589	40644173	GRET	SVC	9/9/2022	1979	RET ABN	UG-SERVICE
4590	39409453	GRET	SVC	12/2/2021	1979	RET ABN	UG-SERVICE
4591	41284215	GRET	SVC	2/17/2023	1979	RET ABN	UG-SERVICE
4592	42138662	GRET	SVC	9/22/2023	1979	RET ABN	UG-SERVICE
4593	36207568	GRET	SVC	4/24/2020	1979	RET ABN	UG-SERVICE
4594	36959592	GRET	SVC	9/16/2020	1979	RET ABN	UG-SERVICE
4595	41341619	GRET	SVC	3/21/2023	1979	RET ABN	UG-SERVICE
4596	40448086	GRET	SVC	7/12/2022	1979	RET ABN	UG-SERVICE
4597	39567730	GRET	SVC	12/20/2021	1979	RET ABN	UG-SERVICE
4598	39860344	GRET	SVC	3/5/2022	1979	RET ABN	UG-SERVICE
4599	39077881	GRET	SVC	1/31/2022	1979	RET ABN	UG-SERVICE
4600	41604795	GRET	SVC	5/8/2023	1979	RET ABN	UG-SERVICE
4601	43063052	GRET	SVC	5/16/2024	1979	RET ABN	UG-SERVICE
4602	40448799	GRET	SVC	7/18/2022	1979	RET ABN	UG-SERVICE
4603	39555445	GRET	SVC	12/20/2021	1979	RET ABN	UG-SERVICE
4604	43967973	GRET	SVC	12/23/2024	1979	RET ABN	UG-SERVICE
4605	40793521	GRET	SVC	10/11/2022	1979	RET ABN	UG-SERVICE
4606	41408290	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4607	40719004	GRET	SVC	9/19/2022	1979	RET ABN	UG-SERVICE
4608	41531000	GRET	SVC	4/22/2023	1979	RET ABN	UG-SERVICE
4609	40371191	GRET	SVC	7/6/2022	1979	RET ABN	UG-SERVICE
4610	43318359	GRET	SVC	8/6/2024	1979	RET ABN	UG-SERVICE
4611	41530832	GRET	SVC	4/22/2023	1979	RET ABN	UG-SERVICE
4612	43632714	GRET	SVC	9/27/2024	1979	RET ABN	UG-SERVICE
4613	42192216	GRET	SVC	10/6/2023	1979	RET ABN	UG-SERVICE
4614	41513722	GRET	SVC	5/30/2023	1979	RET ABN	UG-SERVICE
4615	41411408	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4616	41146781	GRET	SVC	1/11/2023	1979	RET ABN	UG-SERVICE
4617	39619065	GRET	SVC	12/30/2021	1979	RET ABN	UG-SERVICE
4618	39768731	GRET	SVC	2/9/2022	1979	RET ABN	UG-SERVICE
4619	41429924	GRET	SVC	9/13/2023	1979	RET ABN	UG-SERVICE
4620	43703190	GRET	SVC	10/17/2024	1979	RET ABN	UG-SERVICE
4621	40805615	GRET	SVC	10/11/2022	1979	RET ABN	UG-SERVICE
4622	43371587	GRET	SVC	7/31/2024	1979	RET ABN	UG-SERVICE
4623	37918344	GRET	SVC	12/13/2020	1979	RET ABN	UG-SERVICE
4624	38603605	GRET	SVC	6/7/2021	1979	RET ABN	UG-SERVICE
4625	36916073	GRET	SVC	9/10/2020	1979	RET ABN	UG-SERVICE
4626	38044488	GRET	SVC	1/22/2021	1979	RET ABN	UG-SERVICE
4627	43792013	GRET	SVC	11/12/2024	1979	RET ABN	UG-SERVICE
4628	40943515	GRET	SVC	11/15/2022	1979	RET ABN	UG-SERVICE
4629	43481040	GRET	SVC	11/2/2024	1979	RET ABN	UG-SERVICE
4630	39731727	GRET	SVC	1/26/2022	1979	RET ABN	UG-SERVICE
4631	37286082	GRET	SVC	12/13/2020	1979	RET ABN	UG-SERVICE
4632	39273719	GRET	SVC	10/12/2021	1979	RET ABN	UG-SERVICE
4633	41906506	GRET	SVC	7/26/2023	1979	RET ABN	UG-SERVICE
4634	43477773	GRET	SVC	8/26/2024	1979	RET ABN	UG-SERVICE
4635	42212040	GRET	SVC	10/11/2023	1979	RET ABN	UG-SERVICE
4636	36042960	GRET	SVC	2/19/2020	1979	RET ABN	UG-SERVICE
4637	41075200	GRET	SVC	12/21/2022	1979	RET ABN	UG-SERVICE
4638	38671336	GRET	SVC	6/25/2021	1979	RET ABN	UG-SERVICE
4639	39731099	GRET	SVC	1/27/2022	1979	RET ABN	UG-SERVICE
4640	41808286	GRET	SVC	6/27/2023	1979	RET ABN	UG-SERVICE
4641	42330195	GRET	SVC	11/4/2023	1979	RET ABN	UG-SERVICE
4642	39389319	GRET	SVC	12/10/2021	1979	RET ABN	UG-SERVICE
4643	43014476	GRET	SVC	5/3/2024	1979	RET ABN	UG-SERVICE
4644	41212060	GRET	SVC	1/19/2023	1979	RET ABN	UG-SERVICE
4645	41706450	GRET	SVC	6/5/2023	1979	RET ABN	UG-SERVICE
4646	41227101	GRET	SVC	1/31/2023	1979	RET ABN	UG-SERVICE
4647	43408598	GRET	SVC	8/10/2024	1979	RET ABN	UG-SERVICE
4648	42405114	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4649	40855584	GRET	SVC	10/24/2022	1979	RET ABN	UG-SERVICE
4650	38370542	GRET	SVC	4/14/2021	1979	RET ABN	UG-SERVICE
4651	43632137	GRET	SVC	9/27/2024	1979	RET ABN	UG-SERVICE
4652	36134998	GRET	SVC	3/19/2020	1979	RET ABN	UG-SERVICE
4653	41429927	GRET	SVC	9/13/2023	1979	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4654	40737732	GRET	SVC	9/26/2022	1979	RET ABN	UG-SERVICE
4655	41701506	GRET	SVC	5/31/2023	1979	RET ABN	UG-SERVICE
4656	41411403	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4657	42519603	GRET	SVC	12/28/2023	1979	RET ABN	UG-SERVICE
4658	40192726	GRET	SVC	5/25/2022	1979	RET ABN	UG-SERVICE
4659	43365689	GRET	SVC	12/18/2024	1979	RET ABN	UG-SERVICE
4660	41443234	GRET	SVC	3/27/2023	1979	RET ABN	UG-SERVICE
4661	36255845	GRET	SVC	4/24/2020	1979	RET ABN	UG-SERVICE
4662	42587539	GRET	SVC	1/30/2024	1979	RET ABN	UG-SERVICE
4663	43888459	GRET	SVC	12/2/2024	1979	RET ABN	UG-SERVICE
4664	36918267	GRET	SVC	9/3/2020	1979	RET ABN	UG-SERVICE
4665	39735998	GRET	SVC	1/26/2022	1979	RET ABN	UG-SERVICE
4666	39034555	GRET	SVC	9/13/2021	1979	RET ABN	UG-SERVICE
4667	41278228	GRET	SVC	2/13/2023	1979	RET ABN	UG-SERVICE
4668	43966498	GRET	SVC	12/23/2024	1979	RET ABN	UG-SERVICE
4669	41424712	GRET	SVC	10/18/2023	1979	RET ABN	UG-SERVICE
4670	38513285	GRET	SVC	5/17/2021	1979	RET ABN	UG-SERVICE
4671	38741032	GRET	SVC	7/28/2021	1979	RET ABN	UG-SERVICE
4672	39495068	GRET	SVC	12/6/2021	1979	RET ABN	UG-SERVICE
4673	40353038	GRET	SVC	6/25/2022	1979	RET ABN	UG-SERVICE
4674	42404220	GRET	SVC	11/18/2023	1979	RET ABN	UG-SERVICE
4675	41321707	GRET	SVC	3/2/2023	1979	RET ABN	UG-SERVICE
4676	40778899	GRET	SVC	10/5/2022	1979	RET ABN	UG-SERVICE
4677	42556259	GRET	SVC	1/4/2024	1979	RET ABN	UG-SERVICE
4678	42550578	GRET	SVC	1/6/2024	1979	RET ABN	UG-SERVICE
4679	41015459	GRET	SVC	12/3/2022	1979	RET ABN	UG-SERVICE
4680	39495073	GRET	SVC	12/6/2021	1979	RET ABN	UG-SERVICE
4681	39731383	GRET	SVC	1/26/2022	1979	RET ABN	UG-SERVICE
4682	43569826	GRET	SVC	9/16/2024	1979	RET ABN	UG-SERVICE
4683	41969560	GRET	SVC	8/1/2024	1979	RET ABN	UG-SERVICE
4684	42021625	GRET	SVC	8/19/2023	1979	RET ABN	UG-SERVICE
4685	41102804	GRET	SVC	1/12/2023	1979	RET ABN	UG-SERVICE
4686	43605573	GRET	SVC	9/26/2024	1979	RET ABN	UG-SERVICE
4687	38304985	GRET	SVC	4/5/2021	1979	RET ABN	UG-SERVICE
4688	36959590	GRET	SVC	9/16/2020	1979	RET ABN	UG-SERVICE
4689	40486333	GRET	SVC	7/30/2022	1979	RET ABN	UG-SERVICE
4690	39437797	GRET	SVC	11/17/2021	1979	RET ABN	UG-SERVICE
4691	41411517	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4692	37776578	GRET	SVC	11/23/2020	1979	RET ABN	UG-SERVICE
4693	42774031	GRET	SVC	2/21/2024	1979	RET ABN	UG-SERVICE
4694	39236819	GRET	SVC	10/11/2021	1979	RET ABN	UG-SERVICE
4695	41407353	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4696	37887887	GRET	SVC	12/11/2020	1979	RET ABN	UG-SERVICE
4697	36373986	GRET	SVC	6/1/2020	1979	RET ABN	UG-SERVICE
4698	41408298	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4699	41302289	GRET	SVC	2/27/2023	1979	RET ABN	UG-SERVICE
4700	42503354	GRET	SVC	12/21/2023	1979	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4701	36282087	GRET	SVC	4/29/2020	1979	RET ABN	UG-SERVICE
4702	40022702	GRET	SVC	4/20/2022	1979	RET ABN	UG-SERVICE
4703	40341585	GRET	SVC	7/14/2022	1979	RET ABN	UG-SERVICE
4704	42165917	GRET	SVC	9/19/2023	1979	RET ABN	UG-SERVICE
4705	41407285	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4706	43864215	GRET	SVC	11/8/2024	1979	RET ABN	UG-SERVICE
4707	39903448	GRET	SVC	3/25/2022	1979	RET ABN	UG-SERVICE
4708	41429930	GRET	SVC	9/13/2023	1979	RET ABN	UG-SERVICE
4709	39077658	GRET	SVC	1/31/2022	1979	RET ABN	UG-SERVICE
4710	39674940	GRET	SVC	1/11/2022	1979	RET ABN	UG-SERVICE
4711	38315073	GRET	SVC	2/26/2021	1979	RET ABN	UG-SERVICE
4712	40813755	GRET	SVC	10/19/2022	1979	RET ABN	UG-SERVICE
4713	38437018	GRET	SVC	5/5/2021	1979	RET ABN	UG-SERVICE
4714	41411563	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4715	36177526	GRET	SVC	2/14/2020	1979	RET ABN	UG-SERVICE
4716	41321748	GRET	SVC	2/28/2023	1979	RET ABN	UG-SERVICE
4717	40537448	GRET	SVC	8/5/2022	1979	RET ABN	UG-SERVICE
4718	36976514	GRET	SVC	9/25/2020	1979	RET ABN	UG-SERVICE
4719	42185413	GRET	SVC	10/25/2023	1979	RET ABN	UG-SERVICE
4720	37564157	GRET	SVC	11/23/2020	1979	RET ABN	UG-SERVICE
4721	42745648	GRET	SVC	2/20/2024	1979	RET ABN	UG-SERVICE
4722	41531391	GRET	SVC	4/17/2023	1979	RET ABN	UG-SERVICE
4723	41424717	GRET	SVC	10/18/2023	1979	RET ABN	UG-SERVICE
4724	36366991	GRET	SVC	5/28/2020	1979	RET ABN	UG-SERVICE
4725	41083738	GRET	SVC	1/10/2023	1979	RET ABN	UG-SERVICE
4726	43439271	GRET	SVC	8/13/2024	1979	RET ABN	UG-SERVICE
4727	38491638	GRET	SVC	5/12/2021	1979	RET ABN	UG-SERVICE
4728	41408203	GRET	SVC	10/19/2023	1979	RET ABN	UG-SERVICE
4729	40144600	GRET	SVC	5/12/2022	1979	RET ABN	UG-SERVICE
4730	38728537	GRET	SVC	7/6/2021	1979	RET ABN	UG-SERVICE
4731	40802737	GRET	SVC	10/13/2022	1979	RET ABN	UG-SERVICE
4732	41529726	GRET	SVC	4/17/2023	1979	RET ABN	UG-SERVICE
4733	41621213	GRET	SVC	5/10/2023	1979	RET ABN	UG-SERVICE
4734	43610664	GRET	SVC	12/12/2024	1979	RET ABN	UG-SERVICE
4735	38671333	GRET	SVC	6/25/2021	1979	RET ABN	UG-SERVICE
4736	38251709	GRET	SVC	3/22/2021	1979	RET ABN	UG-SERVICE
4737	37894668	GRET	SVC	12/9/2020	1979	RET ABN	UG-SERVICE
4738	35379334	GRET	SVC	3/6/2020	1979	RET ABN	UG-SERVICE
4739	38849352	GRET	SVC	8/17/2021	1979	RET ABN	UG-SERVICE
4740	42079301	GRET	SVC	9/6/2023	1979	RET ABN	UG-SERVICE
4741	43506881	GRET	SVC	10/8/2024	1979	RET ABN	UG-SERVICE
4742	40481577	GRET	SVC	7/28/2022	1979	RET ABN	UG-SERVICE
4743	40578133	GRET	SVC	8/17/2022	1979	RET ABN	UG-SERVICE
4744	43245022	GRET	SVC	9/11/2024	1979	RET ABN	UG-SERVICE
4745	43224670	GRET	SVC	6/18/2024	1979	RET ABN	UG-SERVICE
4746	38604517	GRET	SVC	6/13/2021	1979	RET ABN	UG-SERVICE
4747	41273677	GRET	SVC	2/13/2023	1979	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4748	36750102	GRET	SVC	9/21/2020	1979	RET ABN	UG-SERVICE
4749	39731089	GRET	SVC	1/26/2022	1979	RET ABN	UG-SERVICE
4750	36581451	GRET	SVC	7/22/2020	1979	RET ABN	UG-SERVICE
4751	39257959	GRET	SVC	10/12/2021	1979	RET ABN	UG-SERVICE
4752	37022478	GRET	SVC	10/6/2020	1979	RET ABN	UG-SERVICE
4753	37925673	GRET	SVC	12/16/2020	1979	RET ABN	UG-SERVICE
4754	43565699	GRET	SVC	9/17/2024	1979	RET ABN	UG-SERVICE
4755	39761607	GRET	SVC	2/25/2022	1979	RET ABN	UG-SERVICE
4756	40963050	GRET	SVC	12/15/2022	1979	RET ABN	UG-SERVICE
4757	42247047	GRET	SVC	10/16/2023	1979	RET ABN	UG-SERVICE
4758	36265671	GRET	SVC	5/1/2020	1979	RET ABN	UG-SERVICE
4759	30804651	GRET	SVC	1/13/2020	1979	RET ABN	UG-SERVICE
4760	36874995	GRET	SVC	8/31/2020	1979	RET ABN	UG-SERVICE
4761	39466091	GRET	SVC	11/29/2021	1979	RET ABN	UG-SERVICE
4762	43885143	GRET	SVC	11/27/2024	1979	RET ABN	UG-SERVICE
4763	40156829	GRET	SVC	5/11/2022	1979	RET ABN	UG-SERVICE
4764	39241006	GRET	SVC	10/6/2021	1979	RET ABN	UG-SERVICE
4765	35925193	GRET	SVC	5/5/2020	1979	RET ABN	UG-SERVICE
4766	41445652	GRET	SVC	4/14/2023	1979	RET ABN	UG-SERVICE
4767	42806750	GRET	SVC	3/11/2024	1979	RET ABN	UG-SERVICE
4768	41411564	GRET	SVC	4/2/2024	1979	RET ABN	UG-SERVICE
4769	36046011	GRET	SVC	3/17/2020	1979	RET ABN	UG-SERVICE
4770	42320556	GRET	SVC	11/4/2023	1979	RET ABN	UG-SERVICE
4771	42983088	GRET	SVC	4/19/2024	1979	RET ABN	UG-SERVICE
4772	41429217	GRET	SVC	3/22/2023	1979	RET ABN	UG-SERVICE
4773	42407612	GRET	SVC	11/20/2023	1979	RET ABN	UG-SERVICE
4774	38737824	GRET	SVC	7/8/2021	1979	RET ABN	UG-SERVICE
4775	39958596	GRET	SVC	4/20/2022	1979	RET ABN	UG-SERVICE
4776	38947476	GRET	SVC	8/10/2021	1979	RET ABN	UG-SERVICE
4777	40826587	GRET	SVC	10/18/2022	1979	RET ABN	UG-SERVICE
4778	40147210	GRET	SVC	5/10/2022	1979	RET ABN	UG-SERVICE
4779	40909894	GRET	SVC	11/8/2022	1979	RET ABN	UG-SERVICE
4780	41067104	GRET	SVC	12/15/2022	1979	RET ABN	UG-SERVICE
4781	39921796	GRET	SVC	3/23/2022	1979	RET ABN	UG-SERVICE
4782	35866021	GRET	SVC	1/30/2020	1980	RET ABN	UG-SERVICE
4783	38507917	GRET	SVC	5/19/2021	1980	RET ABN	UG-SERVICE
4784	36867885	GRET	SVC	9/15/2020	1980	RET ABN	UG-SERVICE
4785	42646850	GRET	SVC	2/1/2024	1980	RET ABN	UG-SERVICE
4786	40806772	GRET	SVC	10/13/2022	1980	RET ABN	UG-SERVICE
4787	37918342	GRET	SVC	12/14/2020	1980	RET ABN	UG-SERVICE
4788	42498461	GRET	SVC	12/20/2023	1980	RET ABN	UG-SERVICE
4789	42682551	GRET	SVC	2/12/2024	1980	RET ABN	UG-SERVICE
4790	39609361	GRET	SVC	12/23/2021	1980	RET ABN	UG-SERVICE
4791	43245011	GRET	SVC	9/19/2024	1980	RET ABN	UG-SERVICE
4792	40837418	GRET	SVC	10/20/2022	1980	RET ABN	UG-SERVICE
4793	43052299	GRET	SVC	5/13/2024	1980	RET ABN	UG-SERVICE
4794	43477897	GRET	SVC	9/5/2024	1980	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4795	35926332	GRET	SVC	1/22/2020	1980	RET ABN	UG-SERVICE
4796	35938717	GRET	SVC	1/27/2020	1980	RET ABN	UG-SERVICE
4797	37082344	GRET	SVC	10/16/2020	1980	RET ABN	UG-SERVICE
4798	37887831	GRET	SVC	12/8/2020	1980	RET ABN	UG-SERVICE
4799	38116253	GRET	SVC	2/9/2021	1980	RET ABN	UG-SERVICE
4800	38170941	GRET	SVC	2/19/2021	1980	RET ABN	UG-SERVICE
4801	36822003	GRET	SVC	8/20/2020	1980	RET ABN	UG-SERVICE
4802	43985794	GRET	SVC	12/28/2024	1980	RET ABN	UG-SERVICE
4803	40863154	GRET	SVC	10/22/2022	1980	RET ABN	UG-SERVICE
4804	39194660	GRET	SVC	9/29/2021	1980	RET ABN	UG-SERVICE
4805	38200822	GRET	SVC	3/11/2021	1980	RET ABN	UG-SERVICE
4806	36926676	GRET	SVC	9/15/2020	1980	RET ABN	UG-SERVICE
4807	36727692	GRET	SVC	7/30/2020	1980	RET ABN	UG-SERVICE
4808	38808386	GRET	SVC	7/26/2021	1980	RET ABN	UG-SERVICE
4809	40359797	GRET	SVC	12/12/2022	1980	RET ABN	UG-SERVICE
4810	36047670	GRET	SVC	2/20/2020	1980	RET ABN	UG-SERVICE
4811	39745882	GRET	SVC	1/31/2022	1980	RET ABN	UG-SERVICE
4812	42217287	GRET	SVC	10/13/2023	1980	RET ABN	UG-SERVICE
4813	36730903	GRET	SVC	8/14/2020	1980	RET ABN	UG-SERVICE
4814	42405116	GRET	SVC	12/1/2023	1980	RET ABN	UG-SERVICE
4815	41965367	GRET	SVC	8/12/2023	1980	RET ABN	UG-SERVICE
4816	38880419	GRET	SVC	8/26/2021	1980	RET ABN	UG-SERVICE
4817	35945211	GRET	SVC	1/27/2020	1980	RET ABN	UG-SERVICE
4818	39534511	GRET	SVC	12/14/2021	1980	RET ABN	UG-SERVICE
4819	38113255	GRET	SVC	2/8/2021	1980	RET ABN	UG-SERVICE
4820	38284674	GRET	SVC	5/17/2021	1980	RET ABN	UG-SERVICE
4821	43177005	GRET	SVC	6/17/2024	1980	RET ABN	UG-SERVICE
4822	37087444	GRET	SVC	10/16/2020	1980	RET ABN	UG-SERVICE
4823	38692011	GRET	SVC	7/16/2021	1980	RET ABN	UG-SERVICE
4824	43324199	GRET	SVC	8/23/2024	1980	RET ABN	UG-SERVICE
4825	38666432	GRET	SVC	6/24/2021	1980	RET ABN	UG-SERVICE
4826	36006012	GRET	SVC	2/11/2020	1980	RET ABN	UG-SERVICE
4827	43737110	GRET	SVC	10/22/2024	1980	RET ABN	UG-SERVICE
4828	43345778	GRET	SVC	7/22/2024	1980	RET ABN	UG-SERVICE
4829	43506825	GRET	SVC	10/3/2024	1980	RET ABN	UG-SERVICE
4830	37834392	GRET	SVC	11/30/2020	1980	RET ABN	UG-SERVICE
4831	40637086	GRET	SVC	8/30/2022	1980	RET ABN	UG-SERVICE
4832	40788026	GRET	SVC	10/10/2022	1980	RET ABN	UG-SERVICE
4833	41118205	GRET	SVC	1/3/2023	1980	RET ABN	UG-SERVICE
4834	36404827	GRET	SVC	6/10/2020	1980	RET ABN	UG-SERVICE
4835	41431153	GRET	SVC	3/28/2023	1980	RET ABN	UG-SERVICE
4836	39977279	GRET	SVC	4/7/2022	1980	RET ABN	UG-SERVICE
4837	40701293	GRET	SVC	9/13/2022	1980	RET ABN	UG-SERVICE
4838	38135257	GRET	SVC	2/9/2021	1980	RET ABN	UG-SERVICE
4839	39408469	GRET	SVC	11/6/2021	1980	RET ABN	UG-SERVICE
4840	40400195	GRET	SVC	8/10/2022	1980	RET ABN	UG-SERVICE
4841	40616873	GRET	SVC	8/25/2022	1980	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4842	40829046	GRET	SVC	10/22/2022	1980	RET ABN	UG-SERVICE
4843	36297314	GRET	SVC	5/13/2020	1980	RET ABN	UG-SERVICE
4844	40737880	GRET	SVC	10/1/2022	1980	RET ABN	UG-SERVICE
4845	39940127	GRET	SVC	6/27/2022	1980	RET ABN	UG-SERVICE
4846	38414865	GRET	SVC	4/27/2021	1980	RET ABN	UG-SERVICE
4847	36876670	GRET	SVC	9/10/2020	1980	RET ABN	UG-SERVICE
4848	43974740	GRET	SVC	12/26/2024	1980	RET ABN	UG-SERVICE
4849	40619135	GRET	SVC	8/11/2022	1980	RET ABN	UG-SERVICE
4850	41277505	GRET	SVC	2/13/2023	1980	RET ABN	UG-SERVICE
4851	36039967	GRET	SVC	2/13/2020	1980	RET ABN	UG-SERVICE
4852	40275027	GRET	SVC	7/5/2022	1980	RET ABN	UG-SERVICE
4853	38251173	GRET	SVC	3/16/2021	1980	RET ABN	UG-SERVICE
4854	41083441	GRET	SVC	12/20/2022	1980	RET ABN	UG-SERVICE
4855	36709895	GRET	SVC	8/3/2020	1980	RET ABN	UG-SERVICE
4856	41318142	GRET	SVC	3/3/2023	1980	RET ABN	UG-SERVICE
4857	38113254	GRET	SVC	2/8/2021	1980	RET ABN	UG-SERVICE
4858	39730649	GRET	SVC	1/28/2022	1980	RET ABN	UG-SERVICE
4859	39808430	GRET	SVC	2/16/2022	1980	RET ABN	UG-SERVICE
4860	36198374	GRET	SVC	5/1/2020	1980	RET ABN	UG-SERVICE
4861	43767434	GRET	SVC	11/12/2024	1980	RET ABN	UG-SERVICE
4862	43125485	GRET	SVC	6/7/2024	1980	RET ABN	UG-SERVICE
4863	43678617	GRET	SVC	11/1/2024	1980	RET ABN	UG-SERVICE
4864	38167316	GRET	SVC	2/19/2021	1980	RET ABN	UG-SERVICE
4865	43703191	GRET	SVC	10/18/2024	1980	RET ABN	UG-SERVICE
4866	38167318	GRET	SVC	2/19/2021	1980	RET ABN	UG-SERVICE
4867	36297313	GRET	SVC	5/13/2020	1980	RET ABN	UG-SERVICE
4868	38342400	GRET	SVC	4/12/2021	1980	RET ABN	UG-SERVICE
4869	36590784	GRET	SVC	7/12/2020	1980	RET ABN	UG-SERVICE
4870	37560682	GRET	SVC	11/13/2020	1980	RET ABN	UG-SERVICE
4871	40518272	GRET	SVC	8/3/2022	1980	RET ABN	UG-SERVICE
4872	38260202	GRET	SVC	4/9/2021	1980	RET ABN	UG-SERVICE
4873	39977276	GRET	SVC	4/7/2022	1980	RET ABN	UG-SERVICE
4874	36805445	GRET	SVC	8/20/2020	1980	RET ABN	UG-SERVICE
4875	43793034	GRET	SVC	11/4/2024	1980	RET ABN	UG-SERVICE
4876	41043685	GRET	SVC	12/12/2022	1980	RET ABN	UG-SERVICE
4877	40400196	GRET	SVC	8/10/2022	1980	RET ABN	UG-SERVICE
4878	40513288	GRET	SVC	8/4/2022	1980	RET ABN	UG-SERVICE
4879	42435570	GRET	SVC	12/15/2023	1980	RET ABN	UG-SERVICE
4880	38170519	GRET	SVC	2/19/2021	1980	RET ABN	UG-SERVICE
4881	41411765	GRET	SVC	4/2/2024	1980	RET ABN	UG-SERVICE
4882	35960002	GRET	SVC	1/27/2020	1980	RET ABN	UG-SERVICE
4883	43623490	GRET	SVC	12/5/2024	1980	RET ABN	UG-SERVICE
4884	40618740	GRET	SVC	9/2/2022	1980	RET ABN	UG-SERVICE
4885	41407774	GRET	SVC	4/2/2024	1980	RET ABN	UG-SERVICE
4886	38766858	GRET	SVC	7/12/2021	1980	RET ABN	UG-SERVICE
4887	42217502	GRET	SVC	10/13/2023	1980	RET ABN	UG-SERVICE
4888	38159499	GRET	SVC	2/18/2021	1980	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4889	42767217	GRET	SVC	9/19/2024	1980	RET ABN	UG-SERVICE
4890	39663182	GRET	SVC	12/29/2021	1980	RET ABN	UG-SERVICE
4891	42696012	GRET	SVC	2/14/2024	1980	RET ABN	UG-SERVICE
4892	42083849	GRET	SVC	9/10/2023	1980	RET ABN	UG-SERVICE
4893	42678185	GRET	SVC	2/7/2024	1980	RET ABN	UG-SERVICE
4894	39341151	GRET	SVC	10/26/2021	1980	RET ABN	UG-SERVICE
4895	36715000	GRET	SVC	8/4/2020	1980	RET ABN	UG-SERVICE
4896	41117034	GRET	SVC	1/12/2023	1980	RET ABN	UG-SERVICE
4897	43324508	GRET	SVC	10/15/2024	1980	RET ABN	UG-SERVICE
4898	43144648	GRET	SVC	6/7/2024	1980	RET ABN	UG-SERVICE
4899	43318347	GRET	SVC	8/13/2024	1980	RET ABN	UG-SERVICE
4900	41063071	GRET	SVC	12/11/2022	1980	RET ABN	UG-SERVICE
4901	42784886	GRET	SVC	3/4/2024	1980	RET ABN	UG-SERVICE
4902	39989337	GRET	SVC	4/25/2022	1980	RET ABN	UG-SERVICE
4903	39097214	GRET	SVC	9/10/2021	1980	RET ABN	UG-SERVICE
4904	42165918	GRET	SVC	9/19/2023	1980	RET ABN	UG-SERVICE
4905	42190592	GRET	SVC	10/4/2023	1980	RET ABN	UG-SERVICE
4906	42838256	GRET	SVC	3/15/2024	1980	RET ABN	UG-SERVICE
4907	38159497	GRET	SVC	2/16/2021	1980	RET ABN	UG-SERVICE
4908	36690178	GRET	SVC	7/29/2020	1980	RET ABN	UG-SERVICE
4909	42973050	GRET	SVC	4/22/2024	1980	RET ABN	UG-SERVICE
4910	42904312	GRET	SVC	4/11/2024	1980	RET ABN	UG-SERVICE
4911	37423846	GRET	SVC	11/10/2020	1980	RET ABN	UG-SERVICE
4912	36139991	GRET	SVC	3/16/2020	1980	RET ABN	UG-SERVICE
4913	38113253	GRET	SVC	2/8/2021	1980	RET ABN	UG-SERVICE
4914	39876288	GRET	SVC	3/14/2022	1980	RET ABN	UG-SERVICE
4915	39895862	GRET	SVC	4/22/2022	1980	RET ABN	UG-SERVICE
4916	43471134	GRET	SVC	8/20/2024	1980	RET ABN	UG-SERVICE
4917	36066959	GRET	SVC	2/27/2020	1980	RET ABN	UG-SERVICE
4918	36657935	GRET	SVC	6/11/2020	1980	RET ABN	UG-SERVICE
4919	42217358	GRET	SVC	10/13/2023	1980	RET ABN	UG-SERVICE
4920	36704634	GRET	SVC	7/29/2020	1980	RET ABN	UG-SERVICE
4921	41187919	GRET	SVC	1/17/2023	1980	RET ABN	UG-SERVICE
4922	40396051	GRET	SVC	7/6/2022	1980	RET ABN	UG-SERVICE
4923	42865500	GRET	SVC	2/15/2024	1980	RET ABN	UG-SERVICE
4924	37004084	GRET	SVC	10/16/2020	1980	RET ABN	UG-SERVICE
4925	40900946	GRET	SVC	12/3/2022	1980	RET ABN	UG-SERVICE
4926	38534653	GRET	SVC	5/25/2021	1980	RET ABN	UG-SERVICE
4927	43440669	GRET	SVC	8/14/2024	1980	RET ABN	UG-SERVICE
4928	36953644	GRET	SVC	9/20/2020	1980	RET ABN	UG-SERVICE
4929	40036782	GRET	SVC	4/24/2022	1980	RET ABN	UG-SERVICE
4930	40962785	GRET	SVC	11/22/2022	1980	RET ABN	UG-SERVICE
4931	43610731	GRET	SVC	10/20/2024	1980	RET ABN	UG-SERVICE
4932	40372553	GRET	SVC	7/5/2022	1980	RET ABN	UG-SERVICE
4933	39378017	GRET	SVC	11/2/2021	1980	RET ABN	UG-SERVICE
4934	43506592	GRET	SVC	9/18/2024	1980	RET ABN	UG-SERVICE
4935	43167495	GRET	SVC	7/5/2024	1980	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4936	35960719	GRET	SVC	1/31/2020	1980	RET ABN	UG-SERVICE
4937	38116247	GRET	SVC	2/9/2021	1980	RET ABN	UG-SERVICE
4938	37089338	GRET	SVC	10/20/2020	1980	RET ABN	UG-SERVICE
4939	43244748	GRET	SVC	9/13/2024	1980	RET ABN	UG-SERVICE
4940	42522515	GRET	SVC	12/27/2023	1980	RET ABN	UG-SERVICE
4941	38217494	GRET	SVC	3/22/2021	1980	RET ABN	UG-SERVICE
4942	41774863	GRET	SVC	6/22/2023	1980	RET ABN	UG-SERVICE
4943	39701495	GRET	SVC	1/18/2022	1980	RET ABN	UG-SERVICE
4944	38786025	GRET	SVC	8/2/2021	1980	RET ABN	UG-SERVICE
4945	38401291	GRET	SVC	4/20/2021	1980	RET ABN	UG-SERVICE
4946	38353000	GRET	SVC	2/14/2023	1980	RET ABN	UG-SERVICE
4947	41436522	GRET	SVC	3/27/2023	1980	RET ABN	UG-SERVICE
4948	36260361	GRET	SVC	5/7/2020	1980	RET ABN	UG-SERVICE
4949	40865777	GRET	SVC	10/27/2022	1980	RET ABN	UG-SERVICE
4950	38167319	GRET	SVC	2/19/2021	1980	RET ABN	UG-SERVICE
4951	42217394	GRET	SVC	10/13/2023	1980	RET ABN	UG-SERVICE
4952	43379746	GRET	SVC	7/27/2024	1980	RET ABN	UG-SERVICE
4953	42413380	GRET	SVC	11/27/2023	1980	RET ABN	UG-SERVICE
4954	36759048	GRET	SVC	8/10/2020	1980	RET ABN	UG-SERVICE
4955	43566832	GRET	SVC	10/3/2024	1980	RET ABN	UG-SERVICE
4956	43673036	GRET	SVC	10/9/2024	1980	RET ABN	UG-SERVICE
4957	41277506	GRET	SVC	2/24/2023	1980	RET ABN	UG-SERVICE
4958	40497353	GRET	SVC	8/3/2022	1980	RET ABN	UG-SERVICE
4959	38747941	GRET	SVC	7/16/2021	1980	RET ABN	UG-SERVICE
4960	41585947	GRET	SVC	5/3/2023	1980	RET ABN	UG-SERVICE
4961	40099808	GRET	SVC	5/2/2022	1980	RET ABN	UG-SERVICE
4962	42194936	GRET	SVC	10/9/2023	1980	RET ABN	UG-SERVICE
4963	39452999	GRET	SVC	11/22/2021	1980	RET ABN	UG-SERVICE
4964	38116252	GRET	SVC	2/9/2021	1980	RET ABN	UG-SERVICE
4965	39817525	GRET	SVC	2/23/2022	1980	RET ABN	UG-SERVICE
4966	41509580	GRET	SVC	4/10/2023	1980	RET ABN	UG-SERVICE
4967	38159496	GRET	SVC	2/16/2021	1980	RET ABN	UG-SERVICE
4968	42083826	GRET	SVC	8/28/2023	1980	RET ABN	UG-SERVICE
4969	42170550	GRET	SVC	10/3/2023	1980	RET ABN	UG-SERVICE
4970	43506834	GRET	SVC	9/16/2024	1980	RET ABN	UG-SERVICE
4971	35919327	GRET	SVC	1/16/2020	1980	RET ABN	UG-SERVICE
4972	38662723	GRET	SVC	6/23/2021	1980	RET ABN	UG-SERVICE
4973	39067596	GRET	SVC	9/23/2021	1980	RET ABN	UG-SERVICE
4974	39855421	GRET	SVC	3/7/2022	1980	RET ABN	UG-SERVICE
4975	35965176	GRET	SVC	1/26/2020	1980	RET ABN	UG-SERVICE
4976	38331751	GRET	SVC	4/8/2021	1980	RET ABN	UG-SERVICE
4977	39958831	GRET	SVC	4/26/2022	1980	RET ABN	UG-SERVICE
4978	43245145	GRET	SVC	9/11/2024	1980	RET ABN	UG-SERVICE
4979	42554523	GRET	SVC	1/9/2024	1980	RET ABN	UG-SERVICE
4980	41051917	GRET	SVC	1/12/2023	1980	RET ABN	UG-SERVICE
4981	42290696	GRET	SVC	9/16/2023	1980	RET ABN	UG-SERVICE
4982	43540690	GRET	SVC	9/17/2024	1980	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
4983	39211525	GRET	SVC	9/27/2021	1980	RET ABN	UG-SERVICE
4984	40905625	GRET	SVC	11/9/2022	1980	RET ABN	UG-SERVICE
4985	37593381	GRET	SVC	11/16/2020	1980	RET ABN	UG-SERVICE
4986	43551265	GRET	SVC	9/7/2024	1980	RET ABN	UG-SERVICE
4987	40957854	GRET	SVC	11/21/2022	1980	RET ABN	UG-SERVICE
4988	38135258	GRET	SVC	2/9/2021	1980	RET ABN	UG-SERVICE
4989	43190559	GRET	SVC	6/14/2024	1980	RET ABN	UG-SERVICE
4990	38520452	GRET	SVC	5/19/2021	1980	RET ABN	UG-SERVICE
4991	42220667	GRET	SVC	10/16/2023	1980	RET ABN	UG-SERVICE
4992	41186303	GRET	SVC	1/20/2023	1980	RET ABN	UG-SERVICE
4993	40561831	GRET	SVC	8/17/2022	1980	RET ABN	UG-SERVICE
4994	36734820	GRET	SVC	8/6/2020	1980	RET ABN	UG-SERVICE
4995	39424078	GRET	SVC	4/29/2022	1980	RET ABN	UG-SERVICE
4996	41284183	GRET	SVC	2/26/2023	1980	RET ABN	UG-SERVICE
4997	38082913	GRET	SVC	2/1/2021	1980	RET ABN	UG-SERVICE
4998	37288139	GRET	SVC	11/9/2020	1980	RET ABN	UG-SERVICE
4999	41084274	GRET	SVC	12/21/2022	1980	RET ABN	UG-SERVICE
5000	39917684	GRET	SVC	4/26/2022	1980	RET ABN	UG-SERVICE
5001	42514792	GRET	SVC	12/29/2023	1980	RET ABN	UG-SERVICE
5002	41411047	GRET	SVC	4/2/2024	1980	RET ABN	UG-SERVICE
5003	38172263	GRET	SVC	2/25/2021	1980	RET ABN	UG-SERVICE
5004	41296111	GRET	SVC	2/20/2023	1980	RET ABN	UG-SERVICE
5005	35964247	GRET	SVC	1/31/2020	1980	RET ABN	UG-SERVICE
5006	40515691	GRET	SVC	8/5/2022	1981	RET ABN	UG-SERVICE
5007	40108945	GRET	SVC	5/6/2022	1981	RET ABN	UG-SERVICE
5008	42957322	GRET	SVC	9/19/2024	1981	RET ABN	UG-SERVICE
5009	36504620	GRET	SVC	7/21/2020	1981	RET ABN	UG-SERVICE
5010	39158783	GRET	SVC	9/17/2021	1981	RET ABN	UG-SERVICE
5011	41988878	GRET	SVC	8/14/2023	1981	RET ABN	UG-SERVICE
5012	39114621	GRET	SVC	9/27/2021	1981	RET ABN	UG-SERVICE
5013	36699118	GRET	SVC	7/28/2020	1981	RET ABN	UG-SERVICE
5014	41529177	GRET	SVC	4/18/2023	1981	RET ABN	UG-SERVICE
5015	42429557	GRET	SVC	11/28/2023	1981	RET ABN	UG-SERVICE
5016	42427059	GRET	SVC	9/19/2024	1981	RET ABN	UG-SERVICE
5017	42678163	GRET	SVC	2/7/2024	1981	RET ABN	UG-SERVICE
5018	43612750	GRET	SVC	9/23/2024	1981	RET ABN	UG-SERVICE
5019	42255111	GRET	SVC	4/2/2024	1981	RET ABN	UG-SERVICE
5020	40777231	GRET	SVC	10/7/2022	1981	RET ABN	UG-SERVICE
5021	40824097	GRET	SVC	10/18/2022	1981	RET ABN	UG-SERVICE
5022	42205149	GRET	SVC	10/18/2023	1981	RET ABN	UG-SERVICE
5023	37867772	GRET	SVC	12/6/2020	1981	RET ABN	UG-SERVICE
5024	39372952	GRET	SVC	11/1/2021	1981	RET ABN	UG-SERVICE
5025	40817911	GRET	SVC	11/3/2022	1981	RET ABN	UG-SERVICE
5026	39829823	GRET	SVC	2/28/2022	1981	RET ABN	UG-SERVICE
5027	39292398	GRET	SVC	11/8/2021	1981	RET ABN	UG-SERVICE
5028	39821845	GRET	SVC	2/24/2022	1981	RET ABN	UG-SERVICE
5029	42522226	GRET	SVC	12/28/2023	1981	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5030	36448752	GRET	SVC	6/16/2020	1981	RET ABN	UG-SERVICE
5031	41083935	GRET	SVC	12/21/2022	1981	RET ABN	UG-SERVICE
5032	40824189	GRET	SVC	10/18/2022	1981	RET ABN	UG-SERVICE
5033	43364936	GRET	SVC	10/15/2024	1981	RET ABN	UG-SERVICE
5034	43587179	GRET	SVC	9/20/2024	1981	RET ABN	UG-SERVICE
5035	40656092	GRET	SVC	9/16/2022	1981	RET ABN	UG-SERVICE
5036	42175607	GRET	SVC	9/25/2023	1981	RET ABN	UG-SERVICE
5037	42428954	GRET	SVC	4/2/2024	1981	RET ABN	UG-SERVICE
5038	36207010	GRET	SVC	4/28/2020	1981	RET ABN	UG-SERVICE
5039	39950829	GRET	SVC	5/14/2022	1981	RET ABN	UG-SERVICE
5040	38037820	GRET	SVC	1/19/2021	1981	RET ABN	UG-SERVICE
5041	43364935	GRET	SVC	10/15/2024	1981	RET ABN	UG-SERVICE
5042	36469542	GRET	SVC	7/8/2020	1981	RET ABN	UG-SERVICE
5043	41184328	GRET	SVC	1/18/2023	1981	RET ABN	UG-SERVICE
5044	36177527	GRET	SVC	2/14/2020	1981	RET ABN	UG-SERVICE
5045	40189511	GRET	SVC	5/24/2022	1981	RET ABN	UG-SERVICE
5046	37639332	GRET	SVC	11/9/2020	1981	RET ABN	UG-SERVICE
5047	40345195	GRET	SVC	6/27/2022	1981	RET ABN	UG-SERVICE
5048	41288086	GRET	SVC	2/24/2023	1981	RET ABN	UG-SERVICE
5049	38971803	GRET	SVC	8/30/2021	1981	RET ABN	UG-SERVICE
5050	43765696	GRET	SVC	10/18/2024	1981	RET ABN	UG-SERVICE
5051	41407667	GRET	SVC	4/2/2024	1981	RET ABN	UG-SERVICE
5052	40751127	GRET	SVC	9/30/2022	1981	RET ABN	UG-SERVICE
5053	36058338	GRET	SVC	2/25/2020	1981	RET ABN	UG-SERVICE
5054	43364937	GRET	SVC	10/16/2024	1981	RET ABN	UG-SERVICE
5055	41628115	GRET	SVC	5/16/2023	1981	RET ABN	UG-SERVICE
5056	43456236	GRET	SVC	8/20/2024	1981	RET ABN	UG-SERVICE
5057	36885931	GRET	SVC	9/2/2020	1981	RET ABN	UG-SERVICE
5058	41164933	GRET	SVC	1/18/2023	1981	RET ABN	UG-SERVICE
5059	42535827	GRET	SVC	12/28/2023	1981	RET ABN	UG-SERVICE
5060	38616755	GRET	SVC	6/14/2021	1981	RET ABN	UG-SERVICE
5061	41025632	GRET	SVC	4/4/2023	1981	RET ABN	UG-SERVICE
5062	37113299	GRET	SVC	10/26/2020	1981	RET ABN	UG-SERVICE
5063	41119447	GRET	SVC	1/5/2023	1981	RET ABN	UG-SERVICE
5064	40825319	GRET	SVC	11/1/2022	1981	RET ABN	UG-SERVICE
5065	42070210	GRET	SVC	9/1/2023	1981	RET ABN	UG-SERVICE
5066	42216869	GRET	SVC	10/11/2023	1981	RET ABN	UG-SERVICE
5067	41161391	GRET	SVC	1/18/2023	1981	RET ABN	UG-SERVICE
5068	36977367	GRET	SVC	9/23/2020	1981	RET ABN	UG-SERVICE
5069	42227312	GRET	SVC	10/31/2023	1981	RET ABN	UG-SERVICE
5070	37004001	GRET	SVC	10/9/2020	1981	RET ABN	UG-SERVICE
5071	43364938	GRET	SVC	10/19/2024	1981	RET ABN	UG-SERVICE
5072	36712286	GRET	SVC	8/10/2020	1981	RET ABN	UG-SERVICE
5073	40138088	GRET	SVC	5/9/2022	1981	RET ABN	UG-SERVICE
5074	39439687	GRET	SVC	11/19/2021	1981	RET ABN	UG-SERVICE
5075	36056285	GRET	SVC	2/24/2020	1981	RET ABN	UG-SERVICE
5076	38324631	GRET	SVC	3/1/2021	1981	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5077	38804665	GRET	SVC	8/2/2021	1981	RET ABN	UG-SERVICE
5078	43801210	GRET	SVC	11/6/2024	1981	RET ABN	UG-SERVICE
5079	37181835	GRET	SVC	10/29/2020	1981	RET ABN	UG-SERVICE
5080	40821937	GRET	SVC	10/18/2022	1981	RET ABN	UG-SERVICE
5081	42838191	GRET	SVC	3/20/2024	1981	RET ABN	UG-SERVICE
5082	43318356	GRET	SVC	8/1/2024	1981	RET ABN	UG-SERVICE
5083	36987348	GRET	SVC	9/23/2020	1981	RET ABN	UG-SERVICE
5084	38484804	GRET	SVC	5/10/2021	1981	RET ABN	UG-SERVICE
5085	37018536	GRET	SVC	10/1/2020	1981	RET ABN	UG-SERVICE
5086	36207016	GRET	SVC	4/28/2020	1981	RET ABN	UG-SERVICE
5087	36957850	GRET	SVC	9/9/2020	1981	RET ABN	UG-SERVICE
5088	42248421	GRET	SVC	10/18/2023	1981	RET ABN	UG-SERVICE
5089	43069749	GRET	SVC	5/20/2024	1981	RET ABN	UG-SERVICE
5090	35969641	GRET	SVC	2/3/2020	1981	RET ABN	UG-SERVICE
5091	39571349	GRET	SVC	11/22/2021	1981	RET ABN	UG-SERVICE
5092	41388637	GRET	SVC	3/15/2023	1981	RET ABN	UG-SERVICE
5093	39444730	GRET	SVC	12/2/2021	1981	RET ABN	UG-SERVICE
5094	41516430	GRET	SVC	4/27/2023	1981	RET ABN	UG-SERVICE
5095	40952957	GRET	SVC	11/17/2022	1981	RET ABN	UG-SERVICE
5096	41411426	GRET	SVC	11/2/2023	1981	RET ABN	UG-SERVICE
5097	40736068	GRET	SVC	9/27/2022	1981	RET ABN	UG-SERVICE
5098	40865906	GRET	SVC	8/22/2023	1981	RET ABN	UG-SERVICE
5099	43506821	GRET	SVC	10/11/2024	1981	RET ABN	UG-SERVICE
5100	38289760	GRET	SVC	4/1/2021	1981	RET ABN	UG-SERVICE
5101	38682325	GRET	SVC	7/1/2021	1981	RET ABN	UG-SERVICE
5102	38606748	GRET	SVC	6/11/2021	1981	RET ABN	UG-SERVICE
5103	43323973	GRET	SVC	10/14/2024	1981	RET ABN	UG-SERVICE
5104	38741847	GRET	SVC	7/12/2021	1981	RET ABN	UG-SERVICE
5105	42335278	GRET	SVC	4/2/2024	1981	RET ABN	UG-SERVICE
5106	41185105	GRET	SVC	1/21/2023	1981	RET ABN	UG-SERVICE
5107	40015541	GRET	SVC	4/16/2022	1981	RET ABN	UG-SERVICE
5108	38266117	GRET	SVC	10/27/2021	1981	RET ABN	UG-SERVICE
5109	43323972	GRET	SVC	7/22/2024	1981	RET ABN	UG-SERVICE
5110	40386083	GRET	SVC	7/6/2022	1981	RET ABN	UG-SERVICE
5111	36122706	GRET	SVC	11/5/2020	1981	RET ABN	UG-SERVICE
5112	43564234	GRET	SVC	9/14/2024	1981	RET ABN	UG-SERVICE
5113	41209954	GRET	SVC	1/31/2023	1981	RET ABN	UG-SERVICE
5114	42965256	GRET	SVC	4/24/2024	1981	RET ABN	UG-SERVICE
5115	39843596	GRET	SVC	3/2/2022	1981	RET ABN	UG-SERVICE
5116	38407202	GRET	SVC	3/16/2021	1982	RET ABN	UG-SERVICE
5117	40814058	GRET	SVC	10/19/2022	1982	RET ABN	UG-SERVICE
5118	38505994	GRET	SVC	6/9/2021	1982	RET ABN	UG-SERVICE
5119	40313520	GRET	SVC	6/15/2022	1982	RET ABN	UG-SERVICE
5120	37564159	GRET	SVC	11/25/2020	1982	RET ABN	UG-SERVICE
5121	36666826	GRET	SVC	7/20/2020	1982	RET ABN	UG-SERVICE
5122	41968002	GRET	SVC	8/9/2023	1982	RET ABN	UG-SERVICE
5123	36119404	GRET	SVC	11/5/2020	1982	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5124	38091659	GRET	SVC	2/4/2021	1982	RET ABN	UG-SERVICE
5125	39109977	GRET	SVC	9/8/2021	1982	RET ABN	UG-SERVICE
5126	43896268	GRET	SVC	12/5/2024	1982	RET ABN	UG-SERVICE
5127	42006525	GRET	SVC	8/16/2023	1982	RET ABN	UG-SERVICE
5128	43329182	GRET	SVC	7/16/2024	1982	RET ABN	UG-SERVICE
5129	39104840	GRET	SVC	7/30/2021	1982	RET ABN	UG-SERVICE
5130	40831950	GRET	SVC	10/19/2022	1982	RET ABN	UG-SERVICE
5131	37848473	GRET	SVC	11/30/2020	1982	RET ABN	UG-SERVICE
5132	38113506	GRET	SVC	2/10/2021	1982	RET ABN	UG-SERVICE
5133	43428930	GRET	SVC	8/10/2024	1982	RET ABN	UG-SERVICE
5134	40612445	GRET	SVC	10/27/2022	1982	RET ABN	UG-SERVICE
5135	37848478	GRET	SVC	11/30/2020	1982	RET ABN	UG-SERVICE
5136	43469158	GRET	SVC	8/24/2024	1982	RET ABN	UG-SERVICE
5137	41436390	GRET	SVC	3/27/2023	1982	RET ABN	UG-SERVICE
5138	40942685	GRET	SVC	11/28/2022	1982	RET ABN	UG-SERVICE
5139	43324195	GRET	SVC	7/29/2024	1982	RET ABN	UG-SERVICE
5140	37004013	GRET	SVC	9/29/2020	1982	RET ABN	UG-SERVICE
5141	43353737	GRET	SVC	12/6/2024	1982	RET ABN	UG-SERVICE
5142	38352970	GRET	SVC	2/17/2023	1982	RET ABN	UG-SERVICE
5143	36916863	GRET	SVC	9/11/2020	1982	RET ABN	UG-SERVICE
5144	41279149	GRET	SVC	2/13/2023	1982	RET ABN	UG-SERVICE
5145	43883405	GRET	SVC	11/27/2024	1982	RET ABN	UG-SERVICE
5146	43916042	GRET	SVC	12/7/2024	1982	RET ABN	UG-SERVICE
5147	39243194	GRET	SVC	10/4/2021	1982	RET ABN	UG-SERVICE
5148	40522355	GRET	SVC	8/13/2022	1982	RET ABN	UG-SERVICE
5149	35865617	GRET	SVC	1/6/2020	1982	RET ABN	UG-SERVICE
5150	41877455	GRET	SVC	8/28/2023	1982	RET ABN	UG-SERVICE
5151	36255513	GRET	SVC	5/20/2020	1982	RET ABN	UG-SERVICE
5152	43423327	GRET	SVC	9/11/2024	1982	RET ABN	UG-SERVICE
5153	37739218	GRET	SVC	11/23/2020	1982	RET ABN	UG-SERVICE
5154	41814868	GRET	SVC	6/27/2023	1982	RET ABN	UG-SERVICE
5155	42332553	GRET	SVC	11/7/2023	1982	RET ABN	UG-SERVICE
5156	38461565	GRET	SVC	5/5/2021	1982	RET ABN	UG-SERVICE
5157	36121696	GRET	SVC	10/12/2020	1982	RET ABN	UG-SERVICE
5158	39271873	GRET	SVC	10/26/2021	1982	RET ABN	UG-SERVICE
5159	42408187	GRET	SVC	11/20/2023	1982	RET ABN	UG-SERVICE
5160	42887631	GRET	SVC	4/4/2024	1982	RET ABN	UG-SERVICE
5161	43934271	GRET	SVC	12/17/2024	1982	RET ABN	UG-SERVICE
5162	40283208	GRET	SVC	6/9/2022	1982	RET ABN	UG-SERVICE
5163	38844205	GRET	SVC	7/30/2021	1982	RET ABN	UG-SERVICE
5164	41145263	GRET	SVC	1/9/2023	1982	RET ABN	UG-SERVICE
5165	40860630	GRET	SVC	10/25/2022	1982	RET ABN	UG-SERVICE
5166	42419098	GRET	SVC	12/14/2023	1982	RET ABN	UG-SERVICE
5167	43496524	GRET	SVC	12/4/2024	1982	RET ABN	UG-SERVICE
5168	38352971	GRET	SVC	2/17/2023	1982	RET ABN	UG-SERVICE
5169	41463374	GRET	SVC	4/7/2023	1982	RET ABN	UG-SERVICE
5170	39577719	GRET	SVC	12/27/2021	1982	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5171	43205045	GRET	SVC	9/19/2024	1982	RET ABN	UG-SERVICE
5172	36994454	GRET	SVC	9/28/2020	1982	RET ABN	UG-SERVICE
5173	43312118	GRET	SVC	9/19/2024	1982	RET ABN	UG-SERVICE
5174	42340279	GRET	SVC	11/7/2023	1982	RET ABN	UG-SERVICE
5175	43272247	GRET	SVC	8/1/2024	1982	RET ABN	UG-SERVICE
5176	41130361	GRET	SVC	6/10/2024	1982	RET ABN	UG-SERVICE
5177	42327296	GRET	SVC	11/3/2023	1982	RET ABN	UG-SERVICE
5178	43752302	GRET	SVC	11/23/2024	1982	RET ABN	UG-SERVICE
5179	36566275	GRET	SVC	7/28/2020	1982	RET ABN	UG-SERVICE
5180	35518622	GRET	SVC	3/8/2021	1983	RET ABN	UG-SERVICE
5181	36348439	GRET	SVC	5/20/2020	1983	RET ABN	UG-SERVICE
5182	37957717	GRET	SVC	12/29/2020	1983	RET ABN	UG-SERVICE
5183	41776760	GRET	SVC	6/23/2023	1983	RET ABN	UG-SERVICE
5184	40973240	GRET	SVC	12/7/2022	1983	RET ABN	UG-SERVICE
5185	39724957	GRET	SVC	1/31/2022	1983	RET ABN	UG-SERVICE
5186	39439476	GRET	SVC	11/23/2021	1983	RET ABN	UG-SERVICE
5187	42564000	GRET	SVC	1/9/2024	1983	RET ABN	UG-SERVICE
5188	38490764	GRET	SVC	5/14/2021	1983	RET ABN	UG-SERVICE
5189	43245019	GRET	SVC	9/11/2024	1983	RET ABN	UG-SERVICE
5190	41390194	GRET	SVC	3/17/2023	1983	RET ABN	UG-SERVICE
5191	36004758	GRET	SVC	2/10/2020	1983	RET ABN	UG-SERVICE
5192	43600685	GRET	SVC	10/10/2024	1983	RET ABN	UG-SERVICE
5193	36044453	GRET	SVC	2/19/2020	1983	RET ABN	UG-SERVICE
5194	40959765	GRET	SVC	11/28/2022	1983	RET ABN	UG-SERVICE
5195	35849018	GRET	SVC	1/6/2020	1983	RET ABN	UG-SERVICE
5196	42866693	GRET	SVC	3/27/2024	1983	RET ABN	UG-SERVICE
5197	37639162	GRET	SVC	11/17/2020	1983	RET ABN	UG-SERVICE
5198	39169119	GRET	SVC	9/22/2021	1983	RET ABN	UG-SERVICE
5199	40860201	GRET	SVC	11/3/2022	1983	RET ABN	UG-SERVICE
5200	40831308	GRET	SVC	10/17/2022	1983	RET ABN	UG-SERVICE
5201	38894178	GRET	SVC	8/16/2021	1983	RET ABN	UG-SERVICE
5202	38394513	GRET	SVC	4/20/2021	1983	RET ABN	UG-SERVICE
5203	41538513	GRET	SVC	5/2/2023	1983	RET ABN	UG-SERVICE
5204	36402419	GRET	SVC	6/5/2020	1983	RET ABN	UG-SERVICE
5205	39749529	GRET	SVC	2/9/2022	1983	RET ABN	UG-SERVICE
5206	41407380	GRET	SVC	4/2/2024	1983	RET ABN	UG-SERVICE
5207	40457105	GRET	SVC	7/23/2022	1983	RET ABN	UG-SERVICE
5208	42817043	GRET	SVC	3/13/2024	1983	RET ABN	UG-SERVICE
5209	41426175	GRET	SVC	10/18/2023	1983	RET ABN	UG-SERVICE
5210	43028594	GRET	SVC	5/7/2024	1983	RET ABN	UG-SERVICE
5211	37946275	GRET	SVC	12/22/2020	1983	RET ABN	UG-SERVICE
5212	38247963	GRET	SVC	3/17/2021	1983	RET ABN	UG-SERVICE
5213	41818617	GRET	SVC	7/27/2023	1983	RET ABN	UG-SERVICE
5214	41407392	GRET	SVC	4/2/2024	1983	RET ABN	UG-SERVICE
5215	42249669	GRET	SVC	10/18/2023	1983	RET ABN	UG-SERVICE
5216	39368073	GRET	SVC	11/9/2021	1983	RET ABN	UG-SERVICE
5217	36817898	GRET	SVC	9/22/2020	1983	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5218	43679595	GRET	SVC	10/21/2024	1983	RET ABN	UG-SERVICE
5219	36360514	GRET	SVC	5/26/2020	1983	RET ABN	UG-SERVICE
5220	41594739	GRET	SVC	5/4/2023	1983	RET ABN	UG-SERVICE
5221	36951886	GRET	SVC	9/4/2020	1983	RET ABN	UG-SERVICE
5222	41475077	GRET	SVC	10/27/2023	1983	RET ABN	UG-SERVICE
5223	39353250	GRET	SVC	10/27/2021	1983	RET ABN	UG-SERVICE
5224	39234516	GRET	SVC	10/4/2021	1983	RET ABN	UG-SERVICE
5225	36173759	GRET	SVC	6/16/2020	1983	RET ABN	UG-SERVICE
5226	42144356	GRET	SVC	9/24/2023	1983	RET ABN	UG-SERVICE
5227	42206096	GRET	SVC	10/12/2023	1983	RET ABN	UG-SERVICE
5228	41408228	GRET	SVC	4/2/2024	1983	RET ABN	UG-SERVICE
5229	40634724	GRET	SVC	8/30/2022	1983	RET ABN	UG-SERVICE
5230	43416405	GRET	SVC	8/12/2024	1983	RET ABN	UG-SERVICE
5231	35963738	GRET	SVC	2/3/2020	1983	RET ABN	UG-SERVICE
5232	43762376	GRET	SVC	10/31/2024	1983	RET ABN	UG-SERVICE
5233	39858143	GRET	SVC	3/8/2022	1983	RET ABN	UG-SERVICE
5234	36724022	GRET	SVC	8/4/2020	1983	RET ABN	UG-SERVICE
5235	37216830	GRET	SVC	11/2/2020	1983	RET ABN	UG-SERVICE
5236	43423090	GRET	SVC	8/13/2024	1983	RET ABN	UG-SERVICE
5237	41903992	GRET	SVC	7/25/2023	1983	RET ABN	UG-SERVICE
5238	40375226	GRET	SVC	7/5/2022	1983	RET ABN	UG-SERVICE
5239	43923005	GRET	SVC	12/10/2024	1983	RET ABN	UG-SERVICE
5240	42971127	GRET	SVC	4/24/2024	1983	RET ABN	UG-SERVICE
5241	42302679	GRET	SVC	10/30/2023	1983	RET ABN	UG-SERVICE
5242	41407742	GRET	SVC	4/2/2024	1983	RET ABN	UG-SERVICE
5243	41323150	GRET	SVC	2/28/2023	1983	RET ABN	UG-SERVICE
5244	38382270	GRET	SVC	11/22/2021	1983	RET ABN	UG-SERVICE
5245	38378812	GRET	SVC	4/20/2021	1983	RET ABN	UG-SERVICE
5246	43867006	GRET	SVC	11/27/2024	1983	RET ABN	UG-SERVICE
5247	41578426	GRET	SVC	5/1/2023	1983	RET ABN	UG-SERVICE
5248	43424927	GRET	SVC	8/13/2024	1983	RET ABN	UG-SERVICE
5249	43245018	GRET	SVC	9/11/2024	1983	RET ABN	UG-SERVICE
5250	42678903	GRET	SVC	2/5/2024	1983	RET ABN	UG-SERVICE
5251	38192213	GRET	SVC	3/5/2021	1983	RET ABN	UG-SERVICE
5252	40754598	GRET	SVC	10/3/2022	1983	RET ABN	UG-SERVICE
5253	43365783	GRET	SVC	12/12/2024	1983	RET ABN	UG-SERVICE
5254	41969559	GRET	SVC	8/1/2024	1983	RET ABN	UG-SERVICE
5255	38040117	GRET	SVC	5/20/2021	1983	RET ABN	UG-SERVICE
5256	38312994	GRET	SVC	4/7/2021	1983	RET ABN	UG-SERVICE
5257	41904300	GRET	SVC	7/25/2023	1983	RET ABN	UG-SERVICE
5258	38352967	GRET	SVC	2/14/2023	1983	RET ABN	UG-SERVICE
5259	43424839	GRET	SVC	8/13/2024	1983	RET ABN	UG-SERVICE
5260	40266897	GRET	SVC	6/8/2022	1983	RET ABN	UG-SERVICE
5261	38186947	GRET	SVC	3/8/2021	1983	RET ABN	UG-SERVICE
5262	43148395	GRET	SVC	6/4/2024	1983	RET ABN	UG-SERVICE
5263	41901535	GRET	SVC	7/26/2023	1983	RET ABN	UG-SERVICE
5264	39188037	GRET	SVC	10/1/2021	1983	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5265	41084278	GRET	SVC	12/21/2022	1983	RET ABN	UG-SERVICE
5266	43000538	GRET	SVC	5/8/2024	1983	RET ABN	UG-SERVICE
5267	41918001	GRET	SVC	7/21/2023	1983	RET ABN	UG-SERVICE
5268	40492808	GRET	SVC	8/3/2022	1983	RET ABN	UG-SERVICE
5269	40948679	GRET	SVC	11/16/2022	1983	RET ABN	UG-SERVICE
5270	40406351	GRET	SVC	7/11/2022	1983	RET ABN	UG-SERVICE
5271	38274569	GRET	SVC	3/24/2021	1983	RET ABN	UG-SERVICE
5272	35940350	GRET	SVC	1/23/2020	1983	RET ABN	UG-SERVICE
5273	38561319	GRET	SVC	6/1/2021	1983	RET ABN	UG-SERVICE
5274	43108029	GRET	SVC	6/3/2024	1983	RET ABN	UG-SERVICE
5275	35960290	GRET	SVC	1/29/2020	1983	RET ABN	UG-SERVICE
5276	42277980	GRET	SVC	10/23/2023	1983	RET ABN	UG-SERVICE
5277	43108266	GRET	SVC	6/4/2024	1983	RET ABN	UG-SERVICE
5278	41407674	GRET	SVC	4/2/2024	1983	RET ABN	UG-SERVICE
5279	36252614	GRET	SVC	4/27/2020	1983	RET ABN	UG-SERVICE
5280	41464831	GRET	SVC	4/4/2023	1983	RET ABN	UG-SERVICE
5281	43027931	GRET	SVC	5/8/2024	1983	RET ABN	UG-SERVICE
5282	37070146	GRET	SVC	12/9/2020	1983	RET ABN	UG-SERVICE
5283	36862813	GRET	SVC	9/1/2020	1983	RET ABN	UG-SERVICE
5284	36917247	GRET	SVC	9/9/2020	1983	RET ABN	UG-SERVICE
5285	39577167	GRET	SVC	12/10/2021	1984	RET ABN	UG-SERVICE
5286	40202183	GRET	SVC	5/13/2022	1984	RET ABN	UG-SERVICE
5287	38084329	GRET	SVC	2/4/2021	1984	RET ABN	UG-SERVICE
5288	41260666	GRET	SVC	2/8/2023	1984	RET ABN	UG-SERVICE
5289	43312240	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5290	43245089	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5291	38268354	GRET	SVC	3/25/2021	1984	RET ABN	UG-SERVICE
5292	41694385	GRET	SVC	6/1/2023	1984	RET ABN	UG-SERVICE
5293	38000677	GRET	SVC	1/11/2021	1984	RET ABN	UG-SERVICE
5294	40374657	GRET	SVC	8/6/2022	1984	RET ABN	UG-SERVICE
5295	41000056	GRET	SVC	12/12/2022	1984	RET ABN	UG-SERVICE
5296	38287710	GRET	SVC	3/30/2021	1984	RET ABN	UG-SERVICE
5297	41411260	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5298	43198365	GRET	SVC	6/17/2024	1984	RET ABN	UG-SERVICE
5299	38435374	GRET	SVC	5/5/2021	1984	RET ABN	UG-SERVICE
5300	40407477	GRET	SVC	7/11/2022	1984	RET ABN	UG-SERVICE
5301	38047952	GRET	SVC	1/19/2021	1984	RET ABN	UG-SERVICE
5302	41579803	GRET	SVC	4/29/2023	1984	RET ABN	UG-SERVICE
5303	36890789	GRET	SVC	9/2/2020	1984	RET ABN	UG-SERVICE
5304	41279382	GRET	SVC	2/24/2023	1984	RET ABN	UG-SERVICE
5305	39662446	GRET	SVC	1/5/2022	1984	RET ABN	UG-SERVICE
5306	37998833	GRET	SVC	1/12/2021	1984	RET ABN	UG-SERVICE
5307	40990212	GRET	SVC	11/23/2022	1984	RET ABN	UG-SERVICE
5308	36167955	GRET	SVC	3/23/2020	1984	RET ABN	UG-SERVICE
5309	39390799	GRET	SVC	12/3/2021	1984	RET ABN	UG-SERVICE
5310	40392685	GRET	SVC	7/7/2022	1984	RET ABN	UG-SERVICE
5311	41424034	GRET	SVC	10/18/2023	1984	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5312	37799668	GRET	SVC	11/25/2020	1984	RET ABN	UG-SERVICE
5313	41713847	GRET	SVC	6/5/2023	1984	RET ABN	UG-SERVICE
5314	40496069	GRET	SVC	8/4/2022	1984	RET ABN	UG-SERVICE
5315	42131793	GRET	SVC	9/20/2023	1984	RET ABN	UG-SERVICE
5316	41179518	GRET	SVC	5/18/2023	1984	RET ABN	UG-SERVICE
5317	41411227	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5318	43428103	GRET	SVC	8/12/2024	1984	RET ABN	UG-SERVICE
5319	38616144	GRET	SVC	6/14/2021	1984	RET ABN	UG-SERVICE
5320	43245026	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5321	41026846	GRET	SVC	10/27/2022	1984	RET ABN	UG-SERVICE
5322	40900985	GRET	SVC	12/3/2022	1984	RET ABN	UG-SERVICE
5323	43245028	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5324	36341688	GRET	SVC	5/5/2020	1984	RET ABN	UG-SERVICE
5325	41085375	GRET	SVC	1/11/2023	1984	RET ABN	UG-SERVICE
5326	41411199	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5327	40458767	GRET	SVC	7/19/2022	1984	RET ABN	UG-SERVICE
5328	43245025	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5329	38630801	GRET	SVC	5/3/2021	1984	RET ABN	UG-SERVICE
5330	41977429	GRET	SVC	8/11/2023	1984	RET ABN	UG-SERVICE
5331	40242276	GRET	SVC	6/1/2022	1984	RET ABN	UG-SERVICE
5332	40113736	GRET	SVC	5/2/2022	1984	RET ABN	UG-SERVICE
5333	42827763	GRET	SVC	3/18/2024	1984	RET ABN	UG-SERVICE
5334	41411238	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5335	38874544	GRET	SVC	8/3/2021	1984	RET ABN	UG-SERVICE
5336	37054166	GRET	SVC	10/13/2020	1984	RET ABN	UG-SERVICE
5337	38392192	GRET	SVC	4/20/2021	1984	RET ABN	UG-SERVICE
5338	40231466	GRET	SVC	5/31/2022	1984	RET ABN	UG-SERVICE
5339	39312451	GRET	SVC	10/25/2021	1984	RET ABN	UG-SERVICE
5340	41179468	GRET	SVC	1/18/2023	1984	RET ABN	UG-SERVICE
5341	42415178	GRET	SVC	12/11/2023	1984	RET ABN	UG-SERVICE
5342	43346953	GRET	SVC	7/22/2024	1984	RET ABN	UG-SERVICE
5343	36177529	GRET	SVC	2/14/2020	1984	RET ABN	UG-SERVICE
5344	36657160	GRET	SVC	7/28/2020	1984	RET ABN	UG-SERVICE
5345	43249480	GRET	SVC	7/3/2024	1984	RET ABN	UG-SERVICE
5346	43312241	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5347	41183044	GRET	SVC	1/18/2023	1984	RET ABN	UG-SERVICE
5348	43323078	GRET	SVC	8/13/2024	1984	RET ABN	UG-SERVICE
5349	40395216	GRET	SVC	7/8/2022	1984	RET ABN	UG-SERVICE
5350	39410505	GRET	SVC	11/10/2021	1984	RET ABN	UG-SERVICE
5351	43312119	GRET	SVC	9/11/2024	1984	RET ABN	UG-SERVICE
5352	41411239	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5353	42112724	GRET	SVC	9/13/2023	1984	RET ABN	UG-SERVICE
5354	38455370	GRET	SVC	5/5/2021	1984	RET ABN	UG-SERVICE
5355	39513647	GRET	SVC	12/6/2021	1984	RET ABN	UG-SERVICE
5356	41179478	GRET	SVC	1/17/2023	1984	RET ABN	UG-SERVICE
5357	42834268	GRET	SVC	7/23/2024	1984	RET ABN	UG-SERVICE
5358	42068094	GRET	SVC	9/8/2023	1984	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5359	41477529	GRET	SVC	4/11/2023	1984	RET ABN	UG-SERVICE
5360	42083819	GRET	SVC	8/28/2023	1984	RET ABN	UG-SERVICE
5361	35996987	GRET	SVC	2/11/2020	1984	RET ABN	UG-SERVICE
5362	41411222	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5363	38713955	GRET	SVC	7/2/2021	1984	RET ABN	UG-SERVICE
5364	41411220	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5365	41334096	GRET	SVC	3/6/2023	1984	RET ABN	UG-SERVICE
5366	41969676	GRET	SVC	8/1/2024	1984	RET ABN	UG-SERVICE
5367	41411230	GRET	SVC	4/2/2024	1984	RET ABN	UG-SERVICE
5368	42467159	GRET	SVC	12/22/2023	1984	RET ABN	UG-SERVICE
5369	39501371	GRET	SVC	12/6/2021	1984	RET ABN	UG-SERVICE
5370	43402111	GRET	SVC	8/12/2024	1985	RET ABN	UG-SERVICE
5371	41590369	GRET	SVC	4/19/2023	1985	RET ABN	UG-SERVICE
5372	36185114	GRET	SVC	4/23/2020	1985	RET ABN	UG-SERVICE
5373	43353726	GRET	SVC	12/6/2024	1985	RET ABN	UG-SERVICE
5374	43544497	GRET	SVC	9/11/2024	1985	RET ABN	UG-SERVICE
5375	40693854	GRET	SVC	9/15/2022	1985	RET ABN	UG-SERVICE
5376	40563205	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5377	41067836	GRET	SVC	1/13/2023	1985	RET ABN	UG-SERVICE
5378	40394467	GRET	SVC	7/9/2022	1985	RET ABN	UG-SERVICE
5379	41297487	GRET	SVC	2/24/2023	1985	RET ABN	UG-SERVICE
5380	37116580	GRET	SVC	10/28/2020	1985	RET ABN	UG-SERVICE
5381	41969668	GRET	SVC	8/1/2024	1985	RET ABN	UG-SERVICE
5382	42427483	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5383	41408149	GRET	SVC	4/2/2024	1985	RET ABN	UG-SERVICE
5384	40358442	GRET	SVC	6/17/2022	1985	RET ABN	UG-SERVICE
5385	40316315	GRET	SVC	7/14/2022	1985	RET ABN	UG-SERVICE
5386	42487735	GRET	SVC	7/31/2024	1985	RET ABN	UG-SERVICE
5387	40571823	GRET	SVC	8/15/2022	1985	RET ABN	UG-SERVICE
5388	40563206	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5389	39401740	GRET	SVC	11/9/2021	1985	RET ABN	UG-SERVICE
5390	41277891	GRET	SVC	3/1/2023	1985	RET ABN	UG-SERVICE
5391	43324303	GRET	SVC	7/26/2024	1985	RET ABN	UG-SERVICE
5392	39809488	GRET	SVC	8/3/2022	1985	RET ABN	UG-SERVICE
5393	41858058	GRET	SVC	7/18/2023	1985	RET ABN	UG-SERVICE
5394	41273675	GRET	SVC	2/15/2023	1985	RET ABN	UG-SERVICE
5395	41408150	GRET	SVC	4/2/2024	1985	RET ABN	UG-SERVICE
5396	40818513	GRET	SVC	10/17/2022	1985	RET ABN	UG-SERVICE
5397	41650434	GRET	SVC	6/22/2023	1985	RET ABN	UG-SERVICE
5398	39553633	GRET	SVC	12/13/2021	1985	RET ABN	UG-SERVICE
5399	43029315	GRET	SVC	5/9/2024	1985	RET ABN	UG-SERVICE
5400	43470857	GRET	SVC	8/23/2024	1985	RET ABN	UG-SERVICE
5401	36198376	GRET	SVC	4/29/2020	1985	RET ABN	UG-SERVICE
5402	40645039	GRET	SVC	9/3/2022	1985	RET ABN	UG-SERVICE
5403	42921105	GRET	SVC	3/30/2024	1985	RET ABN	UG-SERVICE
5404	43470802	GRET	SVC	8/26/2024	1985	RET ABN	UG-SERVICE
5405	42767882	GRET	SVC	3/4/2024	1985	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5406	43268813	GRET	SVC	8/12/2024	1985	RET ABN	UG-SERVICE
5407	35145582	GRET	SVC	1/6/2020	1985	RET ABN	UG-SERVICE
5408	40564946	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5409	40564985	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5410	43245041	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5411	41430206	GRET	SVC	9/13/2023	1985	RET ABN	UG-SERVICE
5412	40564889	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5413	43353628	GRET	SVC	11/20/2024	1985	RET ABN	UG-SERVICE
5414	40880404	GRET	SVC	11/3/2022	1985	RET ABN	UG-SERVICE
5415	43353727	GRET	SVC	12/6/2024	1985	RET ABN	UG-SERVICE
5416	40883583	GRET	SVC	11/9/2022	1985	RET ABN	UG-SERVICE
5417	40564947	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5418	42670285	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5419	39556040	GRET	SVC	12/21/2021	1985	RET ABN	UG-SERVICE
5420	40610960	GRET	SVC	8/31/2022	1985	RET ABN	UG-SERVICE
5421	41246619	GRET	SVC	2/8/2023	1985	RET ABN	UG-SERVICE
5422	41467793	GRET	SVC	4/4/2023	1985	RET ABN	UG-SERVICE
5423	41423575	GRET	SVC	10/18/2023	1985	RET ABN	UG-SERVICE
5424	41007066	GRET	SVC	12/6/2022	1985	RET ABN	UG-SERVICE
5425	40901066	GRET	SVC	11/7/2022	1985	RET ABN	UG-SERVICE
5426	41146285	GRET	SVC	1/13/2023	1985	RET ABN	UG-SERVICE
5427	39971213	GRET	SVC	5/16/2022	1985	RET ABN	UG-SERVICE
5428	35968817	GRET	SVC	2/17/2020	1985	RET ABN	UG-SERVICE
5429	41224501	GRET	SVC	3/6/2023	1985	RET ABN	UG-SERVICE
5430	42227665	GRET	SVC	10/31/2023	1985	RET ABN	UG-SERVICE
5431	43226717	GRET	SVC	6/25/2024	1985	RET ABN	UG-SERVICE
5432	43184567	GRET	SVC	6/21/2024	1985	RET ABN	UG-SERVICE
5433	43196207	GRET	SVC	11/25/2024	1985	RET ABN	UG-SERVICE
5434	39464272	GRET	SVC	11/26/2021	1985	RET ABN	UG-SERVICE
5435	43353729	GRET	SVC	12/9/2024	1985	RET ABN	UG-SERVICE
5436	38769233	GRET	SVC	8/30/2021	1985	RET ABN	UG-SERVICE
5437	42246561	GRET	SVC	10/3/2023	1985	RET ABN	UG-SERVICE
5438	38014205	GRET	SVC	1/11/2021	1985	RET ABN	UG-SERVICE
5439	40880416	GRET	SVC	11/3/2022	1985	RET ABN	UG-SERVICE
5440	42236041	GRET	SVC	10/18/2023	1985	RET ABN	UG-SERVICE
5441	41015753	GRET	SVC	12/14/2022	1985	RET ABN	UG-SERVICE
5442	40564888	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5443	42958105	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5444	40564904	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5445	38373204	GRET	SVC	4/14/2021	1985	RET ABN	UG-SERVICE
5446	40564714	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5447	43769717	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5448	41430117	GRET	SVC	9/13/2023	1985	RET ABN	UG-SERVICE
5449	43353800	GRET	SVC	12/9/2024	1985	RET ABN	UG-SERVICE
5450	41408077	GRET	SVC	4/2/2024	1985	RET ABN	UG-SERVICE
5451	41067835	GRET	SVC	1/13/2023	1985	RET ABN	UG-SERVICE
5452	35973037	GRET	SVC	2/4/2020	1985	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5453	43353809	GRET	SVC	12/11/2024	1985	RET ABN	UG-SERVICE
5454	40577493	GRET	SVC	8/16/2022	1985	RET ABN	UG-SERVICE
5455	40564411	GRET	SVC	8/21/2022	1985	RET ABN	UG-SERVICE
5456	41185583	GRET	SVC	1/17/2023	1985	RET ABN	UG-SERVICE
5457	41843595	GRET	SVC	7/3/2023	1985	RET ABN	UG-SERVICE
5458	40973113	GRET	SVC	11/18/2022	1985	RET ABN	UG-SERVICE
5459	38221177	GRET	SVC	3/13/2021	1985	RET ABN	UG-SERVICE
5460	43604511	GRET	SVC	9/23/2024	1985	RET ABN	UG-SERVICE
5461	42427399	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5462	43353739	GRET	SVC	12/3/2024	1985	RET ABN	UG-SERVICE
5463	40900910	GRET	SVC	11/7/2022	1985	RET ABN	UG-SERVICE
5464	38623200	GRET	SVC	6/16/2021	1985	RET ABN	UG-SERVICE
5465	42427101	GRET	SVC	9/19/2024	1985	RET ABN	UG-SERVICE
5466	40856537	GRET	SVC	10/25/2022	1985	RET ABN	UG-SERVICE
5467	42903980	GRET	SVC	4/18/2024	1985	RET ABN	UG-SERVICE
5468	43850749	GRET	SVC	11/18/2024	1985	RET ABN	UG-SERVICE
5469	41411773	GRET	SVC	4/2/2024	1985	RET ABN	UG-SERVICE
5470	41273670	GRET	SVC	2/28/2023	1985	RET ABN	UG-SERVICE
5471	40883590	GRET	SVC	11/9/2022	1985	RET ABN	UG-SERVICE
5472	41409102	GRET	SVC	4/2/2024	1986	RET ABN	UG-SERVICE
5473	36142601	GRET	SVC	3/18/2020	1986	RET ABN	UG-SERVICE
5474	41430201	GRET	SVC	9/13/2023	1986	RET ABN	UG-SERVICE
5475	40778394	GRET	SVC	10/3/2022	1986	RET ABN	UG-SERVICE
5476	43858607	GRET	SVC	11/23/2024	1986	RET ABN	UG-SERVICE
5477	40915198	GRET	SVC	11/9/2022	1986	RET ABN	UG-SERVICE
5478	40641380	GRET	SVC	8/30/2022	1986	RET ABN	UG-SERVICE
5479	38090689	GRET	SVC	2/5/2021	1986	RET ABN	UG-SERVICE
5480	41062439	GRET	SVC	12/14/2022	1986	RET ABN	UG-SERVICE
5481	37335731	GRET	SVC	2/26/2021	1986	RET ABN	UG-SERVICE
5482	43353631	GRET	SVC	11/20/2024	1986	RET ABN	UG-SERVICE
5483	41430200	GRET	SVC	9/13/2023	1986	RET ABN	UG-SERVICE
5484	38562884	GRET	SVC	6/7/2021	1986	RET ABN	UG-SERVICE
5485	41325531	GRET	SVC	3/20/2023	1986	RET ABN	UG-SERVICE
5486	41469915	GRET	SVC	4/4/2023	1986	RET ABN	UG-SERVICE
5487	43353806	GRET	SVC	12/12/2024	1986	RET ABN	UG-SERVICE
5488	42316691	GRET	SVC	4/2/2024	1986	RET ABN	UG-SERVICE
5489	38562880	GRET	SVC	6/7/2021	1986	RET ABN	UG-SERVICE
5490	41556036	GRET	SVC	4/24/2023	1986	RET ABN	UG-SERVICE
5491	40919248	GRET	SVC	1/6/2023	1986	RET ABN	UG-SERVICE
5492	39335724	GRET	SVC	10/26/2021	1986	RET ABN	UG-SERVICE
5493	42873728	GRET	SVC	4/1/2024	1986	RET ABN	UG-SERVICE
5494	43816202	GRET	SVC	12/9/2024	1986	RET ABN	UG-SERVICE
5495	39923622	GRET	SVC	3/22/2022	1986	RET ABN	UG-SERVICE
5496	39126541	GRET	SVC	9/3/2021	1986	RET ABN	UG-SERVICE
5497	38592110	GRET	SVC	4/17/2021	1986	RET ABN	UG-SERVICE
5498	43353730	GRET	SVC	12/9/2024	1986	RET ABN	UG-SERVICE
5499	43353457	GRET	SVC	11/18/2024	1986	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5500	38299044	GRET	SVC	3/31/2021	1986	RET ABN	UG-SERVICE
5501	38352974	GRET	SVC	2/14/2023	1986	RET ABN	UG-SERVICE
5502	40141357	GRET	SVC	5/23/2022	1986	RET ABN	UG-SERVICE
5503	40100832	GRET	SVC	3/18/2022	1986	RET ABN	UG-SERVICE
5504	35960077	GRET	SVC	1/30/2020	1986	RET ABN	UG-SERVICE
5505	40618650	GRET	SVC	8/25/2022	1986	RET ABN	UG-SERVICE
5506	40530414	GRET	SVC	11/7/2022	1986	RET ABN	UG-SERVICE
5507	37325498	GRET	SVC	2/25/2021	1986	RET ABN	UG-SERVICE
5508	41821347	GRET	SVC	6/26/2023	1986	RET ABN	UG-SERVICE
5509	41940034	GRET	SVC	8/6/2023	1986	RET ABN	UG-SERVICE
5510	37561056	GRET	SVC	11/19/2020	1986	RET ABN	UG-SERVICE
5511	43353722	GRET	SVC	12/18/2024	1986	RET ABN	UG-SERVICE
5512	36886014	GRET	SVC	9/1/2020	1986	RET ABN	UG-SERVICE
5513	42048632	GRET	SVC	9/13/2023	1986	RET ABN	UG-SERVICE
5514	41298437	GRET	SVC	8/31/2023	1986	RET ABN	UG-SERVICE
5515	36347720	GRET	SVC	6/29/2020	1986	RET ABN	UG-SERVICE
5516	39335722	GRET	SVC	10/26/2021	1986	RET ABN	UG-SERVICE
5517	43328639	GRET	SVC	7/18/2024	1986	RET ABN	UG-SERVICE
5518	39739689	GRET	SVC	2/10/2022	1986	RET ABN	UG-SERVICE
5519	42203605	GRET	SVC	10/11/2023	1986	RET ABN	UG-SERVICE
5520	40778618	GRET	SVC	10/2/2022	1986	RET ABN	UG-SERVICE
5521	42824956	GRET	SVC	3/13/2024	1986	RET ABN	UG-SERVICE
5522	37115998	GRET	SVC	10/29/2020	1986	RET ABN	UG-SERVICE
5523	41085615	GRET	SVC	12/21/2022	1986	RET ABN	UG-SERVICE
5524	41834505	GRET	SVC	7/21/2023	1986	RET ABN	UG-SERVICE
5525	40303912	GRET	SVC	6/14/2022	1986	RET ABN	UG-SERVICE
5526	42992822	GRET	SVC	4/29/2024	1986	RET ABN	UG-SERVICE
5527	40395529	GRET	SVC	7/7/2022	1986	RET ABN	UG-SERVICE
5528	43324511	GRET	SVC	10/11/2024	1986	RET ABN	UG-SERVICE
5529	41082947	GRET	SVC	12/21/2022	1986	RET ABN	UG-SERVICE
5530	42425594	GRET	SVC	11/30/2023	1986	RET ABN	UG-SERVICE
5531	39177336	GRET	SVC	9/23/2021	1986	RET ABN	UG-SERVICE
5532	42176861	GRET	SVC	10/6/2023	1986	RET ABN	UG-SERVICE
5533	41411501	GRET	SVC	4/2/2024	1986	RET ABN	UG-SERVICE
5534	38441491	GRET	SVC	1/6/2022	1986	RET ABN	UG-SERVICE
5535	38286666	GRET	SVC	3/31/2021	1986	RET ABN	UG-SERVICE
5536	41959905	GRET	SVC	8/7/2023	1986	RET ABN	UG-SERVICE
5537	40944977	GRET	SVC	11/17/2022	1986	RET ABN	UG-SERVICE
5538	43364933	GRET	SVC	12/4/2024	1986	RET ABN	UG-SERVICE
5539	39930692	GRET	SVC	4/7/2022	1986	RET ABN	UG-SERVICE
5540	43353733	GRET	SVC	12/11/2024	1986	RET ABN	UG-SERVICE
5541	41407743	GRET	SVC	4/2/2024	1986	RET ABN	UG-SERVICE
5542	41185589	GRET	SVC	1/21/2023	1986	RET ABN	UG-SERVICE
5543	38635574	GRET	SVC	6/17/2021	1986	RET ABN	UG-SERVICE
5544	38562886	GRET	SVC	6/7/2021	1986	RET ABN	UG-SERVICE
5545	41325581	GRET	SVC	3/20/2023	1986	RET ABN	UG-SERVICE
5546	41333801	GRET	SVC	3/3/2023	1986	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5547	36064582	GRET	SVC	2/26/2020	1986	RET ABN	UG-SERVICE
5548	40124292	GRET	SVC	5/10/2022	1986	RET ABN	UG-SERVICE
5549	41411506	GRET	SVC	4/2/2024	1986	RET ABN	UG-SERVICE
5550	43917756	GRET	SVC	12/9/2024	1986	RET ABN	UG-SERVICE
5551	41555032	GRET	SVC	5/11/2023	1986	RET ABN	UG-SERVICE
5552	37561059	GRET	SVC	11/19/2020	1986	RET ABN	UG-SERVICE
5553	41766898	GRET	SVC	6/20/2023	1986	RET ABN	UG-SERVICE
5554	41129397	GRET	SVC	1/4/2023	1986	RET ABN	UG-SERVICE
5555	35940152	GRET	SVC	1/17/2020	1986	RET ABN	UG-SERVICE
5556	41324834	GRET	SVC	3/20/2023	1986	RET ABN	UG-SERVICE
5557	36485751	GRET	SVC	6/24/2020	1986	RET ABN	UG-SERVICE
5558	37335724	GRET	SVC	2/25/2021	1986	RET ABN	UG-SERVICE
5559	40157835	GRET	SVC	5/17/2022	1986	RET ABN	UG-SERVICE
5560	43353456	GRET	SVC	11/18/2024	1986	RET ABN	UG-SERVICE
5561	39922170	GRET	SVC	3/22/2022	1986	RET ABN	UG-SERVICE
5562	37561057	GRET	SVC	11/19/2020	1986	RET ABN	UG-SERVICE
5563	42954554	GRET	SVC	4/17/2024	1986	RET ABN	UG-SERVICE
5564	41808857	GRET	SVC	6/24/2023	1986	RET ABN	UG-SERVICE
5565	39311633	GRET	SVC	10/27/2021	1986	RET ABN	UG-SERVICE
5566	40656089	GRET	SVC	8/31/2022	1986	RET ABN	UG-SERVICE
5567	42227361	GRET	SVC	10/31/2023	1986	RET ABN	UG-SERVICE
5568	38448870	GRET	SVC	5/5/2021	1986	RET ABN	UG-SERVICE
5569	41427441	GRET	SVC	3/24/2023	1986	RET ABN	UG-SERVICE
5570	37561058	GRET	SVC	12/15/2020	1986	RET ABN	UG-SERVICE
5571	42278935	GRET	SVC	10/27/2023	1986	RET ABN	UG-SERVICE
5572	43353731	GRET	SVC	12/6/2024	1986	RET ABN	UG-SERVICE
5573	38059384	GRET	SVC	1/28/2021	1986	RET ABN	UG-SERVICE
5574	40035473	GRET	SVC	4/19/2022	1986	RET ABN	UG-SERVICE
5575	39930697	GRET	SVC	4/7/2022	1986	RET ABN	UG-SERVICE
5576	41185585	GRET	SVC	1/21/2023	1986	RET ABN	UG-SERVICE
5577	43353805	GRET	SVC	12/12/2024	1986	RET ABN	UG-SERVICE
5578	41325543	GRET	SVC	3/20/2023	1986	RET ABN	UG-SERVICE
5579	40264630	GRET	SVC	6/7/2022	1986	RET ABN	UG-SERVICE
5580	36994489	GRET	SVC	9/28/2020	1986	RET ABN	UG-SERVICE
5581	41775175	GRET	SVC	6/22/2023	1987	RET ABN	UG-SERVICE
5582	43353620	GRET	SVC	11/22/2024	1987	RET ABN	UG-SERVICE
5583	41289007	GRET	SVC	2/22/2023	1987	RET ABN	UG-SERVICE
5584	36776304	GRET	SVC	8/4/2020	1987	RET ABN	UG-SERVICE
5585	40487118	GRET	SVC	7/25/2022	1987	RET ABN	UG-SERVICE
5586	38272961	GRET	SVC	3/24/2021	1987	RET ABN	UG-SERVICE
5587	38357053	GRET	SVC	2/17/2023	1987	RET ABN	UG-SERVICE
5588	39831464	GRET	SVC	8/3/2022	1987	RET ABN	UG-SERVICE
5589	41283634	GRET	SVC	2/18/2023	1987	RET ABN	UG-SERVICE
5590	40953701	GRET	SVC	11/23/2022	1987	RET ABN	UG-SERVICE
5591	38609048	GRET	SVC	6/10/2021	1987	RET ABN	UG-SERVICE
5592	40124284	GRET	SVC	5/6/2022	1987	RET ABN	UG-SERVICE
5593	42526562	GRET	SVC	1/18/2024	1987	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5594	38352978	GRET	SVC	2/17/2023	1987	RET ABN	UG-SERVICE
5595	36949436	GRET	SVC	10/4/2020	1987	RET ABN	UG-SERVICE
5596	38413341	GRET	SVC	8/30/2021	1987	RET ABN	UG-SERVICE
5597	41283623	GRET	SVC	3/15/2023	1987	RET ABN	UG-SERVICE
5598	38542012	GRET	SVC	5/27/2021	1987	RET ABN	UG-SERVICE
5599	41357646	GRET	SVC	3/9/2023	1987	RET ABN	UG-SERVICE
5600	42468286	GRET	SVC	12/12/2023	1987	RET ABN	UG-SERVICE
5601	42870507	GRET	SVC	4/25/2024	1987	RET ABN	UG-SERVICE
5602	43353636	GRET	SVC	12/18/2024	1987	RET ABN	UG-SERVICE
5603	36369313	GRET	SVC	5/27/2020	1987	RET ABN	UG-SERVICE
5604	42671592	GRET	SVC	2/6/2024	1987	RET ABN	UG-SERVICE
5605	39750438	GRET	SVC	5/11/2022	1987	RET ABN	UG-SERVICE
5606	38352927	GRET	SVC	2/17/2023	1987	RET ABN	UG-SERVICE
5607	40976952	GRET	SVC	11/23/2022	1987	RET ABN	UG-SERVICE
5608	42373244	GRET	SVC	11/16/2023	1987	RET ABN	UG-SERVICE
5609	38416005	GRET	SVC	4/26/2021	1987	RET ABN	UG-SERVICE
5610	41509119	GRET	SVC	5/28/2023	1987	RET ABN	UG-SERVICE
5611	39411207	GRET	SVC	11/11/2021	1987	RET ABN	UG-SERVICE
5612	36122361	GRET	SVC	11/5/2020	1987	RET ABN	UG-SERVICE
5613	43241926	GRET	SVC	12/27/2024	1987	RET ABN	UG-SERVICE
5614	43480985	GRET	SVC	10/6/2024	1987	RET ABN	UG-SERVICE
5615	38353001	GRET	SVC	2/14/2023	1987	RET ABN	UG-SERVICE
5616	37973581	GRET	SVC	1/5/2021	1987	RET ABN	UG-SERVICE
5617	36306799	GRET	SVC	6/10/2020	1987	RET ABN	UG-SERVICE
5618	42022519	GRET	SVC	8/19/2023	1987	RET ABN	UG-SERVICE
5619	41283432	GRET	SVC	2/14/2023	1987	RET ABN	UG-SERVICE
5620	42962467	GRET	SVC	4/20/2024	1987	RET ABN	UG-SERVICE
5621	38230875	GRET	SVC	3/16/2021	1987	RET ABN	UG-SERVICE
5622	39093243	GRET	SVC	9/8/2021	1987	RET ABN	UG-SERVICE
5623	36741663	GRET	SVC	8/3/2020	1987	RET ABN	UG-SERVICE
5624	40420448	GRET	SVC	7/11/2022	1987	RET ABN	UG-SERVICE
5625	36992843	GRET	SVC	10/1/2020	1987	RET ABN	UG-SERVICE
5626	43347390	GRET	SVC	7/24/2024	1987	RET ABN	UG-SERVICE
5627	41283621	GRET	SVC	2/25/2023	1987	RET ABN	UG-SERVICE
5628	38207399	GRET	SVC	3/10/2021	1987	RET ABN	UG-SERVICE
5629	38097603	GRET	SVC	1/29/2021	1987	RET ABN	UG-SERVICE
5630	38887676	GRET	SVC	8/19/2021	1987	RET ABN	UG-SERVICE
5631	43219819	GRET	SVC	6/24/2024	1987	RET ABN	UG-SERVICE
5632	40516609	GRET	SVC	8/5/2022	1987	RET ABN	UG-SERVICE
5633	42313715	GRET	SVC	10/27/2023	1987	RET ABN	UG-SERVICE
5634	42503102	GRET	SVC	12/19/2023	1987	RET ABN	UG-SERVICE
5635	40395538	GRET	SVC	7/6/2022	1987	RET ABN	UG-SERVICE
5636	36602938	GRET	SVC	7/7/2020	1987	RET ABN	UG-SERVICE
5637	39848408	GRET	SVC	6/10/2022	1987	RET ABN	UG-SERVICE
5638	43353621	GRET	SVC	11/22/2024	1987	RET ABN	UG-SERVICE
5639	36955071	GRET	SVC	9/17/2020	1987	RET ABN	UG-SERVICE
5640	40396047	GRET	SVC	7/8/2022	1987	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5641	36330971	GRET	SVC	5/19/2020	1987	RET ABN	UG-SERVICE
5642	36122291	GRET	SVC	11/5/2020	1987	RET ABN	UG-SERVICE
5643	39491988	GRET	SVC	12/6/2021	1987	RET ABN	UG-SERVICE
5644	42435909	GRET	SVC	9/19/2024	1987	RET ABN	UG-SERVICE
5645	38083269	GRET	SVC	2/1/2021	1987	RET ABN	UG-SERVICE
5646	40805952	GRET	SVC	10/10/2022	1987	RET ABN	UG-SERVICE
5647	36063444	GRET	SVC	2/24/2020	1987	RET ABN	UG-SERVICE
5648	42007814	GRET	SVC	8/15/2023	1987	RET ABN	UG-SERVICE
5649	43738581	GRET	SVC	10/19/2024	1987	RET ABN	UG-SERVICE
5650	40424138	GRET	SVC	7/12/2022	1987	RET ABN	UG-SERVICE
5651	43481041	GRET	SVC	11/2/2024	1987	RET ABN	UG-SERVICE
5652	41954550	GRET	SVC	8/21/2023	1987	RET ABN	UG-SERVICE
5653	38560872	GRET	SVC	6/1/2021	1987	RET ABN	UG-SERVICE
5654	39750719	GRET	SVC	2/1/2022	1987	RET ABN	UG-SERVICE
5655	41325600	GRET	SVC	3/20/2023	1987	RET ABN	UG-SERVICE
5656	41283330	GRET	SVC	3/15/2023	1987	RET ABN	UG-SERVICE
5657	42962575	GRET	SVC	4/20/2024	1987	RET ABN	UG-SERVICE
5658	41528448	GRET	SVC	5/2/2023	1987	RET ABN	UG-SERVICE
5659	41528299	GRET	SVC	5/2/2023	1987	RET ABN	UG-SERVICE
5660	39497286	GRET	SVC	12/7/2021	1987	RET ABN	UG-SERVICE
5661	39553322	GRET	SVC	12/20/2021	1987	RET ABN	UG-SERVICE
5662	42905534	GRET	SVC	4/1/2024	1987	RET ABN	UG-SERVICE
5663	39671168	GRET	SVC	1/10/2022	1987	RET ABN	UG-SERVICE
5664	40188718	GRET	SVC	5/18/2022	1987	RET ABN	UG-SERVICE
5665	41509377	GRET	SVC	5/5/2023	1987	RET ABN	UG-SERVICE
5666	41176377	GRET	SVC	3/13/2023	1987	RET ABN	UG-SERVICE
5667	36969026	GRET	SVC	12/9/2020	1987	RET ABN	UG-SERVICE
5668	38137182	GRET	SVC	2/18/2021	1987	RET ABN	UG-SERVICE
5669	42487739	GRET	SVC	7/31/2024	1987	RET ABN	UG-SERVICE
5670	37956427	GRET	SVC	12/21/2020	1987	RET ABN	UG-SERVICE
5671	36630719	GRET	SVC	7/16/2020	1987	RET ABN	UG-SERVICE
5672	42453416	GRET	SVC	12/2/2023	1987	RET ABN	UG-SERVICE
5673	38352547	GRET	SVC	2/14/2023	1987	RET ABN	UG-SERVICE
5674	36009861	GRET	SVC	2/13/2020	1987	RET ABN	UG-SERVICE
5675	43219492	GRET	SVC	6/24/2024	1987	RET ABN	UG-SERVICE
5676	42204420	GRET	SVC	10/9/2023	1987	RET ABN	UG-SERVICE
5677	39418862	GRET	SVC	11/15/2021	1987	RET ABN	UG-SERVICE
5678	40023412	GRET	SVC	3/8/2022	1987	RET ABN	UG-SERVICE
5679	38376390	GRET	SVC	4/19/2021	1987	RET ABN	UG-SERVICE
5680	43832784	GRET	SVC	12/17/2024	1987	RET ABN	UG-SERVICE
5681	41953092	GRET	SVC	8/5/2023	1987	RET ABN	UG-SERVICE
5682	43888925	GRET	SVC	12/2/2024	1987	RET ABN	UG-SERVICE
5683	41497634	GRET	SVC	4/24/2023	1987	RET ABN	UG-SERVICE
5684	36730526	GRET	SVC	8/18/2020	1987	RET ABN	UG-SERVICE
5685	39837092	GRET	SVC	3/2/2022	1987	RET ABN	UG-SERVICE
5686	38356734	GRET	SVC	2/17/2023	1987	RET ABN	UG-SERVICE
5687	43353639	GRET	SVC	11/19/2024	1987	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5688	41544094	GRET	SVC	4/24/2023	1987	RET ABN	UG-SERVICE
5689	40640652	GRET	SVC	8/30/2022	1987	RET ABN	UG-SERVICE
5690	40359842	GRET	SVC	6/22/2022	1988	RET ABN	UG-SERVICE
5691	42482398	GRET	SVC	12/13/2023	1988	RET ABN	UG-SERVICE
5692	43529721	GRET	SVC	11/23/2024	1988	RET ABN	UG-SERVICE
5693	41348101	GRET	SVC	3/8/2023	1988	RET ABN	UG-SERVICE
5694	42131094	GRET	SVC	10/2/2023	1988	RET ABN	UG-SERVICE
5695	43424554	GRET	SVC	8/13/2024	1988	RET ABN	UG-SERVICE
5696	41484000	GRET	SVC	4/18/2023	1988	RET ABN	UG-SERVICE
5697	42902358	GRET	SVC	4/10/2024	1988	RET ABN	UG-SERVICE
5698	40802832	GRET	SVC	10/10/2022	1988	RET ABN	UG-SERVICE
5699	38664195	GRET	SVC	6/24/2021	1988	RET ABN	UG-SERVICE
5700	41330583	GRET	SVC	3/6/2023	1988	RET ABN	UG-SERVICE
5701	39726224	GRET	SVC	1/28/2022	1988	RET ABN	UG-SERVICE
5702	43347989	GRET	SVC	7/21/2024	1988	RET ABN	UG-SERVICE
5703	41484001	GRET	SVC	4/18/2023	1988	RET ABN	UG-SERVICE
5704	43344816	GRET	SVC	7/24/2024	1988	RET ABN	UG-SERVICE
5705	43353720	GRET	SVC	11/20/2024	1988	RET ABN	UG-SERVICE
5706	43356661	GRET	SVC	8/5/2024	1988	RET ABN	UG-SERVICE
5707	40690298	GRET	SVC	9/14/2022	1988	RET ABN	UG-SERVICE
5708	38019271	GRET	SVC	1/15/2021	1988	RET ABN	UG-SERVICE
5709	41672952	GRET	SVC	5/24/2023	1988	RET ABN	UG-SERVICE
5710	40318193	GRET	SVC	6/17/2022	1988	RET ABN	UG-SERVICE
5711	42033831	GRET	SVC	8/21/2023	1988	RET ABN	UG-SERVICE
5712	38352353	GRET	SVC	2/14/2023	1988	RET ABN	UG-SERVICE
5713	41317157	GRET	SVC	3/5/2023	1988	RET ABN	UG-SERVICE
5714	40330082	GRET	SVC	6/22/2022	1988	RET ABN	UG-SERVICE
5715	41509368	GRET	SVC	4/18/2023	1988	RET ABN	UG-SERVICE
5716	38936983	GRET	SVC	9/29/2021	1988	RET ABN	UG-SERVICE
5717	43522111	GRET	SVC	8/20/2024	1988	RET ABN	UG-SERVICE
5718	40312080	GRET	SVC	6/22/2022	1988	RET ABN	UG-SERVICE
5719	36664628	GRET	SVC	7/23/2020	1988	RET ABN	UG-SERVICE
5720	42130053	GRET	SVC	9/20/2023	1988	RET ABN	UG-SERVICE
5721	43230016	GRET	SVC	6/30/2024	1988	RET ABN	UG-SERVICE
5722	39091925	GRET	SVC	9/7/2021	1988	RET ABN	UG-SERVICE
5723	40384102	GRET	SVC	7/5/2022	1988	RET ABN	UG-SERVICE
5724	39904611	GRET	SVC	3/21/2022	1988	RET ABN	UG-SERVICE
5725	38353007	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5726	42646567	GRET	SVC	1/29/2024	1988	RET ABN	UG-SERVICE
5727	38352960	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5728	39831389	GRET	SVC	8/3/2022	1988	RET ABN	UG-SERVICE
5729	39429947	GRET	SVC	11/18/2021	1988	RET ABN	UG-SERVICE
5730	43417615	GRET	SVC	8/13/2024	1988	RET ABN	UG-SERVICE
5731	43060076	GRET	SVC	5/14/2024	1988	RET ABN	UG-SERVICE
5732	37809721	GRET	SVC	11/21/2020	1988	RET ABN	UG-SERVICE
5733	41483262	GRET	SVC	4/11/2023	1988	RET ABN	UG-SERVICE
5734	41509363	GRET	SVC	4/17/2023	1988	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5735	43909688	GRET	SVC	12/19/2024	1988	RET ABN	UG-SERVICE
5736	41484578	GRET	SVC	4/11/2023	1988	RET ABN	UG-SERVICE
5737	38548333	GRET	SVC	6/1/2021	1988	RET ABN	UG-SERVICE
5738	38353011	GRET	SVC	2/14/2023	1988	RET ABN	UG-SERVICE
5739	43028883	GRET	SVC	5/15/2024	1988	RET ABN	UG-SERVICE
5740	38352963	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5741	43680029	GRET	SVC	10/31/2024	1988	RET ABN	UG-SERVICE
5742	43868034	GRET	SVC	11/25/2024	1988	RET ABN	UG-SERVICE
5743	43086380	GRET	SVC	5/20/2024	1988	RET ABN	UG-SERVICE
5744	38333914	GRET	SVC	4/8/2021	1988	RET ABN	UG-SERVICE
5745	41339575	GRET	SVC	3/19/2023	1988	RET ABN	UG-SERVICE
5746	38353002	GRET	SVC	2/14/2023	1988	RET ABN	UG-SERVICE
5747	39735614	GRET	SVC	1/27/2022	1988	RET ABN	UG-SERVICE
5748	39831200	GRET	SVC	8/3/2022	1988	RET ABN	UG-SERVICE
5749	36085780	GRET	SVC	2/28/2020	1988	RET ABN	UG-SERVICE
5750	38356735	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5751	40461419	GRET	SVC	7/22/2022	1988	RET ABN	UG-SERVICE
5752	41411401	GRET	SVC	4/2/2024	1988	RET ABN	UG-SERVICE
5753	41784366	GRET	SVC	4/25/2024	1988	RET ABN	UG-SERVICE
5754	38352964	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5755	40150983	GRET	SVC	4/27/2022	1988	RET ABN	UG-SERVICE
5756	41473285	GRET	SVC	4/6/2023	1988	RET ABN	UG-SERVICE
5757	41480838	GRET	SVC	4/8/2023	1988	RET ABN	UG-SERVICE
5758	42115092	GRET	SVC	9/15/2023	1988	RET ABN	UG-SERVICE
5759	39579981	GRET	SVC	12/27/2021	1988	RET ABN	UG-SERVICE
5760	43070081	GRET	SVC	5/17/2024	1988	RET ABN	UG-SERVICE
5761	42272964	GRET	SVC	12/21/2023	1988	RET ABN	UG-SERVICE
5762	38536246	GRET	SVC	5/26/2021	1988	RET ABN	UG-SERVICE
5763	41859584	GRET	SVC	7/12/2023	1988	RET ABN	UG-SERVICE
5764	43635664	GRET	SVC	9/27/2024	1988	RET ABN	UG-SERVICE
5765	41485401	GRET	SVC	4/10/2023	1988	RET ABN	UG-SERVICE
5766	40701884	GRET	SVC	9/15/2022	1988	RET ABN	UG-SERVICE
5767	43516694	GRET	SVC	9/4/2024	1988	RET ABN	UG-SERVICE
5768	39843561	GRET	SVC	3/1/2022	1988	RET ABN	UG-SERVICE
5769	36173692	GRET	SVC	3/24/2020	1988	RET ABN	UG-SERVICE
5770	38134101	GRET	SVC	2/15/2021	1988	RET ABN	UG-SERVICE
5771	39654874	GRET	SVC	6/28/2022	1988	RET ABN	UG-SERVICE
5772	41484635	GRET	SVC	4/14/2023	1988	RET ABN	UG-SERVICE
5773	40860141	GRET	SVC	10/25/2022	1988	RET ABN	UG-SERVICE
5774	38776342	GRET	SVC	7/16/2021	1988	RET ABN	UG-SERVICE
5775	38536250	GRET	SVC	5/26/2021	1988	RET ABN	UG-SERVICE
5776	41347538	GRET	SVC	3/17/2023	1988	RET ABN	UG-SERVICE
5777	40353605	GRET	SVC	6/27/2022	1988	RET ABN	UG-SERVICE
5778	41411428	GRET	SVC	11/2/2023	1988	RET ABN	UG-SERVICE
5779	43173752	GRET	SVC	7/17/2024	1988	RET ABN	UG-SERVICE
5780	41655778	GRET	SVC	5/22/2023	1988	RET ABN	UG-SERVICE
5781	38681133	GRET	SVC	6/28/2021	1988	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5782	40952592	GRET	SVC	11/17/2022	1988	RET ABN	UG-SERVICE
5783	37809726	GRET	SVC	11/21/2020	1988	RET ABN	UG-SERVICE
5784	42833095	GRET	SVC	7/22/2024	1988	RET ABN	UG-SERVICE
5785	41484824	GRET	SVC	4/18/2023	1988	RET ABN	UG-SERVICE
5786	39390980	GRET	SVC	11/22/2021	1988	RET ABN	UG-SERVICE
5787	42902622	GRET	SVC	4/10/2024	1988	RET ABN	UG-SERVICE
5788	41483261	GRET	SVC	4/11/2023	1988	RET ABN	UG-SERVICE
5789	42878215	GRET	SVC	4/1/2024	1988	RET ABN	UG-SERVICE
5790	43388730	GRET	SVC	8/8/2024	1988	RET ABN	UG-SERVICE
5791	38352939	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5792	41339786	GRET	SVC	3/20/2023	1988	RET ABN	UG-SERVICE
5793	39255672	GRET	SVC	10/6/2021	1988	RET ABN	UG-SERVICE
5794	41427597	GRET	SVC	4/11/2023	1988	RET ABN	UG-SERVICE
5795	43907132	GRET	SVC	12/2/2024	1988	RET ABN	UG-SERVICE
5796	40897519	GRET	SVC	10/20/2022	1988	RET ABN	UG-SERVICE
5797	42233736	GRET	SVC	10/17/2023	1988	RET ABN	UG-SERVICE
5798	41183431	GRET	SVC	1/21/2023	1988	RET ABN	UG-SERVICE
5799	36119470	GRET	SVC	3/11/2020	1988	RET ABN	UG-SERVICE
5800	37561228	GRET	SVC	11/18/2020	1988	RET ABN	UG-SERVICE
5801	41728023	GRET	SVC	6/8/2023	1988	RET ABN	UG-SERVICE
5802	41918029	GRET	SVC	7/25/2023	1988	RET ABN	UG-SERVICE
5803	43648056	GRET	SVC	10/8/2024	1988	RET ABN	UG-SERVICE
5804	36330193	GRET	SVC	5/13/2020	1988	RET ABN	UG-SERVICE
5805	41339783	GRET	SVC	3/19/2023	1988	RET ABN	UG-SERVICE
5806	40371068	GRET	SVC	7/6/2022	1988	RET ABN	UG-SERVICE
5807	38409136	GRET	SVC	5/11/2021	1988	RET ABN	UG-SERVICE
5808	43704279	GRET	SVC	10/18/2024	1988	RET ABN	UG-SERVICE
5809	40005608	GRET	SVC	5/4/2022	1988	RET ABN	UG-SERVICE
5810	38353010	GRET	SVC	2/14/2023	1988	RET ABN	UG-SERVICE
5811	38352962	GRET	SVC	2/17/2023	1988	RET ABN	UG-SERVICE
5812	39979951	GRET	SVC	4/12/2022	1988	RET ABN	UG-SERVICE
5813	40869760	GRET	SVC	11/14/2022	1988	RET ABN	UG-SERVICE
5814	39780198	GRET	SVC	2/10/2022	1988	RET ABN	UG-SERVICE
5815	38353009	GRET	SVC	2/14/2023	1988	RET ABN	UG-SERVICE
5816	42902291	GRET	SVC	4/10/2024	1988	RET ABN	UG-SERVICE
5817	39903260	GRET	SVC	3/17/2022	1988	RET ABN	UG-SERVICE
5818	40360328	GRET	SVC	6/30/2022	1989	RET ABN	UG-SERVICE
5819	40806360	GRET	SVC	10/13/2022	1989	RET ABN	UG-SERVICE
5820	38326366	GRET	SVC	4/7/2021	1989	RET ABN	UG-SERVICE
5821	43826495	GRET	SVC	11/21/2024	1989	RET ABN	UG-SERVICE
5822	36045098	GRET	SVC	2/17/2020	1989	RET ABN	UG-SERVICE
5823	41528451	GRET	SVC	4/26/2023	1989	RET ABN	UG-SERVICE
5824	39657989	GRET	SVC	2/11/2022	1989	RET ABN	UG-SERVICE
5825	41411417	GRET	SVC	11/2/2023	1989	RET ABN	UG-SERVICE
5826	42097440	GRET	SVC	9/12/2023	1989	RET ABN	UG-SERVICE
5827	43711682	GRET	SVC	10/17/2024	1989	RET ABN	UG-SERVICE
5828	42338142	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5829	36397955	GRET	SVC	5/31/2020	1989	RET ABN	UG-SERVICE
5830	35965101	GRET	SVC	1/25/2020	1989	RET ABN	UG-SERVICE
5831	43606775	GRET	SVC	9/23/2024	1989	RET ABN	UG-SERVICE
5832	43364867	GRET	SVC	11/15/2024	1989	RET ABN	UG-SERVICE
5833	40524623	GRET	SVC	8/20/2022	1989	RET ABN	UG-SERVICE
5834	42841262	GRET	SVC	3/20/2024	1989	RET ABN	UG-SERVICE
5835	40861132	GRET	SVC	11/3/2022	1989	RET ABN	UG-SERVICE
5836	43889223	GRET	SVC	12/2/2024	1989	RET ABN	UG-SERVICE
5837	38326368	GRET	SVC	4/7/2021	1989	RET ABN	UG-SERVICE
5838	40954338	GRET	SVC	11/25/2022	1989	RET ABN	UG-SERVICE
5839	42672485	GRET	SVC	2/7/2024	1989	RET ABN	UG-SERVICE
5840	39531120	GRET	SVC	11/11/2021	1989	RET ABN	UG-SERVICE
5841	38326367	GRET	SVC	4/7/2021	1989	RET ABN	UG-SERVICE
5842	42833107	GRET	SVC	3/20/2024	1989	RET ABN	UG-SERVICE
5843	39306862	GRET	SVC	10/25/2021	1989	RET ABN	UG-SERVICE
5844	43741572	GRET	SVC	10/23/2024	1989	RET ABN	UG-SERVICE
5845	42338153	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE
5846	40988811	GRET	SVC	11/29/2022	1989	RET ABN	UG-SERVICE
5847	42338155	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE
5848	40974231	GRET	SVC	11/30/2022	1989	RET ABN	UG-SERVICE
5849	40664487	GRET	SVC	9/6/2022	1989	RET ABN	UG-SERVICE
5850	36953283	GRET	SVC	9/17/2020	1989	RET ABN	UG-SERVICE
5851	36177524	GRET	SVC	2/14/2020	1989	RET ABN	UG-SERVICE
5852	43547702	GRET	SVC	10/21/2024	1989	RET ABN	UG-SERVICE
5853	40845456	GRET	SVC	10/25/2022	1989	RET ABN	UG-SERVICE
5854	36967478	GRET	SVC	9/21/2020	1989	RET ABN	UG-SERVICE
5855	38326365	GRET	SVC	4/7/2021	1989	RET ABN	UG-SERVICE
5856	40361069	GRET	SVC	6/29/2022	1989	RET ABN	UG-SERVICE
5857	36732249	GRET	SVC	8/3/2020	1989	RET ABN	UG-SERVICE
5858	39436428	GRET	SVC	11/18/2021	1989	RET ABN	UG-SERVICE
5859	43324191	GRET	SVC	12/17/2024	1989	RET ABN	UG-SERVICE
5860	42484631	GRET	SVC	12/9/2023	1989	RET ABN	UG-SERVICE
5861	40282633	GRET	SVC	6/8/2022	1989	RET ABN	UG-SERVICE
5862	36918313	GRET	SVC	9/14/2020	1989	RET ABN	UG-SERVICE
5863	40385554	GRET	SVC	7/7/2022	1989	RET ABN	UG-SERVICE
5864	40757102	GRET	SVC	10/3/2022	1989	RET ABN	UG-SERVICE
5865	35985008	GRET	SVC	2/5/2020	1989	RET ABN	UG-SERVICE
5866	36804284	GRET	SVC	9/15/2020	1989	RET ABN	UG-SERVICE
5867	42338143	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE
5868	42921460	GRET	SVC	5/20/2024	1989	RET ABN	UG-SERVICE
5869	42337785	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE
5870	39394755	GRET	SVC	11/9/2021	1989	RET ABN	UG-SERVICE
5871	40282639	GRET	SVC	6/7/2022	1989	RET ABN	UG-SERVICE
5872	40370779	GRET	SVC	7/6/2022	1989	RET ABN	UG-SERVICE
5873	40309945	GRET	SVC	6/15/2022	1989	RET ABN	UG-SERVICE
5874	41635508	GRET	SVC	5/18/2023	1989	RET ABN	UG-SERVICE
5875	41272666	GRET	SVC	2/13/2023	1989	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5876	43280669	GRET	SVC	11/25/2024	1989	RET ABN	UG-SERVICE
5877	39423117	GRET	SVC	6/27/2022	1989	RET ABN	UG-SERVICE
5878	37928572	GRET	SVC	1/4/2021	1989	RET ABN	UG-SERVICE
5879	40282857	GRET	SVC	6/13/2022	1989	RET ABN	UG-SERVICE
5880	41768371	GRET	SVC	6/23/2023	1989	RET ABN	UG-SERVICE
5881	36603046	GRET	SVC	7/8/2020	1989	RET ABN	UG-SERVICE
5882	42653097	GRET	SVC	2/6/2024	1989	RET ABN	UG-SERVICE
5883	43930219	GRET	SVC	12/11/2024	1989	RET ABN	UG-SERVICE
5884	40846907	GRET	SVC	10/22/2022	1989	RET ABN	UG-SERVICE
5885	43280670	GRET	SVC	11/25/2024	1989	RET ABN	UG-SERVICE
5886	42338149	GRET	SVC	11/5/2023	1989	RET ABN	UG-SERVICE
5887	42763040	GRET	SVC	3/1/2024	1989	RET ABN	UG-SERVICE
5888	43972041	GRET	SVC	12/23/2024	1989	RET ABN	UG-SERVICE
5889	43195851	GRET	SVC	6/18/2024	1989	RET ABN	UG-SERVICE
5890	42344385	GRET	SVC	11/9/2023	1989	RET ABN	UG-SERVICE
5891	43075712	GRET	SVC	5/24/2024	1989	RET ABN	UG-SERVICE
5892	40973100	GRET	SVC	11/30/2022	1989	RET ABN	UG-SERVICE
5893	36369084	GRET	SVC	5/23/2020	1989	RET ABN	UG-SERVICE
5894	36925972	GRET	SVC	9/14/2020	1989	RET ABN	UG-SERVICE
5895	38532479	GRET	SVC	6/11/2021	1989	RET ABN	UG-SERVICE
5896	41881436	GRET	SVC	7/18/2023	1989	RET ABN	UG-SERVICE
5897	38813221	GRET	SVC	8/2/2021	1989	RET ABN	UG-SERVICE
5898	41433911	GRET	SVC	3/27/2023	1989	RET ABN	UG-SERVICE
5899	38376263	GRET	SVC	4/20/2021	1989	RET ABN	UG-SERVICE
5900	43506885	GRET	SVC	9/27/2024	1989	RET ABN	UG-SERVICE
5901	38613459	GRET	SVC	8/5/2021	1989	RET ABN	UG-SERVICE
5902	42534000	GRET	SVC	1/4/2024	1990	RET ABN	UG-SERVICE
5903	38413345	GRET	SVC	5/25/2021	1990	RET ABN	UG-SERVICE
5904	41397684	GRET	SVC	3/15/2023	1990	RET ABN	UG-SERVICE
5905	39084496	GRET	SVC	9/7/2021	1990	RET ABN	UG-SERVICE
5906	41427450	GRET	SVC	3/21/2023	1990	RET ABN	UG-SERVICE
5907	43600748	GRET	SVC	9/23/2024	1990	RET ABN	UG-SERVICE
5908	41543906	GRET	SVC	4/24/2023	1990	RET ABN	UG-SERVICE
5909	42236828	GRET	SVC	10/16/2023	1990	RET ABN	UG-SERVICE
5910	43353453	GRET	SVC	11/21/2024	1990	RET ABN	UG-SERVICE
5911	40981807	GRET	SVC	11/28/2022	1990	RET ABN	UG-SERVICE
5912	41129074	GRET	SVC	1/5/2023	1990	RET ABN	UG-SERVICE
5913	40491493	GRET	SVC	7/27/2022	1990	RET ABN	UG-SERVICE
5914	36199499	GRET	SVC	4/22/2020	1990	RET ABN	UG-SERVICE
5915	40978232	GRET	SVC	11/28/2022	1990	RET ABN	UG-SERVICE
5916	36125170	GRET	SVC	6/13/2020	1990	RET ABN	UG-SERVICE
5917	40981882	GRET	SVC	11/28/2022	1990	RET ABN	UG-SERVICE
5918	43398030	GRET	SVC	8/6/2024	1990	RET ABN	UG-SERVICE
5919	41447891	GRET	SVC	3/30/2023	1990	RET ABN	UG-SERVICE
5920	43330190	GRET	SVC	7/18/2024	1990	RET ABN	UG-SERVICE
5921	40278530	GRET	SVC	6/10/2022	1990	RET ABN	UG-SERVICE
5922	38698665	GRET	SVC	8/10/2021	1990	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5923	40507607	GRET	SVC	9/9/2022	1990	RET ABN	UG-SERVICE
5924	42823916	GRET	SVC	4/15/2024	1990	RET ABN	UG-SERVICE
5925	36281347	GRET	SVC	4/29/2020	1990	RET ABN	UG-SERVICE
5926	41320813	GRET	SVC	2/28/2023	1990	RET ABN	UG-SERVICE
5927	41767341	GRET	SVC	6/19/2023	1990	RET ABN	UG-SERVICE
5928	41447525	GRET	SVC	3/30/2023	1990	RET ABN	UG-SERVICE
5929	43765822	GRET	SVC	10/30/2024	1990	RET ABN	UG-SERVICE
5930	40621518	GRET	SVC	8/31/2022	1990	RET ABN	UG-SERVICE
5931	40594519	GRET	SVC	9/16/2022	1990	RET ABN	UG-SERVICE
5932	39378868	GRET	SVC	12/2/2021	1990	RET ABN	UG-SERVICE
5933	42020315	GRET	SVC	8/21/2023	1990	RET ABN	UG-SERVICE
5934	38517629	GRET	SVC	4/12/2021	1990	RET ABN	UG-SERVICE
5935	43353452	GRET	SVC	11/20/2024	1990	RET ABN	UG-SERVICE
5936	40075583	GRET	SVC	4/26/2022	1990	RET ABN	UG-SERVICE
5937	40347345	GRET	SVC	6/27/2022	1990	RET ABN	UG-SERVICE
5938	42362055	GRET	SVC	11/9/2023	1990	RET ABN	UG-SERVICE
5939	40658820	GRET	SVC	8/31/2022	1990	RET ABN	UG-SERVICE
5940	40222107	GRET	SVC	5/18/2022	1990	RET ABN	UG-SERVICE
5941	43480988	GRET	SVC	11/8/2024	1990	RET ABN	UG-SERVICE
5942	38283684	GRET	SVC	3/29/2021	1990	RET ABN	UG-SERVICE
5943	43486706	GRET	SVC	8/26/2024	1990	RET ABN	UG-SERVICE
5944	36998793	GRET	SVC	9/30/2020	1990	RET ABN	UG-SERVICE
5945	37810891	GRET	SVC	11/25/2020	1990	RET ABN	UG-SERVICE
5946	41447893	GRET	SVC	3/30/2023	1990	RET ABN	UG-SERVICE
5947	43084799	GRET	SVC	5/22/2024	1990	RET ABN	UG-SERVICE
5948	37424443	GRET	SVC	11/24/2020	1990	RET ABN	UG-SERVICE
5949	36758848	GRET	SVC	7/27/2020	1990	RET ABN	UG-SERVICE
5950	40896368	GRET	SVC	11/21/2022	1990	RET ABN	UG-SERVICE
5951	41920514	GRET	SVC	8/4/2023	1990	RET ABN	UG-SERVICE
5952	41447165	GRET	SVC	3/28/2023	1990	RET ABN	UG-SERVICE
5953	41295790	GRET	SVC	2/20/2023	1990	RET ABN	UG-SERVICE
5954	42163979	GRET	SVC	9/26/2023	1990	RET ABN	UG-SERVICE
5955	40223284	GRET	SVC	6/5/2022	1990	RET ABN	UG-SERVICE
5956	41283320	GRET	SVC	2/15/2023	1990	RET ABN	UG-SERVICE
5957	43353801	GRET	SVC	12/3/2024	1990	RET ABN	UG-SERVICE
5958	42992788	GRET	SVC	4/29/2024	1990	RET ABN	UG-SERVICE
5959	41324893	GRET	SVC	2/28/2023	1990	RET ABN	UG-SERVICE
5960	42045510	GRET	SVC	9/5/2023	1990	RET ABN	UG-SERVICE
5961	40266841	GRET	SVC	7/5/2022	1990	RET ABN	UG-SERVICE
5962	41568304	GRET	SVC	4/23/2023	1990	RET ABN	UG-SERVICE
5963	42534948	GRET	SVC	2/5/2024	1990	RET ABN	UG-SERVICE
5964	38352930	GRET	SVC	2/17/2023	1990	RET ABN	UG-SERVICE
5965	36051642	GRET	SVC	2/22/2020	1990	RET ABN	UG-SERVICE
5966	38441385	GRET	SVC	1/6/2022	1990	RET ABN	UG-SERVICE
5967	41544072	GRET	SVC	4/26/2023	1990	RET ABN	UG-SERVICE
5968	40223294	GRET	SVC	5/31/2022	1990	RET ABN	UG-SERVICE
5969	41015444	GRET	SVC	12/16/2022	1990	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
5970	41428821	GRET	SVC	3/28/2023	1990	RET ABN	UG-SERVICE
5971	43203102	GRET	SVC	6/24/2024	1990	RET ABN	UG-SERVICE
5972	38697861	GRET	SVC	7/7/2021	1990	RET ABN	UG-SERVICE
5973	38044256	GRET	SVC	1/16/2021	1990	RET ABN	UG-SERVICE
5974	42745580	GRET	SVC	3/5/2024	1990	RET ABN	UG-SERVICE
5975	41447886	GRET	SVC	3/30/2023	1990	RET ABN	UG-SERVICE
5976	38050812	GRET	SVC	1/25/2021	1990	RET ABN	UG-SERVICE
5977	41317496	GRET	SVC	3/3/2023	1990	RET ABN	UG-SERVICE
5978	40241979	GRET	SVC	5/21/2022	1990	RET ABN	UG-SERVICE
5979	40514680	GRET	SVC	7/30/2022	1990	RET ABN	UG-SERVICE
5980	41418432	GRET	SVC	3/20/2023	1990	RET ABN	UG-SERVICE
5981	41398461	GRET	SVC	3/13/2023	1990	RET ABN	UG-SERVICE
5982	39932756	GRET	SVC	4/1/2022	1990	RET ABN	UG-SERVICE
5983	36108718	GRET	SVC	3/10/2020	1990	RET ABN	UG-SERVICE
5984	41411510	GRET	SVC	4/2/2024	1990	RET ABN	UG-SERVICE
5985	42320050	GRET	SVC	11/3/2023	1990	RET ABN	UG-SERVICE
5986	41419857	GRET	SVC	3/21/2023	1990	RET ABN	UG-SERVICE
5987	43634479	GRET	SVC	10/3/2024	1990	RET ABN	UG-SERVICE
5988	42449339	GRET	SVC	12/5/2023	1990	RET ABN	UG-SERVICE
5989	41896733	GRET	SVC	7/18/2023	1990	RET ABN	UG-SERVICE
5990	41425508	GRET	SVC	3/31/2023	1990	RET ABN	UG-SERVICE
5991	41273858	GRET	SVC	2/14/2023	1990	RET ABN	UG-SERVICE
5992	40334904	GRET	SVC	10/6/2022	1990	RET ABN	UG-SERVICE
5993	41282918	GRET	SVC	2/15/2023	1990	RET ABN	UG-SERVICE
5994	42226640	GRET	SVC	10/16/2023	1990	RET ABN	UG-SERVICE
5995	43318037	GRET	SVC	8/12/2024	1990	RET ABN	UG-SERVICE
5996	40683519	GRET	SVC	9/14/2022	1990	RET ABN	UG-SERVICE
5997	39161965	GRET	SVC	9/13/2021	1990	RET ABN	UG-SERVICE
5998	41235835	GRET	SVC	2/4/2023	1990	RET ABN	UG-SERVICE
5999	43268084	GRET	SVC	7/9/2024	1990	RET ABN	UG-SERVICE
6000	41961264	GRET	SVC	8/8/2023	1990	RET ABN	UG-SERVICE
6001	42361115	GRET	SVC	11/13/2023	1990	RET ABN	UG-SERVICE
6002	41670040	GRET	SVC	5/20/2023	1990	RET ABN	UG-SERVICE
6003	40557697	GRET	SVC	8/19/2022	1990	RET ABN	UG-SERVICE
6004	43529746	GRET	SVC	11/7/2024	1990	RET ABN	UG-SERVICE
6005	36061274	GRET	SVC	2/22/2020	1990	RET ABN	UG-SERVICE
6006	41288524	GRET	SVC	3/17/2023	1990	RET ABN	UG-SERVICE
6007	40400410	GRET	SVC	7/14/2022	1990	RET ABN	UG-SERVICE
6008	36626255	GRET	SVC	6/29/2020	1990	RET ABN	UG-SERVICE
6009	37951728	GRET	SVC	12/22/2020	1990	RET ABN	UG-SERVICE
6010	38168857	GRET	SVC	2/24/2021	1990	RET ABN	UG-SERVICE
6011	35960295	GRET	SVC	1/29/2020	1990	RET ABN	UG-SERVICE
6012	37847687	GRET	SVC	12/1/2020	1990	RET ABN	UG-SERVICE
6013	39337455	GRET	SVC	10/26/2021	1990	RET ABN	UG-SERVICE
6014	43210020	GRET	SVC	7/1/2024	1990	RET ABN	UG-SERVICE
6015	40807464	GRET	SVC	10/11/2022	1990	RET ABN	UG-SERVICE
6016	37145164	GRET	SVC	10/26/2020	1990	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6017	43328055	GRET	SVC	7/15/2024	1990	RET ABN	UG-SERVICE
6018	41418436	GRET	SVC	3/20/2023	1990	RET ABN	UG-SERVICE
6019	41418538	GRET	SVC	3/20/2023	1990	RET ABN	UG-SERVICE
6020	43353808	GRET	SVC	12/17/2024	1990	RET ABN	UG-SERVICE
6021	43353807	GRET	SVC	12/17/2024	1990	RET ABN	UG-SERVICE
6022	39893102	GRET	SVC	7/11/2022	1991	RET ABN	UG-SERVICE
6023	36409445	GRET	SVC	6/8/2020	1991	RET ABN	UG-SERVICE
6024	42430283	GRET	SVC	11/26/2023	1991	RET ABN	UG-SERVICE
6025	40327028	GRET	SVC	6/21/2022	1991	RET ABN	UG-SERVICE
6026	35983294	GRET	SVC	3/2/2020	1991	RET ABN	UG-SERVICE
6027	37914954	GRET	SVC	12/17/2020	1991	RET ABN	UG-SERVICE
6028	43481043	GRET	SVC	10/25/2024	1991	RET ABN	UG-SERVICE
6029	42353448	GRET	SVC	11/13/2023	1991	RET ABN	UG-SERVICE
6030	41144784	GRET	SVC	1/11/2023	1991	RET ABN	UG-SERVICE
6031	43713034	GRET	SVC	10/21/2024	1991	RET ABN	UG-SERVICE
6032	36625393	GRET	SVC	7/11/2020	1991	RET ABN	UG-SERVICE
6033	38357401	GRET	SVC	2/14/2023	1991	RET ABN	UG-SERVICE
6034	38647500	GRET	SVC	6/22/2021	1991	RET ABN	UG-SERVICE
6035	43318170	GRET	SVC	8/9/2024	1991	RET ABN	UG-SERVICE
6036	40860216	GRET	SVC	11/3/2022	1991	RET ABN	UG-SERVICE
6037	42904493	GRET	SVC	4/7/2024	1991	RET ABN	UG-SERVICE
6038	41733397	GRET	SVC	6/12/2023	1991	RET ABN	UG-SERVICE
6039	43345647	GRET	SVC	7/22/2024	1991	RET ABN	UG-SERVICE
6040	43529732	GRET	SVC	11/22/2024	1991	RET ABN	UG-SERVICE
6041	38352828	GRET	SVC	2/17/2023	1991	RET ABN	UG-SERVICE
6042	40883285	GRET	SVC	10/30/2022	1991	RET ABN	UG-SERVICE
6043	40571828	GRET	SVC	8/16/2022	1991	RET ABN	UG-SERVICE
6044	36962757	GRET	SVC	9/21/2020	1991	RET ABN	UG-SERVICE
6045	36356345	GRET	SVC	5/18/2020	1991	RET ABN	UG-SERVICE
6046	36199822	GRET	SVC	5/1/2020	1991	RET ABN	UG-SERVICE
6047	41222791	GRET	SVC	1/31/2023	1991	RET ABN	UG-SERVICE
6048	36511655	GRET	SVC	6/18/2020	1991	RET ABN	UG-SERVICE
6049	41304549	GRET	SVC	3/6/2023	1991	RET ABN	UG-SERVICE
6050	41428831	GRET	SVC	3/23/2023	1991	RET ABN	UG-SERVICE
6051	38913622	GRET	SVC	8/9/2021	1991	RET ABN	UG-SERVICE
6052	40858949	GRET	SVC	10/24/2022	1991	RET ABN	UG-SERVICE
6053	41144636	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6054	41803088	GRET	SVC	7/7/2023	1991	RET ABN	UG-SERVICE
6055	42112489	GRET	SVC	9/12/2023	1991	RET ABN	UG-SERVICE
6056	39544010	GRET	SVC	12/14/2021	1991	RET ABN	UG-SERVICE
6057	40990263	GRET	SVC	11/18/2022	1991	RET ABN	UG-SERVICE
6058	42953403	GRET	SVC	4/17/2024	1991	RET ABN	UG-SERVICE
6059	41144491	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6060	40949368	GRET	SVC	11/16/2022	1991	RET ABN	UG-SERVICE
6061	41582634	GRET	SVC	5/3/2023	1991	RET ABN	UG-SERVICE
6062	40190769	GRET	SVC	5/21/2022	1991	RET ABN	UG-SERVICE
6063	43329557	GRET	SVC	7/19/2024	1991	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6064	36659846	GRET	SVC	7/21/2020	1991	RET ABN	UG-SERVICE
6065	38938944	GRET	SVC	8/15/2021	1991	RET ABN	UG-SERVICE
6066	43000634	GRET	SVC	5/23/2024	1991	RET ABN	UG-SERVICE
6067	40883588	GRET	SVC	11/9/2022	1991	RET ABN	UG-SERVICE
6068	38352829	GRET	SVC	2/17/2023	1991	RET ABN	UG-SERVICE
6069	36683352	GRET	SVC	7/27/2020	1991	RET ABN	UG-SERVICE
6070	41321352	GRET	SVC	3/16/2023	1991	RET ABN	UG-SERVICE
6071	41144604	GRET	SVC	1/7/2023	1991	RET ABN	UG-SERVICE
6072	36363706	GRET	SVC	5/19/2020	1991	RET ABN	UG-SERVICE
6073	41144755	GRET	SVC	1/11/2023	1991	RET ABN	UG-SERVICE
6074	40991251	GRET	SVC	11/18/2022	1991	RET ABN	UG-SERVICE
6075	37958000	GRET	SVC	12/29/2020	1991	RET ABN	UG-SERVICE
6076	42105047	GRET	SVC	9/13/2023	1991	RET ABN	UG-SERVICE
6077	43529729	GRET	SVC	12/22/2024	1991	RET ABN	UG-SERVICE
6078	41142029	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6079	41482052	GRET	SVC	4/9/2023	1991	RET ABN	UG-SERVICE
6080	42462806	GRET	SVC	12/9/2023	1991	RET ABN	UG-SERVICE
6081	43364876	GRET	SVC	12/12/2024	1991	RET ABN	UG-SERVICE
6082	36267690	GRET	SVC	3/24/2020	1991	RET ABN	UG-SERVICE
6083	36302290	GRET	SVC	5/5/2020	1991	RET ABN	UG-SERVICE
6084	41424367	GRET	SVC	3/24/2023	1991	RET ABN	UG-SERVICE
6085	41143808	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6086	36234314	GRET	SVC	5/15/2020	1991	RET ABN	UG-SERVICE
6087	43260047	GRET	SVC	8/12/2024	1991	RET ABN	UG-SERVICE
6088	42872613	GRET	SVC	4/2/2024	1991	RET ABN	UG-SERVICE
6089	38603828	GRET	SVC	6/15/2021	1991	RET ABN	UG-SERVICE
6090	41015443	GRET	SVC	12/4/2022	1991	RET ABN	UG-SERVICE
6091	39330552	GRET	SVC	10/26/2021	1991	RET ABN	UG-SERVICE
6092	41321340	GRET	SVC	3/15/2023	1991	RET ABN	UG-SERVICE
6093	41143388	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6094	41321345	GRET	SVC	3/15/2023	1991	RET ABN	UG-SERVICE
6095	42873152	GRET	SVC	4/2/2024	1991	RET ABN	UG-SERVICE
6096	41421864	GRET	SVC	3/23/2023	1991	RET ABN	UG-SERVICE
6097	39543628	GRET	SVC	12/14/2021	1991	RET ABN	UG-SERVICE
6098	42195837	GRET	SVC	10/9/2023	1991	RET ABN	UG-SERVICE
6099	38906642	GRET	SVC	8/31/2021	1991	RET ABN	UG-SERVICE
6100	40302997	GRET	SVC	6/13/2022	1991	RET ABN	UG-SERVICE
6101	41321354	GRET	SVC	3/16/2023	1991	RET ABN	UG-SERVICE
6102	40859701	GRET	SVC	11/30/2022	1991	RET ABN	UG-SERVICE
6103	41065389	GRET	SVC	12/14/2022	1991	RET ABN	UG-SERVICE
6104	40860841	GRET	SVC	10/28/2022	1991	RET ABN	UG-SERVICE
6105	43529375	GRET	SVC	11/24/2024	1991	RET ABN	UG-SERVICE
6106	37251258	GRET	SVC	11/2/2020	1991	RET ABN	UG-SERVICE
6107	43857177	GRET	SVC	11/20/2024	1991	RET ABN	UG-SERVICE
6108	42145812	GRET	SVC	9/25/2023	1991	RET ABN	UG-SERVICE
6109	42216031	GRET	SVC	10/10/2023	1991	RET ABN	UG-SERVICE
6110	38352827	GRET	SVC	2/17/2023	1991	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6111	38098231	GRET	SVC	2/7/2021	1991	RET ABN	UG-SERVICE
6112	43329564	GRET	SVC	7/19/2024	1991	RET ABN	UG-SERVICE
6113	38326248	GRET	SVC	4/9/2021	1991	RET ABN	UG-SERVICE
6114	40036272	GRET	SVC	4/19/2022	1991	RET ABN	UG-SERVICE
6115	41144462	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6116	41083867	GRET	SVC	12/21/2022	1991	RET ABN	UG-SERVICE
6117	41877226	GRET	SVC	7/17/2023	1991	RET ABN	UG-SERVICE
6118	43324307	GRET	SVC	10/17/2024	1991	RET ABN	UG-SERVICE
6119	42562269	GRET	SVC	1/12/2024	1991	RET ABN	UG-SERVICE
6120	41320413	GRET	SVC	3/3/2023	1991	RET ABN	UG-SERVICE
6121	42025605	GRET	SVC	8/22/2023	1991	RET ABN	UG-SERVICE
6122	39743323	GRET	SVC	1/27/2022	1991	RET ABN	UG-SERVICE
6123	40775520	GRET	SVC	10/4/2022	1991	RET ABN	UG-SERVICE
6124	36016960	GRET	SVC	2/11/2020	1991	RET ABN	UG-SERVICE
6125	40899890	GRET	SVC	11/8/2022	1991	RET ABN	UG-SERVICE
6126	40395847	GRET	SVC	7/6/2022	1991	RET ABN	UG-SERVICE
6127	40571973	GRET	SVC	8/16/2022	1991	RET ABN	UG-SERVICE
6128	39657988	GRET	SVC	2/5/2022	1991	RET ABN	UG-SERVICE
6129	41321122	GRET	SVC	3/16/2023	1991	RET ABN	UG-SERVICE
6130	43358252	GRET	SVC	7/19/2024	1991	RET ABN	UG-SERVICE
6131	40162498	GRET	SVC	5/18/2022	1991	RET ABN	UG-SERVICE
6132	41182810	GRET	SVC	1/18/2023	1991	RET ABN	UG-SERVICE
6133	36487200	GRET	SVC	6/18/2020	1991	RET ABN	UG-SERVICE
6134	41143459	GRET	SVC	1/11/2023	1991	RET ABN	UG-SERVICE
6135	41464722	GRET	SVC	4/3/2023	1991	RET ABN	UG-SERVICE
6136	40868641	GRET	SVC	11/3/2022	1991	RET ABN	UG-SERVICE
6137	35844797	GRET	SVC	2/4/2020	1991	RET ABN	UG-SERVICE
6138	38352830	GRET	SVC	2/17/2023	1991	RET ABN	UG-SERVICE
6139	38402399	GRET	SVC	4/23/2021	1991	RET ABN	UG-SERVICE
6140	41482054	GRET	SVC	4/8/2023	1991	RET ABN	UG-SERVICE
6141	36301314	GRET	SVC	5/5/2020	1991	RET ABN	UG-SERVICE
6142	41064586	GRET	SVC	12/15/2022	1991	RET ABN	UG-SERVICE
6143	43325562	GRET	SVC	7/15/2024	1991	RET ABN	UG-SERVICE
6144	36597389	GRET	SVC	6/27/2020	1991	RET ABN	UG-SERVICE
6145	40883299	GRET	SVC	10/30/2022	1991	RET ABN	UG-SERVICE
6146	41065407	GRET	SVC	12/14/2022	1991	RET ABN	UG-SERVICE
6147	41144071	GRET	SVC	1/9/2023	1991	RET ABN	UG-SERVICE
6148	41247249	GRET	SVC	2/7/2023	1991	RET ABN	UG-SERVICE
6149	41143964	GRET	SVC	1/10/2023	1991	RET ABN	UG-SERVICE
6150	39544351	GRET	SVC	12/13/2021	1991	RET ABN	UG-SERVICE
6151	41143554	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6152	38146655	GRET	SVC	2/17/2021	1991	RET ABN	UG-SERVICE
6153	36901871	GRET	SVC	9/9/2020	1991	RET ABN	UG-SERVICE
6154	41144319	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6155	36283868	GRET	SVC	5/12/2020	1991	RET ABN	UG-SERVICE
6156	41675410	GRET	SVC	5/30/2023	1991	RET ABN	UG-SERVICE
6157	43329720	GRET	SVC	7/19/2024	1991	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6158	36356885	GRET	SVC	5/18/2020	1991	RET ABN	UG-SERVICE
6159	39874650	GRET	SVC	3/11/2022	1991	RET ABN	UG-SERVICE
6160	38441559	GRET	SVC	1/6/2022	1991	RET ABN	UG-SERVICE
6161	38480827	GRET	SVC	5/11/2021	1991	RET ABN	UG-SERVICE
6162	37935135	GRET	SVC	12/19/2020	1991	RET ABN	UG-SERVICE
6163	42588325	GRET	SVC	1/24/2024	1991	RET ABN	UG-SERVICE
6164	41143738	GRET	SVC	7/31/2023	1991	RET ABN	UG-SERVICE
6165	43955127	GRET	SVC	12/30/2024	1991	RET ABN	UG-SERVICE
6166	41321353	GRET	SVC	3/16/2023	1991	RET ABN	UG-SERVICE
6167	40752909	GRET	SVC	9/26/2022	1991	RET ABN	UG-SERVICE
6168	41144786	GRET	SVC	1/11/2023	1991	RET ABN	UG-SERVICE
6169	36739594	GRET	SVC	8/4/2020	1991	RET ABN	UG-SERVICE
6170	38146652	GRET	SVC	2/17/2021	1991	RET ABN	UG-SERVICE
6171	42425332	GRET	SVC	5/29/2024	1991	RET ABN	UG-SERVICE
6172	40142745	GRET	SVC	5/11/2022	1991	RET ABN	UG-SERVICE
6173	43318485	GRET	SVC	9/26/2024	1991	RET ABN	UG-SERVICE
6174	41428828	GRET	SVC	3/23/2023	1991	RET ABN	UG-SERVICE
6175	38146653	GRET	SVC	2/17/2021	1991	RET ABN	UG-SERVICE
6176	41479993	GRET	SVC	4/10/2023	1991	RET ABN	UG-SERVICE
6177	43481258	GRET	SVC	11/1/2024	1991	RET ABN	UG-SERVICE
6178	41139511	GRET	SVC	1/13/2023	1991	RET ABN	UG-SERVICE
6179	42187329	GRET	SVC	10/5/2023	1991	RET ABN	UG-SERVICE
6180	40883288	GRET	SVC	10/30/2022	1991	RET ABN	UG-SERVICE
6181	38232683	GRET	SVC	3/15/2021	1991	RET ABN	UG-SERVICE
6182	41321129	GRET	SVC	3/15/2023	1991	RET ABN	UG-SERVICE
6183	41430970	GRET	SVC	3/29/2023	1992	RET ABN	UG-SERVICE
6184	43462114	GRET	SVC	9/3/2024	1992	RET ABN	UG-SERVICE
6185	41411236	GRET	SVC	4/2/2024	1992	RET ABN	UG-SERVICE
6186	41324884	GRET	SVC	3/1/2023	1992	RET ABN	UG-SERVICE
6187	41243169	GRET	SVC	2/5/2023	1992	RET ABN	UG-SERVICE
6188	41032256	GRET	SVC	12/15/2022	1992	RET ABN	UG-SERVICE
6189	43481091	GRET	SVC	10/31/2024	1992	RET ABN	UG-SERVICE
6190	40286467	GRET	SVC	6/11/2022	1992	RET ABN	UG-SERVICE
6191	37291022	GRET	SVC	11/9/2020	1992	RET ABN	UG-SERVICE
6192	40385556	GRET	SVC	7/6/2022	1992	RET ABN	UG-SERVICE
6193	39154112	GRET	SVC	9/20/2021	1992	RET ABN	UG-SERVICE
6194	43717068	GRET	SVC	10/25/2024	1992	RET ABN	UG-SERVICE
6195	41180365	GRET	SVC	1/19/2023	1992	RET ABN	UG-SERVICE
6196	42520346	GRET	SVC	12/26/2023	1992	RET ABN	UG-SERVICE
6197	38910599	GRET	SVC	8/11/2021	1992	RET ABN	UG-SERVICE
6198	37843371	GRET	SVC	11/30/2020	1992	RET ABN	UG-SERVICE
6199	40827593	GRET	SVC	10/17/2022	1992	RET ABN	UG-SERVICE
6200	40952735	GRET	SVC	11/18/2022	1992	RET ABN	UG-SERVICE
6201	43481183	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6202	39803732	GRET	SVC	3/22/2022	1992	RET ABN	UG-SERVICE
6203	40813403	GRET	SVC	10/15/2022	1992	RET ABN	UG-SERVICE
6204	41222784	GRET	SVC	3/3/2023	1992	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6205	37887981	GRET	SVC	12/5/2020	1992	RET ABN	UG-SERVICE
6206	43318038	GRET	SVC	7/29/2024	1992	RET ABN	UG-SERVICE
6207	40468999	GRET	SVC	7/22/2022	1992	RET ABN	UG-SERVICE
6208	41205592	GRET	SVC	1/27/2023	1992	RET ABN	UG-SERVICE
6209	40395840	GRET	SVC	7/6/2022	1992	RET ABN	UG-SERVICE
6210	39476682	GRET	SVC	11/26/2021	1992	RET ABN	UG-SERVICE
6211	41483269	GRET	SVC	4/13/2023	1992	RET ABN	UG-SERVICE
6212	41143413	GRET	SVC	1/10/2023	1992	RET ABN	UG-SERVICE
6213	41144751	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6214	43902683	GRET	SVC	12/5/2024	1992	RET ABN	UG-SERVICE
6215	36881227	GRET	SVC	8/29/2020	1992	RET ABN	UG-SERVICE
6216	36834327	GRET	SVC	8/27/2020	1992	RET ABN	UG-SERVICE
6217	40831607	GRET	SVC	10/19/2022	1992	RET ABN	UG-SERVICE
6218	43529748	GRET	SVC	12/4/2024	1992	RET ABN	UG-SERVICE
6219	41179464	GRET	SVC	1/18/2023	1992	RET ABN	UG-SERVICE
6220	41937404	GRET	SVC	8/1/2023	1992	RET ABN	UG-SERVICE
6221	42265988	GRET	SVC	10/23/2023	1992	RET ABN	UG-SERVICE
6222	40867634	GRET	SVC	11/3/2022	1992	RET ABN	UG-SERVICE
6223	39461251	GRET	SVC	11/24/2021	1992	RET ABN	UG-SERVICE
6224	43591085	GRET	SVC	9/16/2024	1992	RET ABN	UG-SERVICE
6225	43627285	GRET	SVC	9/30/2024	1992	RET ABN	UG-SERVICE
6226	41873064	GRET	SVC	7/11/2023	1992	RET ABN	UG-SERVICE
6227	41347204	GRET	SVC	3/6/2023	1992	RET ABN	UG-SERVICE
6228	39487063	GRET	SVC	12/20/2021	1992	RET ABN	UG-SERVICE
6229	41144816	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6230	41420314	GRET	SVC	3/24/2023	1992	RET ABN	UG-SERVICE
6231	42277344	GRET	SVC	10/23/2023	1992	RET ABN	UG-SERVICE
6232	43899043	GRET	SVC	12/4/2024	1992	RET ABN	UG-SERVICE
6233	42760798	GRET	SVC	8/1/2024	1992	RET ABN	UG-SERVICE
6234	38747325	GRET	SVC	7/20/2021	1992	RET ABN	UG-SERVICE
6235	35865564	GRET	SVC	1/4/2020	1992	RET ABN	UG-SERVICE
6236	42004114	GRET	SVC	8/16/2023	1992	RET ABN	UG-SERVICE
6237	41242848	GRET	SVC	3/27/2023	1992	RET ABN	UG-SERVICE
6238	38315072	GRET	SVC	2/26/2021	1992	RET ABN	UG-SERVICE
6239	42506615	GRET	SVC	12/27/2023	1992	RET ABN	UG-SERVICE
6240	42658671	GRET	SVC	2/4/2024	1992	RET ABN	UG-SERVICE
6241	41143610	GRET	SVC	1/10/2023	1992	RET ABN	UG-SERVICE
6242	41429207	GRET	SVC	3/22/2023	1992	RET ABN	UG-SERVICE
6243	41177079	GRET	SVC	1/18/2023	1992	RET ABN	UG-SERVICE
6244	40973551	GRET	SVC	12/5/2022	1992	RET ABN	UG-SERVICE
6245	36878132	GRET	SVC	9/1/2020	1992	RET ABN	UG-SERVICE
6246	41144495	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6247	41568141	GRET	SVC	4/26/2023	1992	RET ABN	UG-SERVICE
6248	42290060	GRET	SVC	10/30/2023	1992	RET ABN	UG-SERVICE
6249	41429214	GRET	SVC	3/22/2023	1992	RET ABN	UG-SERVICE
6250	40898338	GRET	SVC	11/10/2022	1992	RET ABN	UG-SERVICE
6251	41143375	GRET	SVC	4/26/2023	1992	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6252	41418435	GRET	SVC	3/21/2023	1992	RET ABN	UG-SERVICE
6253	42905382	GRET	SVC	4/7/2024	1992	RET ABN	UG-SERVICE
6254	41143373	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6255	40899525	GRET	SVC	11/10/2022	1992	RET ABN	UG-SERVICE
6256	40420603	GRET	SVC	6/27/2022	1992	RET ABN	UG-SERVICE
6257	41317140	GRET	SVC	3/2/2023	1992	RET ABN	UG-SERVICE
6258	40308199	GRET	SVC	6/13/2022	1992	RET ABN	UG-SERVICE
6259	40772093	GRET	SVC	10/3/2022	1992	RET ABN	UG-SERVICE
6260	40952953	GRET	SVC	11/18/2022	1992	RET ABN	UG-SERVICE
6261	39070846	GRET	SVC	8/30/2021	1992	RET ABN	UG-SERVICE
6262	41143735	GRET	SVC	7/31/2023	1992	RET ABN	UG-SERVICE
6263	39832165	GRET	SVC	2/24/2022	1992	RET ABN	UG-SERVICE
6264	41429212	GRET	SVC	3/22/2023	1992	RET ABN	UG-SERVICE
6265	42773918	GRET	SVC	2/21/2024	1992	RET ABN	UG-SERVICE
6266	41177539	GRET	SVC	1/20/2023	1992	RET ABN	UG-SERVICE
6267	43481180	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6268	42816107	GRET	SVC	3/11/2024	1992	RET ABN	UG-SERVICE
6269	42626582	GRET	SVC	1/31/2024	1992	RET ABN	UG-SERVICE
6270	40241954	GRET	SVC	5/21/2022	1992	RET ABN	UG-SERVICE
6271	41330187	GRET	SVC	3/2/2023	1992	RET ABN	UG-SERVICE
6272	40870056	GRET	SVC	11/9/2022	1992	RET ABN	UG-SERVICE
6273	43481099	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6274	35970017	GRET	SVC	2/3/2020	1992	RET ABN	UG-SERVICE
6275	41143703	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6276	43529740	GRET	SVC	12/13/2024	1992	RET ABN	UG-SERVICE
6277	40683517	GRET	SVC	10/21/2022	1992	RET ABN	UG-SERVICE
6278	42353320	GRET	SVC	11/13/2023	1992	RET ABN	UG-SERVICE
6279	41904630	GRET	SVC	7/25/2023	1992	RET ABN	UG-SERVICE
6280	42774030	GRET	SVC	2/21/2024	1992	RET ABN	UG-SERVICE
6281	42015112	GRET	SVC	8/21/2023	1992	RET ABN	UG-SERVICE
6282	40396046	GRET	SVC	7/6/2022	1992	RET ABN	UG-SERVICE
6283	40813635	GRET	SVC	10/21/2022	1992	RET ABN	UG-SERVICE
6284	38917203	GRET	SVC	8/13/2021	1992	RET ABN	UG-SERVICE
6285	36609816	GRET	SVC	7/13/2020	1992	RET ABN	UG-SERVICE
6286	39320982	GRET	SVC	10/19/2021	1992	RET ABN	UG-SERVICE
6287	42479754	GRET	SVC	12/15/2023	1992	RET ABN	UG-SERVICE
6288	38302240	GRET	SVC	5/26/2021	1992	RET ABN	UG-SERVICE
6289	43108074	GRET	SVC	5/29/2024	1992	RET ABN	UG-SERVICE
6290	42313855	GRET	SVC	10/31/2023	1992	RET ABN	UG-SERVICE
6291	38276821	GRET	SVC	3/25/2021	1992	RET ABN	UG-SERVICE
6292	42669945	GRET	SVC	2/3/2024	1992	RET ABN	UG-SERVICE
6293	39876268	GRET	SVC	3/14/2022	1992	RET ABN	UG-SERVICE
6294	41316946	GRET	SVC	3/2/2023	1992	RET ABN	UG-SERVICE
6295	41334394	GRET	SVC	3/8/2023	1992	RET ABN	UG-SERVICE
6296	41143633	GRET	SVC	7/31/2023	1992	RET ABN	UG-SERVICE
6297	36888540	GRET	SVC	9/29/2020	1992	RET ABN	UG-SERVICE
6298	36306734	GRET	SVC	5/7/2020	1992	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6299	43481256	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6300	41427192	GRET	SVC	3/23/2023	1992	RET ABN	UG-SERVICE
6301	40898981	GRET	SVC	11/10/2022	1992	RET ABN	UG-SERVICE
6302	39487066	GRET	SVC	12/20/2021	1992	RET ABN	UG-SERVICE
6303	40973242	GRET	SVC	12/9/2022	1992	RET ABN	UG-SERVICE
6304	42487565	GRET	SVC	4/23/2024	1992	RET ABN	UG-SERVICE
6305	36218872	GRET	SVC	4/23/2020	1992	RET ABN	UG-SERVICE
6306	42539236	GRET	SVC	12/27/2023	1992	RET ABN	UG-SERVICE
6307	41177533	GRET	SVC	1/19/2023	1992	RET ABN	UG-SERVICE
6308	40883298	GRET	SVC	10/30/2022	1992	RET ABN	UG-SERVICE
6309	41144453	GRET	SVC	7/31/2023	1992	RET ABN	UG-SERVICE
6310	41143729	GRET	SVC	4/25/2023	1992	RET ABN	UG-SERVICE
6311	41422538	GRET	SVC	3/24/2023	1992	RET ABN	UG-SERVICE
6312	40584964	GRET	SVC	8/19/2022	1992	RET ABN	UG-SERVICE
6313	41428836	GRET	SVC	3/22/2023	1992	RET ABN	UG-SERVICE
6314	43481181	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6315	40396049	GRET	SVC	7/6/2022	1992	RET ABN	UG-SERVICE
6316	41177525	GRET	SVC	1/19/2023	1992	RET ABN	UG-SERVICE
6317	40694438	GRET	SVC	9/28/2022	1992	RET ABN	UG-SERVICE
6318	40690733	GRET	SVC	9/14/2022	1992	RET ABN	UG-SERVICE
6319	37032864	GRET	SVC	10/6/2020	1992	RET ABN	UG-SERVICE
6320	40952583	GRET	SVC	11/17/2022	1992	RET ABN	UG-SERVICE
6321	37887897	GRET	SVC	12/5/2020	1992	RET ABN	UG-SERVICE
6322	43481097	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6323	38862869	GRET	SVC	8/4/2021	1992	RET ABN	UG-SERVICE
6324	43901346	GRET	SVC	12/13/2024	1992	RET ABN	UG-SERVICE
6325	43414289	GRET	SVC	8/13/2024	1992	RET ABN	UG-SERVICE
6326	41324891	GRET	SVC	3/1/2023	1992	RET ABN	UG-SERVICE
6327	36089527	GRET	SVC	3/4/2020	1992	RET ABN	UG-SERVICE
6328	41007068	GRET	SVC	12/9/2022	1992	RET ABN	UG-SERVICE
6329	42409788	GRET	SVC	11/22/2023	1992	RET ABN	UG-SERVICE
6330	43469644	GRET	SVC	8/23/2024	1992	RET ABN	UG-SERVICE
6331	41411482	GRET	SVC	11/2/2023	1992	RET ABN	UG-SERVICE
6332	41650006	GRET	SVC	5/14/2023	1992	RET ABN	UG-SERVICE
6333	41177536	GRET	SVC	1/20/2023	1992	RET ABN	UG-SERVICE
6334	39837492	GRET	SVC	2/28/2022	1992	RET ABN	UG-SERVICE
6335	41245809	GRET	SVC	2/11/2023	1992	RET ABN	UG-SERVICE
6336	42487444	GRET	SVC	4/15/2024	1992	RET ABN	UG-SERVICE
6337	43347163	GRET	SVC	7/26/2024	1992	RET ABN	UG-SERVICE
6338	41428834	GRET	SVC	3/22/2023	1992	RET ABN	UG-SERVICE
6339	36199251	GRET	SVC	5/18/2020	1992	RET ABN	UG-SERVICE
6340	40973553	GRET	SVC	12/9/2022	1992	RET ABN	UG-SERVICE
6341	41258479	GRET	SVC	3/17/2023	1992	RET ABN	UG-SERVICE
6342	40353366	GRET	SVC	6/27/2022	1992	RET ABN	UG-SERVICE
6343	43607356	GRET	SVC	10/8/2024	1992	RET ABN	UG-SERVICE
6344	40899522	GRET	SVC	11/10/2022	1992	RET ABN	UG-SERVICE
6345	38052661	GRET	SVC	1/30/2021	1992	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6346	41243171	GRET	SVC	2/5/2023	1992	RET ABN	UG-SERVICE
6347	40916722	GRET	SVC	11/28/2022	1992	RET ABN	UG-SERVICE
6348	43662628	GRET	SVC	10/9/2024	1992	RET ABN	UG-SERVICE
6349	41177703	GRET	SVC	1/20/2023	1992	RET ABN	UG-SERVICE
6350	38713758	GRET	SVC	7/20/2021	1992	RET ABN	UG-SERVICE
6351	36712372	GRET	SVC	8/4/2020	1992	RET ABN	UG-SERVICE
6352	42353480	GRET	SVC	11/13/2023	1992	RET ABN	UG-SERVICE
6353	41144787	GRET	SVC	1/12/2023	1992	RET ABN	UG-SERVICE
6354	38882775	GRET	SVC	8/10/2021	1992	RET ABN	UG-SERVICE
6355	40466749	GRET	SVC	7/25/2022	1992	RET ABN	UG-SERVICE
6356	43856858	GRET	SVC	11/20/2024	1992	RET ABN	UG-SERVICE
6357	43244752	GRET	SVC	9/19/2024	1992	RET ABN	UG-SERVICE
6358	39984699	GRET	SVC	10/14/2022	1993	RET ABN	UG-SERVICE
6359	36380971	GRET	SVC	6/9/2020	1993	RET ABN	UG-SERVICE
6360	43957767	GRET	SVC	12/10/2024	1993	RET ABN	UG-SERVICE
6361	41031151	GRET	SVC	12/7/2022	1993	RET ABN	UG-SERVICE
6362	36262294	GRET	SVC	4/27/2020	1993	RET ABN	UG-SERVICE
6363	37863208	GRET	SVC	11/22/2020	1993	RET ABN	UG-SERVICE
6364	38739429	GRET	SVC	7/12/2021	1993	RET ABN	UG-SERVICE
6365	41497869	GRET	SVC	4/10/2023	1993	RET ABN	UG-SERVICE
6366	42207700	GRET	SVC	10/9/2023	1993	RET ABN	UG-SERVICE
6367	38857281	GRET	SVC	8/4/2021	1993	RET ABN	UG-SERVICE
6368	37935104	GRET	SVC	12/20/2020	1993	RET ABN	UG-SERVICE
6369	41407556	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6370	43327227	GRET	SVC	8/22/2024	1993	RET ABN	UG-SERVICE
6371	39937838	GRET	SVC	2/14/2022	1993	RET ABN	UG-SERVICE
6372	41179724	GRET	SVC	1/18/2023	1993	RET ABN	UG-SERVICE
6373	40913278	GRET	SVC	11/16/2022	1993	RET ABN	UG-SERVICE
6374	40643028	GRET	SVC	9/2/2022	1993	RET ABN	UG-SERVICE
6375	43241683	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6376	43205832	GRET	SVC	6/17/2024	1993	RET ABN	UG-SERVICE
6377	40352156	GRET	SVC	6/27/2022	1993	RET ABN	UG-SERVICE
6378	41035751	GRET	SVC	12/13/2022	1993	RET ABN	UG-SERVICE
6379	42111992	GRET	SVC	9/14/2023	1993	RET ABN	UG-SERVICE
6380	43480989	GRET	SVC	11/8/2024	1993	RET ABN	UG-SERVICE
6381	42344241	GRET	SVC	11/12/2023	1993	RET ABN	UG-SERVICE
6382	36778382	GRET	SVC	8/13/2020	1993	RET ABN	UG-SERVICE
6383	41411585	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6384	39984698	GRET	SVC	5/2/2022	1993	RET ABN	UG-SERVICE
6385	41146290	GRET	SVC	1/9/2023	1993	RET ABN	UG-SERVICE
6386	43506820	GRET	SVC	9/25/2024	1993	RET ABN	UG-SERVICE
6387	40900096	GRET	SVC	11/7/2022	1993	RET ABN	UG-SERVICE
6388	38493263	GRET	SVC	5/18/2021	1993	RET ABN	UG-SERVICE
6389	39903271	GRET	SVC	3/18/2022	1993	RET ABN	UG-SERVICE
6390	38191772	GRET	SVC	3/8/2021	1993	RET ABN	UG-SERVICE
6391	42205741	GRET	SVC	10/13/2023	1993	RET ABN	UG-SERVICE
6392	36837125	GRET	SVC	8/27/2020	1993	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6393	43026498	GRET	SVC	5/8/2024	1993	RET ABN	UG-SERVICE
6394	38779477	GRET	SVC	7/15/2021	1993	RET ABN	UG-SERVICE
6395	39665676	GRET	SVC	8/3/2022	1993	RET ABN	UG-SERVICE
6396	40952498	GRET	SVC	11/20/2022	1993	RET ABN	UG-SERVICE
6397	41427198	GRET	SVC	3/23/2023	1993	RET ABN	UG-SERVICE
6398	41411596	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6399	36427762	GRET	SVC	6/6/2020	1993	RET ABN	UG-SERVICE
6400	38040119	GRET	SVC	5/4/2021	1993	RET ABN	UG-SERVICE
6401	40989593	GRET	SVC	11/17/2022	1993	RET ABN	UG-SERVICE
6402	41185240	GRET	SVC	1/19/2023	1993	RET ABN	UG-SERVICE
6403	42227547	GRET	SVC	10/31/2023	1993	RET ABN	UG-SERVICE
6404	43241279	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6405	41411655	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6406	40425799	GRET	SVC	7/13/2022	1993	RET ABN	UG-SERVICE
6407	40749752	GRET	SVC	9/29/2022	1993	RET ABN	UG-SERVICE
6408	40883287	GRET	SVC	10/30/2022	1993	RET ABN	UG-SERVICE
6409	37896727	GRET	SVC	12/9/2020	1993	RET ABN	UG-SERVICE
6410	38376930	GRET	SVC	1/22/2021	1993	RET ABN	UG-SERVICE
6411	41770798	GRET	SVC	6/23/2023	1993	RET ABN	UG-SERVICE
6412	43982688	GRET	SVC	12/12/2024	1993	RET ABN	UG-SERVICE
6413	41497865	GRET	SVC	4/6/2023	1993	RET ABN	UG-SERVICE
6414	36152589	GRET	SVC	3/24/2020	1993	RET ABN	UG-SERVICE
6415	41420312	GRET	SVC	3/23/2023	1993	RET ABN	UG-SERVICE
6416	41320579	GRET	SVC	3/3/2023	1993	RET ABN	UG-SERVICE
6417	38568738	GRET	SVC	6/9/2021	1993	RET ABN	UG-SERVICE
6418	39098295	GRET	SVC	9/8/2021	1993	RET ABN	UG-SERVICE
6419	43957768	GRET	SVC	12/9/2024	1993	RET ABN	UG-SERVICE
6420	41497626	GRET	SVC	4/17/2023	1993	RET ABN	UG-SERVICE
6421	41035836	GRET	SVC	12/3/2022	1993	RET ABN	UG-SERVICE
6422	36984588	GRET	SVC	9/21/2020	1993	RET ABN	UG-SERVICE
6423	41401756	GRET	SVC	3/15/2023	1993	RET ABN	UG-SERVICE
6424	38153161	GRET	SVC	2/23/2021	1993	RET ABN	UG-SERVICE
6425	36992556	GRET	SVC	9/30/2020	1993	RET ABN	UG-SERVICE
6426	42586960	GRET	SVC	1/12/2024	1993	RET ABN	UG-SERVICE
6427	40644077	GRET	SVC	9/3/2022	1993	RET ABN	UG-SERVICE
6428	36002277	GRET	SVC	2/8/2020	1993	RET ABN	UG-SERVICE
6429	42589413	GRET	SVC	1/26/2024	1993	RET ABN	UG-SERVICE
6430	38783978	GRET	SVC	7/15/2021	1993	RET ABN	UG-SERVICE
6431	42048234	GRET	SVC	8/30/2023	1993	RET ABN	UG-SERVICE
6432	40952485	GRET	SVC	11/20/2022	1993	RET ABN	UG-SERVICE
6433	42259859	GRET	SVC	11/6/2023	1993	RET ABN	UG-SERVICE
6434	40748422	GRET	SVC	10/4/2022	1993	RET ABN	UG-SERVICE
6435	39484906	GRET	SVC	11/29/2021	1993	RET ABN	UG-SERVICE
6436	41035832	GRET	SVC	12/8/2022	1993	RET ABN	UG-SERVICE
6437	43021641	GRET	SVC	4/22/2024	1993	RET ABN	UG-SERVICE
6438	43481182	GRET	SVC	11/20/2024	1993	RET ABN	UG-SERVICE
6439	43623426	GRET	SVC	12/6/2024	1993	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6440	39266989	GRET	SVC	10/4/2021	1993	RET ABN	UG-SERVICE
6441	39184089	GRET	SVC	9/22/2021	1993	RET ABN	UG-SERVICE
6442	41411593	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6443	43957764	GRET	SVC	12/19/2024	1993	RET ABN	UG-SERVICE
6444	43957763	GRET	SVC	12/11/2024	1993	RET ABN	UG-SERVICE
6445	39739691	GRET	SVC	2/10/2022	1993	RET ABN	UG-SERVICE
6446	41082585	GRET	SVC	12/21/2022	1993	RET ABN	UG-SERVICE
6447	39786419	GRET	SVC	2/21/2022	1993	RET ABN	UG-SERVICE
6448	38133227	GRET	SVC	2/15/2021	1993	RET ABN	UG-SERVICE
6449	43241680	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6450	39352989	GRET	SVC	10/28/2021	1993	RET ABN	UG-SERVICE
6451	42344678	GRET	SVC	11/6/2023	1993	RET ABN	UG-SERVICE
6452	36882130	GRET	SVC	9/1/2020	1993	RET ABN	UG-SERVICE
6453	41768365	GRET	SVC	6/23/2023	1993	RET ABN	UG-SERVICE
6454	42170232	GRET	SVC	10/16/2023	1993	RET ABN	UG-SERVICE
6455	41016209	GRET	SVC	12/12/2022	1993	RET ABN	UG-SERVICE
6456	40514003	GRET	SVC	8/2/2022	1993	RET ABN	UG-SERVICE
6457	42511205	GRET	SVC	4/15/2024	1993	RET ABN	UG-SERVICE
6458	40370774	GRET	SVC	7/6/2022	1993	RET ABN	UG-SERVICE
6459	39254599	GRET	SVC	10/5/2021	1993	RET ABN	UG-SERVICE
6460	41411589	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6461	40327786	GRET	SVC	9/30/2022	1993	RET ABN	UG-SERVICE
6462	42426287	GRET	SVC	11/28/2023	1993	RET ABN	UG-SERVICE
6463	36397063	GRET	SVC	6/4/2020	1993	RET ABN	UG-SERVICE
6464	43241682	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6465	36826472	GRET	SVC	8/24/2020	1993	RET ABN	UG-SERVICE
6466	40952329	GRET	SVC	11/18/2022	1993	RET ABN	UG-SERVICE
6467	38153564	GRET	SVC	2/10/2021	1993	RET ABN	UG-SERVICE
6468	35924715	GRET	SVC	1/16/2020	1993	RET ABN	UG-SERVICE
6469	43957760	GRET	SVC	12/9/2024	1993	RET ABN	UG-SERVICE
6470	41083459	GRET	SVC	1/7/2023	1993	RET ABN	UG-SERVICE
6471	40883591	GRET	SVC	11/8/2022	1993	RET ABN	UG-SERVICE
6472	38793267	GRET	SVC	7/22/2021	1993	RET ABN	UG-SERVICE
6473	42589550	GRET	SVC	1/26/2024	1993	RET ABN	UG-SERVICE
6474	41006861	GRET	SVC	12/7/2022	1993	RET ABN	UG-SERVICE
6475	39903766	GRET	SVC	3/18/2022	1993	RET ABN	UG-SERVICE
6476	39906731	GRET	SVC	6/3/2022	1993	RET ABN	UG-SERVICE
6477	41411954	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6478	39825103	GRET	SVC	2/22/2022	1993	RET ABN	UG-SERVICE
6479	39302358	GRET	SVC	10/18/2021	1993	RET ABN	UG-SERVICE
6480	43498333	GRET	SVC	8/26/2024	1993	RET ABN	UG-SERVICE
6481	37528691	GRET	SVC	11/18/2020	1993	RET ABN	UG-SERVICE
6482	38779079	GRET	SVC	7/15/2021	1993	RET ABN	UG-SERVICE
6483	39838385	GRET	SVC	2/21/2022	1993	RET ABN	UG-SERVICE
6484	42116060	GRET	SVC	9/15/2023	1993	RET ABN	UG-SERVICE
6485	37059285	GRET	SVC	10/28/2020	1993	RET ABN	UG-SERVICE
6486	39306786	GRET	SVC	10/25/2021	1993	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6487	38817197	GRET	SVC	7/21/2021	1993	RET ABN	UG-SERVICE
6488	41872475	GRET	SVC	7/12/2023	1993	RET ABN	UG-SERVICE
6489	43481246	GRET	SVC	9/28/2024	1993	RET ABN	UG-SERVICE
6490	43481255	GRET	SVC	11/20/2024	1993	RET ABN	UG-SERVICE
6491	36868129	GRET	SVC	8/29/2020	1993	RET ABN	UG-SERVICE
6492	39691376	GRET	SVC	1/18/2022	1993	RET ABN	UG-SERVICE
6493	39060316	GRET	SVC	9/16/2021	1993	RET ABN	UG-SERVICE
6494	40153194	GRET	SVC	5/10/2022	1993	RET ABN	UG-SERVICE
6495	41411653	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6496	42517560	GRET	SVC	12/27/2023	1993	RET ABN	UG-SERVICE
6497	41584965	GRET	SVC	5/1/2023	1993	RET ABN	UG-SERVICE
6498	43241684	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6499	36436503	GRET	SVC	6/6/2020	1993	RET ABN	UG-SERVICE
6500	39895906	GRET	SVC	3/16/2022	1993	RET ABN	UG-SERVICE
6501	38851993	GRET	SVC	11/2/2021	1993	RET ABN	UG-SERVICE
6502	38207650	GRET	SVC	3/15/2021	1993	RET ABN	UG-SERVICE
6503	42208707	GRET	SVC	10/10/2023	1993	RET ABN	UG-SERVICE
6504	41573436	GRET	SVC	5/1/2023	1993	RET ABN	UG-SERVICE
6505	43957762	GRET	SVC	12/11/2024	1993	RET ABN	UG-SERVICE
6506	36769541	GRET	SVC	7/4/2020	1993	RET ABN	UG-SERVICE
6507	42956492	GRET	SVC	4/20/2024	1993	RET ABN	UG-SERVICE
6508	43318026	GRET	SVC	7/29/2024	1993	RET ABN	UG-SERVICE
6509	42336298	GRET	SVC	4/16/2024	1993	RET ABN	UG-SERVICE
6510	36709888	GRET	SVC	8/4/2020	1993	RET ABN	UG-SERVICE
6511	40395344	GRET	SVC	7/5/2022	1993	RET ABN	UG-SERVICE
6512	42245667	GRET	SVC	10/4/2023	1993	RET ABN	UG-SERVICE
6513	40595240	GRET	SVC	8/14/2022	1993	RET ABN	UG-SERVICE
6514	41411919	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6515	39785597	GRET	SVC	2/21/2022	1993	RET ABN	UG-SERVICE
6516	41036020	GRET	SVC	12/7/2022	1993	RET ABN	UG-SERVICE
6517	43957765	GRET	SVC	12/19/2024	1993	RET ABN	UG-SERVICE
6518	39191278	GRET	SVC	9/24/2021	1993	RET ABN	UG-SERVICE
6519	43506884	GRET	SVC	9/25/2024	1993	RET ABN	UG-SERVICE
6520	38632600	GRET	SVC	6/14/2021	1993	RET ABN	UG-SERVICE
6521	39177676	GRET	SVC	9/21/2021	1993	RET ABN	UG-SERVICE
6522	41390581	GRET	SVC	3/17/2023	1993	RET ABN	UG-SERVICE
6523	41677520	GRET	SVC	5/30/2023	1993	RET ABN	UG-SERVICE
6524	43250695	GRET	SVC	12/26/2024	1993	RET ABN	UG-SERVICE
6525	36793069	GRET	SVC	8/18/2020	1993	RET ABN	UG-SERVICE
6526	41497335	GRET	SVC	4/6/2023	1993	RET ABN	UG-SERVICE
6527	38441439	GRET	SVC	1/6/2022	1993	RET ABN	UG-SERVICE
6528	36886591	GRET	SVC	7/7/2021	1993	RET ABN	UG-SERVICE
6529	42588548	GRET	SVC	1/31/2024	1993	RET ABN	UG-SERVICE
6530	42317372	GRET	SVC	10/24/2023	1993	RET ABN	UG-SERVICE
6531	43241688	GRET	SVC	9/19/2024	1993	RET ABN	UG-SERVICE
6532	41088874	GRET	SVC	12/22/2022	1993	RET ABN	UG-SERVICE
6533	41411587	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6534	43978376	GRET	SVC	12/23/2024	1993	RET ABN	UG-SERVICE
6535	39552702	GRET	SVC	12/17/2021	1993	RET ABN	UG-SERVICE
6536	41184946	GRET	SVC	1/19/2023	1993	RET ABN	UG-SERVICE
6537	41411595	GRET	SVC	4/2/2024	1993	RET ABN	UG-SERVICE
6538	40277457	GRET	SVC	4/27/2023	1993	RET ABN	UG-SERVICE
6539	41101692	GRET	SVC	1/30/2023	1993	RET ABN	UG-SERVICE
6540	43241278	GRET	SVC	9/17/2024	1993	RET ABN	UG-SERVICE
6541	43957769	GRET	SVC	12/9/2024	1993	RET ABN	UG-SERVICE
6542	41727358	GRET	SVC	6/16/2023	1993	RET ABN	UG-SERVICE
6543	41187076	GRET	SVC	1/18/2023	1993	RET ABN	UG-SERVICE
6544	41083458	GRET	SVC	1/4/2023	1993	RET ABN	UG-SERVICE
6545	42201247	GRET	SVC	10/9/2023	1993	RET ABN	UG-SERVICE
6546	37924849	GRET	SVC	12/16/2020	1993	RET ABN	UG-SERVICE
6547	35868779	GRET	SVC	2/11/2020	1993	RET ABN	UG-SERVICE
6548	37934852	GRET	SVC	12/19/2020	1993	RET ABN	UG-SERVICE
6549	39984017	GRET	SVC	6/9/2022	1993	RET ABN	UG-SERVICE
6550	41928924	GRET	SVC	7/19/2023	1993	RET ABN	UG-SERVICE
6551	42156958	GRET	SVC	9/27/2023	1993	RET ABN	UG-SERVICE
6552	41507925	GRET	SVC	4/13/2023	1993	RET ABN	UG-SERVICE
6553	37048150	GRET	SVC	10/5/2020	1993	RET ABN	UG-SERVICE
6554	36710983	GRET	SVC	8/3/2020	1993	RET ABN	UG-SERVICE
6555	40558161	GRET	SVC	8/12/2022	1993	RET ABN	UG-SERVICE
6556	40813750	GRET	SVC	10/17/2022	1993	RET ABN	UG-SERVICE
6557	39890620	GRET	SVC	3/14/2022	1993	RET ABN	UG-SERVICE
6558	42442496	GRET	SVC	12/2/2023	1993	RET ABN	UG-SERVICE
6559	41392507	GRET	SVC	3/26/2023	1993	RET ABN	UG-SERVICE
6560	43957771	GRET	SVC	12/9/2024	1993	RET ABN	UG-SERVICE
6561	42505488	GRET	SVC	12/26/2023	1993	RET ABN	UG-SERVICE
6562	38779467	GRET	SVC	7/15/2021	1993	RET ABN	UG-SERVICE
6563	41933546	GRET	SVC	10/13/2023	1993	RET ABN	UG-SERVICE
6564	40199012	GRET	SVC	5/31/2022	1993	RET ABN	UG-SERVICE
6565	43191348	GRET	SVC	6/25/2024	1993	RET ABN	UG-SERVICE
6566	40732875	GRET	SVC	10/1/2022	1993	RET ABN	UG-SERVICE
6567	36221953	GRET	SVC	4/23/2020	1993	RET ABN	UG-SERVICE
6568	42658316	GRET	SVC	2/5/2024	1993	RET ABN	UG-SERVICE
6569	40318182	GRET	SVC	6/17/2022	1993	RET ABN	UG-SERVICE
6570	43498111	GRET	SVC	8/26/2024	1993	RET ABN	UG-SERVICE
6571	37098566	GRET	SVC	10/29/2020	1993	RET ABN	UG-SERVICE
6572	42137945	GRET	SVC	9/22/2023	1993	RET ABN	UG-SERVICE
6573	41083721	GRET	SVC	12/21/2022	1993	RET ABN	UG-SERVICE
6574	41813702	GRET	SVC	6/29/2023	1994	RET ABN	UG-SERVICE
6575	40943969	GRET	SVC	11/28/2022	1994	RET ABN	UG-SERVICE
6576	43492538	GRET	SVC	12/3/2024	1994	RET ABN	UG-SERVICE
6577	40395859	GRET	SVC	7/6/2022	1994	RET ABN	UG-SERVICE
6578	41099795	GRET	SVC	1/5/2023	1994	RET ABN	UG-SERVICE
6579	43951150	GRET	SVC	12/17/2024	1994	RET ABN	UG-SERVICE
6580	38783975	GRET	SVC	7/13/2021	1994	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6581	43529376	GRET	SVC	10/27/2024	1994	RET ABN	UG-SERVICE
6582	43529753	GRET	SVC	12/22/2024	1994	RET ABN	UG-SERVICE
6583	42322524	GRET	SVC	4/2/2024	1994	RET ABN	UG-SERVICE
6584	41877018	GRET	SVC	7/18/2023	1994	RET ABN	UG-SERVICE
6585	39681495	GRET	SVC	1/14/2022	1994	RET ABN	UG-SERVICE
6586	38900666	GRET	SVC	10/12/2021	1994	RET ABN	UG-SERVICE
6587	39753654	GRET	SVC	1/26/2022	1994	RET ABN	UG-SERVICE
6588	40987271	GRET	SVC	11/30/2022	1994	RET ABN	UG-SERVICE
6589	36177525	GRET	SVC	2/14/2020	1994	RET ABN	UG-SERVICE
6590	36470402	GRET	SVC	6/22/2020	1994	RET ABN	UG-SERVICE
6591	41426054	GRET	SVC	3/24/2023	1994	RET ABN	UG-SERVICE
6592	42344007	GRET	SVC	4/2/2024	1994	RET ABN	UG-SERVICE
6593	39854795	GRET	SVC	3/9/2022	1994	RET ABN	UG-SERVICE
6594	37929078	GRET	SVC	12/16/2020	1994	RET ABN	UG-SERVICE
6595	37120664	GRET	SVC	10/24/2020	1994	RET ABN	UG-SERVICE
6596	42418511	GRET	SVC	10/14/2023	1994	RET ABN	UG-SERVICE
6597	43020926	GRET	SVC	5/24/2024	1994	RET ABN	UG-SERVICE
6598	38875200	GRET	SVC	8/4/2021	1994	RET ABN	UG-SERVICE
6599	43135174	GRET	SVC	6/4/2024	1994	RET ABN	UG-SERVICE
6600	41411424	GRET	SVC	11/2/2023	1994	RET ABN	UG-SERVICE
6601	41244977	GRET	SVC	2/6/2023	1994	RET ABN	UG-SERVICE
6602	41195734	GRET	SVC	1/24/2023	1994	RET ABN	UG-SERVICE
6603	37987403	GRET	SVC	1/5/2021	1994	RET ABN	UG-SERVICE
6604	38499745	GRET	SVC	5/18/2021	1994	RET ABN	UG-SERVICE
6605	43909723	GRET	SVC	12/6/2024	1994	RET ABN	UG-SERVICE
6606	43365780	GRET	SVC	12/3/2024	1994	RET ABN	UG-SERVICE
6607	43529730	GRET	SVC	11/27/2024	1994	RET ABN	UG-SERVICE
6608	41288879	GRET	SVC	3/17/2023	1994	RET ABN	UG-SERVICE
6609	41207591	GRET	SVC	1/24/2023	1994	RET ABN	UG-SERVICE
6610	37120663	GRET	SVC	10/24/2020	1994	RET ABN	UG-SERVICE
6611	42825292	GRET	SVC	3/11/2024	1994	RET ABN	UG-SERVICE
6612	43529378	GRET	SVC	11/2/2024	1994	RET ABN	UG-SERVICE
6613	41185660	GRET	SVC	1/26/2023	1994	RET ABN	UG-SERVICE
6614	43623435	GRET	SVC	12/2/2024	1994	RET ABN	UG-SERVICE
6615	41288866	GRET	SVC	3/17/2023	1994	RET ABN	UG-SERVICE
6616	40723313	GRET	SVC	10/7/2022	1994	RET ABN	UG-SERVICE
6617	36998791	GRET	SVC	9/28/2020	1994	RET ABN	UG-SERVICE
6618	40864102	GRET	SVC	10/31/2022	1994	RET ABN	UG-SERVICE
6619	41552451	GRET	SVC	4/28/2023	1994	RET ABN	UG-SERVICE
6620	36576775	GRET	SVC	8/6/2020	1994	RET ABN	UG-SERVICE
6621	39390797	GRET	SVC	11/19/2021	1994	RET ABN	UG-SERVICE
6622	38779469	GRET	SVC	7/13/2021	1994	RET ABN	UG-SERVICE
6623	40116597	GRET	SVC	5/6/2022	1994	RET ABN	UG-SERVICE
6624	38189719	GRET	SVC	3/15/2021	1994	RET ABN	UG-SERVICE
6625	42506402	GRET	SVC	12/28/2023	1994	RET ABN	UG-SERVICE
6626	41211396	GRET	SVC	1/30/2023	1994	RET ABN	UG-SERVICE
6627	41649933	GRET	SVC	5/16/2023	1994	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6628	39721214	GRET	SVC	1/25/2022	1994	RET ABN	UG-SERVICE
6629	40222490	GRET	SVC	5/31/2022	1994	RET ABN	UG-SERVICE
6630	41085376	GRET	SVC	1/4/2023	1994	RET ABN	UG-SERVICE
6631	36605914	GRET	SVC	7/9/2020	1994	RET ABN	UG-SERVICE
6632	39455877	GRET	SVC	11/22/2021	1994	RET ABN	UG-SERVICE
6633	40318192	GRET	SVC	6/17/2022	1994	RET ABN	UG-SERVICE
6634	38146654	GRET	SVC	2/17/2021	1994	RET ABN	UG-SERVICE
6635	38095982	GRET	SVC	2/15/2021	1994	RET ABN	UG-SERVICE
6636	36485802	GRET	SVC	6/20/2020	1994	RET ABN	UG-SERVICE
6637	43617825	GRET	SVC	9/24/2024	1994	RET ABN	UG-SERVICE
6638	36707376	GRET	SVC	7/21/2020	1994	RET ABN	UG-SERVICE
6639	36142355	GRET	SVC	3/17/2020	1994	RET ABN	UG-SERVICE
6640	41427447	GRET	SVC	3/21/2023	1994	RET ABN	UG-SERVICE
6641	43042233	GRET	SVC	5/14/2024	1994	RET ABN	UG-SERVICE
6642	42705990	GRET	SVC	2/14/2024	1994	RET ABN	UG-SERVICE
6643	42855625	GRET	SVC	3/26/2024	1994	RET ABN	UG-SERVICE
6644	43529726	GRET	SVC	11/27/2024	1994	RET ABN	UG-SERVICE
6645	41139009	GRET	SVC	1/21/2023	1994	RET ABN	UG-SERVICE
6646	43529731	GRET	SVC	11/2/2024	1994	RET ABN	UG-SERVICE
6647	43300973	GRET	SVC	7/13/2024	1994	RET ABN	UG-SERVICE
6648	39224492	GRET	SVC	9/30/2021	1994	RET ABN	UG-SERVICE
6649	41317489	GRET	SVC	3/3/2023	1994	RET ABN	UG-SERVICE
6650	39966172	GRET	SVC	2/22/2022	1994	RET ABN	UG-SERVICE
6651	39299440	GRET	SVC	10/18/2021	1994	RET ABN	UG-SERVICE
6652	43323975	GRET	SVC	7/24/2024	1994	RET ABN	UG-SERVICE
6653	43731861	GRET	SVC	10/21/2024	1994	RET ABN	UG-SERVICE
6654	36505784	GRET	SVC	6/23/2020	1994	RET ABN	UG-SERVICE
6655	41123319	GRET	SVC	1/4/2023	1994	RET ABN	UG-SERVICE
6656	41057669	GRET	SVC	12/14/2022	1994	RET ABN	UG-SERVICE
6657	39630749	GRET	SVC	1/4/2022	1994	RET ABN	UG-SERVICE
6658	39333382	GRET	SVC	11/2/2021	1994	RET ABN	UG-SERVICE
6659	40973116	GRET	SVC	11/18/2022	1994	RET ABN	UG-SERVICE
6660	43529744	GRET	SVC	12/6/2024	1994	RET ABN	UG-SERVICE
6661	39666486	GRET	SVC	11/18/2022	1994	RET ABN	UG-SERVICE
6662	43493327	GRET	SVC	10/22/2024	1994	RET ABN	UG-SERVICE
6663	43826770	GRET	SVC	11/12/2024	1994	RET ABN	UG-SERVICE
6664	43529728	GRET	SVC	10/27/2024	1994	RET ABN	UG-SERVICE
6665	39277584	GRET	SVC	10/11/2021	1994	RET ABN	UG-SERVICE
6666	42135700	GRET	SVC	9/20/2023	1994	RET ABN	UG-SERVICE
6667	42113245	GRET	SVC	9/11/2023	1994	RET ABN	UG-SERVICE
6668	38298837	GRET	SVC	3/25/2021	1994	RET ABN	UG-SERVICE
6669	41425309	GRET	SVC	3/21/2023	1994	RET ABN	UG-SERVICE
6670	37525595	GRET	SVC	11/16/2020	1994	RET ABN	UG-SERVICE
6671	39070007	GRET	SVC	8/30/2021	1994	RET ABN	UG-SERVICE
6672	43507270	GRET	SVC	9/9/2024	1994	RET ABN	UG-SERVICE
6673	37082844	GRET	SVC	10/16/2020	1994	RET ABN	UG-SERVICE
6674	43529751	GRET	SVC	12/13/2024	1994	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6675	39666491	GRET	SVC	11/18/2022	1994	RET ABN	UG-SERVICE
6676	40239927	GRET	SVC	5/28/2022	1994	RET ABN	UG-SERVICE
6677	43529752	GRET	SVC	12/21/2024	1994	RET ABN	UG-SERVICE
6678	38458599	GRET	SVC	5/5/2021	1994	RET ABN	UG-SERVICE
6679	41277358	GRET	SVC	2/14/2023	1994	RET ABN	UG-SERVICE
6680	42159014	GRET	SVC	9/22/2023	1994	RET ABN	UG-SERVICE
6681	43529379	GRET	SVC	11/24/2024	1994	RET ABN	UG-SERVICE
6682	40456748	GRET	SVC	7/18/2022	1994	RET ABN	UG-SERVICE
6683	40498173	GRET	SVC	7/27/2022	1994	RET ABN	UG-SERVICE
6684	43529720	GRET	SVC	11/24/2024	1994	RET ABN	UG-SERVICE
6685	39398834	GRET	SVC	11/8/2021	1994	RET ABN	UG-SERVICE
6686	41113796	GRET	SVC	12/28/2022	1994	RET ABN	UG-SERVICE
6687	36009496	GRET	SVC	2/10/2020	1994	RET ABN	UG-SERVICE
6688	40396838	GRET	SVC	7/11/2022	1994	RET ABN	UG-SERVICE
6689	39992844	GRET	SVC	4/11/2022	1994	RET ABN	UG-SERVICE
6690	41770913	GRET	SVC	8/7/2023	1994	RET ABN	UG-SERVICE
6691	37020751	GRET	SVC	10/10/2020	1994	RET ABN	UG-SERVICE
6692	36633102	GRET	SVC	7/14/2020	1994	RET ABN	UG-SERVICE
6693	42695250	GRET	SVC	2/10/2024	1994	RET ABN	UG-SERVICE
6694	36724026	GRET	SVC	8/4/2020	1994	RET ABN	UG-SERVICE
6695	39744802	GRET	SVC	2/8/2022	1994	RET ABN	UG-SERVICE
6696	38002843	GRET	SVC	1/11/2021	1994	RET ABN	UG-SERVICE
6697	36576604	GRET	SVC	8/6/2020	1994	RET ABN	UG-SERVICE
6698	41286923	GRET	SVC	2/15/2023	1994	RET ABN	UG-SERVICE
6699	40847366	GRET	SVC	11/20/2022	1994	RET ABN	UG-SERVICE
6700	38454097	GRET	SVC	5/7/2021	1994	RET ABN	UG-SERVICE
6701	36120513	GRET	SVC	3/13/2020	1994	RET ABN	UG-SERVICE
6702	36980371	GRET	SVC	9/21/2020	1994	RET ABN	UG-SERVICE
6703	36791124	GRET	SVC	9/4/2020	1994	RET ABN	UG-SERVICE
6704	43529725	GRET	SVC	11/27/2024	1994	RET ABN	UG-SERVICE
6705	40561703	GRET	SVC	8/17/2022	1994	RET ABN	UG-SERVICE
6706	43251087	GRET	SVC	6/24/2024	1994	RET ABN	UG-SERVICE
6707	39820706	GRET	SVC	2/22/2022	1994	RET ABN	UG-SERVICE
6708	40655356	GRET	SVC	10/21/2022	1994	RET ABN	UG-SERVICE
6709	41428827	GRET	SVC	3/23/2023	1995	RET ABN	UG-SERVICE
6710	42654196	GRET	SVC	2/2/2024	1995	RET ABN	UG-SERVICE
6711	37070438	GRET	SVC	8/19/2020	1995	RET ABN	UG-SERVICE
6712	42817716	GRET	SVC	4/17/2024	1995	RET ABN	UG-SERVICE
6713	42419488	GRET	SVC	11/27/2023	1995	RET ABN	UG-SERVICE
6714	41015454	GRET	SVC	12/16/2022	1995	RET ABN	UG-SERVICE
6715	36672044	GRET	SVC	8/7/2020	1995	RET ABN	UG-SERVICE
6716	41242177	GRET	SVC	3/1/2023	1995	RET ABN	UG-SERVICE
6717	41760937	GRET	SVC	8/2/2023	1995	RET ABN	UG-SERVICE
6718	40048048	GRET	SVC	4/22/2022	1995	RET ABN	UG-SERVICE
6719	43705926	GRET	SVC	10/14/2024	1995	RET ABN	UG-SERVICE
6720	43150812	GRET	SVC	6/6/2024	1995	RET ABN	UG-SERVICE
6721	43245087	GRET	SVC	9/11/2024	1995	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6722	42834263	GRET	SVC	7/23/2024	1995	RET ABN	UG-SERVICE
6723	39903275	GRET	SVC	3/15/2022	1995	RET ABN	UG-SERVICE
6724	41429218	GRET	SVC	3/24/2023	1995	RET ABN	UG-SERVICE
6725	40749609	GRET	SVC	9/29/2022	1995	RET ABN	UG-SERVICE
6726	36301953	GRET	SVC	5/13/2020	1995	RET ABN	UG-SERVICE
6727	40870524	GRET	SVC	11/9/2022	1995	RET ABN	UG-SERVICE
6728	41951085	GRET	SVC	8/4/2023	1995	RET ABN	UG-SERVICE
6729	40551322	GRET	SVC	8/16/2022	1995	RET ABN	UG-SERVICE
6730	41402081	GRET	SVC	3/15/2023	1995	RET ABN	UG-SERVICE
6731	40396055	GRET	SVC	7/6/2022	1995	RET ABN	UG-SERVICE
6732	40855837	GRET	SVC	10/22/2022	1995	RET ABN	UG-SERVICE
6733	41244979	GRET	SVC	2/4/2023	1995	RET ABN	UG-SERVICE
6734	42695047	GRET	SVC	2/14/2024	1995	RET ABN	UG-SERVICE
6735	38521182	GRET	SVC	6/4/2021	1995	RET ABN	UG-SERVICE
6736	36946066	GRET	SVC	9/15/2020	1995	RET ABN	UG-SERVICE
6737	41375577	GRET	SVC	3/13/2023	1995	RET ABN	UG-SERVICE
6738	40461409	GRET	SVC	7/21/2022	1995	RET ABN	UG-SERVICE
6739	37490029	GRET	SVC	12/11/2020	1995	RET ABN	UG-SERVICE
6740	39646756	GRET	SVC	4/11/2022	1995	RET ABN	UG-SERVICE
6741	36399235	GRET	SVC	6/1/2020	1995	RET ABN	UG-SERVICE
6742	40952499	GRET	SVC	11/19/2022	1995	RET ABN	UG-SERVICE
6743	41279174	GRET	SVC	2/24/2023	1995	RET ABN	UG-SERVICE
6744	43323976	GRET	SVC	7/25/2024	1995	RET ABN	UG-SERVICE
6745	35959607	GRET	SVC	1/28/2020	1995	RET ABN	UG-SERVICE
6746	39494528	GRET	SVC	12/14/2021	1995	RET ABN	UG-SERVICE
6747	40174364	GRET	SVC	6/6/2022	1995	RET ABN	UG-SERVICE
6748	40201045	GRET	SVC	6/6/2022	1995	RET ABN	UG-SERVICE
6749	40661475	GRET	SVC	9/22/2022	1995	RET ABN	UG-SERVICE
6750	41708455	GRET	SVC	6/5/2023	1995	RET ABN	UG-SERVICE
6751	40013196	GRET	SVC	4/19/2022	1995	RET ABN	UG-SERVICE
6752	43481122	GRET	SVC	10/28/2024	1995	RET ABN	UG-SERVICE
6753	42611333	GRET	SVC	1/24/2024	1995	RET ABN	UG-SERVICE
6754	39581789	GRET	SVC	12/26/2021	1995	RET ABN	UG-SERVICE
6755	39554828	GRET	SVC	12/28/2021	1995	RET ABN	UG-SERVICE
6756	41242172	GRET	SVC	3/2/2023	1995	RET ABN	UG-SERVICE
6757	43862404	GRET	SVC	11/22/2024	1995	RET ABN	UG-SERVICE
6758	42534910	GRET	SVC	1/4/2024	1995	RET ABN	UG-SERVICE
6759	41332048	GRET	SVC	3/1/2023	1995	RET ABN	UG-SERVICE
6760	41428823	GRET	SVC	3/27/2023	1995	RET ABN	UG-SERVICE
6761	41513273	GRET	SVC	4/16/2023	1995	RET ABN	UG-SERVICE
6762	38713913	GRET	SVC	7/7/2021	1995	RET ABN	UG-SERVICE
6763	43535155	GRET	SVC	9/30/2024	1995	RET ABN	UG-SERVICE
6764	42276448	GRET	SVC	10/26/2023	1995	RET ABN	UG-SERVICE
6765	41223589	GRET	SVC	2/3/2023	1995	RET ABN	UG-SERVICE
6766	41969540	GRET	SVC	8/1/2024	1995	RET ABN	UG-SERVICE
6767	40951421	GRET	SVC	1/5/2023	1995	RET ABN	UG-SERVICE
6768	41834504	GRET	SVC	7/21/2023	1995	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6769	40841472	GRET	SVC	10/20/2022	1995	RET ABN	UG-SERVICE
6770	41418707	GRET	SVC	3/22/2023	1995	RET ABN	UG-SERVICE
6771	41175947	GRET	SVC	1/17/2023	1995	RET ABN	UG-SERVICE
6772	42336324	GRET	SVC	4/16/2024	1995	RET ABN	UG-SERVICE
6773	40913346	GRET	SVC	11/7/2022	1995	RET ABN	UG-SERVICE
6774	36101932	GRET	SVC	2/8/2020	1995	RET ABN	UG-SERVICE
6775	38109797	GRET	SVC	12/29/2020	1995	RET ABN	UG-SERVICE
6776	38122800	GRET	SVC	2/10/2021	1995	RET ABN	UG-SERVICE
6777	40862490	GRET	SVC	10/28/2022	1995	RET ABN	UG-SERVICE
6778	40506086	GRET	SVC	8/2/2022	1995	RET ABN	UG-SERVICE
6779	42959506	GRET	SVC	4/22/2024	1995	RET ABN	UG-SERVICE
6780	42336327	GRET	SVC	4/19/2024	1995	RET ABN	UG-SERVICE
6781	37143043	GRET	SVC	11/13/2020	1995	RET ABN	UG-SERVICE
6782	36829570	GRET	SVC	8/27/2020	1995	RET ABN	UG-SERVICE
6783	43633875	GRET	SVC	10/16/2024	1995	RET ABN	UG-SERVICE
6784	43410047	GRET	SVC	8/28/2024	1995	RET ABN	UG-SERVICE
6785	42560751	GRET	SVC	1/9/2024	1995	RET ABN	UG-SERVICE
6786	39368598	GRET	SVC	11/2/2021	1995	RET ABN	UG-SERVICE
6787	38567222	GRET	SVC	6/1/2021	1995	RET ABN	UG-SERVICE
6788	41423930	GRET	SVC	3/22/2023	1995	RET ABN	UG-SERVICE
6789	41015754	GRET	SVC	12/14/2022	1995	RET ABN	UG-SERVICE
6790	41545676	GRET	SVC	4/23/2023	1995	RET ABN	UG-SERVICE
6791	42226971	GRET	SVC	10/12/2023	1995	RET ABN	UG-SERVICE
6792	42706083	GRET	SVC	2/6/2024	1995	RET ABN	UG-SERVICE
6793	38429962	GRET	SVC	4/29/2021	1995	RET ABN	UG-SERVICE
6794	39847437	GRET	SVC	3/2/2022	1995	RET ABN	UG-SERVICE
6795	40801474	GRET	SVC	10/12/2022	1995	RET ABN	UG-SERVICE
6796	36675373	GRET	SVC	8/18/2020	1995	RET ABN	UG-SERVICE
6797	41389621	GRET	SVC	3/11/2023	1995	RET ABN	UG-SERVICE
6798	42483429	GRET	SVC	4/15/2024	1995	RET ABN	UG-SERVICE
6799	37102731	GRET	SVC	10/30/2020	1995	RET ABN	UG-SERVICE
6800	42873783	GRET	SVC	4/1/2024	1995	RET ABN	UG-SERVICE
6801	37041376	GRET	SVC	10/8/2020	1995	RET ABN	UG-SERVICE
6802	35835931	GRET	SVC	1/2/2020	1995	RET ABN	UG-SERVICE
6803	37979445	GRET	SVC	1/5/2021	1995	RET ABN	UG-SERVICE
6804	35997397	GRET	SVC	2/10/2020	1995	RET ABN	UG-SERVICE
6805	40813407	GRET	SVC	10/14/2022	1995	RET ABN	UG-SERVICE
6806	40282845	GRET	SVC	6/9/2022	1995	RET ABN	UG-SERVICE
6807	39636945	GRET	SVC	1/3/2022	1995	RET ABN	UG-SERVICE
6808	39831207	GRET	SVC	8/3/2022	1995	RET ABN	UG-SERVICE
6809	41183047	GRET	SVC	1/17/2023	1995	RET ABN	UG-SERVICE
6810	43624700	GRET	SVC	9/30/2024	1995	RET ABN	UG-SERVICE
6811	43812801	GRET	SVC	11/9/2024	1995	RET ABN	UG-SERVICE
6812	43506833	GRET	SVC	9/16/2024	1995	RET ABN	UG-SERVICE
6813	41428826	GRET	SVC	3/24/2023	1995	RET ABN	UG-SERVICE
6814	39468936	GRET	SVC	12/27/2021	1995	RET ABN	UG-SERVICE
6815	39830357	GRET	SVC	8/3/2022	1995	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6816	41183046	GRET	SVC	1/17/2023	1995	RET ABN	UG-SERVICE
6817	38766883	GRET	SVC	7/11/2021	1995	RET ABN	UG-SERVICE
6818	40859973	GRET	SVC	11/3/2022	1995	RET ABN	UG-SERVICE
6819	38252498	GRET	SVC	5/3/2021	1995	RET ABN	UG-SERVICE
6820	39318304	GRET	SVC	10/18/2021	1995	RET ABN	UG-SERVICE
6821	40855333	GRET	SVC	10/23/2022	1995	RET ABN	UG-SERVICE
6822	36708021	GRET	SVC	7/28/2020	1995	RET ABN	UG-SERVICE
6823	39658081	GRET	SVC	2/11/2022	1995	RET ABN	UG-SERVICE
6824	41774605	GRET	SVC	6/19/2023	1995	RET ABN	UG-SERVICE
6825	37981636	GRET	SVC	1/5/2021	1995	RET ABN	UG-SERVICE
6826	40853497	GRET	SVC	10/28/2022	1995	RET ABN	UG-SERVICE
6827	36255380	GRET	SVC	3/11/2020	1995	RET ABN	UG-SERVICE
6828	41279363	GRET	SVC	2/15/2023	1995	RET ABN	UG-SERVICE
6829	40092706	GRET	SVC	5/2/2022	1995	RET ABN	UG-SERVICE
6830	38399319	GRET	SVC	4/21/2021	1995	RET ABN	UG-SERVICE
6831	42881713	GRET	SVC	5/8/2024	1995	RET ABN	UG-SERVICE
6832	41887923	GRET	SVC	8/23/2023	1995	RET ABN	UG-SERVICE
6833	41423345	GRET	SVC	3/24/2023	1995	RET ABN	UG-SERVICE
6834	43934140	GRET	SVC	12/21/2024	1995	RET ABN	UG-SERVICE
6835	41589611	GRET	SVC	4/19/2023	1995	RET ABN	UG-SERVICE
6836	43459327	GRET	SVC	8/26/2024	1995	RET ABN	UG-SERVICE
6837	42407919	GRET	SVC	11/19/2023	1995	RET ABN	UG-SERVICE
6838	43650873	GRET	SVC	9/28/2024	1995	RET ABN	UG-SERVICE
6839	43678006	GRET	SVC	10/17/2024	1995	RET ABN	UG-SERVICE
6840	41290031	GRET	SVC	8/31/2023	1995	RET ABN	UG-SERVICE
6841	41868410	GRET	SVC	7/14/2023	1995	RET ABN	UG-SERVICE
6842	41423927	GRET	SVC	3/22/2023	1995	RET ABN	UG-SERVICE
6843	41322893	GRET	SVC	2/28/2023	1995	RET ABN	UG-SERVICE
6844	38256071	GRET	SVC	3/22/2021	1995	RET ABN	UG-SERVICE
6845	41145679	GRET	SVC	1/13/2023	1995	RET ABN	UG-SERVICE
6846	40545203	GRET	SVC	8/9/2022	1995	RET ABN	UG-SERVICE
6847	39795647	GRET	SVC	2/15/2022	1995	RET ABN	UG-SERVICE
6848	43905495	GRET	SVC	12/23/2024	1996	RET ABN	UG-SERVICE
6849	42938843	GRET	SVC	4/16/2024	1996	RET ABN	UG-SERVICE
6850	42586939	GRET	SVC	1/17/2024	1996	RET ABN	UG-SERVICE
6851	40525193	GRET	SVC	8/8/2022	1996	RET ABN	UG-SERVICE
6852	36184262	GRET	SVC	3/30/2020	1996	RET ABN	UG-SERVICE
6853	40654144	GRET	SVC	9/7/2022	1996	RET ABN	UG-SERVICE
6854	43364924	GRET	SVC	12/2/2024	1996	RET ABN	UG-SERVICE
6855	41545257	GRET	SVC	4/24/2023	1996	RET ABN	UG-SERVICE
6856	40522172	GRET	SVC	9/1/2022	1996	RET ABN	UG-SERVICE
6857	36036302	GRET	SVC	1/9/2020	1996	RET ABN	UG-SERVICE
6858	41102022	GRET	SVC	1/5/2023	1996	RET ABN	UG-SERVICE
6859	38271025	GRET	SVC	3/23/2021	1996	RET ABN	UG-SERVICE
6860	38568364	GRET	SVC	8/18/2021	1996	RET ABN	UG-SERVICE
6861	42087142	GRET	SVC	9/9/2023	1996	RET ABN	UG-SERVICE
6862	38402622	GRET	SVC	4/22/2021	1996	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6863	41061141	GRET	SVC	11/30/2022	1996	RET ABN	UG-SERVICE
6864	43428601	GRET	SVC	9/6/2024	1996	RET ABN	UG-SERVICE
6865	40551342	GRET	SVC	8/17/2022	1996	RET ABN	UG-SERVICE
6866	41179720	GRET	SVC	1/17/2023	1996	RET ABN	UG-SERVICE
6867	41407818	GRET	SVC	4/2/2024	1996	RET ABN	UG-SERVICE
6868	43357267	GRET	SVC	7/26/2024	1996	RET ABN	UG-SERVICE
6869	39367029	GRET	SVC	10/22/2021	1996	RET ABN	UG-SERVICE
6870	36963476	GRET	SVC	9/21/2020	1996	RET ABN	UG-SERVICE
6871	43971349	GRET	SVC	12/26/2024	1996	RET ABN	UG-SERVICE
6872	40425685	GRET	SVC	7/12/2022	1996	RET ABN	UG-SERVICE
6873	36310706	GRET	SVC	6/6/2020	1996	RET ABN	UG-SERVICE
6874	36730565	GRET	SVC	8/3/2020	1996	RET ABN	UG-SERVICE
6875	42037856	GRET	SVC	8/27/2023	1996	RET ABN	UG-SERVICE
6876	43950611	GRET	SVC	12/17/2024	1996	RET ABN	UG-SERVICE
6877	43861085	GRET	SVC	12/2/2024	1996	RET ABN	UG-SERVICE
6878	38512754	GRET	SVC	5/17/2021	1996	RET ABN	UG-SERVICE
6879	40481466	GRET	SVC	7/21/2022	1996	RET ABN	UG-SERVICE
6880	39311784	GRET	SVC	11/21/2021	1996	RET ABN	UG-SERVICE
6881	42177914	GRET	SVC	10/6/2023	1996	RET ABN	UG-SERVICE
6882	41664559	GRET	SVC	5/23/2023	1996	RET ABN	UG-SERVICE
6883	42406042	GRET	SVC	11/29/2023	1996	RET ABN	UG-SERVICE
6884	40610690	GRET	SVC	8/23/2022	1996	RET ABN	UG-SERVICE
6885	39795741	GRET	SVC	2/15/2022	1996	RET ABN	UG-SERVICE
6886	41826324	GRET	SVC	7/26/2023	1996	RET ABN	UG-SERVICE
6887	38352961	GRET	SVC	2/17/2023	1996	RET ABN	UG-SERVICE
6888	42514886	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6889	40380288	GRET	SVC	5/23/2022	1996	RET ABN	UG-SERVICE
6890	42372478	GRET	SVC	7/31/2024	1996	RET ABN	UG-SERVICE
6891	36730127	GRET	SVC	8/3/2020	1996	RET ABN	UG-SERVICE
6892	41287836	GRET	SVC	2/16/2023	1996	RET ABN	UG-SERVICE
6893	40999434	GRET	SVC	11/30/2022	1996	RET ABN	UG-SERVICE
6894	37883740	GRET	SVC	12/6/2020	1996	RET ABN	UG-SERVICE
6895	41106614	GRET	SVC	12/27/2022	1996	RET ABN	UG-SERVICE
6896	43916749	GRET	SVC	12/10/2024	1996	RET ABN	UG-SERVICE
6897	35993672	GRET	SVC	2/10/2020	1996	RET ABN	UG-SERVICE
6898	39470796	GRET	SVC	11/30/2021	1996	RET ABN	UG-SERVICE
6899	37934865	GRET	SVC	12/13/2020	1996	RET ABN	UG-SERVICE
6900	42514888	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6901	36877204	GRET	SVC	9/3/2020	1996	RET ABN	UG-SERVICE
6902	36480011	GRET	SVC	5/28/2020	1996	RET ABN	UG-SERVICE
6903	40241209	GRET	SVC	5/25/2022	1996	RET ABN	UG-SERVICE
6904	42193971	GRET	SVC	10/9/2023	1996	RET ABN	UG-SERVICE
6905	41767756	GRET	SVC	6/24/2023	1996	RET ABN	UG-SERVICE
6906	40668509	GRET	SVC	9/12/2022	1996	RET ABN	UG-SERVICE
6907	41273851	GRET	SVC	2/13/2023	1996	RET ABN	UG-SERVICE
6908	43071543	GRET	SVC	5/14/2024	1996	RET ABN	UG-SERVICE
6909	41576705	GRET	SVC	5/1/2023	1996	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6910	38489445	GRET	SVC	5/12/2021	1996	RET ABN	UG-SERVICE
6911	43364923	GRET	SVC	10/15/2024	1996	RET ABN	UG-SERVICE
6912	42437187	GRET	SVC	12/2/2023	1996	RET ABN	UG-SERVICE
6913	42514885	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6914	42514881	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6915	39780070	GRET	SVC	2/8/2022	1996	RET ABN	UG-SERVICE
6916	41440502	GRET	SVC	3/27/2023	1996	RET ABN	UG-SERVICE
6917	36691476	GRET	SVC	8/20/2020	1996	RET ABN	UG-SERVICE
6918	41245284	GRET	SVC	2/5/2023	1996	RET ABN	UG-SERVICE
6919	42070933	GRET	SVC	10/6/2023	1996	RET ABN	UG-SERVICE
6920	41274146	GRET	SVC	2/24/2023	1996	RET ABN	UG-SERVICE
6921	39279671	GRET	SVC	10/13/2021	1996	RET ABN	UG-SERVICE
6922	38033806	GRET	SVC	1/21/2021	1996	RET ABN	UG-SERVICE
6923	43244754	GRET	SVC	9/18/2024	1996	RET ABN	UG-SERVICE
6924	42405485	GRET	SVC	11/22/2023	1996	RET ABN	UG-SERVICE
6925	39536369	GRET	SVC	12/14/2021	1996	RET ABN	UG-SERVICE
6926	43318034	GRET	SVC	8/14/2024	1996	RET ABN	UG-SERVICE
6927	41825568	GRET	SVC	7/3/2023	1996	RET ABN	UG-SERVICE
6928	40576551	GRET	SVC	11/21/2022	1996	RET ABN	UG-SERVICE
6929	40987514	GRET	SVC	12/5/2022	1996	RET ABN	UG-SERVICE
6930	42142331	GRET	SVC	10/3/2023	1996	RET ABN	UG-SERVICE
6931	36730532	GRET	SVC	8/27/2020	1996	RET ABN	UG-SERVICE
6932	41254088	GRET	SVC	2/10/2023	1996	RET ABN	UG-SERVICE
6933	39809219	GRET	SVC	8/3/2022	1996	RET ABN	UG-SERVICE
6934	40332290	GRET	SVC	6/20/2022	1996	RET ABN	UG-SERVICE
6935	43356324	GRET	SVC	7/26/2024	1996	RET ABN	UG-SERVICE
6936	42152239	GRET	SVC	9/25/2023	1996	RET ABN	UG-SERVICE
6937	36152825	GRET	SVC	3/18/2020	1996	RET ABN	UG-SERVICE
6938	37958743	GRET	SVC	12/29/2020	1996	RET ABN	UG-SERVICE
6939	39084028	GRET	SVC	9/12/2021	1996	RET ABN	UG-SERVICE
6940	42692586	GRET	SVC	2/12/2024	1996	RET ABN	UG-SERVICE
6941	42514517	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6942	41436546	GRET	SVC	3/26/2023	1996	RET ABN	UG-SERVICE
6943	35994086	GRET	SVC	2/10/2020	1996	RET ABN	UG-SERVICE
6944	35994083	GRET	SVC	2/10/2020	1996	RET ABN	UG-SERVICE
6945	36900245	GRET	SVC	9/8/2020	1996	RET ABN	UG-SERVICE
6946	40576820	GRET	SVC	8/17/2022	1996	RET ABN	UG-SERVICE
6947	42514887	GRET	SVC	3/1/2024	1996	RET ABN	UG-SERVICE
6948	41424021	GRET	SVC	8/7/2023	1996	RET ABN	UG-SERVICE
6949	43916748	GRET	SVC	12/10/2024	1996	RET ABN	UG-SERVICE
6950	42514882	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6951	41503107	GRET	SVC	4/13/2023	1996	RET ABN	UG-SERVICE
6952	41791634	GRET	SVC	6/25/2023	1996	RET ABN	UG-SERVICE
6953	42270558	GRET	SVC	10/28/2023	1996	RET ABN	UG-SERVICE
6954	43318486	GRET	SVC	7/19/2024	1996	RET ABN	UG-SERVICE
6955	41906846	GRET	SVC	8/21/2023	1996	RET ABN	UG-SERVICE
6956	36031413	GRET	SVC	2/20/2020	1996	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
6957	43330520	GRET	SVC	7/16/2024	1996	RET ABN	UG-SERVICE
6958	39162854	GRET	SVC	9/29/2021	1996	RET ABN	UG-SERVICE
6959	35866461	GRET	SVC	1/6/2020	1996	RET ABN	UG-SERVICE
6960	36374976	GRET	SVC	6/1/2020	1996	RET ABN	UG-SERVICE
6961	42227344	GRET	SVC	10/16/2023	1996	RET ABN	UG-SERVICE
6962	39947534	GRET	SVC	3/31/2022	1996	RET ABN	UG-SERVICE
6963	36908265	GRET	SVC	9/8/2020	1996	RET ABN	UG-SERVICE
6964	42514884	GRET	SVC	2/27/2024	1996	RET ABN	UG-SERVICE
6965	42819755	GRET	SVC	3/11/2024	1997	RET ABN	UG-SERVICE
6966	43506837	GRET	SVC	10/3/2024	1997	RET ABN	UG-SERVICE
6967	36184089	GRET	SVC	4/23/2020	1997	RET ABN	UG-SERVICE
6968	42105249	GRET	SVC	9/13/2023	1997	RET ABN	UG-SERVICE
6969	42010596	GRET	SVC	8/18/2023	1997	RET ABN	UG-SERVICE
6970	39423758	GRET	SVC	6/27/2022	1997	RET ABN	UG-SERVICE
6971	37033927	GRET	SVC	11/3/2020	1997	RET ABN	UG-SERVICE
6972	36692253	GRET	SVC	8/6/2020	1997	RET ABN	UG-SERVICE
6973	36835574	GRET	SVC	9/21/2020	1997	RET ABN	UG-SERVICE
6974	40954748	GRET	SVC	11/21/2022	1997	RET ABN	UG-SERVICE
6975	43902245	GRET	SVC	11/30/2024	1997	RET ABN	UG-SERVICE
6976	39432443	GRET	SVC	11/17/2021	1997	RET ABN	UG-SERVICE
6977	37973319	GRET	SVC	1/25/2021	1997	RET ABN	UG-SERVICE
6978	38134204	GRET	SVC	2/17/2021	1997	RET ABN	UG-SERVICE
6979	36146234	GRET	SVC	3/18/2020	1997	RET ABN	UG-SERVICE
6980	43798077	GRET	SVC	11/7/2024	1997	RET ABN	UG-SERVICE
6981	41872715	GRET	SVC	7/11/2023	1997	RET ABN	UG-SERVICE
6982	36060667	GRET	SVC	3/20/2020	1997	RET ABN	UG-SERVICE
6983	35816991	GRET	SVC	6/15/2021	1997	RET ABN	UG-SERVICE
6984	42796846	GRET	SVC	4/4/2024	1997	RET ABN	UG-SERVICE
6985	42412883	GRET	SVC	11/20/2023	1997	RET ABN	UG-SERVICE
6986	41471664	GRET	SVC	4/4/2023	1997	RET ABN	UG-SERVICE
6987	39280351	GRET	SVC	10/15/2021	1997	RET ABN	UG-SERVICE
6988	41430973	GRET	SVC	3/28/2023	1997	RET ABN	UG-SERVICE
6989	43475964	GRET	SVC	8/26/2024	1997	RET ABN	UG-SERVICE
6990	40487332	GRET	SVC	7/27/2022	1997	RET ABN	UG-SERVICE
6991	41399043	GRET	SVC	3/13/2023	1997	RET ABN	UG-SERVICE
6992	40064748	GRET	SVC	4/29/2022	1997	RET ABN	UG-SERVICE
6993	38437787	GRET	SVC	5/2/2021	1997	RET ABN	UG-SERVICE
6994	40879834	GRET	SVC	10/28/2022	1997	RET ABN	UG-SERVICE
6995	43418899	GRET	SVC	7/31/2024	1997	RET ABN	UG-SERVICE
6996	39338467	GRET	SVC	11/1/2021	1997	RET ABN	UG-SERVICE
6997	43610452	GRET	SVC	9/22/2024	1997	RET ABN	UG-SERVICE
6998	37020175	GRET	SVC	10/1/2020	1997	RET ABN	UG-SERVICE
6999	40824074	GRET	SVC	10/18/2022	1997	RET ABN	UG-SERVICE
7000	39150297	GRET	SVC	9/13/2021	1997	RET ABN	UG-SERVICE
7001	40802935	GRET	SVC	10/13/2022	1997	RET ABN	UG-SERVICE
7002	41399041	GRET	SVC	3/13/2023	1997	RET ABN	UG-SERVICE
7003	39816673	GRET	SVC	2/21/2022	1997	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7004	39504173	GRET	SVC	12/6/2021	1997	RET ABN	UG-SERVICE
7005	38240753	GRET	SVC	3/23/2021	1997	RET ABN	UG-SERVICE
7006	36364821	GRET	SVC	6/5/2020	1997	RET ABN	UG-SERVICE
7007	40883585	GRET	SVC	11/7/2022	1997	RET ABN	UG-SERVICE
7008	40871925	GRET	SVC	11/8/2022	1997	RET ABN	UG-SERVICE
7009	41426043	GRET	SVC	3/21/2023	1997	RET ABN	UG-SERVICE
7010	40479240	GRET	SVC	7/25/2022	1997	RET ABN	UG-SERVICE
7011	42297504	GRET	SVC	10/30/2023	1997	RET ABN	UG-SERVICE
7012	40802345	GRET	SVC	10/10/2022	1997	RET ABN	UG-SERVICE
7013	36838651	GRET	SVC	8/29/2020	1997	RET ABN	UG-SERVICE
7014	36540298	GRET	SVC	7/15/2020	1997	RET ABN	UG-SERVICE
7015	38239062	GRET	SVC	3/13/2021	1997	RET ABN	UG-SERVICE
7016	42216810	GRET	SVC	12/6/2023	1997	RET ABN	UG-SERVICE
7017	41129510	GRET	SVC	1/3/2023	1997	RET ABN	UG-SERVICE
7018	36038825	GRET	SVC	2/18/2020	1997	RET ABN	UG-SERVICE
7019	36400479	GRET	SVC	6/5/2020	1997	RET ABN	UG-SERVICE
7020	42216817	GRET	SVC	12/12/2023	1997	RET ABN	UG-SERVICE
7021	43533818	GRET	SVC	9/6/2024	1997	RET ABN	UG-SERVICE
7022	42216818	GRET	SVC	12/12/2023	1997	RET ABN	UG-SERVICE
7023	36202195	GRET	SVC	4/23/2020	1997	RET ABN	UG-SERVICE
7024	41504298	GRET	SVC	4/14/2023	1997	RET ABN	UG-SERVICE
7025	40784654	GRET	SVC	10/10/2022	1997	RET ABN	UG-SERVICE
7026	42740575	GRET	SVC	2/20/2024	1997	RET ABN	UG-SERVICE
7027	38132322	GRET	SVC	2/4/2021	1997	RET ABN	UG-SERVICE
7028	41213829	GRET	SVC	12/11/2023	1997	RET ABN	UG-SERVICE
7029	36704815	GRET	SVC	7/28/2020	1997	RET ABN	UG-SERVICE
7030	41337380	GRET	SVC	3/6/2023	1997	RET ABN	UG-SERVICE
7031	40871924	GRET	SVC	10/28/2022	1997	RET ABN	UG-SERVICE
7032	41006860	GRET	SVC	12/9/2022	1997	RET ABN	UG-SERVICE
7033	43495960	GRET	SVC	8/29/2024	1997	RET ABN	UG-SERVICE
7034	39783820	GRET	SVC	2/17/2022	1997	RET ABN	UG-SERVICE
7035	41006557	GRET	SVC	12/9/2022	1997	RET ABN	UG-SERVICE
7036	39665275	GRET	SVC	8/3/2022	1997	RET ABN	UG-SERVICE
7037	37422619	GRET	SVC	11/20/2020	1997	RET ABN	UG-SERVICE
7038	38968696	GRET	SVC	8/30/2021	1997	RET ABN	UG-SERVICE
7039	36252177	GRET	SVC	5/5/2020	1997	RET ABN	UG-SERVICE
7040	41568419	GRET	SVC	4/28/2023	1997	RET ABN	UG-SERVICE
7041	40919279	GRET	SVC	11/8/2022	1997	RET ABN	UG-SERVICE
7042	43804914	GRET	SVC	11/21/2024	1997	RET ABN	UG-SERVICE
7043	41088416	GRET	SVC	1/18/2023	1997	RET ABN	UG-SERVICE
7044	40479242	GRET	SVC	7/25/2022	1997	RET ABN	UG-SERVICE
7045	38406800	GRET	SVC	5/9/2021	1997	RET ABN	UG-SERVICE
7046	41694326	GRET	SVC	10/6/2023	1997	RET ABN	UG-SERVICE
7047	39992586	GRET	SVC	4/11/2022	1997	RET ABN	UG-SERVICE
7048	40314683	GRET	SVC	6/15/2022	1997	RET ABN	UG-SERVICE
7049	41006555	GRET	SVC	12/9/2022	1997	RET ABN	UG-SERVICE
7050	42162126	GRET	SVC	9/23/2023	1997	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7051	41969493	GRET	SVC	8/1/2024	1997	RET ABN	UG-SERVICE
7052	43324305	GRET	SVC	7/24/2024	1997	RET ABN	UG-SERVICE
7053	43506888	GRET	SVC	9/18/2024	1997	RET ABN	UG-SERVICE
7054	41280027	GRET	SVC	3/3/2023	1997	RET ABN	UG-SERVICE
7055	43396869	GRET	SVC	8/19/2024	1997	RET ABN	UG-SERVICE
7056	41750595	GRET	SVC	6/10/2023	1997	RET ABN	UG-SERVICE
7057	35868778	GRET	SVC	2/11/2020	1997	RET ABN	UG-SERVICE
7058	38727537	GRET	SVC	7/12/2021	1997	RET ABN	UG-SERVICE
7059	39386496	GRET	SVC	11/15/2021	1997	RET ABN	UG-SERVICE
7060	38950424	GRET	SVC	8/17/2021	1997	RET ABN	UG-SERVICE
7061	37606013	GRET	SVC	12/14/2020	1997	RET ABN	UG-SERVICE
7062	41411155	GRET	SVC	4/2/2024	1997	RET ABN	UG-SERVICE
7063	40629974	GRET	SVC	9/2/2022	1997	RET ABN	UG-SERVICE
7064	39966710	GRET	SVC	5/26/2022	1997	RET ABN	UG-SERVICE
7065	43583403	GRET	SVC	9/19/2024	1997	RET ABN	UG-SERVICE
7066	40954747	GRET	SVC	11/21/2022	1997	RET ABN	UG-SERVICE
7067	42405319	GRET	SVC	11/20/2023	1997	RET ABN	UG-SERVICE
7068	42261815	GRET	SVC	10/23/2023	1997	RET ABN	UG-SERVICE
7069	40954445	GRET	SVC	12/12/2022	1997	RET ABN	UG-SERVICE
7070	36371116	GRET	SVC	5/28/2020	1997	RET ABN	UG-SERVICE
7071	43926050	GRET	SVC	12/11/2024	1997	RET ABN	UG-SERVICE
7072	38875855	GRET	SVC	8/6/2021	1997	RET ABN	UG-SERVICE
7073	40856523	GRET	SVC	10/30/2022	1997	RET ABN	UG-SERVICE
7074	41876593	GRET	SVC	7/10/2023	1997	RET ABN	UG-SERVICE
7075	41450868	GRET	SVC	7/12/2023	1997	RET ABN	UG-SERVICE
7076	42433828	GRET	SVC	12/3/2023	1997	RET ABN	UG-SERVICE
7077	41427496	GRET	SVC	3/28/2023	1997	RET ABN	UG-SERVICE
7078	41213872	GRET	SVC	12/11/2023	1997	RET ABN	UG-SERVICE
7079	43106678	GRET	SVC	5/28/2024	1997	RET ABN	UG-SERVICE
7080	36569971	GRET	SVC	8/12/2020	1997	RET ABN	UG-SERVICE
7081	39183553	GRET	SVC	9/23/2021	1997	RET ABN	UG-SERVICE
7082	37867609	GRET	SVC	11/30/2020	1997	RET ABN	UG-SERVICE
7083	39666090	GRET	SVC	8/3/2022	1997	RET ABN	UG-SERVICE
7084	36392804	GRET	SVC	6/9/2020	1997	RET ABN	UG-SERVICE
7085	41188707	GRET	SVC	1/18/2023	1998	RET ABN	UG-SERVICE
7086	41528624	GRET	SVC	4/23/2023	1998	RET ABN	UG-SERVICE
7087	38767419	GRET	SVC	7/20/2021	1998	RET ABN	UG-SERVICE
7088	40563766	GRET	SVC	8/25/2022	1998	RET ABN	UG-SERVICE
7089	36596097	GRET	SVC	7/29/2020	1998	RET ABN	UG-SERVICE
7090	36826768	GRET	SVC	8/24/2020	1998	RET ABN	UG-SERVICE
7091	41247252	GRET	SVC	2/8/2023	1998	RET ABN	UG-SERVICE
7092	41576608	GRET	SVC	5/2/2023	1998	RET ABN	UG-SERVICE
7093	42681619	GRET	SVC	2/12/2024	1998	RET ABN	UG-SERVICE
7094	43318487	GRET	SVC	8/9/2024	1998	RET ABN	UG-SERVICE
7095	41188703	GRET	SVC	1/20/2023	1998	RET ABN	UG-SERVICE
7096	41195084	GRET	SVC	1/24/2023	1998	RET ABN	UG-SERVICE
7097	42806300	GRET	SVC	3/12/2024	1998	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7098	41253572	GRET	SVC	2/6/2023	1998	RET ABN	UG-SERVICE
7099	38940808	GRET	SVC	8/19/2021	1998	RET ABN	UG-SERVICE
7100	41036021	GRET	SVC	1/27/2023	1998	RET ABN	UG-SERVICE
7101	37288381	GRET	SVC	11/9/2020	1998	RET ABN	UG-SERVICE
7102	38791174	GRET	SVC	7/20/2021	1998	RET ABN	UG-SERVICE
7103	41128958	GRET	SVC	1/4/2023	1998	RET ABN	UG-SERVICE
7104	41068184	GRET	SVC	1/10/2023	1998	RET ABN	UG-SERVICE
7105	37000459	GRET	SVC	11/3/2020	1998	RET ABN	UG-SERVICE
7106	36745032	GRET	SVC	7/23/2020	1998	RET ABN	UG-SERVICE
7107	39262300	GRET	SVC	10/26/2021	1998	RET ABN	UG-SERVICE
7108	36792648	GRET	SVC	8/17/2020	1998	RET ABN	UG-SERVICE
7109	39274158	GRET	SVC	10/14/2021	1998	RET ABN	UG-SERVICE
7110	36480152	GRET	SVC	6/19/2020	1998	RET ABN	UG-SERVICE
7111	41242473	GRET	SVC	2/21/2023	1998	RET ABN	UG-SERVICE
7112	36915601	GRET	SVC	9/8/2020	1998	RET ABN	UG-SERVICE
7113	39610822	GRET	SVC	12/26/2021	1998	RET ABN	UG-SERVICE
7114	43090426	GRET	SVC	5/20/2024	1998	RET ABN	UG-SERVICE
7115	41188567	GRET	SVC	1/19/2023	1998	RET ABN	UG-SERVICE
7116	41472143	GRET	SVC	4/8/2023	1998	RET ABN	UG-SERVICE
7117	40402788	GRET	SVC	7/12/2022	1998	RET ABN	UG-SERVICE
7118	39978074	GRET	SVC	4/6/2022	1998	RET ABN	UG-SERVICE
7119	41242608	GRET	SVC	2/21/2023	1998	RET ABN	UG-SERVICE
7120	42787554	GRET	SVC	3/6/2024	1998	RET ABN	UG-SERVICE
7121	41195093	GRET	SVC	1/27/2023	1998	RET ABN	UG-SERVICE
7122	36435516	GRET	SVC	6/15/2020	1998	RET ABN	UG-SERVICE
7123	40352474	GRET	SVC	7/1/2022	1998	RET ABN	UG-SERVICE
7124	37934848	GRET	SVC	12/19/2020	1998	RET ABN	UG-SERVICE
7125	35980848	GRET	SVC	2/6/2020	1998	RET ABN	UG-SERVICE
7126	39904134	GRET	SVC	3/16/2022	1998	RET ABN	UG-SERVICE
7127	36709896	GRET	SVC	8/5/2020	1998	RET ABN	UG-SERVICE
7128	40141056	GRET	SVC	5/5/2022	1998	RET ABN	UG-SERVICE
7129	41127312	GRET	SVC	1/5/2023	1998	RET ABN	UG-SERVICE
7130	40812721	GRET	SVC	10/12/2022	1998	RET ABN	UG-SERVICE
7131	41847581	GRET	SVC	7/13/2023	1998	RET ABN	UG-SERVICE
7132	40669280	GRET	SVC	9/12/2022	1998	RET ABN	UG-SERVICE
7133	38206744	GRET	SVC	3/13/2021	1998	RET ABN	UG-SERVICE
7134	41188573	GRET	SVC	1/18/2023	1998	RET ABN	UG-SERVICE
7135	38862872	GRET	SVC	8/4/2021	1998	RET ABN	UG-SERVICE
7136	41246607	GRET	SVC	2/6/2023	1998	RET ABN	UG-SERVICE
7137	41083456	GRET	SVC	1/4/2023	1998	RET ABN	UG-SERVICE
7138	38481828	GRET	SVC	5/13/2021	1998	RET ABN	UG-SERVICE
7139	38862875	GRET	SVC	8/4/2021	1998	RET ABN	UG-SERVICE
7140	38769079	GRET	SVC	8/4/2021	1998	RET ABN	UG-SERVICE
7141	41016211	GRET	SVC	12/12/2022	1998	RET ABN	UG-SERVICE
7142	41195087	GRET	SVC	1/24/2023	1998	RET ABN	UG-SERVICE
7143	42269392	GRET	SVC	11/3/2023	1998	RET ABN	UG-SERVICE
7144	40514013	GRET	SVC	9/15/2022	1998	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7145	42347999	GRET	SVC	11/20/2023	1998	RET ABN	UG-SERVICE
7146	43469742	GRET	SVC	8/24/2024	1998	RET ABN	UG-SERVICE
7147	41598850	GRET	SVC	5/25/2023	1998	RET ABN	UG-SERVICE
7148	42383762	GRET	SVC	11/17/2023	1998	RET ABN	UG-SERVICE
7149	40282165	GRET	SVC	6/13/2022	1998	RET ABN	UG-SERVICE
7150	36302109	GRET	SVC	5/4/2020	1998	RET ABN	UG-SERVICE
7151	37971361	GRET	SVC	12/29/2020	1998	RET ABN	UG-SERVICE
7152	35933672	GRET	SVC	1/22/2020	1998	RET ABN	UG-SERVICE
7153	39305036	GRET	SVC	10/25/2021	1998	RET ABN	UG-SERVICE
7154	36914878	GRET	SVC	9/16/2020	1998	RET ABN	UG-SERVICE
7155	41300695	GRET	SVC	2/28/2023	1998	RET ABN	UG-SERVICE
7156	39125203	GRET	SVC	9/14/2021	1998	RET ABN	UG-SERVICE
7157	43409641	GRET	SVC	8/5/2024	1998	RET ABN	UG-SERVICE
7158	39831571	GRET	SVC	8/3/2022	1998	RET ABN	UG-SERVICE
7159	37842345	GRET	SVC	11/30/2020	1998	RET ABN	UG-SERVICE
7160	41194834	GRET	SVC	1/22/2023	1998	RET ABN	UG-SERVICE
7161	40731660	GRET	SVC	9/30/2022	1998	RET ABN	UG-SERVICE
7162	41338302	GRET	SVC	3/1/2023	1998	RET ABN	UG-SERVICE
7163	36710941	GRET	SVC	8/3/2020	1998	RET ABN	UG-SERVICE
7164	41912317	GRET	SVC	7/27/2023	1998	RET ABN	UG-SERVICE
7165	43650607	GRET	SVC	9/30/2024	1998	RET ABN	UG-SERVICE
7166	42925411	GRET	SVC	4/25/2024	1998	RET ABN	UG-SERVICE
7167	41242468	GRET	SVC	3/2/2023	1998	RET ABN	UG-SERVICE
7168	41536200	GRET	SVC	4/18/2023	1998	RET ABN	UG-SERVICE
7169	41974091	GRET	SVC	8/9/2023	1998	RET ABN	UG-SERVICE
7170	43705212	GRET	SVC	10/12/2024	1998	RET ABN	UG-SERVICE
7171	40469681	GRET	SVC	7/14/2022	1998	RET ABN	UG-SERVICE
7172	41969578	GRET	SVC	8/1/2024	1998	RET ABN	UG-SERVICE
7173	41188706	GRET	SVC	1/20/2023	1998	RET ABN	UG-SERVICE
7174	42905583	GRET	SVC	4/1/2024	1998	RET ABN	UG-SERVICE
7175	38862878	GRET	SVC	8/4/2021	1998	RET ABN	UG-SERVICE
7176	41194837	GRET	SVC	1/21/2023	1998	RET ABN	UG-SERVICE
7177	41974945	GRET	SVC	8/16/2023	1998	RET ABN	UG-SERVICE
7178	41194830	GRET	SVC	1/22/2023	1998	RET ABN	UG-SERVICE
7179	41188563	GRET	SVC	1/19/2023	1998	RET ABN	UG-SERVICE
7180	41301033	GRET	SVC	2/20/2023	1998	RET ABN	UG-SERVICE
7181	43464740	GRET	SVC	8/20/2024	1998	RET ABN	UG-SERVICE
7182	41241354	GRET	SVC	3/7/2023	1998	RET ABN	UG-SERVICE
7183	37051179	GRET	SVC	10/9/2020	1998	RET ABN	UG-SERVICE
7184	41253571	GRET	SVC	2/6/2023	1998	RET ABN	UG-SERVICE
7185	36792651	GRET	SVC	8/17/2020	1998	RET ABN	UG-SERVICE
7186	39305663	GRET	SVC	10/18/2021	1998	RET ABN	UG-SERVICE
7187	41194611	GRET	SVC	1/24/2023	1998	RET ABN	UG-SERVICE
7188	42270913	GRET	SVC	10/23/2023	1998	RET ABN	UG-SERVICE
7189	39484323	GRET	SVC	11/30/2021	1998	RET ABN	UG-SERVICE
7190	38954562	GRET	SVC	8/20/2021	1998	RET ABN	UG-SERVICE
7191	41383474	GRET	SVC	3/14/2023	1998	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7192	40220224	GRET	SVC	5/26/2022	1998	RET ABN	UG-SERVICE
7193	40093182	GRET	SVC	5/2/2022	1998	RET ABN	UG-SERVICE
7194	38624921	GRET	SVC	5/1/2021	1998	RET ABN	UG-SERVICE
7195	42570377	GRET	SVC	1/18/2024	1998	RET ABN	UG-SERVICE
7196	35973634	GRET	SVC	2/3/2020	1998	RET ABN	UG-SERVICE
7197	37934613	GRET	SVC	12/19/2020	1998	RET ABN	UG-SERVICE
7198	39305039	GRET	SVC	10/25/2021	1998	RET ABN	UG-SERVICE
7199	41503110	GRET	SVC	4/13/2023	1998	RET ABN	UG-SERVICE
7200	41195082	GRET	SVC	1/21/2023	1998	RET ABN	UG-SERVICE
7201	36914879	GRET	SVC	9/16/2020	1998	RET ABN	UG-SERVICE
7202	39878518	GRET	SVC	6/2/2022	1998	RET ABN	UG-SERVICE
7203	41188571	GRET	SVC	1/18/2023	1998	RET ABN	UG-SERVICE
7204	41195088	GRET	SVC	1/24/2023	1998	RET ABN	UG-SERVICE
7205	41067838	GRET	SVC	1/21/2023	1998	RET ABN	UG-SERVICE
7206	39212890	GRET	SVC	9/28/2021	1998	RET ABN	UG-SERVICE
7207	42914143	GRET	SVC	4/19/2024	1998	RET ABN	UG-SERVICE
7208	42375997	GRET	SVC	11/22/2023	1999	RET ABN	UG-SERVICE
7209	38875933	GRET	SVC	8/5/2021	1999	RET ABN	UG-SERVICE
7210	43611901	GRET	SVC	10/2/2024	1999	RET ABN	UG-SERVICE
7211	41830501	GRET	SVC	9/27/2023	1999	RET ABN	UG-SERVICE
7212	42067507	GRET	SVC	9/6/2023	1999	RET ABN	UG-SERVICE
7213	42216804	GRET	SVC	12/5/2023	1999	RET ABN	UG-SERVICE
7214	40492265	GRET	SVC	8/11/2022	1999	RET ABN	UG-SERVICE
7215	38947394	GRET	SVC	8/26/2021	1999	RET ABN	UG-SERVICE
7216	36684436	GRET	SVC	7/26/2020	1999	RET ABN	UG-SERVICE
7217	42216594	GRET	SVC	12/4/2023	1999	RET ABN	UG-SERVICE
7218	39160109	GRET	SVC	9/12/2021	1999	RET ABN	UG-SERVICE
7219	42453892	GRET	SVC	12/6/2023	1999	RET ABN	UG-SERVICE
7220	38865033	GRET	SVC	8/3/2021	1999	RET ABN	UG-SERVICE
7221	42023961	GRET	SVC	8/21/2023	1999	RET ABN	UG-SERVICE
7222	43610587	GRET	SVC	12/6/2024	1999	RET ABN	UG-SERVICE
7223	39444953	GRET	SVC	12/8/2021	1999	RET ABN	UG-SERVICE
7224	39169287	GRET	SVC	6/3/2021	1999	RET ABN	UG-SERVICE
7225	36016317	GRET	SVC	5/6/2020	1999	RET ABN	UG-SERVICE
7226	38220190	GRET	SVC	3/15/2021	1999	RET ABN	UG-SERVICE
7227	43529804	GRET	SVC	12/13/2024	1999	RET ABN	UG-SERVICE
7228	36567677	GRET	SVC	6/30/2020	1999	RET ABN	UG-SERVICE
7229	42216805	GRET	SVC	12/5/2023	1999	RET ABN	UG-SERVICE
7230	42068096	GRET	SVC	9/13/2023	1999	RET ABN	UG-SERVICE
7231	41428833	GRET	SVC	3/23/2023	1999	RET ABN	UG-SERVICE
7232	43481197	GRET	SVC	11/23/2024	1999	RET ABN	UG-SERVICE
7233	39414253	GRET	SVC	9/30/2021	1999	RET ABN	UG-SERVICE
7234	35863418	GRET	SVC	1/7/2020	1999	RET ABN	UG-SERVICE
7235	41282911	GRET	SVC	2/24/2023	1999	RET ABN	UG-SERVICE
7236	43035947	GRET	SVC	6/7/2024	1999	RET ABN	UG-SERVICE
7237	42660372	GRET	SVC	3/7/2024	1999	RET ABN	UG-SERVICE
7238	39878723	GRET	SVC	6/2/2022	1999	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7239	41282906	GRET	SVC	2/21/2023	1999	RET ABN	UG-SERVICE
7240	43378910	GRET	SVC	8/5/2024	1999	RET ABN	UG-SERVICE
7241	40500606	GRET	SVC	8/3/2022	1999	RET ABN	UG-SERVICE
7242	39562050	GRET	SVC	11/8/2021	1999	RET ABN	UG-SERVICE
7243	38358930	GRET	SVC	4/12/2021	1999	RET ABN	UG-SERVICE
7244	39666612	GRET	SVC	11/18/2022	1999	RET ABN	UG-SERVICE
7245	37898367	GRET	SVC	12/8/2020	1999	RET ABN	UG-SERVICE
7246	43032811	GRET	SVC	7/27/2024	1999	RET ABN	UG-SERVICE
7247	43547058	GRET	SVC	9/15/2024	1999	RET ABN	UG-SERVICE
7248	41140303	GRET	SVC	1/5/2023	1999	RET ABN	UG-SERVICE
7249	42881813	GRET	SVC	4/4/2024	1999	RET ABN	UG-SERVICE
7250	41785388	GRET	SVC	6/22/2023	1999	RET ABN	UG-SERVICE
7251	37892197	GRET	SVC	12/6/2020	1999	RET ABN	UG-SERVICE
7252	37040165	GRET	SVC	10/22/2020	1999	RET ABN	UG-SERVICE
7253	42467509	GRET	SVC	3/4/2024	1999	RET ABN	UG-SERVICE
7254	37879007	GRET	SVC	12/5/2020	1999	RET ABN	UG-SERVICE
7255	40813400	GRET	SVC	10/21/2022	1999	RET ABN	UG-SERVICE
7256	41727399	GRET	SVC	6/8/2023	1999	RET ABN	UG-SERVICE
7257	40018957	GRET	SVC	4/19/2022	1999	RET ABN	UG-SERVICE
7258	36672939	GRET	SVC	7/27/2020	1999	RET ABN	UG-SERVICE
7259	39217533	GRET	SVC	8/20/2021	1999	RET ABN	UG-SERVICE
7260	43481189	GRET	SVC	10/15/2024	1999	RET ABN	UG-SERVICE
7261	37077690	GRET	SVC	10/11/2020	1999	RET ABN	UG-SERVICE
7262	41425689	GRET	SVC	3/26/2023	1999	RET ABN	UG-SERVICE
7263	38642523	GRET	SVC	6/18/2021	1999	RET ABN	UG-SERVICE
7264	43529756	GRET	SVC	12/16/2024	1999	RET ABN	UG-SERVICE
7265	43364877	GRET	SVC	12/13/2024	1999	RET ABN	UG-SERVICE
7266	40416195	GRET	SVC	6/27/2022	1999	RET ABN	UG-SERVICE
7267	37895426	GRET	SVC	12/6/2020	1999	RET ABN	UG-SERVICE
7268	42380213	GRET	SVC	11/29/2023	1999	RET ABN	UG-SERVICE
7269	40446586	GRET	SVC	7/18/2022	1999	RET ABN	UG-SERVICE
7270	42216816	GRET	SVC	12/7/2023	1999	RET ABN	UG-SERVICE
7271	37892560	GRET	SVC	12/6/2020	1999	RET ABN	UG-SERVICE
7272	35870559	GRET	SVC	1/13/2020	1999	RET ABN	UG-SERVICE
7273	39666144	GRET	SVC	8/3/2022	1999	RET ABN	UG-SERVICE
7274	41095697	GRET	SVC	1/17/2023	1999	RET ABN	UG-SERVICE
7275	43145278	GRET	SVC	6/6/2024	1999	RET ABN	UG-SERVICE
7276	40046869	GRET	SVC	12/22/2021	1999	RET ABN	UG-SERVICE
7277	37892199	GRET	SVC	12/6/2020	1999	RET ABN	UG-SERVICE
7278	39657986	GRET	SVC	3/28/2022	1999	RET ABN	UG-SERVICE
7279	37925872	GRET	SVC	12/16/2020	1999	RET ABN	UG-SERVICE
7280	41284193	GRET	SVC	2/15/2023	1999	RET ABN	UG-SERVICE
7281	37077695	GRET	SVC	10/11/2020	1999	RET ABN	UG-SERVICE
7282	43346349	GRET	SVC	7/23/2024	1999	RET ABN	UG-SERVICE
7283	36881818	GRET	SVC	7/31/2020	1999	RET ABN	UG-SERVICE
7284	42315524	GRET	SVC	10/25/2023	1999	RET ABN	UG-SERVICE
7285	40722553	GRET	SVC	9/20/2022	1999	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7286	39873511	GRET	SVC	3/15/2022	1999	RET ABN	UG-SERVICE
7287	40613623	GRET	SVC	8/30/2022	1999	RET ABN	UG-SERVICE
7288	40989692	GRET	SVC	12/2/2022	1999	RET ABN	UG-SERVICE
7289	41242477	GRET	SVC	2/10/2023	1999	RET ABN	UG-SERVICE
7290	39510760	GRET	SVC	12/9/2021	1999	RET ABN	UG-SERVICE
7291	35535542	GRET	SVC	1/9/2020	1999	RET ABN	UG-SERVICE
7292	40155145	GRET	SVC	5/17/2022	1999	RET ABN	UG-SERVICE
7293	39327948	GRET	SVC	10/27/2021	1999	RET ABN	UG-SERVICE
7294	38191559	GRET	SVC	3/17/2021	1999	RET ABN	UG-SERVICE
7295	36881999	GRET	SVC	8/30/2020	1999	RET ABN	UG-SERVICE
7296	43901506	GRET	SVC	12/13/2024	1999	RET ABN	UG-SERVICE
7297	38879126	GRET	SVC	8/9/2021	1999	RET ABN	UG-SERVICE
7298	40524690	GRET	SVC	8/5/2022	1999	RET ABN	UG-SERVICE
7299	40867635	GRET	SVC	11/7/2022	1999	RET ABN	UG-SERVICE
7300	42434593	GRET	SVC	11/29/2023	1999	RET ABN	UG-SERVICE
7301	36562307	GRET	SVC	7/1/2020	1999	RET ABN	UG-SERVICE
7302	38108091	GRET	SVC	12/22/2021	1999	RET ABN	UG-SERVICE
7303	43481190	GRET	SVC	10/26/2024	1999	RET ABN	UG-SERVICE
7304	42216806	GRET	SVC	12/6/2023	1999	RET ABN	UG-SERVICE
7305	38522082	GRET	SVC	5/21/2021	1999	RET ABN	UG-SERVICE
7306	36495443	GRET	SVC	6/23/2020	1999	RET ABN	UG-SERVICE
7307	41425681	GRET	SVC	3/26/2023	1999	RET ABN	UG-SERVICE
7308	38303368	GRET	SVC	3/26/2021	2000	RET ABN	UG-SERVICE
7309	37707370	GRET	SVC	11/24/2020	2000	RET ABN	UG-SERVICE
7310	36919699	GRET	SVC	9/17/2020	2000	RET ABN	UG-SERVICE
7311	42041818	GRET	SVC	8/28/2023	2000	RET ABN	UG-SERVICE
7312	43889066	GRET	SVC	12/3/2024	2000	RET ABN	UG-SERVICE
7313	36868331	GRET	SVC	8/30/2020	2000	RET ABN	UG-SERVICE
7314	42771048	GRET	SVC	3/1/2024	2000	RET ABN	UG-SERVICE
7315	43623429	GRET	SVC	12/16/2024	2000	RET ABN	UG-SERVICE
7316	42589740	GRET	SVC	1/24/2024	2000	RET ABN	UG-SERVICE
7317	38824668	GRET	SVC	7/28/2021	2000	RET ABN	UG-SERVICE
7318	40802927	GRET	SVC	10/12/2022	2000	RET ABN	UG-SERVICE
7319	36880252	GRET	SVC	9/1/2020	2000	RET ABN	UG-SERVICE
7320	39670256	GRET	SVC	1/10/2022	2000	RET ABN	UG-SERVICE
7321	36433745	GRET	SVC	6/10/2020	2000	RET ABN	UG-SERVICE
7322	39025562	GRET	SVC	9/1/2021	2000	RET ABN	UG-SERVICE
7323	40332125	GRET	SVC	7/8/2022	2000	RET ABN	UG-SERVICE
7324	41968577	GRET	SVC	9/12/2023	2000	RET ABN	UG-SERVICE
7325	43005048	GRET	SVC	9/19/2024	2000	RET ABN	UG-SERVICE
7326	41436809	GRET	SVC	4/13/2023	2000	RET ABN	UG-SERVICE
7327	40802837	GRET	SVC	10/10/2022	2000	RET ABN	UG-SERVICE
7328	38884420	GRET	SVC	7/30/2021	2000	RET ABN	UG-SERVICE
7329	42980534	GRET	SVC	4/23/2024	2000	RET ABN	UG-SERVICE
7330	41064388	GRET	SVC	12/8/2022	2000	RET ABN	UG-SERVICE
7331	41008796	GRET	SVC	12/5/2022	2000	RET ABN	UG-SERVICE
7332	40722885	GRET	SVC	9/21/2022	2000	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7333	41030225	GRET	SVC	12/8/2022	2000	RET ABN	UG-SERVICE
7334	37424279	GRET	SVC	11/12/2020	2000	RET ABN	UG-SERVICE
7335	37897527	GRET	SVC	12/11/2020	2000	RET ABN	UG-SERVICE
7336	40812991	GRET	SVC	10/21/2022	2000	RET ABN	UG-SERVICE
7337	39610702	GRET	SVC	9/21/2021	2000	RET ABN	UG-SERVICE
7338	35844431	GRET	SVC	1/2/2020	2000	RET ABN	UG-SERVICE
7339	43361452	GRET	SVC	7/30/2024	2000	RET ABN	UG-SERVICE
7340	36421667	GRET	SVC	5/19/2020	2000	RET ABN	UG-SERVICE
7341	37078266	GRET	SVC	10/14/2020	2000	RET ABN	UG-SERVICE
7342	43344414	GRET	SVC	7/19/2024	2000	RET ABN	UG-SERVICE
7343	38194555	GRET	SVC	3/12/2021	2000	RET ABN	UG-SERVICE
7344	41431156	GRET	SVC	3/29/2023	2000	RET ABN	UG-SERVICE
7345	42499932	GRET	SVC	12/13/2023	2000	RET ABN	UG-SERVICE
7346	38791569	GRET	SVC	7/22/2021	2000	RET ABN	UG-SERVICE
7347	35926514	GRET	SVC	2/6/2020	2000	RET ABN	UG-SERVICE
7348	43481244	GRET	SVC	10/25/2024	2000	RET ABN	UG-SERVICE
7349	41398463	GRET	SVC	3/15/2023	2000	RET ABN	UG-SERVICE
7350	42177066	GRET	SVC	9/29/2023	2000	RET ABN	UG-SERVICE
7351	41610596	GRET	SVC	5/9/2023	2000	RET ABN	UG-SERVICE
7352	41436550	GRET	SVC	3/29/2023	2000	RET ABN	UG-SERVICE
7353	43338309	GRET	SVC	7/22/2024	2000	RET ABN	UG-SERVICE
7354	38176405	GRET	SVC	3/1/2021	2000	RET ABN	UG-SERVICE
7355	42033600	GRET	SVC	8/23/2023	2000	RET ABN	UG-SERVICE
7356	42866194	GRET	SVC	3/26/2024	2000	RET ABN	UG-SERVICE
7357	38043897	GRET	SVC	1/20/2021	2000	RET ABN	UG-SERVICE
7358	41283334	GRET	SVC	2/13/2023	2000	RET ABN	UG-SERVICE
7359	40343946	GRET	SVC	6/27/2022	2000	RET ABN	UG-SERVICE
7360	36421668	GRET	SVC	5/19/2020	2000	RET ABN	UG-SERVICE
7361	37505359	GRET	SVC	9/20/2020	2000	RET ABN	UG-SERVICE
7362	40802485	GRET	SVC	10/12/2022	2000	RET ABN	UG-SERVICE
7363	40256570	GRET	SVC	6/14/2022	2000	RET ABN	UG-SERVICE
7364	42600007	GRET	SVC	1/20/2024	2000	RET ABN	UG-SERVICE
7365	36783423	GRET	SVC	8/15/2020	2000	RET ABN	UG-SERVICE
7366	43272061	GRET	SVC	7/11/2024	2000	RET ABN	UG-SERVICE
7367	38194559	GRET	SVC	3/12/2021	2000	RET ABN	UG-SERVICE
7368	41064392	GRET	SVC	12/18/2022	2000	RET ABN	UG-SERVICE
7369	37897528	GRET	SVC	12/11/2020	2000	RET ABN	UG-SERVICE
7370	41498150	GRET	SVC	4/21/2023	2000	RET ABN	UG-SERVICE
7371	36571480	GRET	SVC	6/30/2020	2000	RET ABN	UG-SERVICE
7372	41436806	GRET	SVC	4/13/2023	2000	RET ABN	UG-SERVICE
7373	38194704	GRET	SVC	3/10/2021	2000	RET ABN	UG-SERVICE
7374	40883284	GRET	SVC	11/2/2022	2000	RET ABN	UG-SERVICE
7375	40472864	GRET	SVC	7/27/2022	2000	RET ABN	UG-SERVICE
7376	41116479	GRET	SVC	12/29/2022	2000	RET ABN	UG-SERVICE
7377	43480659	GRET	SVC	10/11/2024	2000	RET ABN	UG-SERVICE
7378	43480657	GRET	SVC	10/25/2024	2000	RET ABN	UG-SERVICE
7379	37971090	GRET	SVC	1/5/2021	2000	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7380	36049726	GRET	SVC	2/19/2020	2000	RET ABN	UG-SERVICE
7381	43633368	GRET	SVC	10/2/2024	2000	RET ABN	UG-SERVICE
7382	40921851	GRET	SVC	11/14/2022	2000	RET ABN	UG-SERVICE
7383	41064380	GRET	SVC	12/8/2022	2000	RET ABN	UG-SERVICE
7384	42810562	GRET	SVC	3/11/2024	2000	RET ABN	UG-SERVICE
7385	40629871	GRET	SVC	8/26/2022	2000	RET ABN	UG-SERVICE
7386	41498146	GRET	SVC	4/21/2023	2000	RET ABN	UG-SERVICE
7387	39611828	GRET	SVC	12/28/2021	2000	RET ABN	UG-SERVICE
7388	40395245	GRET	SVC	7/7/2022	2000	RET ABN	UG-SERVICE
7389	41660704	GRET	SVC	5/23/2023	2000	RET ABN	UG-SERVICE
7390	41895787	GRET	SVC	7/24/2023	2000	RET ABN	UG-SERVICE
7391	41932128	GRET	SVC	6/22/2023	2000	RET ABN	UG-SERVICE
7392	40367262	GRET	SVC	6/29/2022	2000	RET ABN	UG-SERVICE
7393	43318025	GRET	SVC	7/19/2024	2000	RET ABN	UG-SERVICE
7394	37000688	GRET	SVC	9/30/2020	2000	RET ABN	UG-SERVICE
7395	41827231	GRET	SVC	7/5/2023	2000	RET ABN	UG-SERVICE
7396	39915194	GRET	SVC	3/21/2022	2000	RET ABN	UG-SERVICE
7397	39998636	GRET	SVC	4/18/2022	2000	RET ABN	UG-SERVICE
7398	42995220	GRET	SVC	7/10/2024	2000	RET ABN	UG-SERVICE
7399	36740596	GRET	SVC	8/8/2020	2000	RET ABN	UG-SERVICE
7400	38176406	GRET	SVC	3/1/2021	2000	RET ABN	UG-SERVICE
7401	40492805	GRET	SVC	7/27/2022	2000	RET ABN	UG-SERVICE
7402	43849373	GRET	SVC	11/15/2024	2000	RET ABN	UG-SERVICE
7403	39235699	GRET	SVC	9/30/2021	2000	RET ABN	UG-SERVICE
7404	41064387	GRET	SVC	12/18/2022	2000	RET ABN	UG-SERVICE
7405	39621131	GRET	SVC	1/4/2022	2000	RET ABN	UG-SERVICE
7406	36173901	GRET	SVC	6/16/2020	2000	RET ABN	UG-SERVICE
7407	42947563	GRET	SVC	4/16/2024	2000	RET ABN	UG-SERVICE
7408	43796589	GRET	SVC	10/31/2024	2000	RET ABN	UG-SERVICE
7409	41064382	GRET	SVC	12/17/2022	2000	RET ABN	UG-SERVICE
7410	39316948	GRET	SVC	10/14/2021	2000	RET ABN	UG-SERVICE
7411	37897531	GRET	SVC	12/11/2020	2000	RET ABN	UG-SERVICE
7412	43613455	GRET	SVC	9/24/2024	2000	RET ABN	UG-SERVICE
7413	43349767	GRET	SVC	7/24/2024	2001	RET ABN	UG-SERVICE
7414	40900097	GRET	SVC	11/7/2022	2001	RET ABN	UG-SERVICE
7415	41045286	GRET	SVC	12/12/2022	2001	RET ABN	UG-SERVICE
7416	41538999	GRET	SVC	4/19/2023	2001	RET ABN	UG-SERVICE
7417	43318358	GRET	SVC	7/31/2024	2001	RET ABN	UG-SERVICE
7418	36418335	GRET	SVC	6/13/2020	2001	RET ABN	UG-SERVICE
7419	38565574	GRET	SVC	6/1/2021	2001	RET ABN	UG-SERVICE
7420	41388776	GRET	SVC	3/17/2023	2001	RET ABN	UG-SERVICE
7421	38706673	GRET	SVC	7/12/2021	2001	RET ABN	UG-SERVICE
7422	43914918	GRET	SVC	12/9/2024	2001	RET ABN	UG-SERVICE
7423	39392830	GRET	SVC	11/9/2021	2001	RET ABN	UG-SERVICE
7424	42967818	GRET	SVC	4/20/2024	2001	RET ABN	UG-SERVICE
7425	39465548	GRET	SVC	11/22/2021	2001	RET ABN	UG-SERVICE
7426	42073379	GRET	SVC	9/6/2023	2001	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7427	43351576	GRET	SVC	7/29/2024	2001	RET ABN	UG-SERVICE
7428	41465015	GRET	SVC	4/4/2023	2001	RET ABN	UG-SERVICE
7429	38343718	GRET	SVC	4/12/2021	2001	RET ABN	UG-SERVICE
7430	39615246	GRET	SVC	12/30/2021	2001	RET ABN	UG-SERVICE
7431	43152901	GRET	SVC	6/11/2024	2001	RET ABN	UG-SERVICE
7432	41969562	GRET	SVC	8/1/2024	2001	RET ABN	UG-SERVICE
7433	40328438	GRET	SVC	7/12/2022	2001	RET ABN	UG-SERVICE
7434	36881982	GRET	SVC	8/29/2020	2001	RET ABN	UG-SERVICE
7435	40191460	GRET	SVC	5/23/2022	2001	RET ABN	UG-SERVICE
7436	43123265	GRET	SVC	4/19/2024	2001	RET ABN	UG-SERVICE
7437	40656085	GRET	SVC	9/7/2022	2001	RET ABN	UG-SERVICE
7438	41273377	GRET	SVC	2/11/2023	2001	RET ABN	UG-SERVICE
7439	40325461	GRET	SVC	6/21/2022	2001	RET ABN	UG-SERVICE
7440	43499674	GRET	SVC	8/29/2024	2001	RET ABN	UG-SERVICE
7441	41891997	GRET	SVC	7/19/2023	2001	RET ABN	UG-SERVICE
7442	41429934	GRET	SVC	9/13/2023	2001	RET ABN	UG-SERVICE
7443	39661991	GRET	SVC	1/19/2022	2001	RET ABN	UG-SERVICE
7444	38192854	GRET	SVC	3/5/2021	2001	RET ABN	UG-SERVICE
7445	41242470	GRET	SVC	2/16/2023	2001	RET ABN	UG-SERVICE
7446	36997699	GRET	SVC	9/24/2020	2001	RET ABN	UG-SERVICE
7447	36983987	GRET	SVC	9/24/2020	2001	RET ABN	UG-SERVICE
7448	41436448	GRET	SVC	3/29/2023	2001	RET ABN	UG-SERVICE
7449	39554485	GRET	SVC	12/23/2021	2001	RET ABN	UG-SERVICE
7450	41485315	GRET	SVC	4/10/2023	2001	RET ABN	UG-SERVICE
7451	43141890	GRET	SVC	6/5/2024	2001	RET ABN	UG-SERVICE
7452	36862809	GRET	SVC	9/2/2020	2001	RET ABN	UG-SERVICE
7453	43932203	GRET	SVC	12/20/2024	2001	RET ABN	UG-SERVICE
7454	42221056	GRET	SVC	10/16/2023	2001	RET ABN	UG-SERVICE
7455	40118446	GRET	SVC	5/2/2022	2001	RET ABN	UG-SERVICE
7456	41283325	GRET	SVC	3/21/2023	2001	RET ABN	UG-SERVICE
7457	38557584	GRET	SVC	6/7/2021	2001	RET ABN	UG-SERVICE
7458	38604359	GRET	SVC	6/7/2021	2001	RET ABN	UG-SERVICE
7459	36881758	GRET	SVC	8/30/2020	2001	RET ABN	UG-SERVICE
7460	36484469	GRET	SVC	6/22/2020	2001	RET ABN	UG-SERVICE
7461	39318777	GRET	SVC	11/2/2021	2001	RET ABN	UG-SERVICE
7462	39891183	GRET	SVC	3/14/2022	2001	RET ABN	UG-SERVICE
7463	40981283	GRET	SVC	11/30/2022	2001	RET ABN	UG-SERVICE
7464	38302256	GRET	SVC	4/8/2021	2001	RET ABN	UG-SERVICE
7465	38163054	GRET	SVC	2/2/2023	2001	RET ABN	UG-SERVICE
7466	43973883	GRET	SVC	12/26/2024	2001	RET ABN	UG-SERVICE
7467	41007407	GRET	SVC	12/16/2022	2001	RET ABN	UG-SERVICE
7468	42418509	GRET	SVC	11/28/2023	2001	RET ABN	UG-SERVICE
7469	36988776	GRET	SVC	10/1/2020	2001	RET ABN	UG-SERVICE
7470	41721316	GRET	SVC	6/8/2023	2001	RET ABN	UG-SERVICE
7471	38472023	GRET	SVC	5/10/2021	2001	RET ABN	UG-SERVICE
7472	37087269	GRET	SVC	11/20/2020	2001	RET ABN	UG-SERVICE
7473	42157164	GRET	SVC	9/27/2023	2001	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7474	38084821	GRET	SVC	2/3/2021	2001	RET ABN	UG-SERVICE
7475	36698308	GRET	SVC	7/28/2020	2001	RET ABN	UG-SERVICE
7476	43494793	GRET	SVC	9/10/2024	2001	RET ABN	UG-SERVICE
7477	40419926	GRET	SVC	6/28/2022	2001	RET ABN	UG-SERVICE
7478	37673227	GRET	SVC	11/17/2020	2001	RET ABN	UG-SERVICE
7479	36724029	GRET	SVC	8/4/2020	2001	RET ABN	UG-SERVICE
7480	41743295	GRET	SVC	6/12/2023	2001	RET ABN	UG-SERVICE
7481	36306576	GRET	SVC	5/26/2020	2001	RET ABN	UG-SERVICE
7482	42967388	GRET	SVC	4/20/2024	2001	RET ABN	UG-SERVICE
7483	43318354	GRET	SVC	8/1/2024	2001	RET ABN	UG-SERVICE
7484	41179728	GRET	SVC	1/19/2023	2001	RET ABN	UG-SERVICE
7485	41273577	GRET	SVC	2/19/2023	2001	RET ABN	UG-SERVICE
7486	41645975	GRET	SVC	5/17/2023	2001	RET ABN	UG-SERVICE
7487	37886691	GRET	SVC	12/7/2020	2001	RET ABN	UG-SERVICE
7488	41640802	GRET	SVC	5/19/2023	2001	RET ABN	UG-SERVICE
7489	41483265	GRET	SVC	4/11/2023	2001	RET ABN	UG-SERVICE
7490	42942077	GRET	SVC	4/17/2024	2001	RET ABN	UG-SERVICE
7491	38413342	GRET	SVC	4/29/2021	2001	RET ABN	UG-SERVICE
7492	35960480	GRET	SVC	1/28/2020	2001	RET ABN	UG-SERVICE
7493	39971774	GRET	SVC	4/7/2022	2001	RET ABN	UG-SERVICE
7494	38571054	GRET	SVC	6/11/2021	2001	RET ABN	UG-SERVICE
7495	36734782	GRET	SVC	8/4/2020	2001	RET ABN	UG-SERVICE
7496	42940123	GRET	SVC	4/17/2024	2001	RET ABN	UG-SERVICE
7497	42409026	GRET	SVC	11/22/2023	2001	RET ABN	UG-SERVICE
7498	41149794	GRET	SVC	1/10/2023	2001	RET ABN	UG-SERVICE
7499	43861502	GRET	SVC	11/20/2024	2001	RET ABN	UG-SERVICE
7500	41016021	GRET	SVC	12/5/2022	2001	RET ABN	UG-SERVICE
7501	37676416	GRET	SVC	11/18/2020	2001	RET ABN	UG-SERVICE
7502	39330668	GRET	SVC	10/26/2021	2001	RET ABN	UG-SERVICE
7503	40883580	GRET	SVC	10/30/2022	2001	RET ABN	UG-SERVICE
7504	38708008	GRET	SVC	7/9/2021	2001	RET ABN	UG-SERVICE
7505	41933549	GRET	SVC	10/4/2023	2001	RET ABN	UG-SERVICE
7506	39554490	GRET	SVC	12/23/2021	2001	RET ABN	UG-SERVICE
7507	43614554	GRET	SVC	10/1/2024	2001	RET ABN	UG-SERVICE
7508	40943532	GRET	SVC	11/13/2022	2001	RET ABN	UG-SERVICE
7509	38194703	GRET	SVC	3/5/2021	2001	RET ABN	UG-SERVICE
7510	36801154	GRET	SVC	8/18/2020	2001	RET ABN	UG-SERVICE
7511	36881756	GRET	SVC	8/30/2020	2001	RET ABN	UG-SERVICE
7512	41697192	GRET	SVC	5/27/2023	2001	RET ABN	UG-SERVICE
7513	43610591	GRET	SVC	11/21/2024	2001	RET ABN	UG-SERVICE
7514	43326668	GRET	SVC	7/27/2024	2001	RET ABN	UG-SERVICE
7515	42380946	GRET	SVC	2/26/2024	2001	RET ABN	UG-SERVICE
7516	41242465	GRET	SVC	3/7/2023	2001	RET ABN	UG-SERVICE
7517	37887068	GRET	SVC	12/7/2020	2001	RET ABN	UG-SERVICE
7518	42670287	GRET	SVC	9/19/2024	2001	RET ABN	UG-SERVICE
7519	42909599	GRET	SVC	4/11/2024	2001	RET ABN	UG-SERVICE
7520	38862750	GRET	SVC	8/10/2021	2001	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7521	37049087	GRET	SVC	10/13/2020	2001	RET ABN	UG-SERVICE
7522	41420887	GRET	SVC	3/22/2023	2001	RET ABN	UG-SERVICE
7523	43890028	GRET	SVC	12/5/2024	2001	RET ABN	UG-SERVICE
7524	39725649	GRET	SVC	1/26/2022	2001	RET ABN	UG-SERVICE
7525	42325245	GRET	SVC	11/7/2023	2001	RET ABN	UG-SERVICE
7526	43267204	GRET	SVC	7/1/2024	2001	RET ABN	UG-SERVICE
7527	41834508	GRET	SVC	8/1/2023	2001	RET ABN	UG-SERVICE
7528	37146457	GRET	SVC	10/26/2020	2001	RET ABN	UG-SERVICE
7529	39661053	GRET	SVC	1/6/2022	2001	RET ABN	UG-SERVICE
7530	41409365	GRET	SVC	3/20/2023	2001	RET ABN	UG-SERVICE
7531	40870057	GRET	SVC	11/7/2022	2001	RET ABN	UG-SERVICE
7532	37084444	GRET	SVC	10/18/2020	2001	RET ABN	UG-SERVICE
7533	38304357	GRET	SVC	4/5/2021	2002	RET ABN	UG-SERVICE
7534	42399667	GRET	SVC	11/22/2023	2002	RET ABN	UG-SERVICE
7535	37810974	GRET	SVC	11/28/2020	2002	RET ABN	UG-SERVICE
7536	41427445	GRET	SVC	3/20/2023	2002	RET ABN	UG-SERVICE
7537	41389205	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7538	41245807	GRET	SVC	2/11/2023	2002	RET ABN	UG-SERVICE
7539	37150059	GRET	SVC	10/27/2020	2002	RET ABN	UG-SERVICE
7540	41411077	GRET	SVC	4/2/2024	2002	RET ABN	UG-SERVICE
7541	37064274	GRET	SVC	10/12/2020	2002	RET ABN	UG-SERVICE
7542	37896321	GRET	SVC	12/9/2020	2002	RET ABN	UG-SERVICE
7543	41867849	GRET	SVC	7/30/2023	2002	RET ABN	UG-SERVICE
7544	41073858	GRET	SVC	12/19/2022	2002	RET ABN	UG-SERVICE
7545	37925617	GRET	SVC	12/15/2020	2002	RET ABN	UG-SERVICE
7546	41428201	GRET	SVC	3/17/2023	2002	RET ABN	UG-SERVICE
7547	40526714	GRET	SVC	8/15/2022	2002	RET ABN	UG-SERVICE
7548	41940284	GRET	SVC	7/30/2023	2002	RET ABN	UG-SERVICE
7549	39199257	GRET	SVC	9/16/2021	2002	RET ABN	UG-SERVICE
7550	41578979	GRET	SVC	5/3/2023	2002	RET ABN	UG-SERVICE
7551	36021539	GRET	SVC	2/27/2020	2002	RET ABN	UG-SERVICE
7552	36253908	GRET	SVC	3/8/2021	2002	RET ABN	UG-SERVICE
7553	41447522	GRET	SVC	3/28/2023	2002	RET ABN	UG-SERVICE
7554	41672471	GRET	SVC	5/21/2023	2002	RET ABN	UG-SERVICE
7555	43481129	GRET	SVC	10/17/2024	2002	RET ABN	UG-SERVICE
7556	36068845	GRET	SVC	2/18/2020	2002	RET ABN	UG-SERVICE
7557	38534793	GRET	SVC	5/25/2021	2002	RET ABN	UG-SERVICE
7558	41749481	GRET	SVC	6/15/2023	2002	RET ABN	UG-SERVICE
7559	40474020	GRET	SVC	7/23/2022	2002	RET ABN	UG-SERVICE
7560	40302688	GRET	SVC	6/14/2022	2002	RET ABN	UG-SERVICE
7561	39174443	GRET	SVC	9/21/2021	2002	RET ABN	UG-SERVICE
7562	41195274	GRET	SVC	2/3/2023	2002	RET ABN	UG-SERVICE
7563	36731996	GRET	SVC	8/4/2020	2002	RET ABN	UG-SERVICE
7564	41421866	GRET	SVC	3/22/2023	2002	RET ABN	UG-SERVICE
7565	41379689	GRET	SVC	3/14/2023	2002	RET ABN	UG-SERVICE
7566	43879552	GRET	SVC	11/25/2024	2002	RET ABN	UG-SERVICE
7567	41356754	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7568	40802652	GRET	SVC	10/14/2022	2002	RET ABN	UG-SERVICE
7569	43480770	GRET	SVC	9/9/2024	2002	RET ABN	UG-SERVICE
7570	42857255	GRET	SVC	3/25/2024	2002	RET ABN	UG-SERVICE
7571	41774861	GRET	SVC	6/19/2023	2002	RET ABN	UG-SERVICE
7572	39165294	GRET	SVC	10/4/2021	2002	RET ABN	UG-SERVICE
7573	35861527	GRET	SVC	1/6/2020	2002	RET ABN	UG-SERVICE
7574	41933968	GRET	SVC	9/7/2023	2002	RET ABN	UG-SERVICE
7575	40143951	GRET	SVC	5/9/2022	2002	RET ABN	UG-SERVICE
7576	35926820	GRET	SVC	1/20/2020	2002	RET ABN	UG-SERVICE
7577	43126530	GRET	SVC	6/10/2024	2002	RET ABN	UG-SERVICE
7578	43481248	GRET	SVC	10/31/2024	2002	RET ABN	UG-SERVICE
7579	43329575	GRET	SVC	7/23/2024	2002	RET ABN	UG-SERVICE
7580	37751453	GRET	SVC	11/24/2020	2002	RET ABN	UG-SERVICE
7581	38415911	GRET	SVC	4/27/2021	2002	RET ABN	UG-SERVICE
7582	36319105	GRET	SVC	9/14/2020	2002	RET ABN	UG-SERVICE
7583	43480656	GRET	SVC	10/6/2024	2002	RET ABN	UG-SERVICE
7584	40903183	GRET	SVC	11/9/2022	2002	RET ABN	UG-SERVICE
7585	35987870	GRET	SVC	2/5/2020	2002	RET ABN	UG-SERVICE
7586	40890406	GRET	SVC	11/7/2022	2002	RET ABN	UG-SERVICE
7587	42846731	GRET	SVC	3/19/2024	2002	RET ABN	UG-SERVICE
7588	41389215	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7589	42766384	GRET	SVC	2/29/2024	2002	RET ABN	UG-SERVICE
7590	41447265	GRET	SVC	3/28/2023	2002	RET ABN	UG-SERVICE
7591	41353730	GRET	SVC	3/8/2023	2002	RET ABN	UG-SERVICE
7592	41431601	GRET	SVC	3/29/2023	2002	RET ABN	UG-SERVICE
7593	41379698	GRET	SVC	3/14/2023	2002	RET ABN	UG-SERVICE
7594	42671362	GRET	SVC	2/9/2024	2002	RET ABN	UG-SERVICE
7595	43120501	GRET	SVC	5/28/2024	2002	RET ABN	UG-SERVICE
7596	38566433	GRET	SVC	6/2/2021	2002	RET ABN	UG-SERVICE
7597	41232992	GRET	SVC	1/27/2023	2002	RET ABN	UG-SERVICE
7598	40661316	GRET	SVC	9/8/2022	2002	RET ABN	UG-SERVICE
7599	40103568	GRET	SVC	5/27/2022	2002	RET ABN	UG-SERVICE
7600	40344678	GRET	SVC	6/24/2022	2002	RET ABN	UG-SERVICE
7601	41827373	GRET	SVC	6/29/2023	2002	RET ABN	UG-SERVICE
7602	41127770	GRET	SVC	1/5/2023	2002	RET ABN	UG-SERVICE
7603	42556959	GRET	SVC	1/10/2024	2002	RET ABN	UG-SERVICE
7604	41356022	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7605	39084238	GRET	SVC	9/7/2021	2002	RET ABN	UG-SERVICE
7606	40159959	GRET	SVC	6/6/2022	2002	RET ABN	UG-SERVICE
7607	42044124	GRET	SVC	9/1/2023	2002	RET ABN	UG-SERVICE
7608	38600943	GRET	SVC	10/10/2021	2002	RET ABN	UG-SERVICE
7609	40092080	GRET	SVC	5/2/2022	2002	RET ABN	UG-SERVICE
7610	41347205	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7611	41564462	GRET	SVC	4/25/2023	2002	RET ABN	UG-SERVICE
7612	41175129	GRET	SVC	1/18/2023	2002	RET ABN	UG-SERVICE
7613	40989681	GRET	SVC	12/11/2022	2002	RET ABN	UG-SERVICE
7614	43628634	GRET	SVC	10/3/2024	2002	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7615	43245004	GRET	SVC	9/19/2024	2002	RET ABN	UG-SERVICE
7616	42947767	GRET	SVC	4/12/2024	2002	RET ABN	UG-SERVICE
7617	40282726	GRET	SVC	6/7/2022	2002	RET ABN	UG-SERVICE
7618	42332589	GRET	SVC	11/9/2023	2002	RET ABN	UG-SERVICE
7619	43870478	GRET	SVC	12/11/2024	2002	RET ABN	UG-SERVICE
7620	37355647	GRET	SVC	11/4/2020	2002	RET ABN	UG-SERVICE
7621	41427444	GRET	SVC	3/22/2023	2002	RET ABN	UG-SERVICE
7622	36792659	GRET	SVC	8/17/2020	2002	RET ABN	UG-SERVICE
7623	41098638	GRET	SVC	12/28/2022	2002	RET ABN	UG-SERVICE
7624	39982794	GRET	SVC	4/11/2022	2002	RET ABN	UG-SERVICE
7625	37003857	GRET	SVC	9/28/2020	2002	RET ABN	UG-SERVICE
7626	40834140	GRET	SVC	10/17/2022	2002	RET ABN	UG-SERVICE
7627	43347675	GRET	SVC	7/30/2024	2002	RET ABN	UG-SERVICE
7628	41389208	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7629	38348342	GRET	SVC	4/11/2021	2002	RET ABN	UG-SERVICE
7630	41749310	GRET	SVC	6/12/2023	2002	RET ABN	UG-SERVICE
7631	41389627	GRET	SVC	3/11/2023	2002	RET ABN	UG-SERVICE
7632	39776978	GRET	SVC	2/10/2022	2002	RET ABN	UG-SERVICE
7633	39853683	GRET	SVC	3/7/2022	2003	RET ABN	UG-SERVICE
7634	38200838	GRET	SVC	3/10/2021	2003	RET ABN	UG-SERVICE
7635	36121800	GRET	SVC	10/12/2020	2003	RET ABN	UG-SERVICE
7636	41064399	GRET	SVC	12/13/2022	2003	RET ABN	UG-SERVICE
7637	38470502	GRET	SVC	5/9/2021	2003	RET ABN	UG-SERVICE
7638	41064581	GRET	SVC	12/13/2022	2003	RET ABN	UG-SERVICE
7639	40630791	GRET	SVC	8/24/2022	2003	RET ABN	UG-SERVICE
7640	40549630	GRET	SVC	8/11/2022	2003	RET ABN	UG-SERVICE
7641	41009843	GRET	SVC	12/5/2022	2003	RET ABN	UG-SERVICE
7642	36142357	GRET	SVC	3/17/2020	2003	RET ABN	UG-SERVICE
7643	42427105	GRET	SVC	9/19/2024	2003	RET ABN	UG-SERVICE
7644	42469806	GRET	SVC	12/11/2023	2003	RET ABN	UG-SERVICE
7645	43480655	GRET	SVC	10/10/2024	2003	RET ABN	UG-SERVICE
7646	40549831	GRET	SVC	8/11/2022	2003	RET ABN	UG-SERVICE
7647	35841979	GRET	SVC	2/5/2020	2003	RET ABN	UG-SERVICE
7648	40572770	GRET	SVC	8/24/2022	2003	RET ABN	UG-SERVICE
7649	36622900	GRET	SVC	7/14/2020	2003	RET ABN	UG-SERVICE
7650	40036010	GRET	SVC	5/9/2022	2003	RET ABN	UG-SERVICE
7651	37926602	GRET	SVC	12/13/2020	2003	RET ABN	UG-SERVICE
7652	39715818	GRET	SVC	4/11/2022	2003	RET ABN	UG-SERVICE
7653	43541484	GRET	SVC	9/7/2024	2003	RET ABN	UG-SERVICE
7654	42203265	GRET	SVC	10/9/2023	2003	RET ABN	UG-SERVICE
7655	37044199	GRET	SVC	10/8/2020	2003	RET ABN	UG-SERVICE
7656	40247527	GRET	SVC	6/3/2022	2003	RET ABN	UG-SERVICE
7657	39831648	GRET	SVC	8/3/2022	2003	RET ABN	UG-SERVICE
7658	39724678	GRET	SVC	2/14/2022	2003	RET ABN	UG-SERVICE
7659	42257656	GRET	SVC	10/17/2023	2003	RET ABN	UG-SERVICE
7660	37107895	GRET	SVC	11/3/2020	2003	RET ABN	UG-SERVICE
7661	41056876	GRET	SVC	12/14/2022	2003	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7662	39970682	GRET	SVC	6/17/2022	2003	RET ABN	UG-SERVICE
7663	40513377	GRET	SVC	8/2/2022	2003	RET ABN	UG-SERVICE
7664	37935101	GRET	SVC	12/20/2020	2003	RET ABN	UG-SERVICE
7665	43645446	GRET	SVC	10/2/2024	2003	RET ABN	UG-SERVICE
7666	41062120	GRET	SVC	12/15/2022	2003	RET ABN	UG-SERVICE
7667	40549745	GRET	SVC	8/11/2022	2003	RET ABN	UG-SERVICE
7668	36370810	GRET	SVC	5/26/2020	2003	RET ABN	UG-SERVICE
7669	37995172	GRET	SVC	1/7/2021	2003	RET ABN	UG-SERVICE
7670	41407581	GRET	SVC	4/2/2024	2003	RET ABN	UG-SERVICE
7671	40549515	GRET	SVC	8/11/2022	2003	RET ABN	UG-SERVICE
7672	41062957	GRET	SVC	12/13/2022	2003	RET ABN	UG-SERVICE
7673	36482418	GRET	SVC	6/24/2020	2003	RET ABN	UG-SERVICE
7674	38312389	GRET	SVC	10/5/2021	2003	RET ABN	UG-SERVICE
7675	40501628	GRET	SVC	8/1/2022	2003	RET ABN	UG-SERVICE
7676	40549218	GRET	SVC	8/11/2022	2003	RET ABN	UG-SERVICE
7677	38466241	GRET	SVC	5/11/2021	2003	RET ABN	UG-SERVICE
7678	40371595	GRET	SVC	7/6/2022	2003	RET ABN	UG-SERVICE
7679	42300691	GRET	SVC	10/30/2023	2003	RET ABN	UG-SERVICE
7680	41896727	GRET	SVC	7/22/2023	2003	RET ABN	UG-SERVICE
7681	43244858	GRET	SVC	9/19/2024	2003	RET ABN	UG-SERVICE
7682	40498905	GRET	SVC	7/28/2022	2003	RET ABN	UG-SERVICE
7683	36169905	GRET	SVC	4/23/2020	2003	RET ABN	UG-SERVICE
7684	43222767	GRET	SVC	6/24/2024	2003	RET ABN	UG-SERVICE
7685	41258462	GRET	SVC	3/14/2023	2003	RET ABN	UG-SERVICE
7686	42520538	GRET	SVC	12/27/2023	2003	RET ABN	UG-SERVICE
7687	40975075	GRET	SVC	11/28/2022	2003	RET ABN	UG-SERVICE
7688	36982532	GRET	SVC	9/21/2020	2003	RET ABN	UG-SERVICE
7689	36917243	GRET	SVC	9/10/2020	2003	RET ABN	UG-SERVICE
7690	42860042	GRET	SVC	3/27/2024	2003	RET ABN	UG-SERVICE
7691	43529739	GRET	SVC	12/6/2024	2003	RET ABN	UG-SERVICE
7692	39772389	GRET	SVC	2/7/2022	2003	RET ABN	UG-SERVICE
7693	36185118	GRET	SVC	4/23/2020	2003	RET ABN	UG-SERVICE
7694	38720222	GRET	SVC	7/8/2021	2003	RET ABN	UG-SERVICE
7695	43345642	GRET	SVC	7/23/2024	2004	RET ABN	UG-SERVICE
7696	42356134	GRET	SVC	11/13/2023	2004	RET ABN	UG-SERVICE
7697	38917715	GRET	SVC	9/10/2021	2004	RET ABN	UG-SERVICE
7698	36283351	GRET	SVC	4/28/2020	2004	RET ABN	UG-SERVICE
7699	42073632	GRET	SVC	9/1/2023	2004	RET ABN	UG-SERVICE
7700	40233704	GRET	SVC	6/1/2022	2004	RET ABN	UG-SERVICE
7701	42857414	GRET	SVC	3/25/2024	2004	RET ABN	UG-SERVICE
7702	40599515	GRET	SVC	8/23/2022	2004	RET ABN	UG-SERVICE
7703	39725947	GRET	SVC	1/26/2022	2004	RET ABN	UG-SERVICE
7704	41143393	GRET	SVC	7/31/2023	2004	RET ABN	UG-SERVICE
7705	43439588	GRET	SVC	8/15/2024	2004	RET ABN	UG-SERVICE
7706	40658454	GRET	SVC	9/9/2022	2004	RET ABN	UG-SERVICE
7707	41243163	GRET	SVC	2/5/2023	2004	RET ABN	UG-SERVICE
7708	39449955	GRET	SVC	11/22/2021	2004	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7709	43861615	GRET	SVC	12/4/2024	2004	RET ABN	UG-SERVICE
7710	35768208	GRET	SVC	1/8/2020	2004	RET ABN	UG-SERVICE
7711	43480983	GRET	SVC	10/6/2024	2004	RET ABN	UG-SERVICE
7712	37020402	GRET	SVC	10/6/2020	2004	RET ABN	UG-SERVICE
7713	38531959	GRET	SVC	6/24/2021	2004	RET ABN	UG-SERVICE
7714	42586652	GRET	SVC	1/24/2024	2004	RET ABN	UG-SERVICE
7715	42834266	GRET	SVC	8/5/2024	2004	RET ABN	UG-SERVICE
7716	41513768	GRET	SVC	4/17/2023	2004	RET ABN	UG-SERVICE
7717	36473507	GRET	SVC	6/16/2020	2004	RET ABN	UG-SERVICE
7718	41242287	GRET	SVC	2/6/2023	2004	RET ABN	UG-SERVICE
7719	42871432	GRET	SVC	3/30/2024	2004	RET ABN	UG-SERVICE
7720	41063698	GRET	SVC	12/17/2022	2004	RET ABN	UG-SERVICE
7721	41062537	GRET	SVC	12/15/2022	2004	RET ABN	UG-SERVICE
7722	37006649	GRET	SVC	10/6/2020	2004	RET ABN	UG-SERVICE
7723	40271975	GRET	SVC	6/9/2022	2004	RET ABN	UG-SERVICE
7724	40812988	GRET	SVC	10/17/2022	2004	RET ABN	UG-SERVICE
7725	41513769	GRET	SVC	4/17/2023	2004	RET ABN	UG-SERVICE
7726	41062651	GRET	SVC	12/16/2022	2004	RET ABN	UG-SERVICE
7727	41513764	GRET	SVC	4/17/2023	2004	RET ABN	UG-SERVICE
7728	43948545	GRET	SVC	12/18/2024	2004	RET ABN	UG-SERVICE
7729	41513760	GRET	SVC	4/16/2023	2004	RET ABN	UG-SERVICE
7730	36303943	GRET	SVC	5/7/2020	2004	RET ABN	UG-SERVICE
7731	41082594	GRET	SVC	1/12/2023	2004	RET ABN	UG-SERVICE
7732	43041512	GRET	SVC	5/16/2024	2004	RET ABN	UG-SERVICE
7733	42337122	GRET	SVC	11/29/2023	2004	RET ABN	UG-SERVICE
7734	41436449	GRET	SVC	3/29/2023	2004	RET ABN	UG-SERVICE
7735	37521263	GRET	SVC	11/13/2020	2004	RET ABN	UG-SERVICE
7736	37811363	GRET	SVC	11/23/2020	2004	RET ABN	UG-SERVICE
7737	41273663	GRET	SVC	3/16/2023	2004	RET ABN	UG-SERVICE
7738	36730902	GRET	SVC	9/20/2020	2004	RET ABN	UG-SERVICE
7739	36273752	GRET	SVC	5/8/2020	2004	RET ABN	UG-SERVICE
7740	38944874	GRET	SVC	8/7/2021	2004	RET ABN	UG-SERVICE
7741	40513962	GRET	SVC	8/1/2022	2004	RET ABN	UG-SERVICE
7742	39126371	GRET	SVC	9/15/2021	2004	RET ABN	UG-SERVICE
7743	41082950	GRET	SVC	1/5/2023	2004	RET ABN	UG-SERVICE
7744	36303951	GRET	SVC	5/7/2020	2004	RET ABN	UG-SERVICE
7745	39613259	GRET	SVC	12/29/2021	2004	RET ABN	UG-SERVICE
7746	38060055	GRET	SVC	1/27/2021	2004	RET ABN	UG-SERVICE
7747	41064396	GRET	SVC	12/8/2022	2004	RET ABN	UG-SERVICE
7748	41283626	GRET	SVC	2/21/2023	2004	RET ABN	UG-SERVICE
7749	36760761	GRET	SVC	8/11/2020	2004	RET ABN	UG-SERVICE
7750	40208463	GRET	SVC	5/25/2022	2004	RET ABN	UG-SERVICE
7751	41185736	GRET	SVC	1/27/2023	2004	RET ABN	UG-SERVICE
7752	41082953	GRET	SVC	1/7/2023	2004	RET ABN	UG-SERVICE
7753	40205522	GRET	SVC	5/23/2022	2004	RET ABN	UG-SERVICE
7754	38631228	GRET	SVC	8/4/2021	2004	RET ABN	UG-SERVICE
7755	41513766	GRET	SVC	4/17/2023	2004	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7756	36977167	GRET	SVC	9/25/2020	2004	RET ABN	UG-SERVICE
7757	36834103	GRET	SVC	8/29/2020	2004	RET ABN	UG-SERVICE
7758	40652843	GRET	SVC	9/7/2022	2004	RET ABN	UG-SERVICE
7759	41116665	GRET	SVC	1/21/2023	2004	RET ABN	UG-SERVICE
7760	39542353	GRET	SVC	12/15/2021	2004	RET ABN	UG-SERVICE
7761	38126148	GRET	SVC	2/15/2021	2004	RET ABN	UG-SERVICE
7762	36609220	GRET	SVC	7/13/2020	2004	RET ABN	UG-SERVICE
7763	36367091	GRET	SVC	5/27/2020	2004	RET ABN	UG-SERVICE
7764	36304192	GRET	SVC	5/7/2020	2004	RET ABN	UG-SERVICE
7765	41354136	GRET	SVC	3/13/2023	2004	RET ABN	UG-SERVICE
7766	36303948	GRET	SVC	5/7/2020	2004	RET ABN	UG-SERVICE
7767	43480982	GRET	SVC	10/6/2024	2004	RET ABN	UG-SERVICE
7768	36839754	GRET	SVC	8/31/2020	2004	RET ABN	UG-SERVICE
7769	40149164	GRET	SVC	5/17/2022	2004	RET ABN	UG-SERVICE
7770	43618773	GRET	SVC	10/1/2024	2004	RET ABN	UG-SERVICE
7771	41082951	GRET	SVC	1/7/2023	2004	RET ABN	UG-SERVICE
7772	41243166	GRET	SVC	2/5/2023	2004	RET ABN	UG-SERVICE
7773	37933095	GRET	SVC	12/14/2020	2004	RET ABN	UG-SERVICE
7774	42164320	GRET	SVC	9/28/2023	2004	RET ABN	UG-SERVICE
7775	36303952	GRET	SVC	5/7/2020	2004	RET ABN	UG-SERVICE
7776	41436541	GRET	SVC	3/26/2023	2004	RET ABN	UG-SERVICE
7777	39466802	GRET	SVC	11/27/2021	2004	RET ABN	UG-SERVICE
7778	42412971	GRET	SVC	11/27/2023	2004	RET ABN	UG-SERVICE
7779	36379833	GRET	SVC	6/1/2020	2004	RET ABN	UG-SERVICE
7780	40344160	GRET	SVC	6/17/2022	2004	RET ABN	UG-SERVICE
7781	37524106	GRET	SVC	11/13/2020	2004	RET ABN	UG-SERVICE
7782	38807486	GRET	SVC	7/17/2021	2004	RET ABN	UG-SERVICE
7783	43250333	GRET	SVC	12/11/2024	2004	RET ABN	UG-SERVICE
7784	39317784	GRET	SVC	12/7/2021	2004	RET ABN	UG-SERVICE
7785	40899533	GRET	SVC	11/11/2022	2004	RET ABN	UG-SERVICE
7786	41185739	GRET	SVC	1/19/2023	2004	RET ABN	UG-SERVICE
7787	42804378	GRET	SVC	3/9/2024	2004	RET ABN	UG-SERVICE
7788	40867627	GRET	SVC	12/1/2022	2004	RET ABN	UG-SERVICE
7789	37247562	GRET	SVC	11/2/2020	2004	RET ABN	UG-SERVICE
7790	41144909	GRET	SVC	6/10/2024	2004	RET ABN	UG-SERVICE
7791	41062644	GRET	SVC	12/15/2022	2004	RET ABN	UG-SERVICE
7792	38187064	GRET	SVC	3/3/2021	2004	RET ABN	UG-SERVICE
7793	37845210	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7794	41187060	GRET	SVC	1/18/2023	2005	RET ABN	UG-SERVICE
7795	39360486	GRET	SVC	11/8/2021	2005	RET ABN	UG-SERVICE
7796	41740862	GRET	SVC	6/13/2023	2005	RET ABN	UG-SERVICE
7797	41117167	GRET	SVC	1/9/2023	2005	RET ABN	UG-SERVICE
7798	38206747	GRET	SVC	3/10/2021	2005	RET ABN	UG-SERVICE
7799	37845209	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7800	43624426	GRET	SVC	10/2/2024	2005	RET ABN	UG-SERVICE
7801	40609430	GRET	SVC	8/25/2022	2005	RET ABN	UG-SERVICE
7802	43481132	GRET	SVC	10/17/2024	2005	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7803	37845208	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7804	37844978	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7805	43269460	GRET	SVC	7/6/2024	2005	RET ABN	UG-SERVICE
7806	38206558	GRET	SVC	3/10/2021	2005	RET ABN	UG-SERVICE
7807	36135027	GRET	SVC	3/17/2020	2005	RET ABN	UG-SERVICE
7808	37845203	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7809	36036306	GRET	SVC	1/9/2020	2005	RET ABN	UG-SERVICE
7810	43343790	GRET	SVC	7/30/2024	2005	RET ABN	UG-SERVICE
7811	37989381	GRET	SVC	1/6/2021	2005	RET ABN	UG-SERVICE
7812	39258151	GRET	SVC	10/12/2021	2005	RET ABN	UG-SERVICE
7813	37844979	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7814	41289009	GRET	SVC	2/13/2023	2005	RET ABN	UG-SERVICE
7815	37845200	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7816	37845201	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7817	36696343	GRET	SVC	7/27/2020	2005	RET ABN	UG-SERVICE
7818	42188716	GRET	SVC	9/21/2023	2005	RET ABN	UG-SERVICE
7819	41401971	GRET	SVC	3/9/2023	2005	RET ABN	UG-SERVICE
7820	43205682	GRET	SVC	6/19/2024	2005	RET ABN	UG-SERVICE
7821	41140329	GRET	SVC	12/31/2022	2005	RET ABN	UG-SERVICE
7822	41083518	GRET	SVC	12/20/2022	2005	RET ABN	UG-SERVICE
7823	42011212	GRET	SVC	8/16/2023	2005	RET ABN	UG-SERVICE
7824	36962408	GRET	SVC	9/21/2020	2005	RET ABN	UG-SERVICE
7825	41223064	GRET	SVC	1/31/2023	2005	RET ABN	UG-SERVICE
7826	41284360	GRET	SVC	2/13/2023	2005	RET ABN	UG-SERVICE
7827	36735977	GRET	SVC	8/10/2020	2005	RET ABN	UG-SERVICE
7828	36827003	GRET	SVC	8/25/2020	2005	RET ABN	UG-SERVICE
7829	37845205	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7830	43348357	GRET	SVC	7/24/2024	2005	RET ABN	UG-SERVICE
7831	41062216	GRET	SVC	12/14/2022	2005	RET ABN	UG-SERVICE
7832	38472037	GRET	SVC	5/10/2021	2005	RET ABN	UG-SERVICE
7833	37844977	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7834	37845206	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7835	41186311	GRET	SVC	1/28/2023	2005	RET ABN	UG-SERVICE
7836	41064314	GRET	SVC	12/15/2022	2005	RET ABN	UG-SERVICE
7837	36564211	GRET	SVC	6/29/2020	2005	RET ABN	UG-SERVICE
7838	43480997	GRET	SVC	11/16/2024	2005	RET ABN	UG-SERVICE
7839	38520272	GRET	SVC	5/24/2021	2005	RET ABN	UG-SERVICE
7840	41032548	GRET	SVC	12/15/2022	2005	RET ABN	UG-SERVICE
7841	41062525	GRET	SVC	12/15/2022	2005	RET ABN	UG-SERVICE
7842	37083566	GRET	SVC	10/19/2020	2005	RET ABN	UG-SERVICE
7843	42185137	GRET	SVC	10/4/2023	2005	RET ABN	UG-SERVICE
7844	41741068	GRET	SVC	6/13/2023	2005	RET ABN	UG-SERVICE
7845	43480999	GRET	SVC	11/16/2024	2005	RET ABN	UG-SERVICE
7846	37844976	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7847	42844671	GRET	SVC	3/20/2024	2005	RET ABN	UG-SERVICE
7848	41062211	GRET	SVC	12/14/2022	2005	RET ABN	UG-SERVICE
7849	39361790	GRET	SVC	11/2/2021	2005	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7850	38677273	GRET	SVC	6/21/2021	2005	RET ABN	UG-SERVICE
7851	37845204	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7852	39666497	GRET	SVC	11/18/2022	2005	RET ABN	UG-SERVICE
7853	43075757	GRET	SVC	5/18/2024	2005	RET ABN	UG-SERVICE
7854	43481133	GRET	SVC	11/1/2024	2005	RET ABN	UG-SERVICE
7855	41183051	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7856	41032545	GRET	SVC	12/4/2022	2005	RET ABN	UG-SERVICE
7857	43053838	GRET	SVC	5/8/2024	2005	RET ABN	UG-SERVICE
7858	41282902	GRET	SVC	3/21/2023	2005	RET ABN	UG-SERVICE
7859	41186308	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7860	41183057	GRET	SVC	1/20/2023	2005	RET ABN	UG-SERVICE
7861	36744906	GRET	SVC	7/27/2020	2005	RET ABN	UG-SERVICE
7862	37844974	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7863	41067829	GRET	SVC	12/22/2022	2005	RET ABN	UG-SERVICE
7864	42866971	GRET	SVC	3/28/2024	2005	RET ABN	UG-SERVICE
7865	37845207	GRET	SVC	12/3/2020	2005	RET ABN	UG-SERVICE
7866	41025862	GRET	SVC	4/4/2023	2005	RET ABN	UG-SERVICE
7867	41414164	GRET	SVC	4/2/2023	2005	RET ABN	UG-SERVICE
7868	42957328	GRET	SVC	9/19/2024	2005	RET ABN	UG-SERVICE
7869	41183055	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7870	35866707	GRET	SVC	1/7/2020	2005	RET ABN	UG-SERVICE
7871	41327963	GRET	SVC	3/1/2023	2005	RET ABN	UG-SERVICE
7872	39495065	GRET	SVC	12/8/2021	2005	RET ABN	UG-SERVICE
7873	39998931	GRET	SVC	4/12/2022	2005	RET ABN	UG-SERVICE
7874	36760744	GRET	SVC	8/10/2020	2005	RET ABN	UG-SERVICE
7875	42628090	GRET	SVC	1/29/2024	2005	RET ABN	UG-SERVICE
7876	41067832	GRET	SVC	2/4/2023	2005	RET ABN	UG-SERVICE
7877	43329574	GRET	SVC	7/17/2024	2005	RET ABN	UG-SERVICE
7878	41411191	GRET	SVC	4/2/2024	2005	RET ABN	UG-SERVICE
7879	42177396	GRET	SVC	10/4/2023	2005	RET ABN	UG-SERVICE
7880	38360334	GRET	SVC	4/12/2021	2005	RET ABN	UG-SERVICE
7881	38248451	GRET	SVC	3/22/2021	2005	RET ABN	UG-SERVICE
7882	42404191	GRET	SVC	11/20/2023	2005	RET ABN	UG-SERVICE
7883	42076364	GRET	SVC	9/8/2023	2005	RET ABN	UG-SERVICE
7884	38392796	GRET	SVC	4/23/2021	2005	RET ABN	UG-SERVICE
7885	32667124	GRET	SVC	11/1/2020	2005	RET ABN	UG-SERVICE
7886	38259673	GRET	SVC	3/23/2021	2005	RET ABN	UG-SERVICE
7887	42744058	GRET	SVC	2/21/2024	2005	RET ABN	UG-SERVICE
7888	41183045	GRET	SVC	1/17/2023	2005	RET ABN	UG-SERVICE
7889	42652005	GRET	SVC	1/27/2024	2005	RET ABN	UG-SERVICE
7890	43625732	GRET	SVC	9/30/2024	2005	RET ABN	UG-SERVICE
7891	41396611	GRET	SVC	3/14/2023	2005	RET ABN	UG-SERVICE
7892	42856665	GRET	SVC	3/28/2024	2005	RET ABN	UG-SERVICE
7893	42006733	GRET	SVC	8/14/2023	2005	RET ABN	UG-SERVICE
7894	43481252	GRET	SVC	11/20/2024	2005	RET ABN	UG-SERVICE
7895	37052386	GRET	SVC	10/27/2020	2005	RET ABN	UG-SERVICE
7896	42195313	GRET	SVC	10/11/2023	2005	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7897	39291666	GRET	SVC	10/6/2021	2005	RET ABN	UG-SERVICE
7898	40202961	GRET	SVC	5/24/2022	2005	RET ABN	UG-SERVICE
7899	41186317	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7900	40394911	GRET	SVC	7/8/2022	2005	RET ABN	UG-SERVICE
7901	41119750	GRET	SVC	12/31/2022	2005	RET ABN	UG-SERVICE
7902	38305722	GRET	SVC	7/15/2021	2005	RET ABN	UG-SERVICE
7903	41062428	GRET	SVC	12/14/2022	2005	RET ABN	UG-SERVICE
7904	41186062	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7905	41183048	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7906	40394311	GRET	SVC	7/6/2022	2005	RET ABN	UG-SERVICE
7907	35909730	GRET	SVC	1/12/2020	2005	RET ABN	UG-SERVICE
7908	39548807	GRET	SVC	12/15/2021	2005	RET ABN	UG-SERVICE
7909	42166505	GRET	SVC	10/17/2023	2005	RET ABN	UG-SERVICE
7910	43611858	GRET	SVC	9/26/2024	2005	RET ABN	UG-SERVICE
7911	43912027	GRET	SVC	12/9/2024	2005	RET ABN	UG-SERVICE
7912	37999544	GRET	SVC	1/12/2021	2005	RET ABN	UG-SERVICE
7913	38069924	GRET	SVC	1/25/2021	2005	RET ABN	UG-SERVICE
7914	43021506	GRET	SVC	5/6/2024	2005	RET ABN	UG-SERVICE
7915	42701523	GRET	SVC	2/13/2024	2005	RET ABN	UG-SERVICE
7916	42896956	GRET	SVC	4/7/2024	2005	RET ABN	UG-SERVICE
7917	40395626	GRET	SVC	6/30/2022	2005	RET ABN	UG-SERVICE
7918	43449545	GRET	SVC	8/20/2024	2005	RET ABN	UG-SERVICE
7919	41594544	GRET	SVC	5/4/2023	2005	RET ABN	UG-SERVICE
7920	41223068	GRET	SVC	1/31/2023	2005	RET ABN	UG-SERVICE
7921	40462862	GRET	SVC	7/14/2022	2005	RET ABN	UG-SERVICE
7922	38671323	GRET	SVC	6/24/2021	2005	RET ABN	UG-SERVICE
7923	36009163	GRET	SVC	2/12/2020	2005	RET ABN	UG-SERVICE
7924	41186313	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7925	38693632	GRET	SVC	7/2/2021	2005	RET ABN	UG-SERVICE
7926	41183049	GRET	SVC	1/19/2023	2005	RET ABN	UG-SERVICE
7927	40843791	GRET	SVC	10/20/2022	2005	RET ABN	UG-SERVICE
7928	41309567	GRET	SVC	2/20/2023	2005	RET ABN	UG-SERVICE
7929	43963333	GRET	SVC	12/20/2024	2006	RET ABN	UG-SERVICE
7930	41141838	GRET	SVC	1/9/2023	2006	RET ABN	UG-SERVICE
7931	42670806	GRET	SVC	2/6/2024	2006	RET ABN	UG-SERVICE
7932	38260816	GRET	SVC	3/22/2021	2006	RET ABN	UG-SERVICE
7933	38522085	GRET	SVC	5/21/2021	2006	RET ABN	UG-SERVICE
7934	43988607	GRET	SVC	11/15/2024	2006	RET ABN	UG-SERVICE
7935	39704501	GRET	SVC	1/18/2022	2006	RET ABN	UG-SERVICE
7936	37834464	GRET	SVC	11/30/2020	2006	RET ABN	UG-SERVICE
7937	43341174	GRET	SVC	7/22/2024	2006	RET ABN	UG-SERVICE
7938	41955449	GRET	SVC	7/29/2023	2006	RET ABN	UG-SERVICE
7939	39294222	GRET	SVC	10/22/2021	2006	RET ABN	UG-SERVICE
7940	41408151	GRET	SVC	4/2/2024	2006	RET ABN	UG-SERVICE
7941	38813115	GRET	SVC	7/28/2021	2006	RET ABN	UG-SERVICE
7942	41498362	GRET	SVC	4/12/2023	2006	RET ABN	UG-SERVICE
7943	43806038	GRET	SVC	11/9/2024	2006	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7944	42407800	GRET	SVC	11/26/2023	2006	RET ABN	UG-SERVICE
7945	37848585	GRET	SVC	8/14/2020	2006	RET ABN	UG-SERVICE
7946	40863773	GRET	SVC	11/2/2022	2006	RET ABN	UG-SERVICE
7947	42177175	GRET	SVC	10/11/2023	2006	RET ABN	UG-SERVICE
7948	42806286	GRET	SVC	3/11/2024	2006	RET ABN	UG-SERVICE
7949	39823211	GRET	SVC	2/24/2022	2006	RET ABN	UG-SERVICE
7950	41414101	GRET	SVC	3/20/2023	2006	RET ABN	UG-SERVICE
7951	43880122	GRET	SVC	12/2/2024	2006	RET ABN	UG-SERVICE
7952	39301611	GRET	SVC	10/15/2021	2006	RET ABN	UG-SERVICE
7953	37958745	GRET	SVC	12/30/2020	2006	RET ABN	UG-SERVICE
7954	40407299	GRET	SVC	7/11/2022	2006	RET ABN	UG-SERVICE
7955	37390631	GRET	SVC	11/9/2020	2006	RET ABN	UG-SERVICE
7956	42177707	GRET	SVC	10/3/2023	2006	RET ABN	UG-SERVICE
7957	40660400	GRET	SVC	10/22/2022	2006	RET ABN	UG-SERVICE
7958	38813117	GRET	SVC	3/28/2022	2006	RET ABN	UG-SERVICE
7959	43529722	GRET	SVC	12/12/2024	2006	RET ABN	UG-SERVICE
7960	40050319	GRET	SVC	4/27/2022	2006	RET ABN	UG-SERVICE
7961	41119419	GRET	SVC	1/3/2023	2006	RET ABN	UG-SERVICE
7962	40137222	GRET	SVC	5/11/2022	2006	RET ABN	UG-SERVICE
7963	41831517	GRET	SVC	8/2/2023	2006	RET ABN	UG-SERVICE
7964	43204005	GRET	SVC	6/18/2024	2006	RET ABN	UG-SERVICE
7965	42816064	GRET	SVC	3/11/2024	2006	RET ABN	UG-SERVICE
7966	43610733	GRET	SVC	11/20/2024	2006	RET ABN	UG-SERVICE
7967	39463481	GRET	SVC	11/24/2021	2006	RET ABN	UG-SERVICE
7968	38603475	GRET	SVC	6/10/2021	2006	RET ABN	UG-SERVICE
7969	43481198	GRET	SVC	10/26/2024	2006	RET ABN	UG-SERVICE
7970	40264988	GRET	SVC	6/8/2022	2006	RET ABN	UG-SERVICE
7971	41348986	GRET	SVC	3/8/2023	2006	RET ABN	UG-SERVICE
7972	42491871	GRET	SVC	12/19/2023	2006	RET ABN	UG-SERVICE
7973	42283675	GRET	SVC	10/23/2023	2006	RET ABN	UG-SERVICE
7974	39387615	GRET	SVC	11/5/2021	2006	RET ABN	UG-SERVICE
7975	43640145	GRET	SVC	10/21/2024	2006	RET ABN	UG-SERVICE
7976	43015590	GRET	SVC	5/6/2024	2006	RET ABN	UG-SERVICE
7977	40870520	GRET	SVC	11/11/2022	2006	RET ABN	UG-SERVICE
7978	42205155	GRET	SVC	10/19/2023	2006	RET ABN	UG-SERVICE
7979	40395845	GRET	SVC	7/7/2022	2006	RET ABN	UG-SERVICE
7980	40375048	GRET	SVC	7/2/2022	2006	RET ABN	UG-SERVICE
7981	39665816	GRET	SVC	8/3/2022	2006	RET ABN	UG-SERVICE
7982	38934707	GRET	SVC	8/18/2021	2006	RET ABN	UG-SERVICE
7983	39213492	GRET	SVC	9/27/2021	2006	RET ABN	UG-SERVICE
7984	39386292	GRET	SVC	11/4/2021	2006	RET ABN	UG-SERVICE
7985	43324187	GRET	SVC	7/31/2024	2006	RET ABN	UG-SERVICE
7986	43825012	GRET	SVC	11/22/2024	2006	RET ABN	UG-SERVICE
7987	43141717	GRET	SVC	6/5/2024	2006	RET ABN	UG-SERVICE
7988	40283218	GRET	SVC	6/10/2022	2006	RET ABN	UG-SERVICE
7989	43730825	GRET	SVC	11/12/2024	2006	RET ABN	UG-SERVICE
7990	42411040	GRET	SVC	11/28/2023	2006	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
7991	42414850	GRET	SVC	11/28/2023	2006	RET ABN	UG-SERVICE
7992	41482813	GRET	SVC	4/14/2023	2006	RET ABN	UG-SERVICE
7993	40283362	GRET	SVC	7/7/2022	2006	RET ABN	UG-SERVICE
7994	37021085	GRET	SVC	10/22/2020	2007	RET ABN	UG-SERVICE
7995	41328009	GRET	SVC	2/27/2023	2007	RET ABN	UG-SERVICE
7996	37489727	GRET	SVC	11/13/2020	2007	RET ABN	UG-SERVICE
7997	41767990	GRET	SVC	6/19/2023	2007	RET ABN	UG-SERVICE
7998	38806234	GRET	SVC	7/29/2021	2007	RET ABN	UG-SERVICE
7999	38786374	GRET	SVC	7/16/2021	2007	RET ABN	UG-SERVICE
8000	36558770	GRET	SVC	7/1/2020	2007	RET ABN	UG-SERVICE
8001	41101937	GRET	SVC	1/4/2023	2007	RET ABN	UG-SERVICE
8002	42299743	GRET	SVC	10/26/2023	2007	RET ABN	UG-SERVICE
8003	37425453	GRET	SVC	11/10/2020	2007	RET ABN	UG-SERVICE
8004	41169124	GRET	SVC	1/18/2023	2007	RET ABN	UG-SERVICE
8005	42619921	GRET	SVC	1/26/2024	2007	RET ABN	UG-SERVICE
8006	39522293	GRET	SVC	12/13/2021	2007	RET ABN	UG-SERVICE
8007	43512388	GRET	SVC	8/28/2024	2007	RET ABN	UG-SERVICE
8008	43481123	GRET	SVC	11/1/2024	2007	RET ABN	UG-SERVICE
8009	39380043	GRET	SVC	11/30/2021	2007	RET ABN	UG-SERVICE
8010	35996870	GRET	SVC	2/10/2020	2007	RET ABN	UG-SERVICE
8011	41964412	GRET	SVC	8/5/2023	2007	RET ABN	UG-SERVICE
8012	43957833	GRET	SVC	12/17/2024	2007	RET ABN	UG-SERVICE
8013	39857550	GRET	SVC	3/9/2022	2007	RET ABN	UG-SERVICE
8014	43707751	GRET	SVC	10/18/2024	2007	RET ABN	UG-SERVICE
8015	39582342	GRET	SVC	12/27/2021	2007	RET ABN	UG-SERVICE
8016	43481125	GRET	SVC	11/1/2024	2007	RET ABN	UG-SERVICE
8017	43481126	GRET	SVC	10/28/2024	2007	RET ABN	UG-SERVICE
8018	40744624	GRET	SVC	9/15/2022	2007	RET ABN	UG-SERVICE
8019	40498165	GRET	SVC	7/28/2022	2007	RET ABN	UG-SERVICE
8020	39817269	GRET	SVC	2/21/2022	2007	RET ABN	UG-SERVICE
8021	43481196	GRET	SVC	10/22/2024	2007	RET ABN	UG-SERVICE
8022	38496694	GRET	SVC	5/17/2021	2007	RET ABN	UG-SERVICE
8023	38333410	GRET	SVC	4/7/2021	2007	RET ABN	UG-SERVICE
8024	40578829	GRET	SVC	8/16/2022	2007	RET ABN	UG-SERVICE
8025	42506032	GRET	SVC	1/25/2024	2007	RET ABN	UG-SERVICE
8026	38955853	GRET	SVC	8/23/2021	2007	RET ABN	UG-SERVICE
8027	42409561	GRET	SVC	12/1/2023	2007	RET ABN	UG-SERVICE
8028	43481124	GRET	SVC	11/1/2024	2007	RET ABN	UG-SERVICE
8029	38886044	GRET	SVC	8/17/2021	2007	RET ABN	UG-SERVICE
8030	37286086	GRET	SVC	11/17/2020	2007	RET ABN	UG-SERVICE
8031	39524056	GRET	SVC	12/16/2021	2007	RET ABN	UG-SERVICE
8032	41769563	GRET	SVC	6/19/2023	2007	RET ABN	UG-SERVICE
8033	42526243	GRET	SVC	12/30/2023	2007	RET ABN	UG-SERVICE
8034	43318027	GRET	SVC	8/15/2024	2007	RET ABN	UG-SERVICE
8035	36379239	GRET	SVC	6/1/2020	2007	RET ABN	UG-SERVICE
8036	40035079	GRET	SVC	4/27/2022	2007	RET ABN	UG-SERVICE
8037	38424653	GRET	SVC	4/27/2021	2007	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8038	38060234	GRET	SVC	1/27/2021	2007	RET ABN	UG-SERVICE
8039	40265835	GRET	SVC	6/6/2022	2007	RET ABN	UG-SERVICE
8040	43619269	GRET	SVC	9/26/2024	2007	RET ABN	UG-SERVICE
8041	38677464	GRET	SVC	6/19/2021	2007	RET ABN	UG-SERVICE
8042	41411296	GRET	SVC	4/2/2024	2007	RET ABN	UG-SERVICE
8043	42434178	GRET	SVC	12/4/2023	2007	RET ABN	UG-SERVICE
8044	41088619	GRET	SVC	1/12/2023	2007	RET ABN	UG-SERVICE
8045	41464744	GRET	SVC	4/3/2023	2007	RET ABN	UG-SERVICE
8046	39772297	GRET	SVC	2/8/2022	2007	RET ABN	UG-SERVICE
8047	41470722	GRET	SVC	8/9/2023	2007	RET ABN	UG-SERVICE
8048	39665140	GRET	SVC	4/28/2022	2007	RET ABN	UG-SERVICE
8049	41606248	GRET	SVC	5/30/2023	2007	RET ABN	UG-SERVICE
8050	37286897	GRET	SVC	11/2/2020	2007	RET ABN	UG-SERVICE
8051	38671327	GRET	SVC	6/24/2021	2007	RET ABN	UG-SERVICE
8052	42155781	GRET	SVC	9/27/2023	2007	RET ABN	UG-SERVICE
8053	39340651	GRET	SVC	10/26/2021	2007	RET ABN	UG-SERVICE
8054	42098400	GRET	SVC	9/13/2023	2007	RET ABN	UG-SERVICE
8055	36779225	GRET	SVC	8/26/2020	2007	RET ABN	UG-SERVICE
8056	36645610	GRET	SVC	7/17/2020	2007	RET ABN	UG-SERVICE
8057	42201919	GRET	SVC	10/10/2023	2007	RET ABN	UG-SERVICE
8058	39435286	GRET	SVC	11/18/2021	2007	RET ABN	UG-SERVICE
8059	43237027	GRET	SVC	6/28/2024	2007	RET ABN	UG-SERVICE
8060	42612663	GRET	SVC	1/24/2024	2007	RET ABN	UG-SERVICE
8061	40668633	GRET	SVC	9/10/2022	2007	RET ABN	UG-SERVICE
8062	43930806	GRET	SVC	12/13/2024	2008	RET ABN	UG-SERVICE
8063	42069706	GRET	SVC	9/18/2023	2008	RET ABN	UG-SERVICE
8064	39550222	GRET	SVC	12/17/2021	2008	RET ABN	UG-SERVICE
8065	36014715	GRET	SVC	2/13/2020	2008	RET ABN	UG-SERVICE
8066	38709766	GRET	SVC	8/9/2021	2008	RET ABN	UG-SERVICE
8067	36183404	GRET	SVC	4/22/2020	2008	RET ABN	UG-SERVICE
8068	42224049	GRET	SVC	10/12/2023	2008	RET ABN	UG-SERVICE
8069	40277356	GRET	SVC	6/13/2022	2008	RET ABN	UG-SERVICE
8070	41418736	GRET	SVC	3/22/2023	2008	RET ABN	UG-SERVICE
8071	41222213	GRET	SVC	1/30/2023	2008	RET ABN	UG-SERVICE
8072	37096589	GRET	SVC	10/21/2020	2008	RET ABN	UG-SERVICE
8073	40961898	GRET	SVC	11/21/2022	2008	RET ABN	UG-SERVICE
8074	39944269	GRET	SVC	3/28/2022	2008	RET ABN	UG-SERVICE
8075	39084337	GRET	SVC	9/9/2021	2008	RET ABN	UG-SERVICE
8076	40505927	GRET	SVC	8/3/2022	2008	RET ABN	UG-SERVICE
8077	43488867	GRET	SVC	8/28/2024	2008	RET ABN	UG-SERVICE
8078	42370897	GRET	SVC	11/12/2023	2008	RET ABN	UG-SERVICE
8079	38335991	GRET	SVC	4/16/2021	2008	RET ABN	UG-SERVICE
8080	40282852	GRET	SVC	6/9/2022	2008	RET ABN	UG-SERVICE
8081	40119196	GRET	SVC	6/14/2022	2008	RET ABN	UG-SERVICE
8082	36095960	GRET	SVC	3/10/2020	2008	RET ABN	UG-SERVICE
8083	43970938	GRET	SVC	12/23/2024	2008	RET ABN	UG-SERVICE
8084	41144401	GRET	SVC	1/9/2023	2008	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8085	42549392	GRET	SVC	1/2/2024	2008	RET ABN	UG-SERVICE
8086	39202978	GRET	SVC	9/27/2021	2008	RET ABN	UG-SERVICE
8087	41408242	GRET	SVC	3/22/2023	2008	RET ABN	UG-SERVICE
8088	43712063	GRET	SVC	10/15/2024	2008	RET ABN	UG-SERVICE
8089	38260769	GRET	SVC	12/17/2021	2008	RET ABN	UG-SERVICE
8090	36561319	GRET	SVC	7/6/2020	2008	RET ABN	UG-SERVICE
8091	43560442	GRET	SVC	9/14/2024	2008	RET ABN	UG-SERVICE
8092	43151062	GRET	SVC	6/6/2024	2008	RET ABN	UG-SERVICE
8093	43343193	GRET	SVC	7/16/2024	2008	RET ABN	UG-SERVICE
8094	41287923	GRET	SVC	2/24/2023	2008	RET ABN	UG-SERVICE
8095	38625200	GRET	SVC	6/24/2021	2008	RET ABN	UG-SERVICE
8096	42691748	GRET	SVC	2/9/2024	2008	RET ABN	UG-SERVICE
8097	36775157	GRET	SVC	7/30/2020	2008	RET ABN	UG-SERVICE
8098	43499910	GRET	SVC	9/11/2024	2008	RET ABN	UG-SERVICE
8099	43173058	GRET	SVC	6/13/2024	2008	RET ABN	UG-SERVICE
8100	36878398	GRET	SVC	9/9/2020	2008	RET ABN	UG-SERVICE
8101	42131095	GRET	SVC	9/18/2023	2008	RET ABN	UG-SERVICE
8102	41142226	GRET	SVC	1/10/2023	2008	RET ABN	UG-SERVICE
8103	41090671	GRET	SVC	1/23/2023	2008	RET ABN	UG-SERVICE
8104	43861747	GRET	SVC	11/30/2024	2008	RET ABN	UG-SERVICE
8105	38287715	GRET	SVC	3/30/2021	2008	RET ABN	UG-SERVICE
8106	41430052	GRET	SVC	9/12/2023	2008	RET ABN	UG-SERVICE
8107	38472032	GRET	SVC	5/11/2021	2008	RET ABN	UG-SERVICE
8108	42656640	GRET	SVC	2/10/2024	2008	RET ABN	UG-SERVICE
8109	35316597	GRET	SVC	1/22/2021	2008	RET ABN	UG-SERVICE
8110	41408202	GRET	SVC	10/19/2023	2008	RET ABN	UG-SERVICE
8111	37005519	GRET	SVC	9/29/2020	2008	RET ABN	UG-SERVICE
8112	38137996	GRET	SVC	2/17/2021	2008	RET ABN	UG-SERVICE
8113	36893329	GRET	SVC	9/8/2020	2008	RET ABN	UG-SERVICE
8114	43712064	GRET	SVC	10/15/2024	2008	RET ABN	UG-SERVICE
8115	39992560	GRET	SVC	4/12/2022	2008	RET ABN	UG-SERVICE
8116	39720312	GRET	SVC	3/4/2022	2008	RET ABN	UG-SERVICE
8117	38478322	GRET	SVC	5/6/2021	2008	RET ABN	UG-SERVICE
8118	41322605	GRET	SVC	2/28/2023	2008	RET ABN	UG-SERVICE
8119	42942046	GRET	SVC	4/13/2024	2008	RET ABN	UG-SERVICE
8120	38202903	GRET	SVC	3/9/2021	2008	RET ABN	UG-SERVICE
8121	41204527	GRET	SVC	1/25/2023	2008	RET ABN	UG-SERVICE
8122	41296497	GRET	SVC	4/12/2023	2008	RET ABN	UG-SERVICE
8123	39713420	GRET	SVC	1/21/2022	2009	RET ABN	UG-SERVICE
8124	43481259	GRET	SVC	11/22/2024	2009	RET ABN	UG-SERVICE
8125	40352820	GRET	SVC	6/28/2022	2009	RET ABN	UG-SERVICE
8126	40318814	GRET	SVC	6/20/2022	2009	RET ABN	UG-SERVICE
8127	41411489	GRET	SVC	4/2/2024	2009	RET ABN	UG-SERVICE
8128	43605022	GRET	SVC	10/2/2024	2009	RET ABN	UG-SERVICE
8129	38084194	GRET	SVC	2/3/2021	2009	RET ABN	UG-SERVICE
8130	41277502	GRET	SVC	2/13/2023	2009	RET ABN	UG-SERVICE
8131	40667896	GRET	SVC	9/26/2022	2009	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8132	43529733	GRET	SVC	12/6/2024	2009	RET ABN	UG-SERVICE
8133	39884636	GRET	SVC	4/23/2022	2009	RET ABN	UG-SERVICE
8134	43651758	GRET	SVC	10/15/2024	2009	RET ABN	UG-SERVICE
8135	41088773	GRET	SVC	12/21/2022	2009	RET ABN	UG-SERVICE
8136	43459229	GRET	SVC	8/19/2024	2009	RET ABN	UG-SERVICE
8137	40951751	GRET	SVC	12/2/2022	2009	RET ABN	UG-SERVICE
8138	41750998	GRET	SVC	6/10/2023	2009	RET ABN	UG-SERVICE
8139	42524186	GRET	SVC	12/28/2023	2009	RET ABN	UG-SERVICE
8140	38594189	GRET	SVC	6/7/2021	2009	RET ABN	UG-SERVICE
8141	38034059	GRET	SVC	1/20/2021	2009	RET ABN	UG-SERVICE
8142	37960957	GRET	SVC	12/28/2020	2009	RET ABN	UG-SERVICE
8143	42407316	GRET	SVC	11/22/2023	2009	RET ABN	UG-SERVICE
8144	42258901	GRET	SVC	10/25/2023	2009	RET ABN	UG-SERVICE
8145	41232154	GRET	SVC	2/20/2023	2009	RET ABN	UG-SERVICE
8146	42235258	GRET	SVC	11/28/2023	2009	RET ABN	UG-SERVICE
8147	35871725	GRET	SVC	1/4/2020	2009	RET ABN	UG-SERVICE
8148	42524581	GRET	SVC	12/28/2023	2009	RET ABN	UG-SERVICE
8149	38657089	GRET	SVC	6/16/2021	2009	RET ABN	UG-SERVICE
8150	43119125	GRET	SVC	6/3/2024	2009	RET ABN	UG-SERVICE
8151	43904545	GRET	SVC	12/4/2024	2009	RET ABN	UG-SERVICE
8152	38173384	GRET	SVC	3/1/2021	2009	RET ABN	UG-SERVICE
8153	41224539	GRET	SVC	1/30/2023	2009	RET ABN	UG-SERVICE
8154	36878399	GRET	SVC	8/29/2020	2009	RET ABN	UG-SERVICE
8155	40888112	GRET	SVC	11/3/2022	2009	RET ABN	UG-SERVICE
8156	38956799	GRET	SVC	8/16/2021	2009	RET ABN	UG-SERVICE
8157	41430207	GRET	SVC	9/13/2023	2009	RET ABN	UG-SERVICE
8158	43481127	GRET	SVC	11/20/2024	2009	RET ABN	UG-SERVICE
8159	43506447	GRET	SVC	9/9/2024	2009	RET ABN	UG-SERVICE
8160	42484655	GRET	SVC	12/14/2023	2009	RET ABN	UG-SERVICE
8161	42462283	GRET	SVC	12/6/2023	2009	RET ABN	UG-SERVICE
8162	40513128	GRET	SVC	8/3/2022	2009	RET ABN	UG-SERVICE
8163	41843448	GRET	SVC	7/10/2023	2009	RET ABN	UG-SERVICE
8164	42391577	GRET	SVC	11/14/2023	2009	RET ABN	UG-SERVICE
8165	36811300	GRET	SVC	8/24/2020	2009	RET ABN	UG-SERVICE
8166	40903887	GRET	SVC	11/10/2022	2009	RET ABN	UG-SERVICE
8167	37897122	GRET	SVC	12/11/2020	2009	RET ABN	UG-SERVICE
8168	38231096	GRET	SVC	3/16/2021	2009	RET ABN	UG-SERVICE
8169	43324505	GRET	SVC	10/25/2024	2009	RET ABN	UG-SERVICE
8170	40728687	GRET	SVC	9/27/2022	2009	RET ABN	UG-SERVICE
8171	39900986	GRET	SVC	3/16/2022	2009	RET ABN	UG-SERVICE
8172	43481128	GRET	SVC	11/20/2024	2009	RET ABN	UG-SERVICE
8173	37016098	GRET	SVC	9/28/2020	2009	RET ABN	UG-SERVICE
8174	42114053	GRET	SVC	9/11/2023	2009	RET ABN	UG-SERVICE
8175	40283360	GRET	SVC	6/9/2022	2009	RET ABN	UG-SERVICE
8176	40395852	GRET	SVC	7/6/2022	2009	RET ABN	UG-SERVICE
8177	41205872	GRET	SVC	1/21/2023	2009	RET ABN	UG-SERVICE
8178	37915191	GRET	SVC	12/18/2020	2009	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8179	42070602	GRET	SVC	11/19/2023	2009	RET ABN	UG-SERVICE
8180	39875959	GRET	SVC	3/10/2022	2009	RET ABN	UG-SERVICE
8181	39719888	GRET	SVC	2/4/2022	2009	RET ABN	UG-SERVICE
8182	35993663	GRET	SVC	2/7/2020	2009	RET ABN	UG-SERVICE
8183	36393452	GRET	SVC	6/4/2020	2009	RET ABN	UG-SERVICE
8184	41755630	GRET	SVC	6/10/2023	2009	RET ABN	UG-SERVICE
8185	40492811	GRET	SVC	8/3/2022	2009	RET ABN	UG-SERVICE
8186	39603680	GRET	SVC	1/5/2022	2009	RET ABN	UG-SERVICE
8187	41976754	GRET	SVC	9/5/2023	2009	RET ABN	UG-SERVICE
8188	43151638	GRET	SVC	7/15/2024	2009	RET ABN	UG-SERVICE
8189	42520179	GRET	SVC	12/27/2023	2009	RET ABN	UG-SERVICE
8190	36009289	GRET	SVC	2/11/2020	2009	RET ABN	UG-SERVICE
8191	36199839	GRET	SVC	4/30/2020	2010	RET ABN	UG-SERVICE
8192	36652216	GRET	SVC	7/11/2020	2010	RET ABN	UG-SERVICE
8193	43324507	GRET	SVC	10/25/2024	2010	RET ABN	UG-SERVICE
8194	41513275	GRET	SVC	4/16/2023	2010	RET ABN	UG-SERVICE
8195	43318357	GRET	SVC	8/14/2024	2010	RET ABN	UG-SERVICE
8196	41381455	GRET	SVC	3/13/2023	2010	RET ABN	UG-SERVICE
8197	39269783	GRET	SVC	10/11/2021	2010	RET ABN	UG-SERVICE
8198	43427487	GRET	SVC	8/23/2024	2010	RET ABN	UG-SERVICE
8199	41711815	GRET	SVC	6/6/2023	2010	RET ABN	UG-SERVICE
8200	41514001	GRET	SVC	4/16/2023	2010	RET ABN	UG-SERVICE
8201	37958744	GRET	SVC	12/27/2020	2010	RET ABN	UG-SERVICE
8202	41274151	GRET	SVC	2/24/2023	2010	RET ABN	UG-SERVICE
8203	41520903	GRET	SVC	4/26/2023	2010	RET ABN	UG-SERVICE
8204	37033139	GRET	SVC	10/7/2020	2010	RET ABN	UG-SERVICE
8205	40407526	GRET	SVC	7/11/2022	2010	RET ABN	UG-SERVICE
8206	38481836	GRET	SVC	5/11/2021	2010	RET ABN	UG-SERVICE
8207	41520494	GRET	SVC	4/25/2023	2010	RET ABN	UG-SERVICE
8208	38747521	GRET	SVC	7/7/2021	2010	RET ABN	UG-SERVICE
8209	40049852	GRET	SVC	4/26/2022	2010	RET ABN	UG-SERVICE
8210	41513267	GRET	SVC	4/15/2023	2010	RET ABN	UG-SERVICE
8211	41513271	GRET	SVC	4/15/2023	2010	RET ABN	UG-SERVICE
8212	40113656	GRET	SVC	5/2/2022	2010	RET ABN	UG-SERVICE
8213	41513278	GRET	SVC	4/16/2023	2010	RET ABN	UG-SERVICE
8214	40655359	GRET	SVC	9/8/2022	2010	RET ABN	UG-SERVICE
8215	36342461	GRET	SVC	5/21/2020	2010	RET ABN	UG-SERVICE
8216	40120303	GRET	SVC	5/4/2022	2010	RET ABN	UG-SERVICE
8217	41279873	GRET	SVC	2/15/2023	2010	RET ABN	UG-SERVICE
8218	42404945	GRET	SVC	11/22/2023	2010	RET ABN	UG-SERVICE
8219	39386488	GRET	SVC	11/5/2021	2010	RET ABN	UG-SERVICE
8220	40318189	GRET	SVC	6/17/2022	2010	RET ABN	UG-SERVICE
8221	41429980	GRET	SVC	9/13/2023	2010	RET ABN	UG-SERVICE
8222	41646069	GRET	SVC	5/17/2023	2010	RET ABN	UG-SERVICE
8223	38086943	GRET	SVC	2/3/2021	2010	RET ABN	UG-SERVICE
8224	43807761	GRET	SVC	11/15/2024	2010	RET ABN	UG-SERVICE
8225	41514005	GRET	SVC	4/17/2023	2010	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8226	41514003	GRET	SVC	4/17/2023	2010	RET ABN	UG-SERVICE
8227	41585567	GRET	SVC	5/2/2023	2010	RET ABN	UG-SERVICE
8228	43529742	GRET	SVC	12/13/2024	2010	RET ABN	UG-SERVICE
8229	42672732	GRET	SVC	2/9/2024	2010	RET ABN	UG-SERVICE
8230	37035464	GRET	SVC	10/7/2020	2010	RET ABN	UG-SERVICE
8231	41424227	GRET	SVC	10/18/2023	2010	RET ABN	UG-SERVICE
8232	42580209	GRET	SVC	1/17/2024	2010	RET ABN	UG-SERVICE
8233	42376980	GRET	SVC	5/9/2024	2010	RET ABN	UG-SERVICE
8234	36760383	GRET	SVC	8/10/2020	2010	RET ABN	UG-SERVICE
8235	41514004	GRET	SVC	4/17/2023	2010	RET ABN	UG-SERVICE
8236	36142342	GRET	SVC	3/17/2020	2010	RET ABN	UG-SERVICE
8237	41508103	GRET	SVC	4/10/2023	2011	RET ABN	UG-SERVICE
8238	40813628	GRET	SVC	10/20/2022	2011	RET ABN	UG-SERVICE
8239	40282630	GRET	SVC	6/7/2022	2011	RET ABN	UG-SERVICE
8240	41528289	GRET	SVC	4/27/2023	2011	RET ABN	UG-SERVICE
8241	41520915	GRET	SVC	4/18/2023	2011	RET ABN	UG-SERVICE
8242	38065680	GRET	SVC	2/22/2021	2011	RET ABN	UG-SERVICE
8243	38332060	GRET	SVC	4/3/2021	2011	RET ABN	UG-SERVICE
8244	41528290	GRET	SVC	4/21/2023	2011	RET ABN	UG-SERVICE
8245	43318340	GRET	SVC	8/12/2024	2011	RET ABN	UG-SERVICE
8246	43520224	GRET	SVC	8/28/2024	2011	RET ABN	UG-SERVICE
8247	41347944	GRET	SVC	3/6/2023	2011	RET ABN	UG-SERVICE
8248	38333227	GRET	SVC	4/7/2021	2011	RET ABN	UG-SERVICE
8249	40391600	GRET	SVC	7/5/2022	2011	RET ABN	UG-SERVICE
8250	36682175	GRET	SVC	7/27/2020	2011	RET ABN	UG-SERVICE
8251	39860392	GRET	SVC	3/22/2022	2011	RET ABN	UG-SERVICE
8252	40358503	GRET	SVC	7/28/2022	2011	RET ABN	UG-SERVICE
8253	41770076	GRET	SVC	6/19/2023	2011	RET ABN	UG-SERVICE
8254	41520907	GRET	SVC	4/14/2023	2011	RET ABN	UG-SERVICE
8255	41284362	GRET	SVC	3/1/2023	2011	RET ABN	UG-SERVICE
8256	41520918	GRET	SVC	4/18/2023	2011	RET ABN	UG-SERVICE
8257	40855539	GRET	SVC	10/24/2022	2011	RET ABN	UG-SERVICE
8258	41209116	GRET	SVC	1/24/2023	2011	RET ABN	UG-SERVICE
8259	38716142	GRET	SVC	7/7/2021	2011	RET ABN	UG-SERVICE
8260	40208622	GRET	SVC	5/31/2022	2011	RET ABN	UG-SERVICE
8261	42300544	GRET	SVC	10/30/2023	2011	RET ABN	UG-SERVICE
8262	43208316	GRET	SVC	6/22/2024	2011	RET ABN	UG-SERVICE
8263	41528621	GRET	SVC	4/23/2023	2011	RET ABN	UG-SERVICE
8264	41204523	GRET	SVC	1/25/2023	2011	RET ABN	UG-SERVICE
8265	40399903	GRET	SVC	7/11/2022	2011	RET ABN	UG-SERVICE
8266	40037443	GRET	SVC	5/24/2022	2011	RET ABN	UG-SERVICE
8267	43506836	GRET	SVC	10/4/2024	2011	RET ABN	UG-SERVICE
8268	41528442	GRET	SVC	4/23/2023	2011	RET ABN	UG-SERVICE
8269	42909568	GRET	SVC	4/10/2024	2011	RET ABN	UG-SERVICE
8270	41287748	GRET	SVC	3/19/2023	2011	RET ABN	UG-SERVICE
8271	39533060	GRET	SVC	12/14/2021	2011	RET ABN	UG-SERVICE
8272	41521121	GRET	SVC	4/21/2023	2011	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8273	39318350	GRET	SVC	10/22/2021	2011	RET ABN	UG-SERVICE
8274	41528292	GRET	SVC	4/26/2023	2011	RET ABN	UG-SERVICE
8275	43318492	GRET	SVC	8/12/2024	2011	RET ABN	UG-SERVICE
8276	43615032	GRET	SVC	9/24/2024	2011	RET ABN	UG-SERVICE
8277	43151847	GRET	SVC	6/10/2024	2011	RET ABN	UG-SERVICE
8278	41528622	GRET	SVC	4/23/2023	2011	RET ABN	UG-SERVICE
8279	42432713	GRET	SVC	12/2/2023	2011	RET ABN	UG-SERVICE
8280	43514600	GRET	SVC	9/4/2024	2011	RET ABN	UG-SERVICE
8281	41184951	GRET	SVC	1/19/2023	2011	RET ABN	UG-SERVICE
8282	41520909	GRET	SVC	4/14/2023	2011	RET ABN	UG-SERVICE
8283	36037166	GRET	SVC	2/17/2020	2011	RET ABN	UG-SERVICE
8284	43900063	GRET	SVC	12/4/2024	2011	RET ABN	UG-SERVICE
8285	42619515	GRET	SVC	1/29/2024	2011	RET ABN	UG-SERVICE
8286	41528620	GRET	SVC	4/27/2023	2011	RET ABN	UG-SERVICE
8287	41528443	GRET	SVC	4/23/2023	2011	RET ABN	UG-SERVICE
8288	41520910	GRET	SVC	4/14/2023	2011	RET ABN	UG-SERVICE
8289	42370750	GRET	SVC	11/15/2023	2011	RET ABN	UG-SERVICE
8290	36420955	GRET	SVC	6/8/2020	2011	RET ABN	UG-SERVICE
8291	41571943	GRET	SVC	4/26/2023	2011	RET ABN	UG-SERVICE
8292	39402149	GRET	SVC	11/8/2021	2011	RET ABN	UG-SERVICE
8293	41514008	GRET	SVC	4/17/2023	2011	RET ABN	UG-SERVICE
8294	36707975	GRET	SVC	7/30/2020	2011	RET ABN	UG-SERVICE
8295	41520919	GRET	SVC	4/18/2023	2011	RET ABN	UG-SERVICE
8296	42950627	GRET	SVC	4/18/2024	2011	RET ABN	UG-SERVICE
8297	38414555	GRET	SVC	5/4/2021	2011	RET ABN	UG-SERVICE
8298	41440600	GRET	SVC	3/27/2023	2011	RET ABN	UG-SERVICE
8299	38497724	GRET	SVC	5/12/2021	2011	RET ABN	UG-SERVICE
8300	36090333	GRET	SVC	3/5/2020	2011	RET ABN	UG-SERVICE
8301	38240748	GRET	SVC	3/23/2021	2011	RET ABN	UG-SERVICE
8302	40365304	GRET	SVC	6/29/2022	2011	RET ABN	UG-SERVICE
8303	40112218	GRET	SVC	5/5/2022	2012	RET ABN	UG-SERVICE
8304	41207527	GRET	SVC	1/26/2023	2012	RET ABN	UG-SERVICE
8305	40247521	GRET	SVC	6/2/2022	2012	RET ABN	UG-SERVICE
8306	42747783	GRET	SVC	2/16/2024	2012	RET ABN	UG-SERVICE
8307	39435562	GRET	SVC	11/16/2021	2012	RET ABN	UG-SERVICE
8308	41436378	GRET	SVC	3/25/2023	2012	RET ABN	UG-SERVICE
8309	38107359	GRET	SVC	2/8/2021	2012	RET ABN	UG-SERVICE
8310	41787195	GRET	SVC	6/19/2023	2012	RET ABN	UG-SERVICE
8311	41479988	GRET	SVC	4/6/2023	2012	RET ABN	UG-SERVICE
8312	41279860	GRET	SVC	2/12/2023	2012	RET ABN	UG-SERVICE
8313	43749667	GRET	SVC	10/28/2024	2012	RET ABN	UG-SERVICE
8314	42446591	GRET	SVC	12/5/2023	2012	RET ABN	UG-SERVICE
8315	43139671	GRET	SVC	9/19/2024	2012	RET ABN	UG-SERVICE
8316	42911793	GRET	SVC	4/9/2024	2012	RET ABN	UG-SERVICE
8317	40974642	GRET	SVC	11/29/2022	2012	RET ABN	UG-SERVICE
8318	41279354	GRET	SVC	3/8/2023	2012	RET ABN	UG-SERVICE
8319	40137490	GRET	SVC	5/11/2022	2012	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8320	42188672	GRET	SVC	10/2/2023	2012	RET ABN	UG-SERVICE
8321	36121539	GRET	SVC	11/5/2020	2012	RET ABN	UG-SERVICE
8322	40870058	GRET	SVC	11/9/2022	2012	RET ABN	UG-SERVICE
8323	42637733	GRET	SVC	1/29/2024	2012	RET ABN	UG-SERVICE
8324	41116474	GRET	SVC	12/29/2022	2012	RET ABN	UG-SERVICE
8325	36112258	GRET	SVC	10/12/2020	2012	RET ABN	UG-SERVICE
8326	40310333	GRET	SVC	6/13/2022	2012	RET ABN	UG-SERVICE
8327	41279862	GRET	SVC	2/12/2023	2012	RET ABN	UG-SERVICE
8328	40214147	GRET	SVC	5/26/2022	2012	RET ABN	UG-SERVICE
8329	38551598	GRET	SVC	6/2/2021	2012	RET ABN	UG-SERVICE
8330	35928399	GRET	SVC	1/20/2020	2012	RET ABN	UG-SERVICE
8331	36875127	GRET	SVC	9/28/2020	2012	RET ABN	UG-SERVICE
8332	40472871	GRET	SVC	7/20/2022	2012	RET ABN	UG-SERVICE
8333	43883373	GRET	SVC	12/2/2024	2012	RET ABN	UG-SERVICE
8334	36301100	GRET	SVC	5/27/2020	2012	RET ABN	UG-SERVICE
8335	43481131	GRET	SVC	11/22/2024	2012	RET ABN	UG-SERVICE
8336	40802820	GRET	SVC	10/10/2022	2012	RET ABN	UG-SERVICE
8337	42183152	GRET	SVC	10/4/2023	2012	RET ABN	UG-SERVICE
8338	39493267	GRET	SVC	12/6/2021	2012	RET ABN	UG-SERVICE
8339	40864616	GRET	SVC	10/27/2022	2012	RET ABN	UG-SERVICE
8340	43481130	GRET	SVC	11/2/2024	2012	RET ABN	UG-SERVICE
8341	38612023	GRET	SVC	6/11/2021	2012	RET ABN	UG-SERVICE
8342	40516837	GRET	SVC	8/5/2022	2012	RET ABN	UG-SERVICE
8343	41127758	GRET	SVC	1/4/2023	2012	RET ABN	UG-SERVICE
8344	42432669	GRET	SVC	11/29/2023	2012	RET ABN	UG-SERVICE
8345	41279559	GRET	SVC	2/12/2023	2012	RET ABN	UG-SERVICE
8346	40610967	GRET	SVC	8/25/2022	2012	RET ABN	UG-SERVICE
8347	40691272	GRET	SVC	9/15/2022	2012	RET ABN	UG-SERVICE
8348	38612024	GRET	SVC	6/11/2021	2012	RET ABN	UG-SERVICE
8349	40744548	GRET	SVC	9/29/2022	2012	RET ABN	UG-SERVICE
8350	41033839	GRET	SVC	12/8/2022	2012	RET ABN	UG-SERVICE
8351	37919251	GRET	SVC	12/16/2020	2012	RET ABN	UG-SERVICE
8352	37148988	GRET	SVC	11/2/2020	2012	RET ABN	UG-SERVICE
8353	41436442	GRET	SVC	3/25/2023	2012	RET ABN	UG-SERVICE
8354	36915183	GRET	SVC	9/11/2020	2012	RET ABN	UG-SERVICE
8355	38409143	GRET	SVC	4/27/2021	2012	RET ABN	UG-SERVICE
8356	40667760	GRET	SVC	9/23/2022	2012	RET ABN	UG-SERVICE
8357	42837555	GRET	SVC	3/19/2024	2012	RET ABN	UG-SERVICE
8358	36921493	GRET	SVC	9/14/2020	2012	RET ABN	UG-SERVICE
8359	38534040	GRET	SVC	5/23/2021	2012	RET ABN	UG-SERVICE
8360	42014238	GRET	SVC	8/19/2023	2012	RET ABN	UG-SERVICE
8361	43596477	GRET	SVC	9/26/2024	2012	RET ABN	UG-SERVICE
8362	38386356	GRET	SVC	4/18/2021	2012	RET ABN	UG-SERVICE
8363	40609439	GRET	SVC	8/25/2022	2012	RET ABN	UG-SERVICE
8364	40439933	GRET	SVC	7/13/2022	2012	RET ABN	UG-SERVICE
8365	43586149	GRET	SVC	9/24/2024	2012	RET ABN	UG-SERVICE
8366	41971175	GRET	SVC	8/8/2023	2012	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8367	40418097	GRET	SVC	7/13/2022	2012	RET ABN	UG-SERVICE
8368	39459228	GRET	SVC	11/22/2021	2012	RET ABN	UG-SERVICE
8369	41183640	GRET	SVC	1/19/2023	2012	RET ABN	UG-SERVICE
8370	40160583	GRET	SVC	6/6/2022	2012	RET ABN	UG-SERVICE
8371	40360826	GRET	SVC	6/30/2022	2012	RET ABN	UG-SERVICE
8372	41317819	GRET	SVC	3/2/2023	2013	RET ABN	UG-SERVICE
8373	37093462	GRET	SVC	10/29/2020	2013	RET ABN	UG-SERVICE
8374	40360191	GRET	SVC	6/30/2022	2013	RET ABN	UG-SERVICE
8375	41425203	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8376	38580713	GRET	SVC	6/9/2021	2013	RET ABN	UG-SERVICE
8377	40880752	GRET	SVC	10/31/2022	2013	RET ABN	UG-SERVICE
8378	41420721	GRET	SVC	3/24/2023	2013	RET ABN	UG-SERVICE
8379	39581521	GRET	SVC	1/15/2022	2013	RET ABN	UG-SERVICE
8380	43053907	GRET	SVC	5/8/2024	2013	RET ABN	UG-SERVICE
8381	37960327	GRET	SVC	1/2/2021	2013	RET ABN	UG-SERVICE
8382	41540776	GRET	SVC	4/20/2023	2013	RET ABN	UG-SERVICE
8383	40813747	GRET	SVC	10/15/2022	2013	RET ABN	UG-SERVICE
8384	43330334	GRET	SVC	7/17/2024	2013	RET ABN	UG-SERVICE
8385	41330769	GRET	SVC	3/3/2023	2013	RET ABN	UG-SERVICE
8386	38463324	GRET	SVC	5/11/2021	2013	RET ABN	UG-SERVICE
8387	42248449	GRET	SVC	10/19/2023	2013	RET ABN	UG-SERVICE
8388	41430964	GRET	SVC	3/29/2023	2013	RET ABN	UG-SERVICE
8389	40359841	GRET	SVC	7/1/2022	2013	RET ABN	UG-SERVICE
8390	41423634	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8391	38053528	GRET	SVC	3/20/2021	2013	RET ABN	UG-SERVICE
8392	40860638	GRET	SVC	11/9/2022	2013	RET ABN	UG-SERVICE
8393	41573968	GRET	SVC	5/1/2023	2013	RET ABN	UG-SERVICE
8394	41418704	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8395	43481096	GRET	SVC	10/13/2024	2013	RET ABN	UG-SERVICE
8396	40974224	GRET	SVC	11/29/2022	2013	RET ABN	UG-SERVICE
8397	41423359	GRET	SVC	3/21/2023	2013	RET ABN	UG-SERVICE
8398	39453245	GRET	SVC	8/1/2022	2013	RET ABN	UG-SERVICE
8399	41277762	GRET	SVC	2/24/2023	2013	RET ABN	UG-SERVICE
8400	39965045	GRET	SVC	4/5/2022	2013	RET ABN	UG-SERVICE
8401	41423632	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8402	40457109	GRET	SVC	7/14/2022	2013	RET ABN	UG-SERVICE
8403	38953988	GRET	SVC	8/15/2021	2013	RET ABN	UG-SERVICE
8404	41425691	GRET	SVC	3/26/2023	2013	RET ABN	UG-SERVICE
8405	43481092	GRET	SVC	10/31/2024	2013	RET ABN	UG-SERVICE
8406	41485311	GRET	SVC	4/14/2023	2013	RET ABN	UG-SERVICE
8407	36834777	GRET	SVC	8/26/2020	2013	RET ABN	UG-SERVICE
8408	41224005	GRET	SVC	2/2/2023	2013	RET ABN	UG-SERVICE
8409	41529147	GRET	SVC	4/18/2023	2013	RET ABN	UG-SERVICE
8410	38143972	GRET	SVC	2/18/2021	2013	RET ABN	UG-SERVICE
8411	40354109	GRET	SVC	6/28/2022	2013	RET ABN	UG-SERVICE
8412	43531082	GRET	SVC	9/16/2024	2013	RET ABN	UG-SERVICE
8413	38330556	GRET	SVC	4/6/2021	2013	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8414	38679328	GRET	SVC	7/12/2021	2013	RET ABN	UG-SERVICE
8415	38240751	GRET	SVC	3/23/2021	2013	RET ABN	UG-SERVICE
8416	41430968	GRET	SVC	3/29/2023	2013	RET ABN	UG-SERVICE
8417	41194463	GRET	SVC	1/23/2023	2013	RET ABN	UG-SERVICE
8418	39903467	GRET	SVC	3/15/2022	2013	RET ABN	UG-SERVICE
8419	40325388	GRET	SVC	6/20/2022	2013	RET ABN	UG-SERVICE
8420	41425201	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8421	38749423	GRET	SVC	7/9/2021	2013	RET ABN	UG-SERVICE
8422	41423628	GRET	SVC	3/21/2023	2013	RET ABN	UG-SERVICE
8423	41423357	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8424	41425205	GRET	SVC	3/24/2023	2013	RET ABN	UG-SERVICE
8425	43026757	GRET	SVC	5/5/2024	2013	RET ABN	UG-SERVICE
8426	40974647	GRET	SVC	11/29/2022	2013	RET ABN	UG-SERVICE
8427	41277764	GRET	SVC	2/24/2023	2013	RET ABN	UG-SERVICE
8428	41214158	GRET	SVC	12/11/2023	2013	RET ABN	UG-SERVICE
8429	41301399	GRET	SVC	2/20/2023	2013	RET ABN	UG-SERVICE
8430	39354698	GRET	SVC	10/28/2021	2013	RET ABN	UG-SERVICE
8431	38154421	GRET	SVC	2/22/2021	2013	RET ABN	UG-SERVICE
8432	42484242	GRET	SVC	12/14/2023	2013	RET ABN	UG-SERVICE
8433	40850375	GRET	SVC	10/23/2022	2013	RET ABN	UG-SERVICE
8434	36270420	GRET	SVC	4/27/2020	2013	RET ABN	UG-SERVICE
8435	41031318	GRET	SVC	12/10/2022	2013	RET ABN	UG-SERVICE
8436	39453243	GRET	SVC	8/1/2022	2013	RET ABN	UG-SERVICE
8437	41871392	GRET	SVC	7/12/2023	2013	RET ABN	UG-SERVICE
8438	41775028	GRET	SVC	6/21/2023	2013	RET ABN	UG-SERVICE
8439	36106559	GRET	SVC	3/9/2020	2013	RET ABN	UG-SERVICE
8440	43146620	GRET	SVC	6/3/2024	2013	RET ABN	UG-SERVICE
8441	39734316	GRET	SVC	1/27/2022	2013	RET ABN	UG-SERVICE
8442	42526299	GRET	SVC	1/2/2024	2013	RET ABN	UG-SERVICE
8443	42556757	GRET	SVC	1/10/2024	2013	RET ABN	UG-SERVICE
8444	36223775	GRET	SVC	4/23/2020	2013	RET ABN	UG-SERVICE
8445	42789280	GRET	SVC	3/4/2024	2013	RET ABN	UG-SERVICE
8446	41423622	GRET	SVC	3/21/2023	2013	RET ABN	UG-SERVICE
8447	41927480	GRET	SVC	8/1/2023	2013	RET ABN	UG-SERVICE
8448	36170376	GRET	SVC	3/23/2020	2013	RET ABN	UG-SERVICE
8449	40990758	GRET	SVC	11/26/2022	2013	RET ABN	UG-SERVICE
8450	41317244	GRET	SVC	3/4/2023	2013	RET ABN	UG-SERVICE
8451	42169009	GRET	SVC	10/2/2023	2013	RET ABN	UG-SERVICE
8452	41065074	GRET	SVC	12/12/2022	2013	RET ABN	UG-SERVICE
8453	42475083	GRET	SVC	12/9/2023	2013	RET ABN	UG-SERVICE
8454	42502373	GRET	SVC	12/15/2023	2013	RET ABN	UG-SERVICE
8455	40744737	GRET	SVC	9/21/2022	2013	RET ABN	UG-SERVICE
8456	43533814	GRET	SVC	9/16/2024	2013	RET ABN	UG-SERVICE
8457	41482779	GRET	SVC	4/13/2023	2013	RET ABN	UG-SERVICE
8458	39118131	GRET	SVC	9/14/2021	2013	RET ABN	UG-SERVICE
8459	39434873	GRET	SVC	11/18/2021	2013	RET ABN	UG-SERVICE
8460	41036615	GRET	SVC	12/15/2022	2013	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8461	35926324	GRET	SVC	1/17/2020	2013	RET ABN	UG-SERVICE
8462	40360387	GRET	SVC	6/30/2022	2013	RET ABN	UG-SERVICE
8463	40949360	GRET	SVC	11/19/2022	2013	RET ABN	UG-SERVICE
8464	38064547	GRET	SVC	1/27/2021	2013	RET ABN	UG-SERVICE
8465	41420301	GRET	SVC	3/24/2023	2013	RET ABN	UG-SERVICE
8466	39827667	GRET	SVC	3/8/2022	2013	RET ABN	UG-SERVICE
8467	40850368	GRET	SVC	10/23/2022	2013	RET ABN	UG-SERVICE
8468	40681869	GRET	SVC	9/14/2022	2013	RET ABN	UG-SERVICE
8469	38194542	GRET	SVC	3/10/2021	2013	RET ABN	UG-SERVICE
8470	41418844	GRET	SVC	3/22/2023	2013	RET ABN	UG-SERVICE
8471	41423925	GRET	SVC	3/20/2023	2013	RET ABN	UG-SERVICE
8472	39899440	GRET	SVC	3/15/2022	2013	RET ABN	UG-SERVICE
8473	36902011	GRET	SVC	9/8/2020	2013	RET ABN	UG-SERVICE
8474	41273859	GRET	SVC	3/16/2023	2013	RET ABN	UG-SERVICE
8475	43341295	GRET	SVC	7/29/2024	2013	RET ABN	UG-SERVICE
8476	36984582	GRET	SVC	9/24/2020	2013	RET ABN	UG-SERVICE
8477	41317494	GRET	SVC	3/3/2023	2013	RET ABN	UG-SERVICE
8478	41846824	GRET	SVC	7/13/2023	2013	RET ABN	UG-SERVICE
8479	43480652	GRET	SVC	10/6/2024	2013	RET ABN	UG-SERVICE
8480	42226860	GRET	SVC	10/18/2023	2013	RET ABN	UG-SERVICE
8481	41330770	GRET	SVC	3/3/2023	2013	RET ABN	UG-SERVICE
8482	36200626	GRET	SVC	4/22/2020	2013	RET ABN	UG-SERVICE
8483	39453241	GRET	SVC	8/1/2022	2013	RET ABN	UG-SERVICE
8484	39118126	GRET	SVC	9/14/2021	2013	RET ABN	UG-SERVICE
8485	40359850	GRET	SVC	6/30/2022	2013	RET ABN	UG-SERVICE
8486	40400416	GRET	SVC	7/11/2022	2013	RET ABN	UG-SERVICE
8487	38608321	GRET	SVC	6/10/2021	2013	RET ABN	UG-SERVICE
8488	36974527	GRET	SVC	9/22/2020	2013	RET ABN	UG-SERVICE
8489	41425210	GRET	SVC	3/24/2023	2013	RET ABN	UG-SERVICE
8490	38745160	GRET	SVC	7/20/2021	2013	RET ABN	UG-SERVICE
8491	41483270	GRET	SVC	4/12/2023	2013	RET ABN	UG-SERVICE
8492	41428824	GRET	SVC	3/27/2023	2013	RET ABN	UG-SERVICE
8493	40324313	GRET	SVC	6/20/2022	2013	RET ABN	UG-SERVICE
8494	40955979	GRET	SVC	12/5/2022	2013	RET ABN	UG-SERVICE
8495	42185202	GRET	SVC	10/2/2023	2013	RET ABN	UG-SERVICE
8496	42921977	GRET	SVC	4/15/2024	2013	RET ABN	UG-SERVICE
8497	41427493	GRET	SVC	3/28/2023	2013	RET ABN	UG-SERVICE
8498	41423932	GRET	SVC	3/21/2023	2013	RET ABN	UG-SERVICE
8499	42182406	GRET	SVC	10/11/2023	2013	RET ABN	UG-SERVICE
8500	43481094	GRET	SVC	10/13/2024	2013	RET ABN	UG-SERVICE
8501	40744891	GRET	SVC	9/21/2022	2013	RET ABN	UG-SERVICE
8502	36995577	GRET	SVC	9/28/2020	2013	RET ABN	UG-SERVICE
8503	42910239	GRET	SVC	4/8/2024	2013	RET ABN	UG-SERVICE
8504	37024316	GRET	SVC	10/30/2020	2013	RET ABN	UG-SERVICE
8505	38708694	GRET	SVC	7/7/2021	2013	RET ABN	UG-SERVICE
8506	38934445	GRET	SVC	9/15/2021	2013	RET ABN	UG-SERVICE
8507	42981231	GRET	SVC	4/29/2024	2013	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8508	43330439	GRET	SVC	7/3/2024	2013	RET ABN	UG-SERVICE
8509	40659934	GRET	SVC	10/21/2022	2013	RET ABN	UG-SERVICE
8510	43957371	GRET	SVC	12/16/2024	2013	RET ABN	UG-SERVICE
8511	43480654	GRET	SVC	10/6/2024	2013	RET ABN	UG-SERVICE
8512	42796609	GRET	SVC	3/13/2024	2013	RET ABN	UG-SERVICE
8513	40849836	GRET	SVC	10/23/2022	2013	RET ABN	UG-SERVICE
8514	38344248	GRET	SVC	4/12/2021	2014	RET ABN	UG-SERVICE
8515	42671071	GRET	SVC	2/3/2024	2014	RET ABN	UG-SERVICE
8516	41576474	GRET	SVC	3/21/2023	2014	RET ABN	UG-SERVICE
8517	40487925	GRET	SVC	7/25/2022	2014	RET ABN	UG-SERVICE
8518	40353053	GRET	SVC	6/26/2022	2014	RET ABN	UG-SERVICE
8519	40561839	GRET	SVC	8/18/2022	2014	RET ABN	UG-SERVICE
8520	43318351	GRET	SVC	8/26/2024	2014	RET ABN	UG-SERVICE
8521	40982965	GRET	SVC	11/28/2022	2014	RET ABN	UG-SERVICE
8522	41482811	GRET	SVC	4/14/2023	2014	RET ABN	UG-SERVICE
8523	39674319	GRET	SVC	1/12/2022	2014	RET ABN	UG-SERVICE
8524	36096185	GRET	SVC	6/9/2020	2014	RET ABN	UG-SERVICE
8525	42003636	GRET	SVC	8/16/2023	2014	RET ABN	UG-SERVICE
8526	40468017	GRET	SVC	7/14/2022	2014	RET ABN	UG-SERVICE
8527	43402925	GRET	SVC	8/7/2024	2014	RET ABN	UG-SERVICE
8528	39338926	GRET	SVC	11/5/2021	2014	RET ABN	UG-SERVICE
8529	36314549	GRET	SVC	5/11/2020	2014	RET ABN	UG-SERVICE
8530	40708511	GRET	SVC	9/19/2022	2014	RET ABN	UG-SERVICE
8531	40488329	GRET	SVC	7/28/2022	2014	RET ABN	UG-SERVICE
8532	36838641	GRET	SVC	8/29/2020	2014	RET ABN	UG-SERVICE
8533	36164864	GRET	SVC	3/25/2020	2014	RET ABN	UG-SERVICE
8534	41791692	GRET	SVC	6/27/2023	2014	RET ABN	UG-SERVICE
8535	38953221	GRET	SVC	8/23/2021	2014	RET ABN	UG-SERVICE
8536	40492810	GRET	SVC	7/28/2022	2014	RET ABN	UG-SERVICE
8537	38059756	GRET	SVC	1/27/2021	2014	RET ABN	UG-SERVICE
8538	41674280	GRET	SVC	5/22/2023	2014	RET ABN	UG-SERVICE
8539	40983621	GRET	SVC	11/28/2022	2014	RET ABN	UG-SERVICE
8540	43318167	GRET	SVC	8/14/2024	2014	RET ABN	UG-SERVICE
8541	39853612	GRET	SVC	3/8/2022	2014	RET ABN	UG-SERVICE
8542	41513818	GRET	SVC	4/17/2023	2014	RET ABN	UG-SERVICE
8543	36096181	GRET	SVC	6/9/2020	2014	RET ABN	UG-SERVICE
8544	36058957	GRET	SVC	2/22/2020	2014	RET ABN	UG-SERVICE
8545	43506828	GRET	SVC	10/4/2024	2014	RET ABN	UG-SERVICE
8546	36366545	GRET	SVC	5/27/2020	2014	RET ABN	UG-SERVICE
8547	36401305	GRET	SVC	5/31/2020	2014	RET ABN	UG-SERVICE
8548	38359928	GRET	SVC	4/12/2021	2014	RET ABN	UG-SERVICE
8549	41472671	GRET	SVC	4/10/2023	2014	RET ABN	UG-SERVICE
8550	42057086	GRET	SVC	8/30/2023	2014	RET ABN	UG-SERVICE
8551	42036565	GRET	SVC	8/30/2023	2014	RET ABN	UG-SERVICE
8552	41334615	GRET	SVC	3/6/2023	2014	RET ABN	UG-SERVICE
8553	37901089	GRET	SVC	12/11/2020	2014	RET ABN	UG-SERVICE
8554	41860704	GRET	SVC	7/10/2023	2014	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8555	43814800	GRET	SVC	11/15/2024	2014	RET ABN	UG-SERVICE
8556	41508049	GRET	SVC	4/23/2023	2014	RET ABN	UG-SERVICE
8557	41174819	GRET	SVC	1/18/2023	2014	RET ABN	UG-SERVICE
8558	35663480	GRET	SVC	2/5/2020	2014	RET ABN	UG-SERVICE
8559	42468689	GRET	SVC	12/13/2023	2014	RET ABN	UG-SERVICE
8560	41497872	GRET	SVC	4/24/2023	2014	RET ABN	UG-SERVICE
8561	40611930	GRET	SVC	8/21/2022	2014	RET ABN	UG-SERVICE
8562	35663482	GRET	SVC	2/5/2020	2014	RET ABN	UG-SERVICE
8563	40473671	GRET	SVC	7/26/2022	2014	RET ABN	UG-SERVICE
8564	36152899	GRET	SVC	3/17/2020	2014	RET ABN	UG-SERVICE
8565	37148982	GRET	SVC	11/2/2020	2014	RET ABN	UG-SERVICE
8566	38959229	GRET	SVC	10/8/2021	2014	RET ABN	UG-SERVICE
8567	36095742	GRET	SVC	3/7/2020	2014	RET ABN	UG-SERVICE
8568	41031826	GRET	SVC	12/9/2022	2014	RET ABN	UG-SERVICE
8569	41483271	GRET	SVC	4/12/2023	2014	RET ABN	UG-SERVICE
8570	38220966	GRET	SVC	3/14/2021	2014	RET ABN	UG-SERVICE
8571	38059752	GRET	SVC	1/25/2021	2014	RET ABN	UG-SERVICE
8572	41938001	GRET	SVC	8/2/2023	2014	RET ABN	UG-SERVICE
8573	41485312	GRET	SVC	4/19/2023	2014	RET ABN	UG-SERVICE
8574	41584132	GRET	SVC	5/2/2023	2014	RET ABN	UG-SERVICE
8575	39713737	GRET	SVC	1/25/2022	2014	RET ABN	UG-SERVICE
8576	39424443	GRET	SVC	11/16/2021	2014	RET ABN	UG-SERVICE
8577	39264072	GRET	SVC	10/6/2021	2014	RET ABN	UG-SERVICE
8578	41508041	GRET	SVC	4/23/2023	2014	RET ABN	UG-SERVICE
8579	43279916	GRET	SVC	11/27/2024	2014	RET ABN	UG-SERVICE
8580	43953977	GRET	SVC	12/21/2024	2014	RET ABN	UG-SERVICE
8581	38241888	GRET	SVC	3/18/2021	2014	RET ABN	UG-SERVICE
8582	40105476	GRET	SVC	5/3/2022	2014	RET ABN	UG-SERVICE
8583	40561707	GRET	SVC	8/12/2022	2014	RET ABN	UG-SERVICE
8584	40090194	GRET	SVC	5/7/2022	2014	RET ABN	UG-SERVICE
8585	41182819	GRET	SVC	1/20/2023	2014	RET ABN	UG-SERVICE
8586	39776960	GRET	SVC	2/9/2022	2014	RET ABN	UG-SERVICE
8587	40360820	GRET	SVC	6/27/2022	2014	RET ABN	UG-SERVICE
8588	40561718	GRET	SVC	8/18/2022	2014	RET ABN	UG-SERVICE
8589	40468018	GRET	SVC	7/15/2022	2014	RET ABN	UG-SERVICE
8590	41497879	GRET	SVC	4/21/2023	2014	RET ABN	UG-SERVICE
8591	40487933	GRET	SVC	7/26/2022	2014	RET ABN	UG-SERVICE
8592	38397761	GRET	SVC	4/20/2021	2014	RET ABN	UG-SERVICE
8593	41516369	GRET	SVC	4/24/2023	2014	RET ABN	UG-SERVICE
8594	41514328	GRET	SVC	4/15/2023	2014	RET ABN	UG-SERVICE
8595	43330432	GRET	SVC	7/17/2024	2014	RET ABN	UG-SERVICE
8596	42036111	GRET	SVC	8/18/2023	2014	RET ABN	UG-SERVICE
8597	36919391	GRET	SVC	9/17/2020	2014	RET ABN	UG-SERVICE
8598	41485316	GRET	SVC	4/13/2023	2014	RET ABN	UG-SERVICE
8599	38536241	GRET	SVC	5/27/2021	2014	RET ABN	UG-SERVICE
8600	41723280	GRET	SVC	6/6/2023	2014	RET ABN	UG-SERVICE
8601	41497637	GRET	SVC	4/12/2023	2014	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8602	40685319	GRET	SVC	9/12/2022	2014	RET ABN	UG-SERVICE
8603	40493086	GRET	SVC	7/28/2022	2014	RET ABN	UG-SERVICE
8604	40879395	GRET	SVC	11/11/2022	2014	RET ABN	UG-SERVICE
8605	38785519	GRET	SVC	7/16/2021	2014	RET ABN	UG-SERVICE
8606	41146281	GRET	SVC	2/4/2023	2014	RET ABN	UG-SERVICE
8607	41173975	GRET	SVC	1/18/2023	2014	RET ABN	UG-SERVICE
8608	42973877	GRET	SVC	4/21/2024	2014	RET ABN	UG-SERVICE
8609	41051915	GRET	SVC	1/12/2023	2014	RET ABN	UG-SERVICE
8610	43115135	GRET	SVC	5/28/2024	2014	RET ABN	UG-SERVICE
8611	43703182	GRET	SVC	10/17/2024	2014	RET ABN	UG-SERVICE
8612	36472178	GRET	SVC	6/22/2020	2014	RET ABN	UG-SERVICE
8613	39996609	GRET	SVC	4/16/2022	2014	RET ABN	UG-SERVICE
8614	40500330	GRET	SVC	8/10/2022	2014	RET ABN	UG-SERVICE
8615	41223070	GRET	SVC	1/28/2023	2014	RET ABN	UG-SERVICE
8616	40303323	GRET	SVC	6/14/2022	2014	RET ABN	UG-SERVICE
8617	43505782	GRET	SVC	9/10/2024	2014	RET ABN	UG-SERVICE
8618	38178559	GRET	SVC	3/2/2021	2014	RET ABN	UG-SERVICE
8619	40113467	GRET	SVC	5/11/2022	2014	RET ABN	UG-SERVICE
8620	36153333	GRET	SVC	3/14/2020	2014	RET ABN	UG-SERVICE
8621	38097060	GRET	SVC	9/2/2021	2014	RET ABN	UG-SERVICE
8622	43974003	GRET	SVC	12/28/2024	2014	RET ABN	UG-SERVICE
8623	36867567	GRET	SVC	8/29/2020	2014	RET ABN	UG-SERVICE
8624	37113291	GRET	SVC	10/21/2020	2014	RET ABN	UG-SERVICE
8625	40573500	GRET	SVC	8/18/2022	2014	RET ABN	UG-SERVICE
8626	43610676	GRET	SVC	10/10/2024	2014	RET ABN	UG-SERVICE
8627	43010357	GRET	SVC	4/28/2024	2014	RET ABN	UG-SERVICE
8628	40513296	GRET	SVC	8/10/2022	2014	RET ABN	UG-SERVICE
8629	42183130	GRET	SVC	10/3/2023	2014	RET ABN	UG-SERVICE
8630	40762241	GRET	SVC	10/3/2022	2014	RET ABN	UG-SERVICE
8631	40782678	GRET	SVC	10/6/2022	2014	RET ABN	UG-SERVICE
8632	39801066	GRET	SVC	2/12/2022	2014	RET ABN	UG-SERVICE
8633	42487738	GRET	SVC	7/18/2024	2014	RET ABN	UG-SERVICE
8634	39280846	GRET	SVC	10/12/2021	2014	RET ABN	UG-SERVICE
8635	40750114	GRET	SVC	9/29/2022	2014	RET ABN	UG-SERVICE
8636	42565080	GRET	SVC	1/6/2024	2014	RET ABN	UG-SERVICE
8637	40558508	GRET	SVC	8/12/2022	2014	RET ABN	UG-SERVICE
8638	41480832	GRET	SVC	4/8/2023	2014	RET ABN	UG-SERVICE
8639	36156980	GRET	SVC	5/4/2020	2014	RET ABN	UG-SERVICE
8640	40513444	GRET	SVC	8/10/2022	2014	RET ABN	UG-SERVICE
8641	40493091	GRET	SVC	7/28/2022	2014	RET ABN	UG-SERVICE
8642	40487932	GRET	SVC	7/20/2022	2014	RET ABN	UG-SERVICE
8643	39970252	GRET	SVC	4/5/2022	2014	RET ABN	UG-SERVICE
8644	42691183	GRET	SVC	2/13/2024	2014	RET ABN	UG-SERVICE
8645	41414816	GRET	SVC	3/20/2023	2014	RET ABN	UG-SERVICE
8646	40468015	GRET	SVC	7/15/2022	2014	RET ABN	UG-SERVICE
8647	40487105	GRET	SVC	7/23/2022	2014	RET ABN	UG-SERVICE
8648	40890259	GRET	SVC	11/21/2022	2014	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8649	38179283	GRET	SVC	3/1/2021	2014	RET ABN	UG-SERVICE
8650	40988639	GRET	SVC	1/6/2023	2014	RET ABN	UG-SERVICE
8651	41808563	GRET	SVC	6/22/2023	2014	RET ABN	UG-SERVICE
8652	38711101	GRET	SVC	7/7/2021	2014	RET ABN	UG-SERVICE
8653	40275012	GRET	SVC	6/21/2022	2014	RET ABN	UG-SERVICE
8654	42975502	GRET	SVC	5/1/2024	2014	RET ABN	UG-SERVICE
8655	38429030	GRET	SVC	6/16/2021	2015	RET ABN	UG-SERVICE
8656	40316317	GRET	SVC	7/5/2022	2015	RET ABN	UG-SERVICE
8657	43521336	GRET	SVC	9/10/2024	2015	RET ABN	UG-SERVICE
8658	43600865	GRET	SVC	9/23/2024	2015	RET ABN	UG-SERVICE
8659	40371592	GRET	SVC	7/6/2022	2015	RET ABN	UG-SERVICE
8660	39876680	GRET	SVC	3/7/2022	2015	RET ABN	UG-SERVICE
8661	43480996	GRET	SVC	11/1/2024	2015	RET ABN	UG-SERVICE
8662	41482056	GRET	SVC	3/29/2023	2015	RET ABN	UG-SERVICE
8663	43480934	GRET	SVC	10/5/2024	2015	RET ABN	UG-SERVICE
8664	41483267	GRET	SVC	4/13/2023	2015	RET ABN	UG-SERVICE
8665	42560256	GRET	SVC	1/8/2024	2015	RET ABN	UG-SERVICE
8666	41064671	GRET	SVC	12/15/2022	2015	RET ABN	UG-SERVICE
8667	40395632	GRET	SVC	7/7/2022	2015	RET ABN	UG-SERVICE
8668	40406164	GRET	SVC	7/12/2022	2015	RET ABN	UG-SERVICE
8669	41064583	GRET	SVC	12/16/2022	2015	RET ABN	UG-SERVICE
8670	41117387	GRET	SVC	1/9/2023	2015	RET ABN	UG-SERVICE
8671	39875677	GRET	SVC	3/9/2022	2015	RET ABN	UG-SERVICE
8672	42247462	GRET	SVC	11/10/2023	2015	RET ABN	UG-SERVICE
8673	41036614	GRET	SVC	12/10/2022	2015	RET ABN	UG-SERVICE
8674	35924508	GRET	SVC	1/23/2020	2015	RET ABN	UG-SERVICE
8675	41821844	GRET	SVC	7/1/2023	2015	RET ABN	UG-SERVICE
8676	38665719	GRET	SVC	8/2/2021	2015	RET ABN	UG-SERVICE
8677	38160999	GRET	SVC	2/22/2021	2015	RET ABN	UG-SERVICE
8678	40359847	GRET	SVC	6/28/2022	2015	RET ABN	UG-SERVICE
8679	39710753	GRET	SVC	1/26/2022	2015	RET ABN	UG-SERVICE
8680	42524203	GRET	SVC	1/5/2024	2015	RET ABN	UG-SERVICE
8681	41483028	GRET	SVC	4/14/2023	2015	RET ABN	UG-SERVICE
8682	42937515	GRET	SVC	4/15/2024	2015	RET ABN	UG-SERVICE
8683	40360823	GRET	SVC	6/26/2022	2015	RET ABN	UG-SERVICE
8684	40612350	GRET	SVC	8/23/2022	2015	RET ABN	UG-SERVICE
8685	38778278	GRET	SVC	7/15/2021	2015	RET ABN	UG-SERVICE
8686	43529801	GRET	SVC	12/12/2024	2015	RET ABN	UG-SERVICE
8687	38200830	GRET	SVC	3/15/2021	2015	RET ABN	UG-SERVICE
8688	41064590	GRET	SVC	12/8/2022	2015	RET ABN	UG-SERVICE
8689	37123589	GRET	SVC	10/28/2020	2015	RET ABN	UG-SERVICE
8690	40352829	GRET	SVC	6/26/2022	2015	RET ABN	UG-SERVICE
8691	39358682	GRET	SVC	10/26/2021	2015	RET ABN	UG-SERVICE
8692	41117038	GRET	SVC	2/8/2023	2015	RET ABN	UG-SERVICE
8693	36349905	GRET	SVC	5/27/2020	2015	RET ABN	UG-SERVICE
8694	41106886	GRET	SVC	12/27/2022	2015	RET ABN	UG-SERVICE
8695	35924321	GRET	SVC	1/16/2020	2015	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8696	42004793	GRET	SVC	10/11/2023	2015	RET ABN	UG-SERVICE
8697	39996625	GRET	SVC	4/11/2022	2015	RET ABN	UG-SERVICE
8698	42520520	GRET	SVC	12/29/2023	2015	RET ABN	UG-SERVICE
8699	39318771	GRET	SVC	10/27/2021	2015	RET ABN	UG-SERVICE
8700	43480933	GRET	SVC	10/5/2024	2015	RET ABN	UG-SERVICE
8701	39257539	GRET	SVC	11/10/2021	2015	RET ABN	UG-SERVICE
8702	41253456	GRET	SVC	2/6/2023	2015	RET ABN	UG-SERVICE
8703	41485313	GRET	SVC	4/20/2023	2015	RET ABN	UG-SERVICE
8704	43717837	GRET	SVC	10/19/2024	2015	RET ABN	UG-SERVICE
8705	43866221	GRET	SVC	12/16/2024	2015	RET ABN	UG-SERVICE
8706	43618891	GRET	SVC	9/21/2024	2015	RET ABN	UG-SERVICE
8707	42570263	GRET	SVC	2/20/2024	2015	RET ABN	UG-SERVICE
8708	39768304	GRET	SVC	2/7/2022	2015	RET ABN	UG-SERVICE
8709	41479075	GRET	SVC	4/10/2023	2015	RET ABN	UG-SERVICE
8710	39950430	GRET	SVC	3/31/2022	2015	RET ABN	UG-SERVICE
8711	41585804	GRET	SVC	4/30/2023	2015	RET ABN	UG-SERVICE
8712	41508053	GRET	SVC	4/17/2023	2015	RET ABN	UG-SERVICE
8713	41277501	GRET	SVC	2/24/2023	2015	RET ABN	UG-SERVICE
8714	43480995	GRET	SVC	11/1/2024	2015	RET ABN	UG-SERVICE
8715	41485317	GRET	SVC	4/14/2023	2015	RET ABN	UG-SERVICE
8716	42006927	GRET	SVC	8/10/2023	2015	RET ABN	UG-SERVICE
8717	41482806	GRET	SVC	4/4/2023	2015	RET ABN	UG-SERVICE
8718	42281589	GRET	SVC	10/22/2023	2015	RET ABN	UG-SERVICE
8719	38456261	GRET	SVC	5/4/2021	2015	RET ABN	UG-SERVICE
8720	43506883	GRET	SVC	9/23/2024	2015	RET ABN	UG-SERVICE
8721	42253894	GRET	SVC	10/20/2023	2015	RET ABN	UG-SERVICE
8722	41364435	GRET	SVC	3/13/2023	2015	RET ABN	UG-SERVICE
8723	41064593	GRET	SVC	12/8/2022	2015	RET ABN	UG-SERVICE
8724	41016200	GRET	SVC	12/13/2022	2015	RET ABN	UG-SERVICE
8725	40384604	GRET	SVC	6/24/2022	2015	RET ABN	UG-SERVICE
8726	36366078	GRET	SVC	8/24/2020	2015	RET ABN	UG-SERVICE
8727	39869439	GRET	SVC	3/10/2022	2015	RET ABN	UG-SERVICE
8728	41508055	GRET	SVC	4/17/2023	2015	RET ABN	UG-SERVICE
8729	41223587	GRET	SVC	2/15/2023	2015	RET ABN	UG-SERVICE
8730	36751508	GRET	SVC	8/11/2020	2015	RET ABN	UG-SERVICE
8731	41483035	GRET	SVC	4/14/2023	2015	RET ABN	UG-SERVICE
8732	37896188	GRET	SVC	12/8/2020	2015	RET ABN	UG-SERVICE
8733	42328558	GRET	SVC	11/7/2023	2015	RET ABN	UG-SERVICE
8734	41016203	GRET	SVC	12/13/2022	2015	RET ABN	UG-SERVICE
8735	41226272	GRET	SVC	1/28/2023	2015	RET ABN	UG-SERVICE
8736	41032258	GRET	SVC	12/4/2022	2015	RET ABN	UG-SERVICE
8737	41498364	GRET	SVC	4/12/2023	2015	RET ABN	UG-SERVICE
8738	38200828	GRET	SVC	3/17/2021	2015	RET ABN	UG-SERVICE
8739	43318355	GRET	SVC	8/6/2024	2015	RET ABN	UG-SERVICE
8740	38416177	GRET	SVC	4/29/2021	2015	RET ABN	UG-SERVICE
8741	40291546	GRET	SVC	6/13/2022	2015	RET ABN	UG-SERVICE
8742	41016206	GRET	SVC	12/13/2022	2015	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8743	41032543	GRET	SVC	12/4/2022	2015	RET ABN	UG-SERVICE
8744	37880365	GRET	SVC	12/8/2020	2015	RET ABN	UG-SERVICE
8745	42263863	GRET	SVC	10/23/2023	2015	RET ABN	UG-SERVICE
8746	43707637	GRET	SVC	10/28/2024	2015	RET ABN	UG-SERVICE
8747	41937753	GRET	SVC	7/24/2023	2015	RET ABN	UG-SERVICE
8748	43224594	GRET	SVC	6/26/2024	2015	RET ABN	UG-SERVICE
8749	41128151	GRET	SVC	12/31/2022	2015	RET ABN	UG-SERVICE
8750	35865601	GRET	SVC	1/7/2020	2015	RET ABN	UG-SERVICE
8751	41273578	GRET	SVC	2/16/2023	2015	RET ABN	UG-SERVICE
8752	41032250	GRET	SVC	12/6/2022	2015	RET ABN	UG-SERVICE
8753	40395522	GRET	SVC	7/6/2022	2015	RET ABN	UG-SERVICE
8754	36286881	GRET	SVC	6/13/2020	2015	RET ABN	UG-SERVICE
8755	43250929	GRET	SVC	6/29/2024	2015	RET ABN	UG-SERVICE
8756	40593818	GRET	SVC	8/22/2022	2015	RET ABN	UG-SERVICE
8757	43379780	GRET	SVC	8/1/2024	2015	RET ABN	UG-SERVICE
8758	41274837	GRET	SVC	2/15/2023	2015	RET ABN	UG-SERVICE
8759	41106618	GRET	SVC	12/28/2022	2015	RET ABN	UG-SERVICE
8760	37903754	GRET	SVC	12/16/2020	2015	RET ABN	UG-SERVICE
8761	40578571	GRET	SVC	8/16/2022	2015	RET ABN	UG-SERVICE
8762	41114622	GRET	SVC	12/29/2022	2015	RET ABN	UG-SERVICE
8763	36675999	GRET	SVC	7/28/2020	2015	RET ABN	UG-SERVICE
8764	41036613	GRET	SVC	12/10/2022	2015	RET ABN	UG-SERVICE
8765	38200825	GRET	SVC	3/10/2021	2015	RET ABN	UG-SERVICE
8766	42784177	GRET	SVC	3/5/2024	2015	RET ABN	UG-SERVICE
8767	37045736	GRET	SVC	10/21/2020	2015	RET ABN	UG-SERVICE
8768	41482801	GRET	SVC	4/4/2023	2015	RET ABN	UG-SERVICE
8769	41082582	GRET	SVC	12/19/2022	2015	RET ABN	UG-SERVICE
8770	41572132	GRET	SVC	5/6/2023	2015	RET ABN	UG-SERVICE
8771	41721648	GRET	SVC	6/6/2023	2015	RET ABN	UG-SERVICE
8772	41032549	GRET	SVC	12/16/2022	2015	RET ABN	UG-SERVICE
8773	43207843	GRET	SVC	6/22/2024	2015	RET ABN	UG-SERVICE
8774	39394745	GRET	SVC	11/12/2021	2015	RET ABN	UG-SERVICE
8775	41128156	GRET	SVC	12/31/2022	2015	RET ABN	UG-SERVICE
8776	41064594	GRET	SVC	12/13/2022	2015	RET ABN	UG-SERVICE
8777	41771847	GRET	SVC	6/27/2023	2016	RET ABN	UG-SERVICE
8778	40216937	GRET	SVC	6/5/2022	2016	RET ABN	UG-SERVICE
8779	41768170	GRET	SVC	6/17/2023	2016	RET ABN	UG-SERVICE
8780	42745597	GRET	SVC	2/19/2024	2016	RET ABN	UG-SERVICE
8781	41187062	GRET	SVC	1/18/2023	2016	RET ABN	UG-SERVICE
8782	40644721	GRET	SVC	9/16/2022	2016	RET ABN	UG-SERVICE
8783	36818926	GRET	SVC	9/4/2020	2016	RET ABN	UG-SERVICE
8784	37013965	GRET	SVC	10/14/2020	2016	RET ABN	UG-SERVICE
8785	43329965	GRET	SVC	7/18/2024	2016	RET ABN	UG-SERVICE
8786	41284192	GRET	SVC	2/21/2023	2016	RET ABN	UG-SERVICE
8787	35956609	GRET	SVC	1/27/2020	2016	RET ABN	UG-SERVICE
8788	35929651	GRET	SVC	1/23/2020	2016	RET ABN	UG-SERVICE
8789	42512725	GRET	SVC	12/26/2023	2016	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8790	38635511	GRET	SVC	6/21/2021	2016	RET ABN	UG-SERVICE
8791	42276953	GRET	SVC	10/25/2023	2016	RET ABN	UG-SERVICE
8792	43170486	GRET	SVC	6/17/2024	2016	RET ABN	UG-SERVICE
8793	41690367	GRET	SVC	5/30/2023	2016	RET ABN	UG-SERVICE
8794	40846767	GRET	SVC	10/29/2022	2016	RET ABN	UG-SERVICE
8795	37256532	GRET	SVC	11/9/2020	2016	RET ABN	UG-SERVICE
8796	37064079	GRET	SVC	11/16/2020	2016	RET ABN	UG-SERVICE
8797	36152449	GRET	SVC	3/19/2020	2016	RET ABN	UG-SERVICE
8798	38869778	GRET	SVC	8/5/2021	2016	RET ABN	UG-SERVICE
8799	40555890	GRET	SVC	8/25/2022	2016	RET ABN	UG-SERVICE
8800	41568589	GRET	SVC	4/27/2023	2016	RET ABN	UG-SERVICE
8801	36371110	GRET	SVC	6/19/2020	2016	RET ABN	UG-SERVICE
8802	41918683	GRET	SVC	7/25/2023	2016	RET ABN	UG-SERVICE
8803	43169821	GRET	SVC	6/10/2024	2016	RET ABN	UG-SERVICE
8804	36643846	GRET	SVC	7/20/2020	2016	RET ABN	UG-SERVICE
8805	41284197	GRET	SVC	2/15/2023	2016	RET ABN	UG-SERVICE
8806	36834291	GRET	SVC	8/26/2020	2016	RET ABN	UG-SERVICE
8807	40779653	GRET	SVC	10/26/2022	2016	RET ABN	UG-SERVICE
8808	39613255	GRET	SVC	12/29/2021	2016	RET ABN	UG-SERVICE
8809	42744596	GRET	SVC	2/19/2024	2016	RET ABN	UG-SERVICE
8810	36596483	GRET	SVC	8/12/2020	2016	RET ABN	UG-SERVICE
8811	43071571	GRET	SVC	5/17/2024	2016	RET ABN	UG-SERVICE
8812	40691986	GRET	SVC	9/13/2022	2016	RET ABN	UG-SERVICE
8813	42226914	GRET	SVC	10/16/2023	2016	RET ABN	UG-SERVICE
8814	41284198	GRET	SVC	2/14/2023	2016	RET ABN	UG-SERVICE
8815	43013381	GRET	SVC	5/4/2024	2016	RET ABN	UG-SERVICE
8816	35953732	GRET	SVC	1/27/2020	2016	RET ABN	UG-SERVICE
8817	36948624	GRET	SVC	9/18/2020	2016	RET ABN	UG-SERVICE
8818	41568561	GRET	SVC	4/27/2023	2016	RET ABN	UG-SERVICE
8819	39257781	GRET	SVC	10/12/2021	2016	RET ABN	UG-SERVICE
8820	43831245	GRET	SVC	11/26/2024	2016	RET ABN	UG-SERVICE
8821	43741075	GRET	SVC	10/28/2024	2016	RET ABN	UG-SERVICE
8822	41673901	GRET	SVC	5/22/2023	2016	RET ABN	UG-SERVICE
8823	41405833	GRET	SVC	3/20/2023	2016	RET ABN	UG-SERVICE
8824	40230340	GRET	SVC	5/31/2022	2016	RET ABN	UG-SERVICE
8825	43526642	GRET	SVC	9/5/2024	2016	RET ABN	UG-SERVICE
8826	41279556	GRET	SVC	2/12/2023	2016	RET ABN	UG-SERVICE
8827	36021124	GRET	SVC	2/12/2020	2016	RET ABN	UG-SERVICE
8828	40780619	GRET	SVC	10/10/2022	2016	RET ABN	UG-SERVICE
8829	42975777	GRET	SVC	6/3/2024	2016	RET ABN	UG-SERVICE
8830	38092844	GRET	SVC	2/4/2021	2016	RET ABN	UG-SERVICE
8831	39668880	GRET	SVC	1/10/2022	2016	RET ABN	UG-SERVICE
8832	43225267	GRET	SVC	6/26/2024	2016	RET ABN	UG-SERVICE
8833	41287538	GRET	SVC	3/18/2023	2016	RET ABN	UG-SERVICE
8834	39773244	GRET	SVC	2/9/2022	2016	RET ABN	UG-SERVICE
8835	38568981	GRET	SVC	6/7/2021	2016	RET ABN	UG-SERVICE
8836	40874774	GRET	SVC	10/29/2022	2016	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8837	38200983	GRET	SVC	3/10/2021	2016	RET ABN	UG-SERVICE
8838	36650025	GRET	SVC	7/18/2020	2016	RET ABN	UG-SERVICE
8839	42706729	GRET	SVC	2/13/2024	2016	RET ABN	UG-SERVICE
8840	40558481	GRET	SVC	8/21/2022	2016	RET ABN	UG-SERVICE
8841	41609017	GRET	SVC	5/6/2023	2016	RET ABN	UG-SERVICE
8842	42995589	GRET	SVC	4/30/2024	2016	RET ABN	UG-SERVICE
8843	38941812	GRET	SVC	8/18/2021	2016	RET ABN	UG-SERVICE
8844	41286301	GRET	SVC	3/17/2023	2016	RET ABN	UG-SERVICE
8845	42921106	GRET	SVC	3/30/2024	2016	RET ABN	UG-SERVICE
8846	43345805	GRET	SVC	7/26/2024	2016	RET ABN	UG-SERVICE
8847	40976086	GRET	SVC	11/28/2022	2016	RET ABN	UG-SERVICE
8848	38596272	GRET	SVC	6/8/2021	2016	RET ABN	UG-SERVICE
8849	42788300	GRET	SVC	3/11/2024	2016	RET ABN	UG-SERVICE
8850	43862725	GRET	SVC	11/25/2024	2016	RET ABN	UG-SERVICE
8851	37986309	GRET	SVC	1/5/2021	2016	RET ABN	UG-SERVICE
8852	36682911	GRET	SVC	7/27/2020	2016	RET ABN	UG-SERVICE
8853	41919955	GRET	SVC	8/7/2023	2016	RET ABN	UG-SERVICE
8854	43883122	GRET	SVC	12/9/2024	2016	RET ABN	UG-SERVICE
8855	39149347	GRET	SVC	9/16/2021	2016	RET ABN	UG-SERVICE
8856	39316996	GRET	SVC	10/25/2021	2016	RET ABN	UG-SERVICE
8857	40672066	GRET	SVC	10/1/2022	2016	RET ABN	UG-SERVICE
8858	39249723	GRET	SVC	10/11/2021	2016	RET ABN	UG-SERVICE
8859	39215340	GRET	SVC	11/1/2021	2016	RET ABN	UG-SERVICE
8860	41439586	GRET	SVC	3/27/2023	2016	RET ABN	UG-SERVICE
8861	42707431	GRET	SVC	2/11/2024	2016	RET ABN	UG-SERVICE
8862	36196116	GRET	SVC	4/21/2020	2016	RET ABN	UG-SERVICE
8863	41769393	GRET	SVC	6/17/2023	2016	RET ABN	UG-SERVICE
8864	37896786	GRET	SVC	12/9/2020	2016	RET ABN	UG-SERVICE
8865	39352877	GRET	SVC	10/19/2021	2016	RET ABN	UG-SERVICE
8866	43822621	GRET	SVC	11/8/2024	2016	RET ABN	UG-SERVICE
8867	40746028	GRET	SVC	9/23/2022	2017	RET ABN	UG-SERVICE
8868	43683503	GRET	SVC	10/14/2024	2017	RET ABN	UG-SERVICE
8869	40375096	GRET	SVC	7/2/2022	2017	RET ABN	UG-SERVICE
8870	43060531	GRET	SVC	5/13/2024	2017	RET ABN	UG-SERVICE
8871	43668851	GRET	SVC	10/8/2024	2017	RET ABN	UG-SERVICE
8872	40499691	GRET	SVC	8/1/2022	2017	RET ABN	UG-SERVICE
8873	41639188	GRET	SVC	5/19/2023	2017	RET ABN	UG-SERVICE
8874	41389385	GRET	SVC	3/13/2023	2017	RET ABN	UG-SERVICE
8875	41283637	GRET	SVC	2/18/2023	2017	RET ABN	UG-SERVICE
8876	39930409	GRET	SVC	3/28/2022	2017	RET ABN	UG-SERVICE
8877	41904186	GRET	SVC	7/25/2023	2017	RET ABN	UG-SERVICE
8878	43364928	GRET	SVC	12/2/2024	2017	RET ABN	UG-SERVICE
8879	43481247	GRET	SVC	11/22/2024	2017	RET ABN	UG-SERVICE
8880	41274584	GRET	SVC	2/13/2023	2017	RET ABN	UG-SERVICE
8881	43752069	GRET	SVC	11/16/2024	2017	RET ABN	UG-SERVICE
8882	40319102	GRET	SVC	6/20/2022	2017	RET ABN	UG-SERVICE
8883	43480992	GRET	SVC	11/10/2024	2017	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8884	41803122	GRET	SVC	6/27/2023	2017	RET ABN	UG-SERVICE
8885	38349990	GRET	SVC	4/14/2021	2017	RET ABN	UG-SERVICE
8886	43370930	GRET	SVC	7/30/2024	2017	RET ABN	UG-SERVICE
8887	36602821	GRET	SVC	7/9/2020	2017	RET ABN	UG-SERVICE
8888	36168225	GRET	SVC	3/23/2020	2017	RET ABN	UG-SERVICE
8889	39880011	GRET	SVC	3/14/2022	2017	RET ABN	UG-SERVICE
8890	38222416	GRET	SVC	3/17/2021	2017	RET ABN	UG-SERVICE
8891	39324294	GRET	SVC	10/27/2021	2017	RET ABN	UG-SERVICE
8892	40383953	GRET	SVC	7/5/2022	2017	RET ABN	UG-SERVICE
8893	38067901	GRET	SVC	1/25/2021	2017	RET ABN	UG-SERVICE
8894	40091708	GRET	SVC	5/2/2022	2017	RET ABN	UG-SERVICE
8895	38364543	GRET	SVC	4/14/2021	2017	RET ABN	UG-SERVICE
8896	37115386	GRET	SVC	11/2/2020	2017	RET ABN	UG-SERVICE
8897	43642980	GRET	SVC	10/7/2024	2017	RET ABN	UG-SERVICE
8898	38880692	GRET	SVC	8/6/2021	2017	RET ABN	UG-SERVICE
8899	38526701	GRET	SVC	4/11/2021	2017	RET ABN	UG-SERVICE
8900	41893698	GRET	SVC	7/21/2023	2017	RET ABN	UG-SERVICE
8901	41534326	GRET	SVC	5/8/2023	2017	RET ABN	UG-SERVICE
8902	38174775	GRET	SVC	2/27/2021	2017	RET ABN	UG-SERVICE
8903	42181125	GRET	SVC	10/4/2023	2017	RET ABN	UG-SERVICE
8904	39873510	GRET	SVC	3/15/2022	2017	RET ABN	UG-SERVICE
8905	41484577	GRET	SVC	4/18/2023	2017	RET ABN	UG-SERVICE
8906	43905526	GRET	SVC	12/9/2024	2017	RET ABN	UG-SERVICE
8907	42257455	GRET	SVC	10/23/2023	2017	RET ABN	UG-SERVICE
8908	39878839	GRET	SVC	3/14/2022	2017	RET ABN	UG-SERVICE
8909	42653746	GRET	SVC	2/5/2024	2017	RET ABN	UG-SERVICE
8910	41083717	GRET	SVC	12/20/2022	2017	RET ABN	UG-SERVICE
8911	41750989	GRET	SVC	6/13/2023	2017	RET ABN	UG-SERVICE
8912	40204785	GRET	SVC	5/23/2022	2017	RET ABN	UG-SERVICE
8913	43957196	GRET	SVC	12/18/2024	2017	RET ABN	UG-SERVICE
8914	39550414	GRET	SVC	12/16/2021	2017	RET ABN	UG-SERVICE
8915	43459323	GRET	SVC	8/19/2024	2017	RET ABN	UG-SERVICE
8916	40878242	GRET	SVC	11/7/2022	2017	RET ABN	UG-SERVICE
8917	43715117	GRET	SVC	10/22/2024	2017	RET ABN	UG-SERVICE
8918	42914394	GRET	SVC	4/11/2024	2017	RET ABN	UG-SERVICE
8919	41175051	GRET	SVC	1/20/2023	2017	RET ABN	UG-SERVICE
8920	41566183	GRET	SVC	4/25/2023	2017	RET ABN	UG-SERVICE
8921	41560897	GRET	SVC	4/20/2023	2017	RET ABN	UG-SERVICE
8922	42222135	GRET	SVC	10/12/2023	2017	RET ABN	UG-SERVICE
8923	39275116	GRET	SVC	10/15/2021	2017	RET ABN	UG-SERVICE
8924	40928808	GRET	SVC	11/15/2022	2017	RET ABN	UG-SERVICE
8925	42939579	GRET	SVC	4/17/2024	2017	RET ABN	UG-SERVICE
8926	42594903	GRET	SVC	1/24/2024	2017	RET ABN	UG-SERVICE
8927	40853685	GRET	SVC	10/24/2022	2017	RET ABN	UG-SERVICE
8928	43219490	GRET	SVC	6/25/2024	2017	RET ABN	UG-SERVICE
8929	43506824	GRET	SVC	10/3/2024	2017	RET ABN	UG-SERVICE
8930	41424768	GRET	SVC	10/18/2023	2017	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8931	36486890	GRET	SVC	6/25/2020	2017	RET ABN	UG-SERVICE
8932	41926528	GRET	SVC	7/29/2023	2017	RET ABN	UG-SERVICE
8933	36152268	GRET	SVC	3/16/2020	2017	RET ABN	UG-SERVICE
8934	39713217	GRET	SVC	1/12/2022	2017	RET ABN	UG-SERVICE
8935	36366992	GRET	SVC	5/26/2020	2017	RET ABN	UG-SERVICE
8936	41279548	GRET	SVC	2/12/2023	2017	RET ABN	UG-SERVICE
8937	42907196	GRET	SVC	4/7/2024	2017	RET ABN	UG-SERVICE
8938	41588281	GRET	SVC	5/3/2023	2017	RET ABN	UG-SERVICE
8939	43582912	GRET	SVC	9/18/2024	2017	RET ABN	UG-SERVICE
8940	42762981	GRET	SVC	2/29/2024	2017	RET ABN	UG-SERVICE
8941	42967786	GRET	SVC	4/25/2024	2017	RET ABN	UG-SERVICE
8942	36200532	GRET	SVC	4/23/2020	2017	RET ABN	UG-SERVICE
8943	41955802	GRET	SVC	8/5/2023	2017	RET ABN	UG-SERVICE
8944	39081127	GRET	SVC	9/10/2021	2017	RET ABN	UG-SERVICE
8945	36199243	GRET	SVC	5/14/2020	2017	RET ABN	UG-SERVICE
8946	42277126	GRET	SVC	10/12/2023	2017	RET ABN	UG-SERVICE
8947	43481120	GRET	SVC	10/29/2024	2017	RET ABN	UG-SERVICE
8948	42096936	GRET	SVC	9/12/2023	2017	RET ABN	UG-SERVICE
8949	36347808	GRET	SVC	5/19/2020	2017	RET ABN	UG-SERVICE
8950	41958783	GRET	SVC	8/7/2023	2018	RET ABN	UG-SERVICE
8951	37844120	GRET	SVC	12/1/2020	2018	RET ABN	UG-SERVICE
8952	40092393	GRET	SVC	4/27/2022	2018	RET ABN	UG-SERVICE
8953	38428372	GRET	SVC	4/28/2021	2018	RET ABN	UG-SERVICE
8954	39194846	GRET	SVC	9/27/2021	2018	RET ABN	UG-SERVICE
8955	40035889	GRET	SVC	4/20/2022	2018	RET ABN	UG-SERVICE
8956	40694162	GRET	SVC	9/15/2022	2018	RET ABN	UG-SERVICE
8957	36598693	GRET	SVC	7/25/2020	2018	RET ABN	UG-SERVICE
8958	38741237	GRET	SVC	7/27/2021	2018	RET ABN	UG-SERVICE
8959	43489146	GRET	SVC	8/26/2024	2018	RET ABN	UG-SERVICE
8960	40860204	GRET	SVC	10/25/2022	2018	RET ABN	UG-SERVICE
8961	36643845	GRET	SVC	7/20/2020	2018	RET ABN	UG-SERVICE
8962	41205724	GRET	SVC	1/27/2023	2018	RET ABN	UG-SERVICE
8963	41286322	GRET	SVC	2/20/2023	2018	RET ABN	UG-SERVICE
8964	36019879	GRET	SVC	2/12/2020	2018	RET ABN	UG-SERVICE
8965	43481045	GRET	SVC	11/1/2024	2018	RET ABN	UG-SERVICE
8966	38312793	GRET	SVC	4/7/2021	2018	RET ABN	UG-SERVICE
8967	43571069	GRET	SVC	9/17/2024	2018	RET ABN	UG-SERVICE
8968	36066842	GRET	SVC	2/28/2020	2018	RET ABN	UG-SERVICE
8969	40782757	GRET	SVC	10/7/2022	2018	RET ABN	UG-SERVICE
8970	43147157	GRET	SVC	6/3/2024	2018	RET ABN	UG-SERVICE
8971	40812314	GRET	SVC	10/30/2022	2018	RET ABN	UG-SERVICE
8972	43058936	GRET	SVC	5/15/2024	2018	RET ABN	UG-SERVICE
8973	42944771	GRET	SVC	4/16/2024	2018	RET ABN	UG-SERVICE
8974	39657980	GRET	SVC	1/30/2022	2018	RET ABN	UG-SERVICE
8975	42906048	GRET	SVC	4/10/2024	2018	RET ABN	UG-SERVICE
8976	43752226	GRET	SVC	11/27/2024	2018	RET ABN	UG-SERVICE
8977	42078595	GRET	SVC	5/9/2023	2018	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
8978	39242836	GRET	SVC	10/4/2021	2018	RET ABN	UG-SERVICE
8979	39120028	GRET	SVC	9/14/2021	2018	RET ABN	UG-SERVICE
8980	43370808	GRET	SVC	11/4/2024	2018	RET ABN	UG-SERVICE
8981	42470302	GRET	SVC	12/11/2023	2018	RET ABN	UG-SERVICE
8982	40274919	GRET	SVC	6/13/2022	2018	RET ABN	UG-SERVICE
8983	40118393	GRET	SVC	5/4/2022	2018	RET ABN	UG-SERVICE
8984	43023019	GRET	SVC	5/6/2024	2018	RET ABN	UG-SERVICE
8985	38089275	GRET	SVC	2/2/2021	2018	RET ABN	UG-SERVICE
8986	41883655	GRET	SVC	7/15/2023	2018	RET ABN	UG-SERVICE
8987	39484987	GRET	SVC	11/26/2021	2018	RET ABN	UG-SERVICE
8988	43948489	GRET	SVC	12/19/2024	2018	RET ABN	UG-SERVICE
8989	37560374	GRET	SVC	11/5/2020	2018	RET ABN	UG-SERVICE
8990	36914331	GRET	SVC	9/17/2020	2018	RET ABN	UG-SERVICE
8991	40333089	GRET	SVC	6/21/2022	2018	RET ABN	UG-SERVICE
8992	41585923	GRET	SVC	5/2/2023	2018	RET ABN	UG-SERVICE
8993	39776979	GRET	SVC	2/9/2022	2018	RET ABN	UG-SERVICE
8994	40545980	GRET	SVC	1/3/2023	2018	RET ABN	UG-SERVICE
8995	38257670	GRET	SVC	3/20/2021	2018	RET ABN	UG-SERVICE
8996	43861748	GRET	SVC	12/9/2024	2018	RET ABN	UG-SERVICE
8997	40883589	GRET	SVC	11/9/2022	2018	RET ABN	UG-SERVICE
8998	43648281	GRET	SVC	10/22/2024	2018	RET ABN	UG-SERVICE
8999	37358765	GRET	SVC	10/29/2020	2018	RET ABN	UG-SERVICE
9000	40645570	GRET	SVC	8/31/2022	2018	RET ABN	UG-SERVICE
9001	36999957	GRET	SVC	10/5/2020	2018	RET ABN	UG-SERVICE
9002	38528019	GRET	SVC	5/24/2021	2018	RET ABN	UG-SERVICE
9003	38820995	GRET	SVC	7/27/2021	2018	RET ABN	UG-SERVICE
9004	41699139	GRET	SVC	5/30/2023	2018	RET ABN	UG-SERVICE
9005	42250456	GRET	SVC	10/16/2023	2018	RET ABN	UG-SERVICE
9006	38301277	GRET	SVC	7/30/2021	2018	RET ABN	UG-SERVICE
9007	43330270	GRET	SVC	7/15/2024	2018	RET ABN	UG-SERVICE
9008	43466685	GRET	SVC	9/16/2024	2018	RET ABN	UG-SERVICE
9009	39890608	GRET	SVC	3/28/2022	2018	RET ABN	UG-SERVICE
9010	39266340	GRET	SVC	10/11/2021	2018	RET ABN	UG-SERVICE
9011	41913462	GRET	SVC	7/24/2023	2018	RET ABN	UG-SERVICE
9012	40593804	GRET	SVC	8/16/2022	2018	RET ABN	UG-SERVICE
9013	43654922	GRET	SVC	10/2/2024	2018	RET ABN	UG-SERVICE
9014	40949361	GRET	SVC	12/9/2022	2018	RET ABN	UG-SERVICE
9015	41030771	GRET	SVC	12/7/2022	2018	RET ABN	UG-SERVICE
9016	38706201	GRET	SVC	7/7/2021	2018	RET ABN	UG-SERVICE
9017	43493904	GRET	SVC	9/4/2024	2018	RET ABN	UG-SERVICE
9018	41224142	GRET	SVC	1/28/2023	2018	RET ABN	UG-SERVICE
9019	42177006	GRET	SVC	9/29/2023	2018	RET ABN	UG-SERVICE
9020	38838961	GRET	SVC	7/20/2021	2018	RET ABN	UG-SERVICE
9021	36114268	GRET	SVC	3/11/2020	2018	RET ABN	UG-SERVICE
9022	41669294	GRET	SVC	5/25/2023	2018	RET ABN	UG-SERVICE
9023	43141728	GRET	SVC	6/1/2024	2018	RET ABN	UG-SERVICE
9024	36820287	GRET	SVC	8/25/2020	2018	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9025	40062841	GRET	SVC	5/14/2022	2018	RET ABN	UG-SERVICE
9026	36577459	GRET	SVC	7/8/2020	2018	RET ABN	UG-SERVICE
9027	40558804	GRET	SVC	8/11/2022	2018	RET ABN	UG-SERVICE
9028	41612016	GRET	SVC	5/8/2023	2018	RET ABN	UG-SERVICE
9029	36685504	GRET	SVC	7/27/2020	2018	RET ABN	UG-SERVICE
9030	38534654	GRET	SVC	5/27/2021	2018	RET ABN	UG-SERVICE
9031	38397595	GRET	SVC	4/21/2021	2018	RET ABN	UG-SERVICE
9032	41397335	GRET	SVC	3/16/2023	2018	RET ABN	UG-SERVICE
9033	41398471	GRET	SVC	3/14/2023	2018	RET ABN	UG-SERVICE
9034	40506220	GRET	SVC	8/2/2022	2018	RET ABN	UG-SERVICE
9035	39850142	GRET	SVC	3/4/2022	2018	RET ABN	UG-SERVICE
9036	37008451	GRET	SVC	11/12/2020	2018	RET ABN	UG-SERVICE
9037	43519323	GRET	SVC	9/10/2024	2018	RET ABN	UG-SERVICE
9038	41480834	GRET	SVC	4/8/2023	2018	RET ABN	UG-SERVICE
9039	38330664	GRET	SVC	4/6/2021	2018	RET ABN	UG-SERVICE
9040	39996896	GRET	SVC	4/25/2022	2018	RET ABN	UG-SERVICE
9041	36793151	GRET	SVC	8/17/2020	2018	RET ABN	UG-SERVICE
9042	39245797	GRET	SVC	10/6/2021	2018	RET ABN	UG-SERVICE
9043	43669822	GRET	SVC	10/11/2024	2018	RET ABN	UG-SERVICE
9044	41480226	GRET	SVC	4/9/2023	2018	RET ABN	UG-SERVICE
9045	41897722	GRET	SVC	7/22/2023	2018	RET ABN	UG-SERVICE
9046	38466250	GRET	SVC	5/11/2021	2018	RET ABN	UG-SERVICE
9047	36916483	GRET	SVC	9/11/2020	2018	RET ABN	UG-SERVICE
9048	41916572	GRET	SVC	8/22/2023	2018	RET ABN	UG-SERVICE
9049	39166343	GRET	SVC	9/29/2021	2018	RET ABN	UG-SERVICE
9050	43654684	GRET	SVC	10/21/2024	2018	RET ABN	UG-SERVICE
9051	42903351	GRET	SVC	4/10/2024	2018	RET ABN	UG-SERVICE
9052	38534655	GRET	SVC	5/24/2021	2018	RET ABN	UG-SERVICE
9053	42409830	GRET	SVC	11/28/2023	2018	RET ABN	UG-SERVICE
9054	42078302	GRET	SVC	9/5/2023	2019	RET ABN	UG-SERVICE
9055	36282719	GRET	SVC	6/15/2020	2019	RET ABN	UG-SERVICE
9056	37739212	GRET	SVC	11/23/2020	2019	RET ABN	UG-SERVICE
9057	38719485	GRET	SVC	7/12/2021	2019	RET ABN	UG-SERVICE
9058	40418554	GRET	SVC	7/13/2022	2019	RET ABN	UG-SERVICE
9059	43676776	GRET	SVC	10/15/2024	2019	RET ABN	UG-SERVICE
9060	36283381	GRET	SVC	6/15/2020	2019	RET ABN	UG-SERVICE
9061	36671815	GRET	SVC	7/24/2020	2019	RET ABN	UG-SERVICE
9062	36192819	GRET	SVC	4/15/2020	2019	RET ABN	UG-SERVICE
9063	36598689	GRET	SVC	7/25/2020	2019	RET ABN	UG-SERVICE
9064	39233803	GRET	SVC	10/15/2021	2019	RET ABN	UG-SERVICE
9065	36282718	GRET	SVC	6/15/2020	2019	RET ABN	UG-SERVICE
9066	42425970	GRET	SVC	11/27/2023	2019	RET ABN	UG-SERVICE
9067	39150591	GRET	SVC	9/20/2021	2019	RET ABN	UG-SERVICE
9068	39892549	GRET	SVC	3/15/2022	2019	RET ABN	UG-SERVICE
9069	42476344	GRET	SVC	12/7/2023	2019	RET ABN	UG-SERVICE
9070	43353626	GRET	SVC	11/4/2024	2019	RET ABN	UG-SERVICE
9071	41334869	GRET	SVC	3/6/2023	2019	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9072	43915732	GRET	SVC	12/16/2024	2019	RET ABN	UG-SERVICE
9073	36270018	GRET	SVC	4/28/2020	2019	RET ABN	UG-SERVICE
9074	38361202	GRET	SVC	4/14/2021	2019	RET ABN	UG-SERVICE
9075	43882980	GRET	SVC	11/30/2024	2019	RET ABN	UG-SERVICE
9076	36192180	GRET	SVC	4/24/2020	2019	RET ABN	UG-SERVICE
9077	43218663	GRET	SVC	6/25/2024	2019	RET ABN	UG-SERVICE
9078	40368480	GRET	SVC	6/29/2022	2019	RET ABN	UG-SERVICE
9079	35986290	GRET	SVC	2/4/2020	2019	RET ABN	UG-SERVICE
9080	38514856	GRET	SVC	8/5/2021	2019	RET ABN	UG-SERVICE
9081	43492522	GRET	SVC	9/18/2024	2019	RET ABN	UG-SERVICE
9082	37773047	GRET	SVC	11/24/2020	2019	RET ABN	UG-SERVICE
9083	41402091	GRET	SVC	3/15/2023	2019	RET ABN	UG-SERVICE
9084	39550753	GRET	SVC	12/17/2021	2019	RET ABN	UG-SERVICE
9085	41114425	GRET	SVC	1/7/2023	2019	RET ABN	UG-SERVICE
9086	36760770	GRET	SVC	8/11/2020	2019	RET ABN	UG-SERVICE
9087	40050472	GRET	SVC	4/26/2022	2019	RET ABN	UG-SERVICE
9088	43066566	GRET	SVC	5/20/2024	2019	RET ABN	UG-SERVICE
9089	39233714	GRET	SVC	10/11/2021	2019	RET ABN	UG-SERVICE
9090	37914673	GRET	SVC	12/13/2020	2019	RET ABN	UG-SERVICE
9091	42519503	GRET	SVC	12/21/2023	2019	RET ABN	UG-SERVICE
9092	36927894	GRET	SVC	9/14/2020	2019	RET ABN	UG-SERVICE
9093	38808394	GRET	SVC	7/17/2021	2019	RET ABN	UG-SERVICE
9094	36598690	GRET	SVC	7/25/2020	2019	RET ABN	UG-SERVICE
9095	38373952	GRET	SVC	5/3/2021	2019	RET ABN	UG-SERVICE
9096	36740314	GRET	SVC	8/17/2020	2019	RET ABN	UG-SERVICE
9097	36572213	GRET	SVC	6/30/2020	2019	RET ABN	UG-SERVICE
9098	40939061	GRET	SVC	12/6/2022	2019	RET ABN	UG-SERVICE
9099	36837899	GRET	SVC	9/1/2020	2019	RET ABN	UG-SERVICE
9100	38373081	GRET	SVC	4/14/2021	2019	RET ABN	UG-SERVICE
9101	42833098	GRET	SVC	7/22/2024	2019	RET ABN	UG-SERVICE
9102	42166610	GRET	SVC	9/26/2023	2019	RET ABN	UG-SERVICE
9103	43709853	GRET	SVC	10/21/2024	2019	RET ABN	UG-SERVICE
9104	40711628	GRET	SVC	9/18/2022	2019	RET ABN	UG-SERVICE
9105	43318029	GRET	SVC	7/25/2024	2019	RET ABN	UG-SERVICE
9106	39895678	GRET	SVC	3/14/2022	2019	RET ABN	UG-SERVICE
9107	40318183	GRET	SVC	6/22/2022	2019	RET ABN	UG-SERVICE
9108	41401436	GRET	SVC	3/24/2023	2019	RET ABN	UG-SERVICE
9109	36696973	GRET	SVC	7/29/2020	2019	RET ABN	UG-SERVICE
9110	40268707	GRET	SVC	6/7/2022	2019	RET ABN	UG-SERVICE
9111	40607289	GRET	SVC	8/24/2022	2019	RET ABN	UG-SERVICE
9112	41768694	GRET	SVC	6/17/2023	2019	RET ABN	UG-SERVICE
9113	41114388	GRET	SVC	12/28/2022	2019	RET ABN	UG-SERVICE
9114	36833931	GRET	SVC	8/26/2020	2019	RET ABN	UG-SERVICE
9115	36598694	GRET	SVC	7/25/2020	2019	RET ABN	UG-SERVICE
9116	43798465	GRET	SVC	11/9/2024	2019	RET ABN	UG-SERVICE
9117	43345694	GRET	SVC	7/26/2024	2019	RET ABN	UG-SERVICE
9118	41989647	GRET	SVC	8/11/2023	2019	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9119	36470400	GRET	SVC	6/22/2020	2019	RET ABN	UG-SERVICE
9120	40020074	GRET	SVC	5/23/2022	2019	RET ABN	UG-SERVICE
9121	43480650	GRET	SVC	10/2/2024	2019	RET ABN	UG-SERVICE
9122	38873032	GRET	SVC	8/1/2021	2019	RET ABN	UG-SERVICE
9123	38242133	GRET	SVC	3/16/2021	2019	RET ABN	UG-SERVICE
9124	36283380	GRET	SVC	6/15/2020	2019	RET ABN	UG-SERVICE
9125	39776976	GRET	SVC	2/11/2022	2019	RET ABN	UG-SERVICE
9126	39350824	GRET	SVC	10/28/2021	2019	RET ABN	UG-SERVICE
9127	38865013	GRET	SVC	8/3/2021	2019	RET ABN	UG-SERVICE
9128	42150648	GRET	SVC	9/25/2023	2019	RET ABN	UG-SERVICE
9129	40018465	GRET	SVC	4/16/2022	2019	RET ABN	UG-SERVICE
9130	42184977	GRET	SVC	10/5/2023	2019	RET ABN	UG-SERVICE
9131	42164208	GRET	SVC	11/30/2023	2019	RET ABN	UG-SERVICE
9132	39821358	GRET	SVC	2/21/2022	2019	RET ABN	UG-SERVICE
9133	41649339	GRET	SVC	5/19/2023	2019	RET ABN	UG-SERVICE
9134	38954719	GRET	SVC	8/31/2021	2019	RET ABN	UG-SERVICE
9135	41402227	GRET	SVC	3/15/2023	2019	RET ABN	UG-SERVICE
9136	38361201	GRET	SVC	4/14/2021	2019	RET ABN	UG-SERVICE
9137	42386950	GRET	SVC	11/14/2023	2019	RET ABN	UG-SERVICE
9138	42837761	GRET	SVC	3/19/2024	2019	RET ABN	UG-SERVICE
9139	43697688	GRET	SVC	10/12/2024	2019	RET ABN	UG-SERVICE
9140	41089225	GRET	SVC	12/22/2022	2019	RET ABN	UG-SERVICE
9141	39020762	GRET	SVC	8/30/2021	2019	RET ABN	UG-SERVICE
9142	38942234	GRET	SVC	8/23/2021	2019	RET ABN	UG-SERVICE
9143	43759459	GRET	SVC	10/29/2024	2019	RET ABN	UG-SERVICE
9144	43481044	GRET	SVC	11/1/2024	2019	RET ABN	UG-SERVICE
9145	41772175	GRET	SVC	6/19/2023	2019	RET ABN	UG-SERVICE
9146	36270003	GRET	SVC	4/29/2020	2019	RET ABN	UG-SERVICE
9147	36627611	GRET	SVC	7/11/2020	2019	RET ABN	UG-SERVICE
9148	40515683	GRET	SVC	8/2/2022	2019	RET ABN	UG-SERVICE
9149	38514348	GRET	SVC	5/24/2021	2019	RET ABN	UG-SERVICE
9150	37944918	GRET	SVC	12/22/2020	2019	RET ABN	UG-SERVICE
9151	41049460	GRET	SVC	2/21/2023	2019	RET ABN	UG-SERVICE
9152	37019195	GRET	SVC	10/6/2020	2019	RET ABN	UG-SERVICE
9153	36734668	GRET	SVC	9/2/2020	2019	RET ABN	UG-SERVICE
9154	39719594	GRET	SVC	1/25/2022	2019	RET ABN	UG-SERVICE
9155	39461568	GRET	SVC	11/22/2021	2019	RET ABN	UG-SERVICE
9156	41286748	GRET	SVC	2/20/2023	2019	RET ABN	UG-SERVICE
9157	39950252	GRET	SVC	3/30/2022	2019	RET ABN	UG-SERVICE
9158	43112291	GRET	SVC	5/26/2024	2020	RET ABN	UG-SERVICE
9159	42392613	GRET	SVC	11/20/2023	2020	RET ABN	UG-SERVICE
9160	42842213	GRET	SVC	3/18/2024	2020	RET ABN	UG-SERVICE
9161	36545679	GRET	SVC	6/30/2020	2020	RET ABN	UG-SERVICE
9162	43281677	GRET	SVC	7/6/2024	2020	RET ABN	UG-SERVICE
9163	40584450	GRET	SVC	8/18/2022	2020	RET ABN	UG-SERVICE
9164	40432776	GRET	SVC	7/13/2022	2020	RET ABN	UG-SERVICE
9165	41389717	GRET	SVC	3/16/2023	2020	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9166	41925433	GRET	SVC	7/30/2023	2020	RET ABN	UG-SERVICE
9167	42461810	GRET	SVC	12/9/2023	2020	RET ABN	UG-SERVICE
9168	39671443	GRET	SVC	1/10/2022	2020	RET ABN	UG-SERVICE
9169	40840380	GRET	SVC	10/18/2022	2020	RET ABN	UG-SERVICE
9170	41425425	GRET	SVC	5/1/2023	2020	RET ABN	UG-SERVICE
9171	43496215	GRET	SVC	9/10/2024	2020	RET ABN	UG-SERVICE
9172	38258599	GRET	SVC	3/24/2021	2020	RET ABN	UG-SERVICE
9173	42327735	GRET	SVC	11/3/2023	2020	RET ABN	UG-SERVICE
9174	38461048	GRET	SVC	5/7/2021	2020	RET ABN	UG-SERVICE
9175	43488609	GRET	SVC	9/6/2024	2020	RET ABN	UG-SERVICE
9176	43083117	GRET	SVC	5/22/2024	2020	RET ABN	UG-SERVICE
9177	38852427	GRET	SVC	7/29/2021	2020	RET ABN	UG-SERVICE
9178	43903567	GRET	SVC	12/26/2024	2020	RET ABN	UG-SERVICE
9179	41379500	GRET	SVC	3/14/2023	2020	RET ABN	UG-SERVICE
9180	37809334	GRET	SVC	11/24/2020	2020	RET ABN	UG-SERVICE
9181	41330551	GRET	SVC	3/1/2023	2020	RET ABN	UG-SERVICE
9182	39506088	GRET	SVC	12/7/2021	2020	RET ABN	UG-SERVICE
9183	41833025	GRET	SVC	7/6/2023	2020	RET ABN	UG-SERVICE
9184	43615938	GRET	SVC	9/23/2024	2020	RET ABN	UG-SERVICE
9185	36191044	GRET	SVC	6/27/2020	2020	RET ABN	UG-SERVICE
9186	41018278	GRET	SVC	12/6/2022	2020	RET ABN	UG-SERVICE
9187	42165550	GRET	SVC	9/22/2023	2020	RET ABN	UG-SERVICE
9188	40247822	GRET	SVC	6/25/2022	2020	RET ABN	UG-SERVICE
9189	36809602	GRET	SVC	8/21/2020	2020	RET ABN	UG-SERVICE
9190	41399247	GRET	SVC	3/17/2023	2020	RET ABN	UG-SERVICE
9191	42164914	GRET	SVC	9/26/2023	2020	RET ABN	UG-SERVICE
9192	42274276	GRET	SVC	10/20/2023	2020	RET ABN	UG-SERVICE
9193	38153367	GRET	SVC	2/23/2021	2020	RET ABN	UG-SERVICE
9194	40699906	GRET	SVC	9/14/2022	2020	RET ABN	UG-SERVICE
9195	43952089	GRET	SVC	12/17/2024	2020	RET ABN	UG-SERVICE
9196	40837918	GRET	SVC	10/15/2022	2020	RET ABN	UG-SERVICE
9197	40177191	GRET	SVC	5/16/2022	2020	RET ABN	UG-SERVICE
9198	43713255	GRET	SVC	10/15/2024	2020	RET ABN	UG-SERVICE
9199	42697535	GRET	SVC	2/14/2024	2020	RET ABN	UG-SERVICE
9200	42702437	GRET	SVC	2/15/2024	2020	RET ABN	UG-SERVICE
9201	39607683	GRET	SVC	12/27/2021	2020	RET ABN	UG-SERVICE
9202	40273956	GRET	SVC	6/20/2022	2020	RET ABN	UG-SERVICE
9203	42563288	GRET	SVC	1/10/2024	2020	RET ABN	UG-SERVICE
9204	40633657	GRET	SVC	8/29/2022	2020	RET ABN	UG-SERVICE
9205	41317152	GRET	SVC	3/1/2023	2020	RET ABN	UG-SERVICE
9206	39451541	GRET	SVC	11/22/2021	2020	RET ABN	UG-SERVICE
9207	42137985	GRET	SVC	9/18/2023	2020	RET ABN	UG-SERVICE
9208	39524195	GRET	SVC	12/12/2021	2020	RET ABN	UG-SERVICE
9209	40563520	GRET	SVC	8/15/2022	2020	RET ABN	UG-SERVICE
9210	42816657	GRET	SVC	3/13/2024	2020	RET ABN	UG-SERVICE
9211	42581343	GRET	SVC	1/18/2024	2020	RET ABN	UG-SERVICE
9212	40607513	GRET	SVC	8/20/2022	2020	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9213	41401967	GRET	SVC	3/9/2023	2020	RET ABN	UG-SERVICE
9214	43178294	GRET	SVC	6/11/2024	2020	RET ABN	UG-SERVICE
9215	43594940	GRET	SVC	9/16/2024	2020	RET ABN	UG-SERVICE
9216	43710737	GRET	SVC	10/17/2024	2020	RET ABN	UG-SERVICE
9217	42407128	GRET	SVC	12/18/2023	2020	RET ABN	UG-SERVICE
9218	43087440	GRET	SVC	5/20/2024	2020	RET ABN	UG-SERVICE
9219	42355274	GRET	SVC	11/13/2023	2020	RET ABN	UG-SERVICE
9220	43800060	GRET	SVC	11/9/2024	2020	RET ABN	UG-SERVICE
9221	43100872	GRET	SVC	8/14/2024	2020	RET ABN	UG-SERVICE
9222	42104225	GRET	SVC	9/11/2023	2020	RET ABN	UG-SERVICE
9223	39814000	GRET	SVC	2/28/2022	2020	RET ABN	UG-SERVICE
9224	43709155	GRET	SVC	10/17/2024	2020	RET ABN	UG-SERVICE
9225	40665225	GRET	SVC	9/8/2022	2020	RET ABN	UG-SERVICE
9226	43516005	GRET	SVC	9/5/2024	2020	RET ABN	UG-SERVICE
9227	43066420	GRET	SVC	5/17/2024	2020	RET ABN	UG-SERVICE
9228	43241292	GRET	SVC	7/29/2024	2020	RET ABN	UG-SERVICE
9229	43826001	GRET	SVC	11/18/2024	2020	RET ABN	UG-SERVICE
9230	43330505	GRET	SVC	7/17/2024	2020	RET ABN	UG-SERVICE
9231	40272425	GRET	SVC	6/8/2022	2020	RET ABN	UG-SERVICE
9232	43139809	GRET	SVC	6/3/2024	2020	RET ABN	UG-SERVICE
9233	41429977	GRET	SVC	9/13/2023	2020	RET ABN	UG-SERVICE
9234	43005903	GRET	SVC	4/30/2024	2020	RET ABN	UG-SERVICE
9235	40926493	GRET	SVC	11/14/2022	2021	RET ABN	UG-SERVICE
9236	40667659	GRET	SVC	9/12/2022	2021	RET ABN	UG-SERVICE
9237	40383925	GRET	SVC	7/5/2022	2021	RET ABN	UG-SERVICE
9238	40250913	GRET	SVC	6/7/2022	2021	RET ABN	UG-SERVICE
9239	39733562	GRET	SVC	1/27/2022	2021	RET ABN	UG-SERVICE
9240	43903134	GRET	SVC	12/2/2024	2021	RET ABN	UG-SERVICE
9241	42379188	GRET	SVC	11/15/2023	2021	RET ABN	UG-SERVICE
9242	43205162	GRET	SVC	6/12/2024	2021	RET ABN	UG-SERVICE
9243	42856378	GRET	SVC	3/27/2024	2021	RET ABN	UG-SERVICE
9244	40128902	GRET	SVC	5/8/2022	2021	RET ABN	UG-SERVICE
9245	43184786	GRET	SVC	6/12/2024	2021	RET ABN	UG-SERVICE
9246	42594066	GRET	SVC	1/24/2024	2021	RET ABN	UG-SERVICE
9247	40518877	GRET	SVC	8/5/2022	2021	RET ABN	UG-SERVICE
9248	40036551	GRET	SVC	4/20/2022	2021	RET ABN	UG-SERVICE
9249	43676217	GRET	SVC	11/4/2024	2021	RET ABN	UG-SERVICE
9250	42683548	GRET	SVC	2/13/2024	2021	RET ABN	UG-SERVICE
9251	42165919	GRET	SVC	9/19/2023	2021	RET ABN	UG-SERVICE
9252	40978225	GRET	SVC	11/23/2022	2021	RET ABN	UG-SERVICE
9253	43081678	GRET	SVC	5/21/2024	2021	RET ABN	UG-SERVICE
9254	41588398	GRET	SVC	5/1/2023	2021	RET ABN	UG-SERVICE
9255	41960489	GRET	SVC	8/11/2023	2021	RET ABN	UG-SERVICE
9256	40605060	GRET	SVC	8/31/2022	2021	RET ABN	UG-SERVICE
9257	39406846	GRET	SVC	11/12/2021	2021	RET ABN	UG-SERVICE
9258	41279878	GRET	SVC	3/29/2023	2021	RET ABN	UG-SERVICE
9259	40387207	GRET	SVC	7/6/2022	2021	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9260	40705964	GRET	SVC	10/24/2022	2021	RET ABN	UG-SERVICE
9261	43932716	GRET	SVC	12/12/2024	2021	RET ABN	UG-SERVICE
9262	43229149	GRET	SVC	7/8/2024	2021	RET ABN	UG-SERVICE
9263	41408502	GRET	SVC	4/2/2024	2021	RET ABN	UG-SERVICE
9264	39836180	GRET	SVC	3/2/2022	2021	RET ABN	UG-SERVICE
9265	41981422	GRET	SVC	8/16/2023	2021	RET ABN	UG-SERVICE
9266	41083989	GRET	SVC	12/21/2022	2021	RET ABN	UG-SERVICE
9267	41081809	GRET	SVC	12/17/2022	2021	RET ABN	UG-SERVICE
9268	40387113	GRET	SVC	7/6/2022	2021	RET ABN	UG-SERVICE
9269	42067545	GRET	SVC	9/11/2023	2021	RET ABN	UG-SERVICE
9270	43864422	GRET	SVC	11/25/2024	2021	RET ABN	UG-SERVICE
9271	40359084	GRET	SVC	6/28/2022	2021	RET ABN	UG-SERVICE
9272	42284942	GRET	SVC	10/23/2023	2021	RET ABN	UG-SERVICE
9273	42225311	GRET	SVC	10/11/2023	2021	RET ABN	UG-SERVICE
9274	42051354	GRET	SVC	8/29/2023	2021	RET ABN	UG-SERVICE
9275	43506839	GRET	SVC	10/4/2024	2021	RET ABN	UG-SERVICE
9276	42096879	GRET	SVC	9/13/2023	2021	RET ABN	UG-SERVICE
9277	43877243	GRET	SVC	12/18/2024	2021	RET ABN	UG-SERVICE
9278	41974954	GRET	SVC	9/7/2023	2021	RET ABN	UG-SERVICE
9279	39419348	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9280	40898010	GRET	SVC	10/29/2022	2021	RET ABN	UG-SERVICE
9281	42476013	GRET	SVC	12/8/2023	2021	RET ABN	UG-SERVICE
9282	43364871	GRET	SVC	12/18/2024	2021	RET ABN	UG-SERVICE
9283	40589919	GRET	SVC	8/17/2022	2021	RET ABN	UG-SERVICE
9284	41821807	GRET	SVC	7/3/2023	2021	RET ABN	UG-SERVICE
9285	43027221	GRET	SVC	5/17/2024	2021	RET ABN	UG-SERVICE
9286	39837038	GRET	SVC	2/28/2022	2021	RET ABN	UG-SERVICE
9287	41417314	GRET	SVC	3/20/2023	2021	RET ABN	UG-SERVICE
9288	40481487	GRET	SVC	7/25/2022	2021	RET ABN	UG-SERVICE
9289	43736054	GRET	SVC	10/17/2024	2021	RET ABN	UG-SERVICE
9290	42429616	GRET	SVC	11/28/2023	2021	RET ABN	UG-SERVICE
9291	43546001	GRET	SVC	9/9/2024	2021	RET ABN	UG-SERVICE
9292	39419153	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9293	43440686	GRET	SVC	8/18/2024	2021	RET ABN	UG-SERVICE
9294	41670150	GRET	SVC	5/26/2023	2021	RET ABN	UG-SERVICE
9295	43605417	GRET	SVC	9/24/2024	2021	RET ABN	UG-SERVICE
9296	39570589	GRET	SVC	12/7/2021	2021	RET ABN	UG-SERVICE
9297	39968191	GRET	SVC	4/6/2022	2021	RET ABN	UG-SERVICE
9298	39419346	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9299	39445837	GRET	SVC	11/22/2021	2021	RET ABN	UG-SERVICE
9300	40367143	GRET	SVC	6/28/2022	2021	RET ABN	UG-SERVICE
9301	43324182	GRET	SVC	7/31/2024	2021	RET ABN	UG-SERVICE
9302	39660430	GRET	SVC	1/4/2022	2021	RET ABN	UG-SERVICE
9303	40445072	GRET	SVC	8/10/2022	2021	RET ABN	UG-SERVICE
9304	39419359	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9305	43364870	GRET	SVC	12/4/2024	2021	RET ABN	UG-SERVICE
9306	40099804	GRET	SVC	5/2/2022	2021	RET ABN	UG-SERVICE

Line #	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	order_number	order_type	maintenance_activity_type	field_complete_date	vintage_year	cu_action	cu_type
9307	39419351	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9308	41810741	GRET	SVC	6/24/2023	2021	RET ABN	UG-SERVICE
9309	39304588	GRET	SVC	10/18/2021	2021	RET ABN	UG-SERVICE
9310	41649941	GRET	SVC	5/12/2023	2021	RET ABN	UG-SERVICE
9311	39463351	GRET	SVC	11/29/2021	2021	RET ABN	UG-SERVICE
9312	42161019	GRET	SVC	9/25/2023	2021	RET ABN	UG-SERVICE
9313	42053020	GRET	SVC	8/31/2023	2021	RET ABN	UG-SERVICE
9314	43323978	GRET	SVC	10/18/2024	2021	RET ABN	UG-SERVICE
9315	39220296	GRET	SVC	10/4/2021	2021	RET ABN	UG-SERVICE
9316	41193702	GRET	SVC	1/23/2023	2021	RET ABN	UG-SERVICE
9317	40906483	GRET	SVC	11/9/2022	2021	RET ABN	UG-SERVICE
9318	42494285	GRET	SVC	12/18/2023	2021	RET ABN	UG-SERVICE
9319	40172796	GRET	SVC	5/18/2022	2021	RET ABN	UG-SERVICE
9320	41610797	GRET	SVC	5/6/2023	2021	RET ABN	UG-SERVICE
9321	41096317	GRET	SVC	1/17/2023	2021	RET ABN	UG-SERVICE
9322	39419355	GRET	SVC	11/4/2021	2021	RET ABN	UG-SERVICE
9323	39940284	GRET	SVC	3/29/2022	2021	RET ABN	UG-SERVICE
9324	43341451	GRET	SVC	7/22/2024	2021	RET ABN	UG-SERVICE
9325	41693187	GRET	SVC	6/1/2023	2021	RET ABN	UG-SERVICE
9326	41645626	GRET	SVC	5/13/2023	2021	RET ABN	UG-SERVICE
9327	40572170	GRET	SVC	8/16/2022	2021	RET ABN	UG-SERVICE
9328	43604842	GRET	SVC	9/30/2024	2021	RET ABN	UG-SERVICE
9329	40727970	GRET	SVC	9/23/2022	2021	RET ABN	UG-SERVICE
9330	41214688	GRET	SVC	1/31/2023	2022	RET ABN	UG-SERVICE
9331	43094986	GRET	SVC	5/26/2024	2022	RET ABN	UG-SERVICE
9332	42202874	GRET	SVC	10/10/2023	2022	RET ABN	UG-SERVICE
9333	40659650	GRET	SVC	9/7/2022	2022	RET ABN	UG-SERVICE
9334	43883409	GRET	SVC	11/25/2024	2022	RET ABN	UG-SERVICE
9335	43429214	GRET	SVC	8/14/2024	2022	RET ABN	UG-SERVICE
9336	43680049	GRET	SVC	10/31/2024	2022	RET ABN	UG-SERVICE
9337	40392550	GRET	SVC	7/8/2022	2022	RET ABN	UG-SERVICE
9338	44002386	GRET	SVC	12/20/2024	2022	RET ABN	UG-SERVICE
9339	42691237	GRET	SVC	2/12/2024	2022	RET ABN	UG-SERVICE
9340	41059853	GRET	SVC	12/12/2022	2022	RET ABN	UG-SERVICE
9341	42432422	GRET	SVC	12/1/2023	2022	RET ABN	UG-SERVICE
9342	40894333	GRET	SVC	10/27/2022	2022	RET ABN	UG-SERVICE
9343	43480984	GRET	SVC	10/13/2024	2022	RET ABN	UG-SERVICE
9344	42193518	GRET	SVC	10/16/2023	2022	RET ABN	UG-SERVICE
9345	41545560	GRET	SVC	4/20/2023	2022	RET ABN	UG-SERVICE
9346	40903511	GRET	SVC	11/7/2022	2022	RET ABN	UG-SERVICE
9347	41418426	GRET	SVC	3/20/2023	2022	RET ABN	UG-SERVICE
9348	43414528	GRET	SVC	8/14/2024	2022	RET ABN	UG-SERVICE
9349	41505970	GRET	SVC	4/12/2023	2022	RET ABN	UG-SERVICE
9350	41707319	GRET	SVC	6/6/2023	2022	RET ABN	UG-SERVICE
9351	40812853	GRET	SVC	11/4/2022	2022	RET ABN	UG-SERVICE
9352	43141795	GRET	SVC	6/5/2024	2022	RET ABN	UG-SERVICE
9353	42227332	GRET	SVC	10/13/2023	2022	RET ABN	UG-SERVICE

Line #	(a) order_number	(b) order_type	(c) maintenance_activity_type	(d) field_complete_date	(e) vintage_year	(f) cu_action	(g) cu_type
9354	40999526	GRET	SVC	11/14/2022	2022	RET ABN	UG-SERVICE
9355	42009420	GRET	SVC	8/11/2023	2022	RET ABN	UG-SERVICE
9356	40358436	GRET	SVC	6/18/2022	2022	RET ABN	UG-SERVICE
9357	41433515	GRET	SVC	4/10/2023	2022	RET ABN	UG-SERVICE
9358	43088863	GRET	SVC	5/20/2024	2022	RET ABN	UG-SERVICE
9359	42886917	GRET	SVC	4/5/2024	2022	RET ABN	UG-SERVICE
9360	43442961	GRET	SVC	8/29/2024	2022	RET ABN	UG-SERVICE
9361	41832561	GRET	SVC	6/29/2023	2022	RET ABN	UG-SERVICE
9362	42945490	GRET	SVC	4/16/2024	2023	RET ABN	UG-SERVICE
9363	41838260	GRET	SVC	7/7/2023	2023	RET ABN	UG-SERVICE
9364	43250339	GRET	SVC	12/11/2024	2023	RET ABN	UG-SERVICE
9365	43250337	GRET	SVC	12/13/2024	2023	RET ABN	UG-SERVICE
9366	42999743	GRET	SVC	4/30/2024	2023	RET ABN	UG-SERVICE
9367	42025517	GRET	SVC	8/19/2023	2023	RET ABN	UG-SERVICE
9368	43504818	GRET	SVC	9/4/2024	2023	RET ABN	UG-SERVICE
9369	42903146	GRET	SVC	4/10/2024	2023	RET ABN	UG-SERVICE
9370	41818281	GRET	SVC	6/29/2023	2023	RET ABN	UG-SERVICE
9371	42855908	GRET	SVC	3/28/2024	2023	RET ABN	UG-SERVICE
9372	43333372	GRET	SVC	7/29/2024	2023	RET ABN	UG-SERVICE
9373	42835352	GRET	SVC	3/18/2024	2023	RET ABN	UG-SERVICE
9374	43635836	GRET	SVC	9/30/2024	2024	RET ABN	UG-SERVICE
9375	43352875	GRET	SVC	7/12/2024	2024	RET ABN	UG-SERVICE
9376	43397594	GRET	SVC	8/12/2024	2024	RET ABN	UG-SERVICE

	A	B	C	D	E	F	G	H	I
1		report_year	report_month	rate_category	is_apartment	gas_consumption	installation_count	Revision Date	
2		2020	1	A_250	Yes	1080877	152216		
3		2020	1	A_250	No	19426122.5	1325721		
4		2020	2	A_250	Yes	1113111.6	152313		
5		2020	2	A_250	No	19696775.8	1327393		
6		2020	3	A_250	No	19977397	1329209		
7		2020	3	A_250	Yes	1116146.4	152592		
8		2020	4	A_250	No	13899875.3	1330361		
9		2020	4	A_250	Yes	749824.9	151045		
10		2020	5	A_250	Yes	574236.2	148920		
11		2020	5	A_250	No	10845771.1	1330890		
12		2020	6	A_250	Yes	248783.7	134226		
13		2020	6	A_250	No	5037826.6	1322128		
14		2020	7	A_250	Yes	128923.9	105480		
15		2020	7	A_250	No	2544849.5	1284194		
16		2020	8	A_250	No	2224229	1274060		
17		2020	8	A_250	Yes	112773.4	100134		
18		2020	9	A_250	Yes	125952.8	107866		
19		2020	9	A_250	No	2553543.3	1289671		
20		2020	10	A_250	No	4284604.5	1325287		
21		2020	10	A_250	Yes	224044	133543		
22		2020	11	A_250	No	9296285.7	1337935		
23		2020	11	A_250	Yes	508493.1	149182		
24		2020	12	A_250	No	15143084.9	1342016		
25		2020	12	A_250	Yes	854707.1	152959		
26		2021	1	A_250	Yes	1160900.5	153918		
27		2021	1	A_250	No	20647416.7	1343212		
28		2021	2	A_250	Yes	1306263	153190		
29		2021	2	A_250	No	22588743.8	1330945		
30		2021	3	A_250	No	20954704.2	1343933		
31		2021	3	A_250	Yes	1200279.6	154739		
32		2021	4	A_250	Yes	635474.9	153064		
33		2021	4	A_250	No	11702601.6	1349778		
34		2021	5	A_250	No	8731410.1	1348918		
35		2021	5	A_250	Yes	466287.5	150194		
36		2021	6	A_250	No	4564973	1342984		
37		2021	6	A_250	Yes	227719.7	138718		
38		2021	7	A_250	No	2575670.2	1307306		
39		2021	7	A_250	Yes	129571.6	110962		
40		2021	8	A_250	Yes	112260	101727		
41		2021	8	A_250	No	2287453.2	1288434		
42		2021	9	A_250	No	2276470.9	1288364		
43		2021	9	A_250	Yes	112152.9	101339		
44		2021	10	A_250	No	2772695.8	1320072		
45		2021	10	A_250	Yes	145629.7	120188		
46		2021	11	A_250	Yes	430435.8	146550		
47		2021	11	A_250	No	7656923.5	1345944		
48		2021	12	A_250	No	16058111.6	1352830		
49		2021	12	A_250	Yes	900098.2	152411		
50		2022	1	A_250	No	20391006.3	1353665		
51		2022	1	A_250	Yes	1159341.8	153083		
52		2022	2	A_250	No	25335849.7	1355068		
53		2022	2	A_250	Yes	1452309.8	153453		
54		2022	3	A_250	Yes	1250098.9	153274		
55		2022	3	A_250	No	22328350.9	1357178		
56		2022	4	A_250	Yes	880331.4	152654		
57		2022	4	A_250	No	16071716.9	1359907		
58		2022	5	A_250	Yes	555352.1	150086		
59		2022	5	A_250	No	10619781.5	1360592		
60		2022	6	A_250	Yes	193724.2	127923		
61		2022	6	A_250	No	3997753.5	1344080		

	A	B	C	D	E	F	G	H	I
62		2022	7	A_250	Yes	120083.3	103290		
63		2022	7	A_250	No	2462662.6	1305289		
64		2022	8	A_250	Yes	114053.6	98893		
65		2022	8	A_250	No	2403669.1	1296292		
66		2022	9	A_250	No	2115424.4	1181335		
67		2022	9	A_250	Yes	102804.1	93141		
68		2022	10	A_250	Yes	206337.3	128682		
69		2022	10	A_250	No	3903282.1	1338221		
70		2022	11	A_250	Yes	458399.6	146987	Added 1-17-2024	
71		2022	11	A_250	No	8467112.3	1358175	Added 1-17-2024	
72		2022	12	A_250	Yes	901605.2	151796	Added 1-17-2024	
73		2022	12	A_250	No	15970408.2	1363526	Added 1-17-2024	
74		2023	1	A_250	No	20887538.7	1365416	Added 1-17-2024	
75		2023	1	A_250	Yes	1179918.3	153071	Added 1-17-2024	
76		2023	2	A_250	No	20359198.2	1366638	Added 1-17-2024	
77		2023	2	A_250	Yes	1144801.9	153150	Added 1-17-2024	
78		2023	3	A_250	Yes	1081293.7	153061	Added 1-17-2024	
79		2023	3	A_250	No	19614766.7	1367786	Added 1-17-2024	
80		2023	4	A_250	Yes	780002.5	151761	Added 1-17-2024	
81		2023	4	A_250	No	14578543.6	1365154	Added 1-17-2024	
82		2023	5	A_250	Yes	483455.1	149025	Added 1-17-2024	
83		2023	5	A_250	No	9434394.8	1367236	Added 1-17-2024	
84		2023	6	A_250	Yes	192893.2	125912	Added 1-17-2024	
85		2023	6	A_250	No	3906792.8	1292796	Added 1-17-2024	
86		2023	7	A_250	Yes	123229.6	106208	Added 1-17-2024	
87		2023	7	A_250	No	2621319.9	1318248	Added 1-17-2024	
88		2023	8	A_250	Yes	107738.5	99414	Added 1-17-2024	
89		2023	8	A_250	No	2297530	1302736	Added 1-17-2024	
90		2023	9	A_250	No	2475618.4	1311107	Added 1-17-2024	
91		2023	9	A_250	Yes	116760	103938	Added 1-17-2024	
92		2023	10	A_250	Yes	184262.3	1339868	Added 1-17-2024	
93		2023	10	A_250	No	3492235.4	125907	Added 1-17-2024	
94		2023	11	A_250	Yes	449254.1	146863	Added 1-17-2024	
95		2023	11	A_250	No	8333796.2	1364012	Added 1-17-2024	
96		2023	12	A_250	Yes	834293.2	151302	Added 1-17-2024	
97		2023	12	A_250	No	15079471.7	1368077	Added 1-17-2024	
98		2024	1	A_250	No	17800067.15	1382994	Added 2-20-2025	
99		2024	1	A_250	Yes	981678.37	157070	Added 2-20-2025	
100		2024	2	A_250	No	21533608.18	1384764	Added 2-20-2025	
101		2024	2	A_250	Yes	1201469.3	157226	Added 2-20-2025	
102		2024	3	A_250	Yes	856356	157143	Added 2-20-2025	
103		2024	3	A_250	No	15785937.81	1386304	Added 2-20-2025	
104		2024	4	A_250	Yes	771465.55	157303	Added 2-20-2025	
105		2024	4	A_250	No	14160500.17	1387075	Added 2-20-2025	
106		2024	5	A_250	Yes	368662.45	157087	Added 2-20-2025	
107		2024	5	A_250	No	7207548.02	1386823	Added 2-20-2025	
108		2024	6	A_250	Yes	160459.85	156940	Added 2-20-2025	
109		2024	6	A_250	No	3316558.77	1386314	Added 2-20-2025	
110		2024	7	A_250	Yes	117724.85	156794	Added 2-20-2025	
111		2024	7	A_250	No	2487221.75	1385822	Added 2-20-2025	
112		2024	8	A_250	Yes	104878.27	156647	Added 2-20-2025	
113		2024	8	A_250	No	2211320.04	1385277	Added 2-20-2025	
114		2024	9	A_250	No	2351851.14	1385011	Added 2-20-2025	
115		2024	9	A_250	Yes	111508.98	156620	Added 2-20-2025	
116		2024	10	A_250	Yes	135301.2	157091	Added 2-20-2025	
117		2024	10	A_250	No	2653522.59	1385633	Added 2-20-2025	
118		2024	11	A_250	Yes	316923.58	157299	Added 2-20-2025	
119		2024	11	A_250	No	5960552.91	1385837	Added 2-20-2025	
120		2024	12	A_250	Yes	774204.39	158061	Added 2-20-2025	
121		2024	12	A_250	No	13600633.25	1388370	Added 2-20-2025	
122									

Average Installation Count

	2020	2021	2022	2023	2024	3 Year
No	1,318,239	1,330,227	1,331,111	1,242,926	1,385,852	1,319,963
Yes	136,706	136,417	134,439	236,131	157,107	175,892

Average Consumption by Year

	APT	Consumption	Premise Count	Ave Consumption
2020	NO	124,930,365.20	1,318,239	95
2020	YES	6,837,874.10	136,706	50
2021	NO	122,817,174.60	1,330,227	92
2021	YES	6,827,073.40	136,417	50
2022	NO	134,067,017.50	1,331,111	101
2022	YES	7,394,441.30	134,439	55
2023	NO	123,081,206.40	1,242,926	99
2023	YES	6,677,902.40	236,131	28
2024	NO	109,069,321.78	1,385,852	79
2024	YES	5,900,632.79	157,107	38
3 Year	NO	122,072,515.23	1,319,963	92
3 Year	YES	6,657,658.83	175,892	38

Average Consumption by Heating Season (Oct-May)

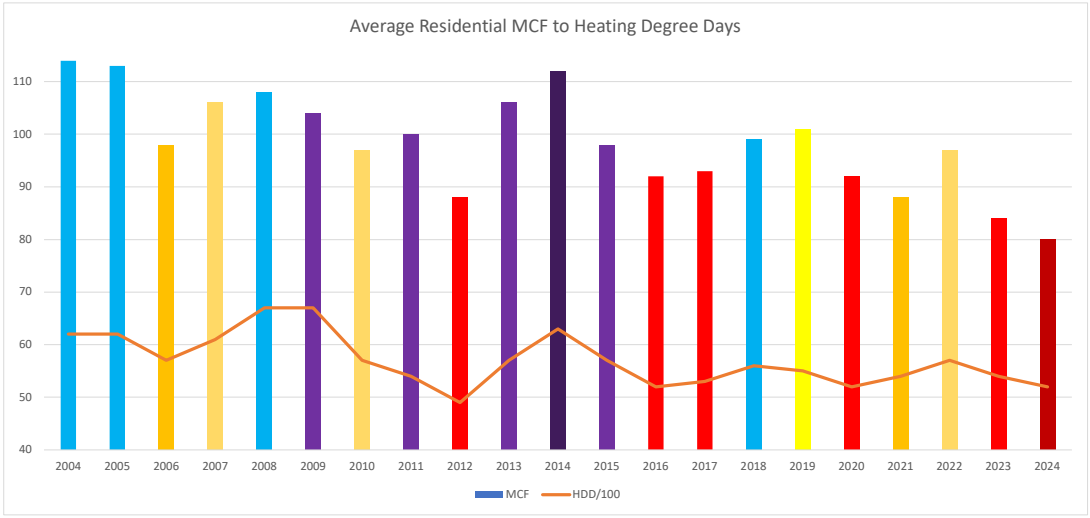
	APT	Consumption	Premise Count	Ave Consumption
2020/21	NO	113,348,851.50	1,324,233	86
2020/21	YES	6,356,449.70	136,562	47
2021/22	NO	121,234,436.20	1,330,669	91
2021/22	YES	6,773,597.70	135,428	50
2022/23	NO	113,215,244.60	1,287,018	88
2022/23	YES	6,235,813.60	185,285	34
2023/24	NO	103,393,164.63	1,314,389	79
2023/24	YES	5,647,441.27	196,619	29

Average Consumption Non-Heating Season (Jun-Sep)

	APT	Consumption	Premise Count	Ave Consumption
2021	NO	11,704,567.30	1,330,227	9
2021	YES	581,704.20	136,417	4
2022	NO	10,979,509.60	1,331,111	8
2022	YES	530,665.20	134,439	4
2023	NO	11,301,261.10	1,242,926	9
2023	YES	540,621.30	236,131	2
2024	NO	10,366,951.70	1,385,852	7
2024	YES	494,571.95	157,107	3

Average Consumption Previous Full Seasons (Jul-Jun)

	APT	Consumption	Premise Count	Ave Consumption
2020/21	NO	125,236,446.30	1,324,233	95
2020/21	YES	6,951,819.50	136,562	51
2021/22	NO	132,371,784.00	1,330,669	99
2021/22	YES	7,321,306.40	135,428	54
2022/23	NO	124,103,793.50	1,287,018	96
2022/23	YES	6,765,647.80	185,285	37
2023/24	NO	114,104,191.70	1,314,389	87
2023/24	YES	6,155,629.22	196,619	31
3 Year	NO	123,526,589.73	1,319,963	94
3 Year	YES	6,747,527.81	175,892	38

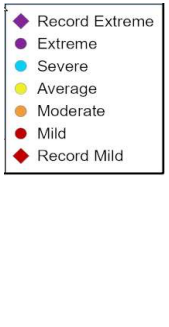

Average Residential MCF to Heating Degree Days
110
100
90
80
70
60
50
40
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
MCF
HDD/100

Calendar Year
Average Residential

Year	MCF	HDD/100	AWSSI Severity
2004	114	62	Average/Severe
2005	113	62	Average/Severe
2006	98	57	Mild/Moderate/Average
2007	106	61	Moderate/Average
2008	108	67	Severe
2009	104	67	Severe/Extreme
2010	97	57	Moderate/Average
2011	100	54	Severe/Extreme
2012	88	49	Mild/Record Mild
2013	106	57	Moderate/Average
2014	112	63	**Record Extreme**
2015	98	57	Extreme
2016	92	52	Mild
2017	93	53	Mild
2018	99	56	Average/Extreme
2019	101	55	Moderate/Average/Severe
2020	92	52	Mild
2021	88	54	Moderate
2022	97	57	Moderate/Average
2023	84	54	Mild
2024	80	52	**Record Mild**
16yr Average	96		
21yr Average	99		

Severity Color

AWSSI Table



For Michigan, historical AWSSI data and category maps are available from the**Midwest Regional Climate Center (MRCC)**:

Severity **Reference:**

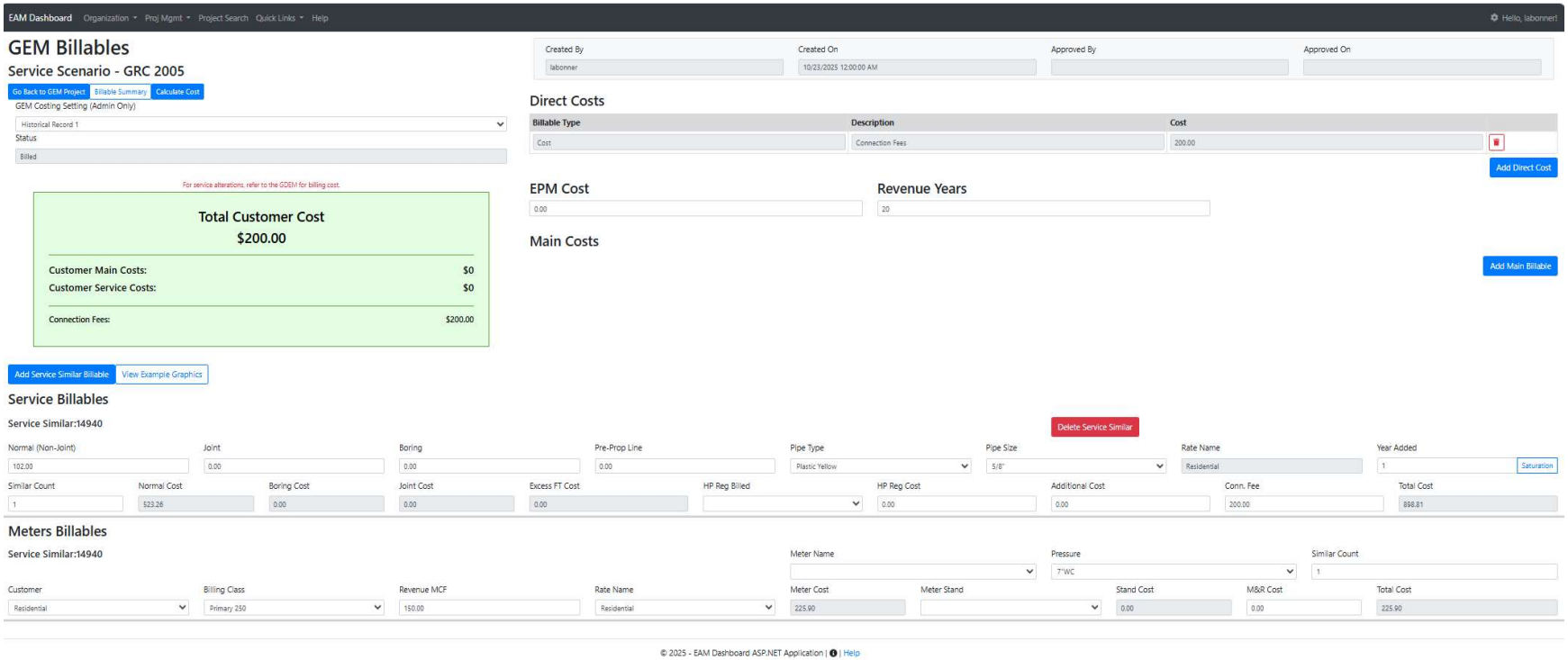
Midwest Regional Climate Center (MRCC). Accumulated Winter Season Severity Index (AWSSI). Available at: https://mrcc.purdue.edu/research/AWSSI?cite?turn4search24?

The **U.S. Energy Information Administration (EIA)** as the source for Heating Degree Days data. The official page explains HDD and provides historical data by census division, including East North Central (which covers Michigan):

HDD **Reference:**

U.S. Energy Information Administration (EIA). Degree-days. Monthly Energy Review, Table 1.11. Available at: https://www.eia.gov/energyexplained/units-and-calculators/degree-days.php

Average Service Length of 102' from the historical data referenced in Exhibit A-45 (LAB-2)



Utlizing 150mcf (the assumption used in 2005)

Utilizing 94mcf (Average actual mcf 2009-2024)

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

ANN E. BULKLEY

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Ann E. Bulkley. My business address is One Beacon Street, Suite 2600, Boston, Massachusetts 02108. I am a Principal at The Brattle Group ("Brattle"), a consulting firm that advises clients on regulatory finance and ratemaking issues.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this direct testimony before the Michigan Public Service Commission ("MPSC" or the "Commission") on behalf of Consumers Energy Company, ("Consumers Energy" or the "Company").

Q. Please describe your background and professional experience in the energy and utility industries.

A. I hold a Bachelor's degree in Economics and Finance from Simmons College and a Master's degree in Economics from Boston University, and have more than 30 years of experience consulting to the energy industry. I have provided testimony regarding financial matters, including the cost of capital, before numerous regulatory agencies. I have advised energy and utility clients on a wide range of financial and economic issues, with primary concentrations in valuation and utility rate matters. Many of these assignments have included the determination of the cost of capital for valuation and ratemaking purposes. A summary of my professional and educational background is presented in Attachment A to Exhibit A-14 (AEB-1), Schedule D-5.

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to present evidence and provide a recommendation regarding the return on equity ("ROE") for Consumers Energy's natural gas utility operations to be used for ratemaking purposes.

Q. Are you sponsoring any exhibits with your direct testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-14 (AEB-1) Schedule D-5 Cost of Common Shareholder's Equity.

Q. Were these exhibits prepared by you or under your supervision?

A. Yes.

Q. Please provide a brief overview of the analyses that support your ROE recommendation.

A. I have estimated the market-based cost of equity by applying traditional estimation methodologies to a proxy group of comparable utilities, including the constant growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), and a Bond Yield Risk Premium ("BYRP" or "Risk Premium") analysis. My recommendation also takes into consideration the business, regulatory and financial risk of the Company relative to the proxy group, and current and prospective capital market conditions. While I do not make specific adjustments to my ROE recommendation for these factors, I do consider them in the aggregate when determining where my recommended ROE falls within the range of the analytical results.

Q. How is the remainder of your direct testimony organized?

A. The remainder of my direct testimony is organized as follows:

- Section III provides a summary of my analyses and conclusions.
- Section IV reviews the regulatory guidelines pertinent to the development of the cost of capital.
- Section V discusses current and projected capital market conditions and the effect of those conditions on the Company's cost of equity.
- Section VI explains my selection of the proxy group.
- Section VII describes my cost of equity analyses and the basis for my recommended ROE in this proceeding.
- Section VIII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for the Company in this case.
- Section IX presents my conclusions and recommendations.

III. SUMMARY OF ANALYSIS AND CONCLUSIONS

Q. Please summarize the key factors that you consider in your analyses and upon which you base your recommended ROE.

A. My analyses and recommendations consider the following:

- The United States ("U.S.") Supreme Court's *Hope* and *Bluefield* decisions established the standards for determining a fair and reasonable authorized ROE for public utilities, including consistency of the allowed return with the returns of other businesses having similar risk, adequacy of the return to provide access to capital and support credit quality, and the requirement that the result lead to just and reasonable rates.[1]
- The effect of current and prospective capital market conditions on the cost of equity estimation models and on investors' return requirements.
- The results of several analytical approaches that provide estimates of the Company's cost of equity. Because the Company's authorized ROE should be a forward-looking estimate over the period during which the rates will be in

[1] *Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591 (1944) ("*Hope*"); *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*").

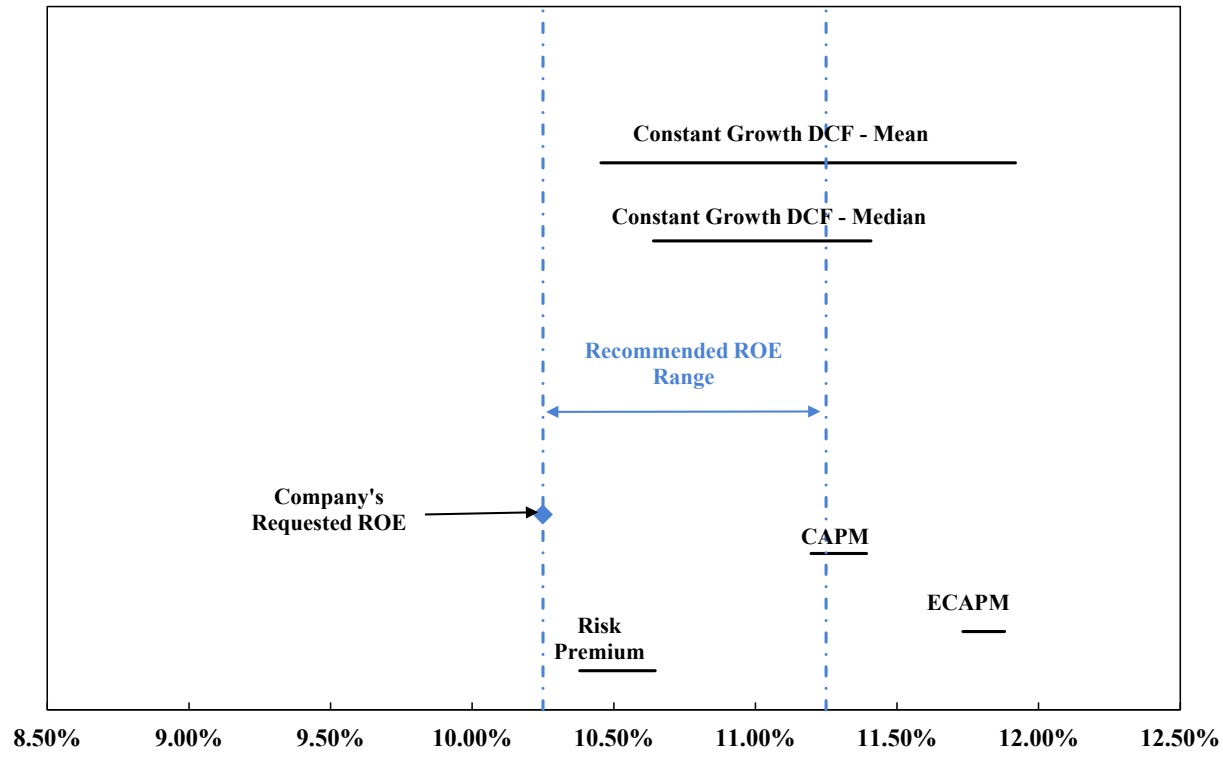
effect, these analyses rely on forward-looking inputs and assumptions (e.g. projected analyst growth rates in the DCF model, forecasted risk-free rate, and market risk premium in the CAPM analysis.)

- Although the companies in my proxy group are generally comparable to Consumers Energy, each company is unique, and no two companies have the exact same business and financial risk profiles. Accordingly, I consider the Company's regulatory, business, and financial risks relative to a proxy group of comparable companies in determining where the Company's ROE should fall within the reasonable range of analytical results to appropriately account for any residual differences in risk.

Q. What are the results of the models that you have used to estimate the market-based cost of equity for Consumers Energy?

A. Figure 1 summarizes the range of results produced by the cost of equity analyses based on market data through the end of September 2025.

Figure 1: Summary of Cost of Equity Analytical Results



Q. What is your recommended ROE for the Company in this proceeding?

A. Considering the analytical results of the market-based cost of equity models, current and prospective capital market conditions and the Company's regulatory, business, and financial risk relative to the proxy group, I conclude that an ROE in the range of 10.25% to 11.25% is reasonable, and within that range, the Company is requesting an ROE of 10.25% with a capital structure consisting of an equity ratio of 50.75%.

IV. REGULATORY GUIDELINES

Q. Please describe the principles that guide the establishment of the cost of capital for a regulated utility.

A. The U.S. Supreme Court's precedent-setting *Hope* and *Bluefield* cases established the standards for determining the fairness or reasonableness of a utility's allowed ROE. Among the standards established by the Court in those cases are: (1) consistency with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the result reached, as opposed to the methodology employed, is the controlling factor in arriving at just and reasonable rates. [2]

Q. Has the Commission provided similar guidance in establishing the appropriate return on common equity?

A. Yes. For example, in its decision in the Company's last natural gas rate case (Case No. U-21806), the Commission stated that:

> The criteria for establishing a fair rate of return for public utilities is rooted in the language of the landmark United States Supreme Court cases *Bluefield* and *Hope*. The Court in *Bluefield* held that:

[2] *Bluefield*, 262 U.S. at 692-93; *Hope*, 320 U.S. at 603.

> [a] public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. [*Bluefield*, 262 US at 692-693.]

In *Hope*, the Court held that:

> the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. [*Hope*, 320 US at 603.]

The Commission also notes that the Michigan Supreme Court has held that the determination of what is a fair or reasonable rate of return "is not subject to mathematical computation with scientific exactitude but depends upon a comprehensive examination of all factors involved, having in mind the objective sought to be attained in its use." *Meridian Twp v City of East Lansing*, 342 Mich 734, 749; 71 NW2d 234 (1955).

These rulings demonstrate that, in establishing a fair return, consideration should be given to both a utility's investors and its customers. As the Commission stated in the December 23, 2008 Order in Case No. U-15244 ("December 23 Order"), "the rate of return should not be so high as to place an unnecessary burden on ratepayers, yet should be high

enough to ensure investor confidence in the financial soundness of the enterprise." December 23 Order, page 12[3].

Q. Is fixing a fair rate of return just about protecting the utility's interests?

A. No. As the court noted in *Bluefield*, a proper rate of return not only assures "confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit [but also] enable[s the utility] to raise the money necessary for the proper discharge of its public duties."[4] As the Court went on to explain in *Hope*, "[t]he rate-making process … involves balancing of the investor and consumer interests."[5]

Q. Is a utility's ability to attract capital also affected by the ROEs that are authorized for other utilities?

A. Yes. Utilities compete directly for capital with other investments of similar risk, which include other electric, natural gas, and water utilities nationally. Therefore, the ROE authorized for a utility sends an important signal to investors regarding whether there is regulatory support for financial integrity, dividends, growth, and fair compensation for business and financial risk within that jurisdiction generally, and for that utility particularly. The cost of capital represents an opportunity cost to investors. If higher returns are available elsewhere for other investments of comparable risk over the same time-period, investors have an incentive to direct their capital to those alternative investments. Thus, an authorized ROE significantly below authorized ROEs for other utilities can inhibit the utility's ability to attract capital for investment.

---

[3] MPSC Case No. U-21806, September 30, 2025 Order, at pages 150-151.

[4] *Bluefield*, 262 U.S. at 679, 693.

[5] *Hope*, 320 U.S. at 591, 603.

Q. What is the standard for setting the ROE in any jurisdiction?

A. The stand-alone ratemaking principle is a foundation of jurisdictional ratemaking. This principle requires that the rates that are charged in any operating jurisdiction be for the costs incurred in that jurisdiction. The stand-alone ratemaking principle ensures that customers in each jurisdiction only pay for the costs of the service provided in that jurisdiction, which is not influenced by the business operations in other operating companies. Consistent with this principle, the cost of equity analysis is performed for an individual operating company as a stand-alone entity. As such, I have evaluated the investor-required return for Consumers Energy's natural gas utility operations in Michigan.

Q. Does the fact that Consumers Energy is a wholly owned subsidiary of CMS Energy Corporation ("CMS"), a publicly-traded company, affect your analysis?

A. No. In this proceeding, consistent with stand-alone ratemaking principles, it is appropriate to establish the cost of equity for Consumers Energy's natural gas operations, not its publicly-traded parent, CMS. More importantly, however, it is appropriate to establish a cost of equity and capital structure that provide the ability to attract capital on reasonable terms for Consumers Energy's natural gas operations, both on a stand-alone basis and within CMS. While Consumers Energy is committed to investing the required capital to provide safe and reliable natural gas service, because it is a subsidiary of CMS, the Company competes with the other CMS subsidiaries for discretionary investment capital. In determining how to allocate its finite discretionary capital resources, it would be reasonable for CMS to consider the authorized ROE of each of its subsidiaries.

Q. Are the regulatory framework, the authorized ROE, and equity ratio important to the financial community?

A. Yes. The regulatory framework is one of the most important factors in investors' assessments of risk. Specifically, the authorized ROE and equity ratio for regulated utilities is very important for determining the degree of regulatory support for reinforcing a utility's creditworthiness and financial stability in the jurisdiction. To the extent authorized returns in a jurisdiction are lower than the returns that have been authorized more broadly, such actions are considered by both debt and equity investors in the overall risk assessment of the regulatory jurisdiction in which the company operates. The direct testimony of Company witness Marc R. Bleckman describes in further detail the effect of the authorized ROE and equity ratio on credit quality as well as rating agencies' assessment of Michigan's regulatory environment.

Q. What are your conclusions regarding regulatory guidelines?

A. The ratemaking process is premised on the principle that, in order for investors and companies to commit the capital needed to provide safe and reliable utility services, a utility must have a reasonable opportunity to recover the return of, and the market-required return on, its invested capital. Accordingly, the Commission's order in this proceeding should establish rates that provide the Company with a reasonable opportunity to earn an ROE that is adequate to attract capital at reasonable terms and sufficient to ensure its financial integrity. It is important for the ROE authorized in this proceeding to take into consideration current and projected capital market conditions, as well as investors' expectations and requirements for both risks and returns. Because utility operations are capital-intensive, regulatory decisions should enable the utility to attract capital at

reasonable terms under a variety of economic and financial market conditions. Providing the opportunity to earn a market-based cost of capital supports the financial integrity of the Company, which is in the interest of both customers and shareholders.

V. CAPITAL MARKET CONDITIONS

Q. Why is it important to analyze capital market conditions?

A. Capital market conditions influence cost of equity models by affecting inputs in the model at the time the analysis is performed. While the ROE that is established in a rate proceeding is intended to be forward-looking, the analyst uses current and projected market data, specifically stock prices, dividends, growth rates and interest rates, in the models to estimate the required return for the subject company.

Analysts and regulatory commissions recognize the importance of considering how these conditions impact cost of equity estimation models when determining the appropriate range and recommended ROE for a future period. If investors do not expect current market conditions to be sustained in the future, it is possible that the cost of equity estimation models will not provide an accurate estimate of investors' required return during that rate period. Therefore, it is important to consider projected market data to estimate the return of the forward-looking period.

Q. What has the level of inflation been over the past few years?

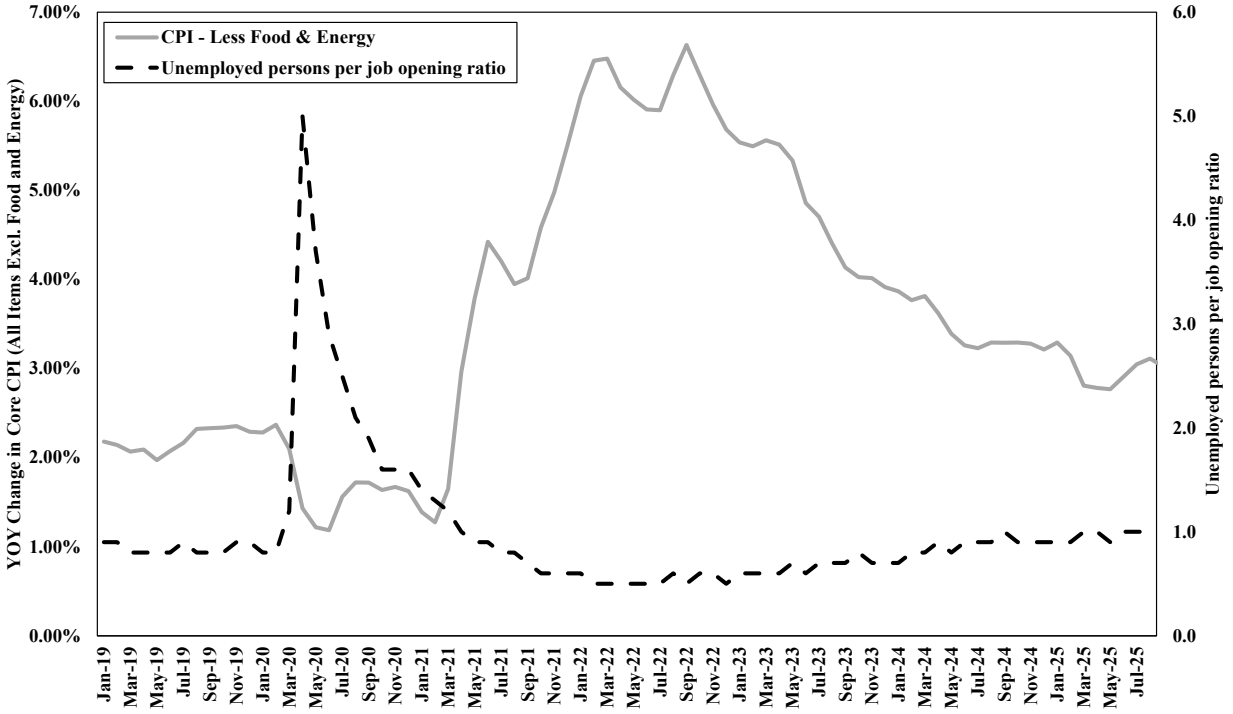
A. As shown in Figure 2, core inflation increased steadily beginning in early 2021, rising from 1.40% in January 2021 to a high of 6.64% in September 2022, which was the largest 12-month increase since 1982.[6] While core inflation has declined in response to the

[6] Reade Pickert, "Core US Inflation Rises to 40-Year High, Securing Big Fed Hike", *Bloomberg,* October 13, 2022.

Federal Reserve's monetary policy, it continues to remain above the Federal Reserve's target level of 2.00%.

Because the Federal Reserve's dual mandate is to promote stable prices and employment, considering employment data, in addition to inflation, is important. The ratio of unemployed persons per job opening was 1.0 in August 2025 (the most recent data available at the time of this testimony) and has been consistently at or below 1.00 since April 2021, suggesting a tighter labor market. This indicates sustained strength in the labor market, allowing the Federal Reserve to prioritize reducing inflation by pursuing the necessary restrictive monetary policy needed to achieve its 2.00% target benchmark.

Figure 2: Core Inflation and Unemployed Persons-to-Job Openings, January 2019 to September 2025[7]



[7] Bureau of Labor Statistics.

Q. What policy actions did the Federal Reserve enact to respond to increased inflation?

A. The dramatic increase in inflation prompted the Federal Reserve to pursue an aggressive normalization of monetary policy, removing the accommodative policy programs used to mitigate the economic effects of COVID-19. Between the March 2022 Federal Open Market Committee ("FOMC") meeting and the July 2023 FOMC meeting, the Federal Reserve increased the target federal funds rate through a series of increases from a range of 0.00 – 0.25% to a range of 5.25% to 5.50%.

Q. How did yields on long-term government bonds respond to the Federal Reserve's normalization of monetary policy?

A. Since the Federal Reserve's December 2021 meeting, the yield on 10-year Treasury bonds has increased by over 350 basis points, increasing from 1.47% on December 15, 2021, to a peak of 4.98% on October 19, 2023. It currently remains well above 2021 levels (i.e. 4.11% as of October 31, 2025).[8]

Q. Did the Federal Reserve recently reduce the federal funds rate?

A. Yes. The Federal Reserve reduced the federal funds rate by 50 basis points in September 2024, 25 basis points in November 2024, 25 basis points in December 2024, and more recently 25 basis points both in September and October 2025. At the September 2025 meeting, the Federal Reserve noted that it was continuing to assess the risks to both inflation and employment, but that the "downside risks to employment have risen" and, as a result, concluded that it was the appropriate time for a rate decrease after having kept rates unchanged in 2025.[9]

---

[8] *Bloomberg Professional.*

[9] Federal Reserve, Press Release, September 17, 2025.

Q. What is the expected path of monetary policy over the near-term?

A. At the October 2025 FOMC meeting, Chairman Powell noted that inflation has "eased from its highs in mid-2022," but remains "somewhat elevated," the labor market is "gradually cooling," and slower job gains "likely reflects a decline in the growth of the labor force."[10] According to Chairman Powell, these recent market developments indicate an increase in the downside risks to employment.[11] As a result, the FOMC reduced the federal funds rate by 25 basis points to a range of 3.75% to 4.00%.[12] Regarding the possible path of monetary policy, Chairman Powell acknowledged increased uncertainty due to the implementation of government policy changes by the current administration, in particular, the changes in tariffs, and that there is still uncertainty whether the effect of tariffs on inflation will be "short-lived" or "more persistent."[13] Given the risks to both inflation and employment, Chairman Powell stated a "further reduction in the policy rate at the December meeting is not a foregone conclusion---Far from it. Policy is not on a preset course."[14]

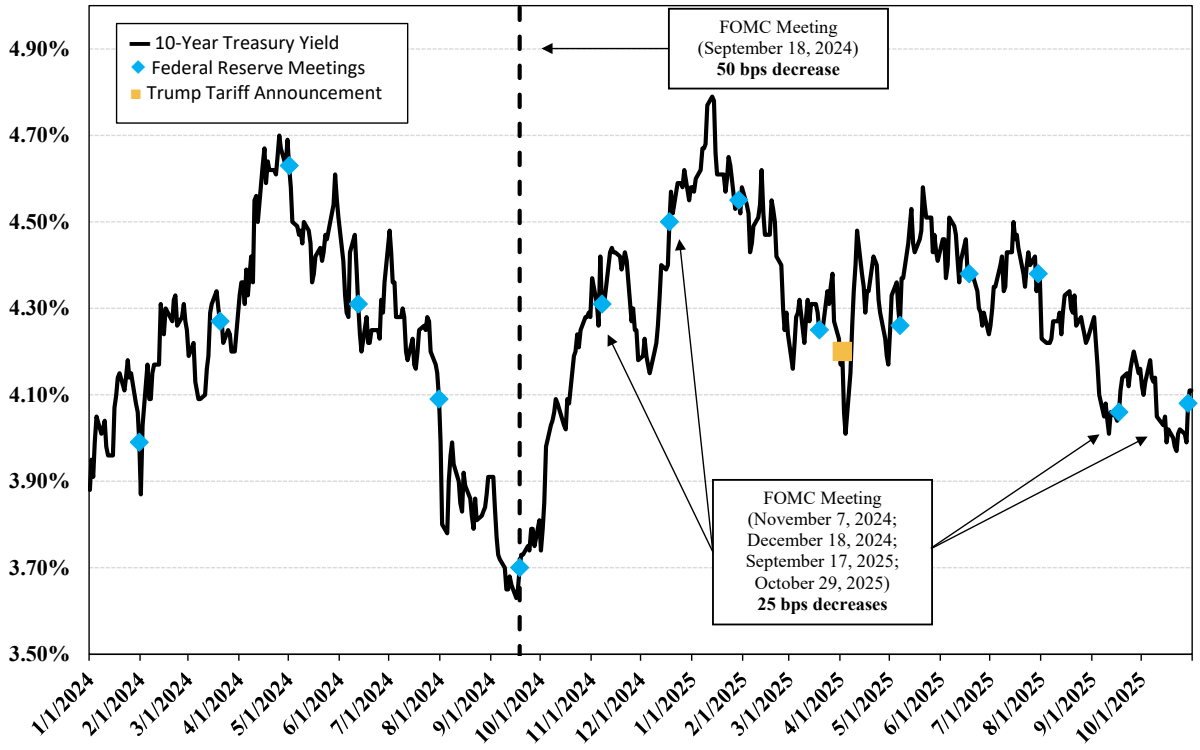
Q. What has happened to the yields on long-term government bonds since the FOMC reduced the federal funds rate in September 2024?

A. As shown in Figure 3 below, while the yield on the 10-year treasury bond declined prior to the time of the first federal funds rate cut, the yield has generally increased since the September 2024 FOMC meeting. As of October 31, 2025, the 10-year Treasury bond yield was 4.11%, which is consistent with levels seen in July 2024, several months prior to the reductions in the federal funds rate.

---

[10] Transcript of Jerome Powell's Press Conference, October 29, 2025.
[11] *Id*.
[12] *Id.*
[13] *Id.*
[14] *Id.*

Figure 3: 10-Year Treasury Bond Yield, Janaury 2024 through October 2025[15]



Q. Why have long-term interest rates remained above the levels at the time the federal reserve first reduced the federal funds rate in September 2024?

A. Investors view key elements of President Trump's economic plan, such as tax cuts, immigration policy, and tariffs, as inflationary.[16] For example, since his inauguration in January 2025, President Trump announced several sets of tariffs on each of the U.S.'s trading partners including by not limited to his announcement on April 2, 2025 implementing a "baseline line" tariff of 10.00% on all imports, reciprocal tariffs on countries that failed to negotiate a trade deal that went into effect on August 7, 2025, as

[15] S&P Capital IQ Pro.

[16] The increase in long-term government bond yields was initially related to investors responding to an increasing probability of a Trump Administration in 2025 and has continued since President Trump's re-election and inauguration. (Davide Barbuscia and Lewis Krauskopf, "Bond rebound uncertain as Trump plans overshadow Fed rate cuts," *Reuters*, November 8, 2024).

well as the 50.00% tariffs on steel, aluminum, and copper and 25.00% tariffs on imported cars.[17] The implemented tariffs are largely viewed as inflationary. Inflation affects bonds, in particular long-term government bonds, because it erodes the value of future bonds payments. Therefore, in an inflationary environment, investors will demand higher returns on bonds to compensate for the added risk of inflation thus bond prices decline and the yields on bonds increase. The longer the duration of the bond, the greater the effect of inflation which is why inflation risk is greater for long-term government bonds. The significant tariff policy increases the risk that inflation will remain elevated, which is why the yields on long-term bonds have not decreased and in fact have increased since the Federal Reserve first reduced the federal funds rate in September 2024. Further, the use of tariffs strains the relationship with trading partners, which could result in a reduction in the foreign demand for long-term U.S. government bonds and lead to additional upward pressure on long-term government bond yields.[18]

Q. What are expectations for the yields on long-term government bonds?

A. While the Federal Reserve is forecasting additional cuts to the federal funds rate in 2025 and 2026, economists are still expecting elevated long-term interest rates. For example, the forward yield curve, which measures the market-implied future yields on Treasury bonds, shows that investors expect the yield on the 30-year Treasury bond to remain stable with the yield ranging from 4.8265% to 4.9050% during the period of November 2025

17 Jennifer Clarke, "What Are Tariffs, How Do They Work and Why Is Trump Using Them?" *BBC News*, August 27, 2025.

18 Karishma Vanjani, "U.S. Treasury Bonds Sell Off as 30-Year Yield Rises Most Since 1982," *Barron's*, April 9, 2025.

through October 2027.[19] This is important because it means that long-term interest rates are expected to remain elevated during the period that the Company's rates will be in effect.

Q. What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A. It is important to consider current and projected market conditions in setting the forward-looking ROE due to its effect on the estimated cost of equity. While the FOMC reduced the federal funds rate at its October 2025 meeting, Chairman Powell has indicated that the Federal Reserve will continue to rely on incoming data to determine future adjustments to the federal funds rate. Further, long-term interest rates remain elevated and are expected to continue to remain elevated due to inflationary policies such as tariffs, immigration policy, and tax cuts. With long-term interest rates expected to remain relatively high, borrowing also remains relatively more expensive, and thus investors also demand a relatively high cost of capital, which means the cost of capital also remains relatively high.

VI. PROXY GROUP SELECTION

Q. Please provide a brief profile of Consumers Energy's natural gas utility operations.

A. Consumers Energy's natural gas operations include gas transmission, storage, and distribution system and is a wholly owned subsidiary of CMS. The Company provides natural gas service to approximately 1.8 million customers in Michigan with approximately $1.9 billion in operating revenues from natural gas sales.[20] As of December 31, 2024, the

[19] *Bloomberg Professional*. This is consistent with the source relied on by Company witness Bleckman for investors' expectations regarding future yields on long-term government bonds over the near-term.

[20] Consumers Energy Corporation, Annual Report of Natural Gas Utilities to the Michigan Public Service Commission, December 31, 2024, at pages 300-301.

Company's net utility natural gas plant was approximately $8.7 billion.[21] Consumers Energy currently has an investment-grade long-term rating of A- (Outlook: Stable) from S&P and A3 (Outlook: Stable) from Moody's.[22]

Q. Why have you used a group of proxy companies to estimate the cost of equity for Consumers Energy?

A. In this proceeding, the cost of equity is being estimated for a natural gas utility that is not itself publicly traded. Because the cost of equity is a market-based concept and the Company's operations do not make up the entirety of a publicly traded entity, it is necessary to establish a group of companies that is both publicly traded and comparable to the Company in certain fundamental business and financial respects to serve as its "proxy" for purposes of estimating the cost of equity.

Even if the Company was a publicly-traded entity, it is possible that transitory events could bias its market value over a given period. A significant benefit of using a proxy group is that it moderates the effects of unusual events that may be associated with any one company. The proxy companies used in my analyses all possess a set of operating and risk characteristics that are substantially comparable to the Company, and thus provide a reasonable basis to estimate the appropriate cost of equity for the Company.

Q. How did you select the companies included in your proxy group?

A. I began with the group of nine companies that *Value Line* classifies as Natural Gas Distribution Utilities and applied the following screening criteria to select companies that:

- pay consistent quarterly cash dividends, because such companies cannot be analyzed using the constant growth DCF model;

[21] Exhibit A-2 (HLR-3), Schedule B-1, p. 1.

[22] S&P Capital IQ Pro, accessed October 24, 2025. Moody's, accessed October 24, 2025.

- have investment grade long-term issuer ratings;
- have positive long-term earnings growth forecasts from at least two utility industry equity analysts;
- derive more than 70.00% of their total operating income from regulated operations;
- derive more than 60.00% of regulated operating income from gas distribution operations; and,
- were not parties to a merger or transformative transaction during the analytical periods relied on.

Q. What is the composition of your proxy group?

A. The screening criteria discussed above is shown in Exhibit A-14 (AEB-1), Schedule D-5, page 2, and results in a proxy group consisting of the companies shown in Figure 4.

Figure 4: Proxy Group

Company	Ticker
Atmos Energy Corporation	ATO
NiSource Inc.	NI
Northwest Natural Gas Company	NWN
ONE Gas, Inc.	OGS
Southwest Gas Corporation	SWX

VII. COST OF EQUITY ESTIMATION

Q. Please briefly discuss the ROE in the context of the regulated rate of return.

A. The rate of return for a regulated utility is the weighted average cost of capital, in which the costs of the individual sources of capital are weighted by their respective proportion (i.e. book values) in the utility's capital structure. The ROE is the cost rate applied to the equity capital in calculating the rate of return. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

Q. How is the required cost of equity determined?

A. The required cost of equity is estimated by using analytical techniques that rely on market-based data to quantify investor expectations regarding equity returns, adjusted for certain incremental costs and risks. Informed judgment is then applied to determine where the company's cost of equity falls within the range of results produced by multiple analytical techniques. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, as well as the subject company (in the context of the proxy group), in particular.

Q. What methods did you use to estimate the cost of equity for the Company in this proceeding?

A. I consider the results of the constant growth form of the DCF model, the CAPM, the ECAPM, and a BYRP analysis. A reasonable cost of equity estimate appropriately considers alternative methodologies and the reasonableness of their individual and collective results.

Q. Is it important to use more than one analytical approach?

A. Yes. Because the cost of equity is not directly observable, it must be estimated based on both quantitative and qualitative information. When faced with the task of estimating the cost of equity, analysts and investors are inclined to gather and evaluate as much relevant data as reasonably can be analyzed. Several models have been developed to estimate the cost of equity, and I use multiple approaches to estimate the cost of equity. As a practical matter, however, all of the models available for estimating the cost of equity are subject to limiting assumptions or other methodological constraints. Consequently, many

well-regarded finance texts recommend using multiple approaches when estimating the cost of equity. For example, Copeland, Koller, and Murrin[23] suggest using the CAPM and Arbitrage Pricing Theory model, while Brigham and Gapenski[24] recommend the CAPM, DCF, and BYRP approaches.

Q. Has the Commission also recognized the benefits of using more than one model to estimate the cost of equity?

A. Yes. In its order in Case No. U-21291 for DTE Gas Company, the Commission noted that the evidence that is presented by the parties in each case should be considered in determining the authorized return for the subject company. Specifically, the Commission stated:

> With respect to the ROE methodologies, the Commission finds that it is not limited to considering methodologies as approved by FERC. Specifically, the Commission agrees with the Staff that:
>
> > [t]he Commission has a history of staying agnostic on what models are presented, and hearing arguments both for and against any model on a case-by-case basis. This not only aligns well with *Bluefield* and *Hope*, which do not endorse a particular model or set of models but is paramount as many witnesses include different inputs and adjustments to their models. This flexibility in utilizing different inputs and adjustments cannot be accounted for in a system where the Commission directly prescribes the use of specific models to analysts.
>
> Staff's exceptions, pp. 8-9. The Commission agrees that the evidence presented in each case should be considered in arriving at an approved ROE for the utility. As noted in the

[23] Tom Copeland, Tim Koller and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies* (3rd ed. 2000), at 214.

[24] Eugene Brigham and Louis Gapenski, *Financial Management: Theory and Practice* (7th ed. 1994), at 341.

> PFD, the appropriateness of the use of the risk premium model is in flux before FERC and, at this time, the Commission declines to make a bright line rule about the applicability or appropriateness of this, or any one model as a whole. Similarly, the Commission declines to require an additional analysis regarding the risk premium model in the company's next rate case as recommended by the ALJ. *See*, PFD, p. 209. The Commission will continue to review the evidence presented by the parties giving appropriate weight and consideration to each methodology presented on each record in each case.[25]

A. Constant Growth DCF Model

Q. Please describe the DCF approach.

A. The DCF approach is based on the theory that a stock's current price represents the present value of all expected future cash flows. In its most general form, the DCF model is expressed as follows:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \ldots + \frac{D_\infty}{(1+k)^\infty} \qquad [1]$$

Where P_0 represents the current stock price, D1…D∞ are all expected future dividends, and *k* is the discount rate, or required cost of equity. Equation [1] is a standard present value calculation that can be simplified and rearranged into the following form:

$$k = \frac{D_0(1+g)}{P_0} + g \qquad [2]$$

Equation [2] is often referred to as the Constant Growth DCF model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate.

[25] MPSC Case No. U-21291, Order dated November 7, 2024, at 106-107.

Q. What assumptions are required for the constant growth DCF model?

A. The constant growth DCF model requires the following assumptions: (1) a constant growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings ratio; and (4) a discount rate greater than the expected growth rate. To the extent that any of these assumptions are violated, considered judgment and/or specific adjustments should be applied to the results.

Q. What market data did you use to calculate the dividend yield in your constant growth DCF model?

The dividend yield in my constant growth DCF model is based on the proxy companies' current annual dividend and average closing stock prices over the 30-, 90-, and 180-trading days as of September 30, 2025.

Q. Why did you use three averaging periods for stock prices?

A. In my constant growth DCF model, I use an average of recent trading days to calculate the term P_0 in the DCF model to ensure that the cost of equity is not skewed by anomalous events that may affect stock prices on any given trading day. The averaging period should also be reasonably representative of expected capital market conditions over the long term.

Q. Did you make any adjustments to the dividend yield to account for periodic growth in dividends?

A. Yes. Because utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. Given that assumption, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected

first-year dividend yield is, on average, representative of the coming 12-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. Why is it important to select appropriate measures of long-term growth in applying the DCF model?

A. In its constant growth form, the DCF model (i.e. Equation [2] shown previously) assumes a single long-term growth rate in perpetuity. In order to reduce the long-term growth rate to a single measure, one must assume that the dividend payout ratio remains constant and that earnings per share ("EPS"), dividends per share, and book value per share all grow at the same constant rate. However, over the long run, dividend growth can only be sustained by earnings growth, meaning earnings are the fundamental driver of a company's ability to pay dividends. Therefore, projected EPS growth is the appropriate measure of a company's long-term growth. In contrast, changes in a company's dividend payments are based on management decisions related to cash management and other factors. For example, a company may decide to retain earnings rather than pay out a portion of those earnings to shareholders through dividends. Therefore, dividend growth rates are less likely than earnings growth rates to accurately reflect investor perceptions of a company's growth prospects. Accordingly, I have incorporated a number of sources of long-term EPS growth rates into the constant growth DCF model.

Q. What sources of long-term growth rates did you rely on in your constant growth DCF model?

A. My constant growth DCF model incorporates three sources of long-term projected EPS growth rates: (1) *Zacks Investment Research* ("Zacks"); (2) *S&P Capital IQ Pro*; and (3) *Value Line*.

Q. Have you previously relied on projected EPS growth rates provided by *Yahoo! Finance*?

A. Yes, however, *Yahoo! Finance* no longer reports consensus projected 3- to 5-year EPS growth rates. As a result, I now instead rely on the consensus projected 3- to 5-year EPS growth rates reported by *S&P Capital IQ*.

Q. How do you calculate the range of results for the constant growth DCF models?

A. I calculate the low-end result for the constant growth DCF model using the minimum growth rate of the three sources (i.e. the lowest of the *Zacks*, *S&P Capital IQ Pro*, and *Value Line* projected EPS growth rates) for each of the proxy group companies. I use a similar approach to calculate a high-end result, using the maximum growth rate of the three sources for each proxy group company. Lastly, I also calculate results using the average EPS growth rate from all three sources for each proxy group company.

Q. Please summarize the results of your constant growth DCF analyses.

A. Exhibit A-14 (AEB-1), Schedule D-5, pages 3-5, and Figure 5 summarize the results of the constant growth DCF models.

Figure 5: Summary of Constant Growth DCF Results

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	10.37%	11.03%	11.83%
90-Day Avg. Stock Price	10.47%	11.14%	11.93%
180-Day Avg. Stock Price	10.53%	11.20%	11.99%
Average	**10.45%**	**11.12%**	**11.92%**
Median Results:			
30-Day Avg. Stock Price	10.54%	10.92%	11.30%
90-Day Avg. Stock Price	10.68%	11.07%	11.45%
180-Day Avg. Stock Price	10.70%	11.09%	11.47%
Average	**10.64%**	**11.02%**	**11.41%**

B. CAPM Analysis

Q. Please briefly describe the Capital Asset Pricing Model.

A. The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium to compensate investors for the non-diversifiable or "systematic" risk of that security.[26] This second component is the product of the market risk premium and the beta coefficient, which measures the relative riskiness of the security being evaluated.

The CAPM is defined by four components:

$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market cost of equity;

β = the beta coefficient of an individual security;

r_f = the risk-free rate of return; and

[26] Systematic risk is the risk inherent in the entire market or market segment, which cannot be diversified away using a portfolio of assets. Unsystematic risk is the risk of a specific company that can, theoretically, be mitigated through portfolio diversification.

r_m = the required return on the market as a whole.

In this specification, the term (r_m – r_f) represents the market risk premium. According to the theory underlying the CAPM, because unsystematic risk can be diversified away, investors should only be concerned with systematic or non-diversifiable risk. Systematic risk is measured by beta, which is a measure of the volatility of a security as compared to the market as a whole. Beta is defined as:

$$\beta = \frac{Covariance\ (r_e, r_m)}{Variance\ (r_m)} \qquad [4]$$

Variance (r_m) represents the variance of the market return, which is a measure of the uncertainty of the general market. *Covariance* (r_e, r_m) represents the covariance between the return on a specific security and the general market, which reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, beta represents the risk of the security relative to the general market.

Q. What risk-free rate did you use in your CAPM analyses?

A. I rely on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year U.S. Treasury bonds, which is 4.79%;[27] (2) the average projected 30-year U.S. Treasury bond yield for November 2025 through October 2027, which is 4.87%;[28] and (3) the average projected 30-year U.S. Treasury bond yield for 2027 through 2031, which is 4.40%.[29]

---

[27] S&P Capital IQ Pro, as of September 30, 2025.

[28] *Bloomberg Professional*. This is consistent with the source relied on by Company witness Bleckman for investors' expectations regarding future yields on long-term government bonds over the near-term.

[29] *Blue Chip Financial Forecasts*, Vol. 44, No. 6, June 2, 2025, at 14.

Q. What beta coefficients did you use in your CAPM analysis?

A. As shown in Exhibit A-14 (AEB-1), Schedule D-5, pages 6-8, I use the beta coefficients for the proxy group companies as reported by *Value Line*. The beta coefficients reported by *Value Line* are calculated based on five years of weekly returns relative to the New York Stock Exchange Composite Index. Additionally, as shown in Exhibit A-14 (AEB-1), Schedule D-5, pages 9-11, I also considered an additional CAPM analysis that relies on the long-term average utility beta coefficient for the companies in my proxy group from 2013 through 2024, which are presented in Exhibit A-14 (AEB-1), Schedule D-5, page 12.

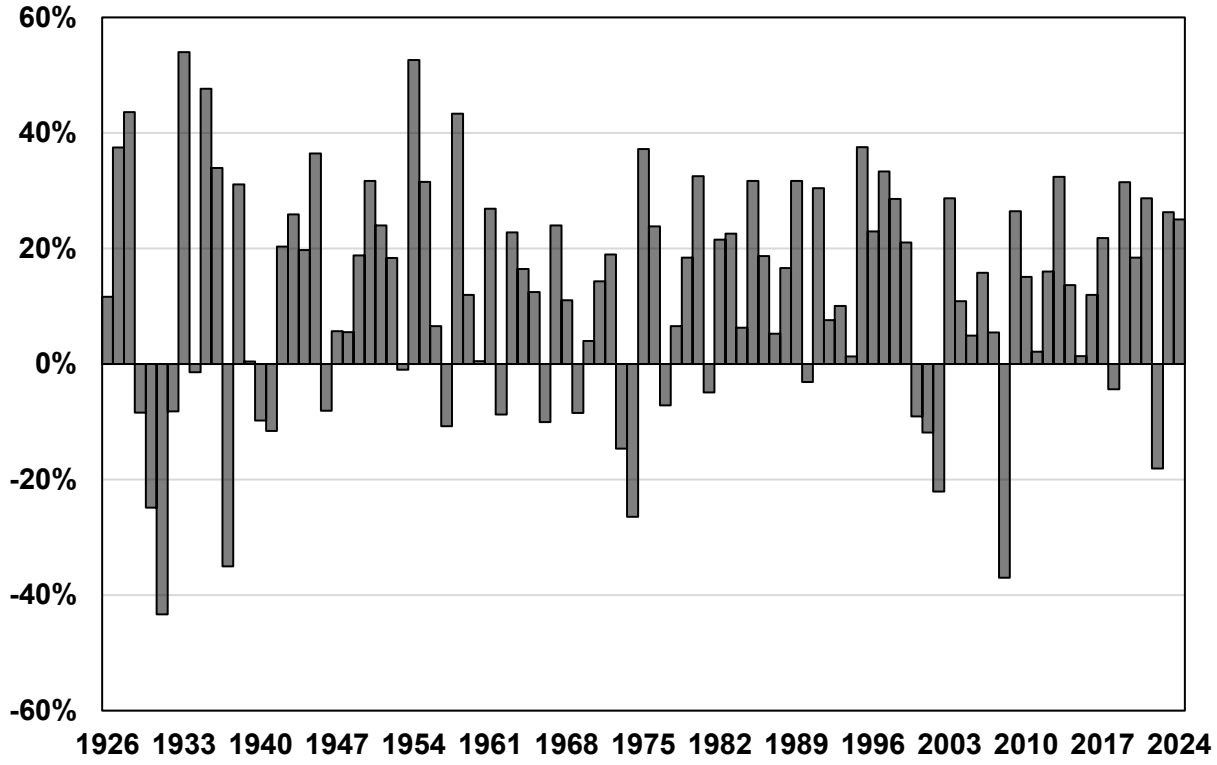
Q. How do you estimate the market risk premium in the CAPM?

A. I estimate the market risk premium as the difference between the implied expected equity market return and the risk-free rate. As shown in Exhibit A-14 (AEB-1), Schedule D-5, pages 13-18, the expected market return is calculated using the constant growth DCF model discussed previously as applied to the companies in the S&P 500 Index. Based on an estimated market capitalization-weighted dividend yield of 1.31% and a weighted long-term growth rate of 11.95%, the estimated required market return for the S&P 500 Index as of September 30, 2025 is 13.34%.

Q. How does the expected market return compare to observed historical market returns?

A. As show in Figure 6, given the range of annual equity returns that have been observed over the past century, a current expected market return of 13.34% is reasonable. In 52 out of the past 99 years (or approximately 53% of observations), the realized equity market return was at least 13.34% or greater.

Figure 6: Realized U.S. Equity Market Returns (1926–2024)[30]



Q. Did you consider another form of the CAPM in your analysis?

A. Yes. I have also considered the results of an ECAPM in estimating the cost of equity for the Company.[31] The ECAPM calculates the product of the adjusted beta coefficient and the market risk premium and applies a weight of 75.00% to that result. The model then applies a 25.00% weight to the market risk premium without any effect from the beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \qquad [5]$$

Where:

k_e = the required market cost of equity;

[30] Depicts total annual returns on large company stocks, as reported in the 2023 Kroll SBBI Yearbook for 1926-2022 and from S&P Capital IQ Pro for 2023-2024.

[31] *See, e.g.*, Roger A. Morin, *New Regulatory Finance*, Public Utilities Reports, Inc., June 1, 2006, at 189.

β = adjusted beta coefficient of an individual security;

r_f = the risk-free rate of return; and,

r_m = the required return on the market as a whole.

The ECAPM addresses the tendency of the "traditional" CAPM to underestimate the cost of equity for companies with low beta coefficients such as regulated utilities. In that regard, the ECAPM is not redundant to the use of adjusted betas in the traditional CAPM, but rather it recognizes the results of academic research indicating that the risk-return relationship is different (in essence, flatter) than estimated by the CAPM, meaning that the CAPM underestimates the cost of equity for companies with a beta less than 1.0 and overestimates the cost of equity for companies with a beta greater than 1.0.[32]

Consistent with my CAPM, my application of the ECAPM uses the same three yields on the 30-year Treasury bonds as the risk-free rate, forward-looking market risk premium estimates, and beta coefficients.

Q. What are the results of your CAPM and ECAPM analyses?

A. The results of my CAPM and ECAPM analyses are summarized in Figure 7, as well as presented in Exhibit A-14 (AEB-1), Schedule D-5, pages 6-11.

[32] *Id.* at 191.

Figure 7: CAPM and ECAPM Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.29%	11.31%	11.20%
Long-term Avg. *Value Line* Beta	11.38%	11.39%	11.29%
ECAPM:			
Current *Value Line* Beta	11.80%	11.82%	11.73%
Long-term Avg. *Value Line* Beta	11.87%	11.88%	11.80%

C. BYRP Analysis

Q. Please describe your BYRP analysis.

A. In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as bondholders. In other words, because returns to equity holders have greater risk than returns to bondholders, equity holders require a higher return for that incremental risk. Thus, risk premium approaches estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I use actual authorized returns for natural gas utilities as the historical measure of the cost of equity to determine the risk premium.

Q. What is the fundamental relationship between the equity risk premium and interest rates?

A. It is important to recognize both academic literature and market evidence indicating that the equity risk premium (as used in this approach) is inversely related to the level of interest rates (i.e. as interest rates increase, the equity risk premium decreases, and vice versa). Consequently, it is important to develop an analysis that: (1) reflects the inverse

relationship between interest rates and the equity risk premium; and (2) relies on recent and expected market conditions. The analysis presented in Exhibit A-14 (AEB-1), Schedule D-5, pages 19-22, establishes that relationship using a regression of the risk premium as a function of Treasury bond yields. When the authorized ROEs serve as the measure of required equity returns and the long-term Treasury bond yield is defined as the relevant measure of interest rates, the risk premium is the difference between those two points.[33]

Q. Is the BYRP analysis relevant to investors?

A. Yes. Investors are aware of authorized ROEs in other jurisdictions and they consider those awards as a benchmark for a reasonable level of equity returns for utilities of comparable risk operating in other jurisdictions. Because my BYRP analysis is based on authorized ROEs for utility companies relative to corresponding Treasury yields, it provides relevant information to assess the return expectations of investors in the current interest rate environment.

Q. What did your BYRP analysis reveal?

A. As shown in Figure 8, from January 1980 through September 2025, there was a strong negative relationship between risk premia and interest rates. To estimate that relationship, I conducted a regression analysis using the following equation:

$$RP = a + b(T) \qquad [6]$$

[33] See, e.g., S. Keith Berry, "Interest Rate Risk and Utility Risk Premia during 1982-93," *Managerial and Decision Economics*, Vol. 19, No. 2, March 1998 (the author used a similar methodology, including using authorized ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates). See, also, Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," *Financial Management*, Spring 1986, at 66.

Where:

RP = Risk Premium (difference between allowed ROEs and the yield on 30-year U.S. Treasury bonds)

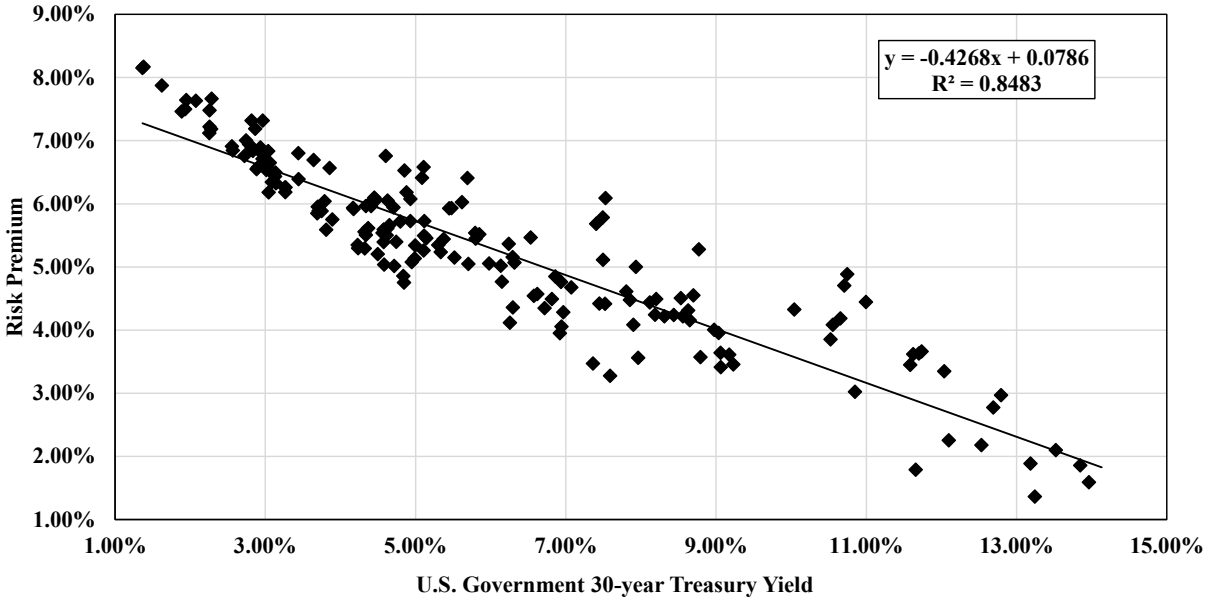
a = intercept term

b = slope term

T = 30-year U.S. Treasury bond yield

Data regarding authorized ROEs were derived from the natural gas utility rate cases over this period as reported by Regulatory Research Associates ("RRA").[34] The equation's coefficients are statistically significant at the 99.00% level.

Figure 8: Risk Premium Regression Analysis



Q. What are the results of your BYRP analysis?

A. Figure 9 presents the results of my BYRP analysis, which is also presented in more detail in Exhibit A-14, (AEB-1), Schedule D-5, page 19.

[34] The data was screened to eliminate limited issue rider cases, transmission cases, and cases that were silent with respect to the authorized ROE.

Figure 9: BYRP Results

	30-Year Treasury Bond Yield		
	Current 30-Day Avg.	Near-Term Projected	Longer-Term Projected
Bond Yield Risk Premium	10.60%	10.65%	10.38%

Q. How did the results of the BYRP inform your recommended ROE for Consumers Energy?

A. I have considered the results of the BYRP analysis in setting my recommended ROE for Consumers Energy. As noted above, investors consider the ROE determination by a regulator when assessing the risk of that company as compared to utilities of comparable risk operating in other jurisdictions. The BYRP analysis takes into account this comparison by estimating the return expectations of investors based on the current and past ROE awards of natural gas utilities across the U.S.

VIII. REGULATORY AND BUSINESS RISKS

Q. Do the results of the cost of equity analyses alone provide an appropriate estimate of the cost of equity for the Company?

A. No. These results provide only a range of the appropriate estimate of the Company's cost of equity. Several additional factors must be considered when determining where the Company's cost of equity falls within the range of analytical results. These risk factors, discussed below, should be considered with respect to their overall effect on the Company's risk profile relative to the proxy group.

A. Flotation Cost

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common stock. These costs include out-of-pocket expenditures for preparation, filing, underwriting, and other issuance costs.

Q. Why is it important to consider flotation costs in the allowed ROE?

A. A regulated utility must have the opportunity to earn an ROE that is both competitive and compensatory to attract and retain new investors. To the extent that a company is denied the opportunity to recover prudently incurred flotation costs, actual returns will fall short of expected (or required) returns, thereby diluting equity share value.

Q. Are flotation costs part of the utility's invested costs or part of the utility's expenses?

A. Flotation costs are part of the invested costs of the utility, which are properly reflected on the balance sheet under "paid in capital." They are not current expenses, and, therefore, are not reflected on the income statement. Rather, like investments in rate base or the issuance costs of long-term debt, flotation costs are incurred over time. As a result, the great majority of a utility's flotation cost is incurred prior to the test year but remains part of the cost structure that exists during the test year and beyond, and as such, should be recognized for ratemaking purposes. Therefore, it is irrelevant whether an issuance occurs during the test year or is planned for the test year because failure to allow recovery of past flotation costs may deny Consumers Energy the opportunity to earn its required rate of return in the future.

Q. Can you provide an example of why a flotation cost adjustment is necessary to compensate investors for the capital they have invested?

A. Yes. Suppose CMS issues stock with a value of $100, and an equity investor invests $100 in CMS in exchange for that stock. Further suppose that, after paying the flotation costs associated with the equity issuance, which include fees paid to underwriters and attorneys, among others, CMS ends up with only $97 of issuance proceeds, rather than the $100 the investor contributed. CMS invests that $97 in plant used to serve its customers, which becomes part of rate base. Absent a flotation cost adjustment, the investor will thereafter earn a return on only the $97 invested in rate base, even though she contributed $100. Making a small flotation cost adjustment gives the investor a reasonable opportunity to earn the authorized return, rather than the lower return that results when the authorized return is applied to an amount less than what the investor contributed.

Q. Is the need to consider flotation costs eliminated because Consumers Energy is a wholly-owned subsidiary of CMS?

A. No. Although Consumers Energy is a wholly-owned subsidiary of CMS, it is appropriate to consider flotation costs because wholly-owned subsidiaries receive equity capital from their parent and provide returns on the capital that roll up to the parent, which is designated to attract and raise capital based upon the returns of those subsidiaries. To deny recovery of issuance costs associated with the capital that is invested in the subsidiaries ultimately penalizes the investors that fund the utility operations and could inhibit the utility's ability to obtain new equity capital at a reasonable cost.

Q. Is the need to consider flotation costs recognized by the academic and financial communities?

A. Yes. The need to reimburse shareholders for the lost returns associated with equity issuance costs is recognized by the academic and financial communities in the same spirit that investors are reimbursed for the costs of issuing debt. This treatment is consistent with the philosophy of a fair rate of return. According to Dr. Shannon Pratt:

> Flotation costs occur when new issues of stock or debt are sold to the public. The firm usually incurs several kinds of flotation or transaction costs, which reduce the actual proceeds received by the firm. Some of these are direct out-of-pocket outlays, such as fees paid to underwriters, legal expenses, and prospectus preparation costs. Because of this reduction in proceeds, the firm's required returns on these proceeds equate to a higher return to compensate for the additional costs. Flotation costs can be accounted for either by amortizing the cost, thus reducing the cash flow to discount, or by incorporating the cost into the cost of capital. Because flotation costs are not typically applied to operating cash flow, one must incorporate them into the cost of capital.[35]

Q. How did you calculate the flotation costs for CMS?

A. My flotation cost calculation is based on the costs of issuing equity that were incurred by CMS in its two most recent common equity issuances. That flotation cost percentage is then applied to the proxy group in the DCF analysis to estimate the impact on the cost of equity associated with flotation costs. As shown in Exhibit A-14 (AEB-1), Schedule D-5, page 23, based on the flotation costs previously incurred by CMS, the impact on the proxy group's cost of equity amounts to 18 basis points (i.e. 0.18%) based on the median and 13 basis points (i.e. 0.13%) based on the mean.

---

[35] Shannon P. Pratt, *Cost of Capital Estimation and Applications* (2nd ed. 2002), at 220-221.

Q. Do your final cost of equity results include an adjustment for flotation cost recovery?

A. No, I do not make an explicit adjustment for flotation costs to any of the quantitative results of my cost of equity models. Rather, I consider the incremental cost associated with stock issuance as part of my overall recommendations regarding the range of reasonable ROEs and ultimate recommended ROE.

B. Capital Expenditures

Q. What are the Company's projected capital expenditure requirements over the next few years?

A. As of December 31, 2024, the Company had net gas utility plant of approximately $8.75 billion,[36] and the Company currently projects capital expenditures for 2026 through 2029 of approximately $5.10 billion,[37] which represent approximately 58.31% of its current net utility plant.

Q. How do Consumers Energy's capital expenditure requirements compare to those of the proxy group companies?

A. As shown Exhibit A-14 (AEB-1), Schedule D-5, page 24, I have calculated the ratio of expected capital expenditures to net utility plant for Consumers Energy and each of the companies in the proxy group by dividing each company's projected capital expenditures for the period from 2026 through 2029 by its total net utility plant as of December 31, 2024. As shown, Consumers Energy's ratio of capital expenditures as a percentage of net utility plant is slightly higher than companies in the proxy group as it is 1.13 times higher than the median for the proxy group companies.

---

[36] Exhibit A-2 (HLR-3), Schedule B-2, pg. 1
[37] Data provided by the Company.

Q. How is the Company's risk profile affected by their substantial capital expenditure requirements?

A. As with any utility faced with substantial capital expenditure requirements, the Company's risk profile may be adversely affected in two significant and related ways: (1) the heightened level of investment increases the risk of under-recovery or delayed recovery of the invested capital; and (2) an inadequate return would put downward pressure on key credit metrics.

Q. Do credit rating agencies recognize the risks associated with significant capital expenditures?

A. Yes. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. To that point, S&P explains the importance of regulatory support for a significant amount of capital projects:

> When applicable, a jurisdiction's willingness to support large capital projects with cash during construction is an important aspect of our analysis. This is especially true when the project represents a major addition to rate base and entails long lead times and technological risks that make it susceptible to construction delays. Broad support for all capital spending is the most credit-sustaining. Support for only specific types of capital spending, such as specific environmental projects or system integrity plans, is less so, but still favorable for creditors. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were extraordinary measures for use in unusual circumstances, but when construction costs are rising, cash flow support could be crucial to maintain credit quality through the spending program. Even more favorable are those jurisdictions that present an opportunity for a

> higher return on capital projects as an incentive to investors.[38]

Recently, S&P evaluated the capital expenditure trends in the utility sector, noting that the balance between operating with negative discretionary cash flow from operations offset by reliable access to capital markets for financing may be tested through ever-increasing capital expenditure requirements as a result of the transformation of the energy sector through the focus on low/no carbon generation, electrification, and the replacement of aging infrastructure:

> We expect rising capital spending and increasing cash flow deficits that are not sufficiently funded in a credit-supportive manner will continue to pressure the industry's financial performance. Its average funds from operations (FFO) to debt was about 15% in 2021 and has gradually fallen to about 13.5%, primarily reflecting rising leverage (see chart 20). Given our expectations for continued increasing capital spending over the next decade, we expect financial performance and credit quality will continue to be pressured.[39]

Therefore, to the extent that Consumers Energy's rates do not permit the opportunity to recover its capital investments on a regular and timely basis, the Company will face increased recovery risk and thus increased pressure on its credit metrics.

Q. Does the Company currently have a capital tracking mechanism to recover the costs associated with its capital expenditures plan between rate cases?

A. No. Consumers Energy currently has not requested approval to recover capital investment costs between rate cases utilizing a capital tracking mechanism. Therefore, Consumers Energy depends entirely on rate case filings for capital cost recovery. However, significant

---

[38] S&P Global Ratings, "Assessing U.S. Investor-Owned Utility Regulatory Environments," August 10, 2016, at 7.

[39] S&P Global Ratings, "Record CapEx Fuels Growth Along With Credit Risk For North American Investor-Owned Utilities," September 12, 2023, at 5, 7-8.

capital programs like Consumer Energy's generally receive cost recovery through infrastructure and capital trackers. As shown in Exhibit A-14 (AEB-1), Schedule D-5, page 26, approximately 77.27% of the companies in the proxy group currently have mechanisms for some form of capital cost recovery in place.

Q. What are your conclusions regarding the effect of the Company's capital spending requirements on its risk profile and cost of capital?

A. Consumer Energy's capital expenditure requirements as a percentage of net utility plant are significant and will continue over the next few years. Additionally, unlike a number of the operating subsidiaries of the proxy group, Consumers Energy does not have a comprehensive capital tracking mechanism to recover the Company's projected capital expenditures. Therefore, Consumers Energy's significant capital expenditures plan and limited ability to recover the capital investment on an as-incurred basis results in a risk profile that is greater than that of the proxy group, all else being equal.

C. Regulatory Risk

Q. How does the regulatory environment affect investors' risk assessments?

A. The ratemaking process is premised on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility service, the subject utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory commissions recognize that because utility operations are capital intensive, their decisions should enable the utility to attract capital at reasonable terms, and that doing so balances the long-term interests of investors and customers. Utilities must finance their operations and thus require the opportunity to earn a reasonable return on their invested capital to maintain their financial profiles. The Company is no

exception. Therefore, the regulatory environment is one of the most important factors considered in both debt and equity investors' risk assessments.

From the perspective of debt investors, the authorized return should enable the utility to generate the cash flow needed to meet its near-term financial obligations, make the capital investments needed to maintain and expand its systems, and maintain the necessary levels of liquidity to fund unexpected events. This financial liquidity must be derived not only from internally-generated funds, but also by efficient access to capital markets. Moreover, because fixed income investors have many investment alternatives, even within a given market sector, a utility's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Equity investors require that the authorized return be adequate to provide a risk-comparable return on the equity portion of the utility's capital investments. Because equity investors are the residual claimants on the utility's cash flows (i.e. the equity return is subordinate to interest payments), they are particularly concerned with the strength of regulatory support and its effect on future cash flows.

Q. Do credit rating agencies consider regulatory risk in establishing a company's credit rating?

A. Yes. Both S&P and Moody's consider the overall regulatory framework in establishing credit ratings. Moody's establishes credit ratings based on four key factors: (1) regulatory framework; (2) the ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity, and key financial metrics. Of these criteria, regulatory framework and the ability to recover costs and earn returns are each given a broad rating

factor of 25.00%, while diversification which considers diversity in terms of regulatory jurisdictions is afforded a rating factor of 10.00%. Therefore, Moody's assigns regulatory risk a 60.00% weighting in the overall assessment of business and financial risk for regulated utilities.[40]

S&P also identifies the regulatory framework as an important factor in credit ratings for regulated utilities, stating: "we assess regulatory advantage because the influence of the regulatory framework and regime is of critical importance. It defines the environment in which a utility operates and has a significant bearing on a utility's financial performance."[41] S&P identifies four specific factors that it uses to assess the credit implications of the regulatory jurisdictions of investor-owned regulated utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3) financial stability; and (4) regulatory independence and insulation.[42]

Q. How does the regulatory environment in which a utility operates affect its access to and cost of capital?

A. The regulatory environment can significantly affect both the access to and cost of capital in several ways. First, the proportion and cost of debt capital available to utility companies are influenced by the rating agencies' assessment of the regulatory environment. As noted by Moody's, "[u]tility rates are set in a political/regulatory process rather than a competitive or free-market process; thus, the regulatory framework is a key determinant of the credit quality of a utility."[43] Moody's further highlighted the relevance of a stable and

---

40 Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, August 6, 2024, at 2.
41 Standard & Poor's Global Ratings, "Sector-Specific Corporate Methodology," April 4, 2024, at 147.
42 *Id*.
43 Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities, August 6, 2024, at 8.

predictable regulatory environment to a utility's credit quality, noting: "[t]he regulatory framework is important because it provides the basis for decisions that affect utilities, including rate-setting as well as the consistency and predictability of regulatory decision-making."[44]

Q. Have you conducted an analysis to compare the cost recovery mechanisms of Consumers Energy to the cost recovery mechanisms approved in the jurisdictions in which the companies in your proxy group operate?

A. Yes. I have evaluated the regulatory framework in Michigan based on three factors that are important in terms of providing a regulated utility a reasonable opportunity to earn its authorized ROE: (1) test year convention (*i.e.*, forecast vs. historical); (2) use of rate design or other mechanisms that mitigate volumetric risk and stabilize revenue; and (3) prevalence of capital cost recovery between rate cases. Each are described below and are summarized in Exhibit A-14 (AEB-1), Schedule D-5, page 26.

> Test Year Convention: Consumers Energy uses a forecasted test year, and similarly, approximately 45.45 percent of the utility operating subsidiaries of the companies in the proxy group also use either a fully forecasted or partially forecasted test year. Forecast test years have been relied on for several years and produce cost estimates that are more reflective of future costs, which results in more accurate recovery of incurred costs and mitigates the regulatory lag associated with historical test years.
>
> Volumetric Risk: Consumers Energy does not currently have protection against volumetric risk because the Company requested not to continue its revenue decoupling mechanism in Case No. U-21308.[45] However, the Company is proposing revenue decoupling mechanism ("RDM") in the current proceeding. Approximately 95.45 percent of the utility operating subsidiaries of the proxy group companies have some form of revenue stabilization through either decoupling, formula-based rates, and/or straight-fixed variable rate design that allow them to break the link between customer usage and revenues. Therefore, if the Commission were to approve the Company's proposed RDM, Consumers Energy's risk related

[44] *Id*.

[45] Case No. U-21308, Direct Testimony of Laura Connolly, December 2022, at 13-14.

to the ability to recover its revenue requirement would be similar to that of the proxy group companies.

Capital Cost Recovery: As previously mentioned, Consumers Energy does not have a capital tracking mechanism to recover capital investment costs between rate cases. However, approximately 77.27 percent of the utility operating subsidiaries of the proxy group companies have some form of capital cost recovery mechanism.

Q. How does Regulatory Research Associates ("RRA") evaluate the regulatory environment in each jurisdiction?

A. RRA evaluates the regulatory environment from an investor perspective, considering the relative regulatory risk associated with ownership of securities issued by the companies that are regulated in each jurisdiction. RRA considers several factors that affect the regulatory process, including gubernatorial, legislative and court activity, rate case decisions and other regulatory decisions, and information obtained through contact with commissioners, staff, utilities, and government outreach.

Q. Has RRA provided recent commentary regarding its regulatory ranking for Michigan?

A. In August 2024, RRA lowered its regulatory ranking of Michigan from "Above Average/3" to "Average/1," noting the following:

> Regulatory Research Associates, a group within S&P Global Commodity Insights, views the regulatory climate in Michigan as somewhat constructive from an investor perspective. On July 31, 2024, RRA reduced its ranking of Michigan regulation to Average/1 from Above Average/3. While the jurisdiction remains more constructive than average from an investor viewpoint, ***the outcomes of certain recent rate proceedings could indicate a tightening in the regulatory climate***. RRA had placed the state on watch following a 2022 rate case decision in which the Michigan Public Service Commission (PSC) authorized DTE Electric Co. (DTE-E) an increase in rates that was less than 10% of that requested, but did not lower the ranking at that time. At the time RRA viewed the decisions to be an anomaly, as a

large part of the revenue requirement difference stemmed from reliance on a higher post-COVID sales forecast than the utility had used in its revenue requirement calculations. DTE-E has had two rate cases decided since then, and while generally more constructive, the company requested rehearing of two issues with respect to its latest case decided Jan. 23, 2025. The commission denied the request for rehearing. DTE-E is not the only company that has faced challenges in recent rate proceedings before the PSC. In a July 2, 2024 electric rate decision for Indiana Michigan Power Co.(IMP), the commission authorized the company a rate increase that was about half what the company requested and kept its authorized ROE unchanged despite recent increases in interest rates. ***While the approved ROEs for both DTE-E and IMP remain above prevailing industry averages, they compare less favorably to those averages, which have risen, albeit modestly, in recent periods***. The commission, nevertheless, does have several constructive practices have been in place: a streamlined rate case process; a framework for the utilization of forecast test years to reduce regulatory lag; and a framework that permits a cash return on certain construction work in progress, thereby reducing the uncertainty of cost recovery. Retail competition for electric generation is in place but is limited, and attempts to raise this limit have not been successful. Electric utilities have retained their generation assets, and customers who do not select a competitive supplier receive service on a regulated, traditional cost-of-service basis. Adjustment mechanisms are in place for fuel costs for customers served under bundled service. However, the courts have ruled against the authorization of revenue decoupling mechanisms for electric utilities. In the gas industry, the major local distribution companies have instituted programs that allow all retail customers to choose their gas supplier, and modest small-customer switching has occurred. The gas companies utilize periodic gas cost recovery mechanisms, and the PSC has authorized revenue decoupling mechanisms for certain gas utilities. Michigan's regulatory and political environments continue to support significant capital investments and timely recovery of these costs. RRA now accords Michigan regulation an Average/1 ranking.[46]

[46] Regulatory Research Associates, Profile of Michigan Public Service Commission, accessed October 28, 2025.

Additionally, Company witness Bleckman's direct testimony provides additional detail on the credit rating agencies' assessment of Michigan's regulatory environment.

Q. What are your conclusions regarding the perceived risks related to the regulatory environment in Michigan?

A. As discussed throughout this section of my testimony, both Moody's and S&P have identified the supportiveness of the regulatory environment as an important consideration in developing their overall credit ratings for regulated utilities. Considering the regulatory adjustment mechanisms including assuming the Company's proposed RDM is approved, I conclude that the Company has similar protections in terms of regulatory mechanisms compared to the proxy group companies. However, while my analysis assumes that the Company's proposed RDM will be approved, the cost recovery risk of Consumers Energy would increase relative to the proxy group if the Commission does not approve the Company's proposal.

IX. CONCLUSION AND RECOMMENDATION

Q. What is your conclusion regarding a fair ROE for Consumers Energy?

A. Figure 10 summarizes the results of my cost of equity analyses. Based on these results, the qualitative analyses presented in my direct testimony, the business and financial risks of Consumers Energy compared to the proxy group, and current and prospective conditions in capital markets, it is my view that an ROE of 10.25 percent is reasonable and would fairly balance the interests of customers and shareholders.

Q. Will the capital structure and ROE authorized in this proceeding affect the Company's access to capital at reasonable rates?

A. Yes. The level of earnings authorized by the Commission directly affects the Company's ability to fund its operations with internally-generated funds. Both bond investors and rating agencies expect a significant portion of ongoing capital investments to be financed with internally-generated funds. In addition, it is important to recognize that because a utility's investment horizon is very long, investors require the assurance of a sufficiently high return to satisfy the long-term financing requirements of the assets placed into service. Those assurances, which often are measured by the relationship between internally-generated cash flows and debt (or interest expense), depend quite heavily on the capital structure. Therefore, both the ROE and capital structure are very important to debt and equity investors, particularly given the capital market conditions discussed previously. Company witness Bleckman's direct testimony explains the effect of the Company's authorized ROE and Equity ratio on credit quality.

Figure 10: Summary of Analytical Results

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	10.37%	11.03%	11.83%
90-Day Avg. Stock Price	10.47%	11.14%	11.93%
180-Day Avg. Stock Price	10.53%	11.20%	11.99%
Average	10.45%	11.12%	11.92%
Median Results:			
30-Day Avg. Stock Price	10.54%	10.92%	11.30%
90-Day Avg. Stock Price	10.68%	11.07%	11.45%
180-Day Avg. Stock Price	10.70%	11.09%	11.47%
Average	10.64%	11.02%	11.41%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.29%	11.31%	11.20%
Long-term Avg. *Value Line* Beta	11.38%	11.39%	11.29%
ECAPM:			
Current *Value Line* Beta	11.80%	11.82%	11.73%
Long-term Avg. *Value Line* Beta	11.87%	11.88%	11.80%
Bond Yield Risk Premium	10.60%	10.65%	10.38%

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBIT

OF

ANN E. BULKLEY

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

COST OF EQUITY ANALYSES
SUMMARY OF RESULTS

Constant Growth DCF

	Minimum Growth Rate	Average Growth Rate	Maximum Growth Rate
Mean Results:			
30-Day Avg. Stock Price	10.37%	11.03%	11.83%
90-Day Avg. Stock Price	10.47%	11.14%	11.93%
180-Day Avg. Stock Price	10.53%	11.20%	11.99%
Average	10.45%	11.12%	11.92%
Median Results:			
30-Day Avg. Stock Price	10.54%	10.92%	11.30%
90-Day Avg. Stock Price	10.68%	11.07%	11.45%
180-Day Avg. Stock Price	10.70%	11.09%	11.47%
Average	10.64%	11.02%	11.41%

CAPM / ECAPM / Bond Yield Risk Premium

	30-Year Treasury Bond Yield		
	Current 30-Day Avg	Near-Term Projected	Longer-Term Projected
CAPM:			
Current *Value Line* Beta	11.29%	11.31%	11.20%
Long-term Avg. *Value Line* Beta	11.38%	11.39%	11.29%
ECAPM:			
Current *Value Line* Beta	11.80%	11.82%	11.73%
Long-term Avg. *Value Line* Beta	11.87%	11.88%	11.80%
Bond Yield Risk Premium	10.60%	10.65%	10.38%

PROXY GROUP SCREENING DATA AND RESULTS

Company	Ticker	[1] Dividends	[2] S&P Credit Rating Between BBB- and AAA	[3] Positive Growth Rates from at least two sources (Value Line, Yahoo! First Call, and Zacks)	[4] % Regulated Operating Income > 70%	[5] % Regulated Natural Gas Operating Income > 60%	[6] Announced Merger
Atmos Energy Corporation	ATO	Yes	A-	Yes	100.00%	64.53%	No
NiSource Inc.	NI	Yes	BBB+	Yes	99.44%	66.50%	No
Northwest Natural Gas Company	NWN	Yes	A-	Yes	99.75%	91.14%	No
ONE Gas, Inc.	OGS	Yes	A-	Yes	100.00%	100.00%	No
Southwest Gas Corporation	SWX	Yes	BBB+	Yes	86.42%	90.89%	No

Notes:
[1] Source: Bloomberg Professiona
[2] Source: Bloomberg Professiona
[3] Source: S&P Capital IQ, Value Line Investment Survey, and Zack
[4] Source: Form 10-K's for 2024, 2023, and 2022
[5] Source: Form 10-K's for 2024, 2023, and 2022
[6] Source: SNL Financial News Release

30-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Projected EPS Growth Rate	S&P Capital IQ Projected EPS Growth Rate	Zacks Projected EPS Growth Rate	Average Projected EPS Growth Rate	Cost of Equity: Minimum Growth Rate	Cost of Equity: Mean Growth Rate	Cost of Equity: Maximum Growth Rate
Atmos Energy Corporation	ATO	$3.48	$165.62	2.10%	2.18%	7.00%	7.22%	7.30%	7.17%	9.17%	9.35%	9.48%
NiSource Inc.	NI	$1.12	$41.53	2.70%	2.81%	9.50%	8.44%	7.90%	8.61%	10.70%	11.43%	12.33%
Northwest Natural Gas Company	NWN	$1.96	$42.14	4.65%	4.79%	6.50%	5.75%	n/a	6.13%	10.54%	10.92%	11.30%
ONE Gas, Inc.	OGS	$2.68	$76.30	3.51%	3.61%	4.50%	5.94%	5.60%	5.35%	8.09%	8.95%	9.56%
Southwest Gas Corporation	SWX	$2.48	$78.30	3.17%	3.34%	10.00%	13.11%	10.40%	11.17%	13.33%	14.51%	16.49%
Mean				3.23%	3.35%	7.50%	8.09%	7.80%	7.69%	10.37%	11.03%	11.83%
Median				3.17%	3.34%	7.00%	7.22%	7.60%	7.17%	10.54%	10.92%	11.30%

Notes:
[1] Bloomberg Professional as of September 30, 202
[2] Bloomberg Professional 30-day average as of September 30, 202
[3] Equals [1]/[2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Value Line
[6] S&P Capital IQ
[7] Zacks
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + 0.5 x (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x (max([5], [6], [7])) + (max([5], [6], [7])

90-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Projected EPS Growth Rate	S&P Capital IQ Projected EPS Growth Rate	Zacks Projected EPS Growth Rate	Average Projected EPS Growth Rate	Cost of Equity: Minimum Growth Rate	Cost of Equity: Mean Growth Rate	Cost of Equity: Maximum Growth Rate
Atmos Energy Corporation	ATO	3.48	$158.64	2.19%	2.27%	7.00%	7.22%	7.30%	7.17%	9.27%	9.45%	9.57%
NiSource Inc.	NI	1.12	$40.71	2.75%	2.87%	9.50%	8.44%	7.90%	8.61%	10.76%	11.48%	12.38%
Northwest Natural Gas Company	NWN	1.96	$40.87	4.80%	4.94%	6.50%	5.75%	n/a	6.13%	10.68%	11.07%	11.45%
ONE Gas, Inc.	OGS	2.68	$74.02	3.62%	3.72%	4.50%	5.94%	5.60%	5.35%	8.20%	9.06%	9.67%
Southwest Gas Corporation	SWX	2.48	$76.00	3.26%	3.45%	10.00%	13.11%	10.40%	11.17%	13.43%	14.62%	16.59%
Mean				3.32%	3.45%	7.50%	8.09%	7.80%	7.69%	10.47%	11.14%	11.93%
Median				3.26%	3.45%	7.00%	7.22%	7.60%	7.17%	10.68%	11.07%	11.45%

Notes:
[1] Bloomberg Professional as of September 30, 2025
[2] Bloomberg Professional 90-day average as of September 30, 2025
[3] Equals [1]/[2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Value Line
[6] S&P Capital IQ
[7] Zacks
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + 0.5 x (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x (max([5], [6], [7])) + (max([5], [6], [7])

180-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Projected EPS Growth Rate	S&P Capital IQ Projected EPS Growth Rate	Zacks Projected EPS Growth Rate	Average Projected EPS Growth Rate	Cost of Equity: Minimum Growth Rate	Cost of Equity: Mean Growth Rate	Cost of Equity: Maximum Growth Rate
Atmos Energy Corporation	ATO	$3.48	$153.71	2.26%	2.35%	7.00%	7.22%	7.30%	7.17%	9.34%	9.52%	9.65%
NiSource Inc.	NI	$1.12	$39.53	2.83%	2.96%	9.50%	8.44%	7.90%	8.61%	10.84%	11.57%	12.47%
Northwest Natural Gas Company	NWN	$1.96	$40.72	4.81%	4.96%	6.50%	5.75%	n/a	6.13%	10.70%	11.09%	11.47%
ONE Gas, Inc.	OGS	$2.68	$73.30	3.66%	3.75%	4.50%	5.94%	5.60%	5.35%	8.24%	9.10%	9.70%
Southwest Gas Corporation	SWX	$2.48	$74.00	3.35%	3.54%	10.00%	13.11%	10.40%	11.17%	13.52%	14.71%	16.68%
Mean				3.38%	3.51%	7.50%	8.09%	7.80%	7.69%	10.53%	11.20%	11.99%
Median				3.35%	3.54%	7.00%	7.22%	7.60%	7.17%	10.70%	11.09%	11.47%

Notes:
[1] Bloomberg Professional as of September 30, 2025
[2] Bloomberg Professional 180-day average as of September 30, 2025
[3] Equals [1]/[2]
[4] Equals [3] x (1 + 0.5 x [8])
[5] Value Line
[6] S&P Capital IQ
[7] Zacks
[8] Equals average of [5], [6], [7]
[9] Equals [3] x (1 + 0.5 x (min([5], [6], [7])) + (min([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.5 x (max([5], [6], [7])) + (max([5], [6], [7])

CAPITAL ASSET PRICING MODEL
CURRENT RISK FREE RATE AND VALUE LINE BETA

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.79%	0.75	13.34%	8.55%	11.20%	11.74%
NiSource Inc.	NI	4.79%	0.80	13.34%	8.55%	11.63%	12.06%
Northwest Natural Gas Company	NWN	4.79%	0.75	13.34%	8.55%	11.20%	11.74%
ONE Gas, Inc.	OGS	4.79%	0.75	13.34%	8.55%	11.20%	11.74%
Southwest Gas Corporation	SWX	4.79%	0.75	13.34%	8.55%	11.20%	11.74%
Mean						11.29%	11.80%

Notes:
[1] Bloomberg Professional 30-day average as of September 30, 2025
[2] Value Line
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL
NEAR TERM PROJECTED RISK-FREE RATE AND VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (November 2025 - October 2027)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.87%	0.75	13.34%	8.48%	11.22%	11.75%
NiSource Inc.	NI	4.87%	0.80	13.34%	8.48%	11.65%	12.07%
Northwest Natural Gas Company	NWN	4.87%	0.75	13.34%	8.48%	11.22%	11.75%
ONE Gas, Inc.	OGS	4.87%	0.75	13.34%	8.48%	11.22%	11.75%
Southwest Gas Corporation	SWX	4.87%	0.75	13.34%	8.48%	11.22%	11.75%
Mean						11.31%	11.82%

Notes:
[1] Bloomberg Professional
[2] Value Line
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL
LONG-TERM PROJECTED RISK-FREE RATE AND VALUE LINE BETA

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2027 - 2031)	[2] Beta	[3] Market Return	[4] Market Risk Premium	[5] Cost of Equity: CAPM	[6] Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.40%	0.75	13.34%	8.94%	11.11%	11.67%
NiSource Inc.	NI	4.40%	0.80	13.34%	8.94%	11.55%	12.00%
Northwest Natural Gas Company	NWN	4.40%	0.75	13.34%	8.94%	11.11%	11.67%
ONE Gas, Inc.	OGS	4.40%	0.75	13.34%	8.94%	11.11%	11.67%
Southwest Gas Corporation	SWX	4.40%	0.75	13.34%	8.94%	11.11%	11.67%
Mean						11.20%	11.73%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 44, No. 6, June 2, 2025, at 14
[2] Value Line
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL
CURRENT RISK FREE RATE AND LONG-TERM VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.79%	0.76	13.34%	8.55%	11.31%	11.82%
NiSource Inc.	NI	4.79%	0.78	13.34%	8.55%	11.42%	11.90%
Northwest Natural Gas Company	NWN	4.79%	0.73	13.34%	8.55%	10.99%	11.58%
ONE Gas, Inc.	OGS	4.79%	0.75	13.34%	8.55%	11.20%	11.74%
Southwest Gas Corporation	SWX	4.79%	0.84	13.34%	8.55%	11.95%	12.30%
Mean						11.38%	11.87%

Notes:
[1] Bloomberg Professional 30-day average as of September 30, 2025
[2] LT Beta
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL
NEAR-TERM PROJECTED RISK FREE RATE AND LONG-TERM VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (November 2025 - October 2027)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.87%	0.76	13.34%	8.48%	11.33%	11.83%
NiSource Inc.	NI	4.87%	0.78	13.34%	8.48%	11.44%	11.91%
Northwest Natural Gas Company	NWN	4.87%	0.73	13.34%	8.48%	11.01%	11.59%
ONE Gas, Inc.	OGS	4.87%	0.75	13.34%	8.48%	11.22%	11.75%
Southwest Gas Corporation	SWX	4.87%	0.84	13.34%	8.48%	11.96%	12.31%
Mean						11.39%	11.88%

Notes:
[1] Bloomberg Professional
[2] LT Beta
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL
LONG-TERM PROJECTED RISK FREE RATE AND LONG-TERM VALUE LINE BETA

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2027 - 2031)	Beta	Market Return	Market Risk Premium	Cost of Equity: CAPM	Cost of Equity: ECAPM
Atmos Energy Corporation	ATO	4.40%	0.76	13.34%	8.94%	11.22%	11.75%
NiSource Inc.	NI	4.40%	0.78	13.34%	8.94%	11.33%	11.83%
Northwest Natural Gas Company	NWN	4.40%	0.73	13.34%	8.94%	10.88%	11.50%
ONE Gas, Inc.	OGS	4.40%	0.75	13.34%	8.94%	11.11%	11.67%
Southwest Gas Corporation	SWX	4.40%	0.84	13.34%	8.94%	11.89%	12.25%
Mean						11.29%	11.80%

Notes:
[1] Blue Chip Financial Forecasts, Vol. 44, No. 6, June 2, 2025, at 14
[2] LT Beta
[3] Market Return
[4] Equals [3]-[1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL BETA

Company	Ticker	[1] 2013	[2] 2014	[3] 2015	[4] 2016	[5] 2017	[6] 2018	[7] 2019	[8] 2020	[9] 2021	[10] 2022	[11] 2023	[12] 2024	[13] Average
Atmos Energy Corporation	ATO	0.80	0.80	0.80	0.70	0.70	0.60	0.60	0.80	0.80	0.80	0.85	0.90	0.76
NiSource Inc.	NI	0.85	0.85	NMF	NMF	0.60	0.50	0.55	0.85	0.85	0.85	0.90	0.95	0.78
Northwest Natural Gas Company	NWN	0.65	0.70	0.65	0.65	0.70	0.60	0.60	0.80	0.85	0.80	0.80	0.90	0.73
ONE Gas, Inc.	OGS				0.70	0.70	0.65	0.65	0.80	0.80	0.80	0.80	0.85	0.75
Southwest Gas Corporation	SWX	0.80	0.85	0.80	0.75	0.80	0.70	0.70	0.95	0.95	0.90	0.90	0.95	0.84
Mean		0.78	0.80	0.75	0.70	0.70	0.61	0.62	0.84	0.85	0.83	0.85	0.91	0.77

Notes:
[1] Value Line, dated December 26, 2013.
[2] Value Line, dated December 31, 2014.
[3] Value Line, dated December 30, 2015.
[4] Value Line, dated December 29, 2016.
[5] Value Line, dated December 28, 2017.
[6] Value Line, dated December 27, 2018.
[7] Value Line, dated December 26, 2019.
[8] Value Line, dated December 30, 2020.
[9] Value Line, dated December 29, 2021.
[10] Value Line, dated December 30, 2022.
[11] Value Line, Dated December 29, 2023.
[12] Value Line, Dated December 27, 2024.
[13] Average of Cols. [1] through [12]

MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimate of the S&P 500 Dividend Yield	1.31%
[2] Estimate of the S&P 500 Growth Rate	11.95%
[3] S&P 500 Estimated Required Market Return	13.34%

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Bloomberg Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	321.64843	49.04	15,773.64		11.17%		-9.85%	
American Express Co	AXP	695.88223	332.16	231,144.24	0.56%	0.99%	0.01%	15.03%	0.08%
Verizon Communications Inc	VZ	4216.32481	43.95	185,307.48	0.45%	6.28%	0.03%	2.27%	0.01%
Texas Pacific Land Corp	TPL	22.97941	933.64	21,454.50		0.69%			
Broadcom Inc	AVGO	4722.36502	329.91	1,557,955.44		0.72%		40.05%	
Boeing Co/The	BA	756.1577	215.83	163,201.52				31.71%	
Solventum Corp	SOLV	173.3878	73	12,657.31	0.03%			1.28%	0.00%
Caterpillar Inc	CAT	468.47892	477.15	223,534.72	0.54%	1.27%	0.01%	6.56%	0.04%
JPMorgan Chase & Co	JPM	2749.75385	315.43	867,354.86	2.11%	1.90%	0.04%	8.55%	0.18%
Chevron Corp	CVX	2047.39391	155.29	317,939.80	0.77%	4.40%	0.03%	15.39%	0.12%
Coca-Cola Co/The	KO	4303.66725	66.32	285,419.21	0.69%	3.08%	0.02%	5.90%	0.04%
AbbVie Inc	ABBV	1766.55825	231.54	409,028.90	0.99%	2.83%	0.03%	13.98%	0.14%
Walt Disney Co/The	DIS	1797.93383	114.5	205,863.42	0.50%	0.87%	0.00%	13.12%	0.07%
Corpay Inc	CPAY	70.61438	288.06	20,341.18	0.05%			12.12%	0.01%
Extra Space Storage Inc	EXR	212.25361	140.94	29,915.02	0.07%	4.60%	0.00%	3.14%	0.00%
Exxon Mobil Corp	XOM	4263.24702	112.75	480,681.10	1.17%	3.51%	0.04%	11.40%	0.13%
Phillips 66	PSX	404.12427	136.02	54,968.98		3.53%		22.37%	
General Electric Co	GE	1060.43939	300.82	319,001.38		0.48%		20.51%	
HP Inc	HPQ	934.70185	27.23	25,451.93		4.25%		-0.60%	
Home Depot Inc/The	HD	995.38665	405.19	403,320.72	0.98%	2.27%	0.02%	5.04%	0.05%
Monolithic Power Systems Inc	MPWR	47.892	920.64	44,091.29		0.68%			
International Business Machines Corp	IBM	931.51924	282.16	262,837.47	0.64%	2.38%	0.02%	6.68%	0.04%
Johnson & Johnson	JNJ	2408.33887	185.42	446,554.19	1.09%	2.80%	0.03%	7.35%	0.08%
Lululemon Athletica Inc	LULU	113.46808	177.93	20,189.38	0.05%			1.24%	0.00%
McDonald's Corp	MCD	713.60443	303.89	216,857.25	0.53%	2.33%	0.01%	8.63%	0.05%
Merck & Co Inc	MRK	2497.78321	83.93	209,638.94	0.51%	3.86%	0.02%	15.57%	0.08%
3M Co	MMM	532.6297	155.18	82,653.48	0.20%	1.88%	0.00%	6.99%	0.01%
American Water Works Co Inc	AWK	203.19716	139.19	28,283.01	0.07%	2.38%	0.00%	6.60%	0.00%
Bank of America Corp	BAC	7406.94731	51.59	382,124.41		2.17%			
Pfizer Inc	PFE	5685.5505	25.48	144,867.83	0.35%	6.75%	0.02%	0.11%	0.00%
Procter & Gamble Co/The	PG	2340.48526	153.65	359,615.56	0.87%	2.75%	0.02%	4.08%	0.04%
AT&T Inc	T	7150.38548	28.24	201,926.89	0.49%	3.93%	0.02%	4.63%	0.02%
Travelers Cos Inc/The	TRV	225.13384	279.22	62,861.87		1.58%		54.50%	
RTX Corp	RTX	1338.54183	167.33	223,978.20	0.54%	1.63%	0.01%	7.41%	0.04%
Analog Devices Inc	ADI	491.95544	245.7	120,873.45	0.29%	1.61%	0.00%	17.18%	0.05%
Walmart Inc	WMT	7972.85112	103.06	821,682.04	2.00%	0.91%	0.02%	8.46%	0.17%
Cisco Systems Inc	CSCO	3953.19695	68.42	270,477.74	0.66%	2.40%	0.02%	8.32%	0.05%
Intel Corp	INTC	4651.583	33.55	156,060.61	0.38%			9.28%	0.04%
General Motors Co	GM	952.0778	60.97	58,048.18	0.14%	0.98%	0.00%	6.04%	0.01%
Microsoft Corp	MSFT	7433.16638	517.95	3,850,008.53	9.36%	0.70%	0.07%	14.84%	1.39%
Dollar General Corp	DG	220.10603	103.35	22,747.96	0.06%	2.28%	0.00%	5.24%	0.00%
Cigna Group/The	CI	266.92807	288.25	76,942.02	0.19%	2.10%	0.00%	10.86%	0.02%
Kinder Morgan Inc	KMI	2222.07762	28.31	62,907.02	0.15%	4.13%	0.01%	8.46%	0.01%
Citigroup Inc	C	1840.8979	101.5	186,851.14		2.36%		25.65%	
American International Group Inc	AIG	554.00385	78.54	43,511.46	0.11%	2.29%	0.00%	19.99%	0.02%
Altria Group Inc	MO	1679.89095	66.06	110,973.60	0.27%	6.42%	0.02%	4.72%	0.01%
HCA Healthcare Inc	HCA	233.9935	426.2	99,728.03	0.24%	0.68%	0.00%	10.76%	0.03%
International Paper Co	IP	527.98209	46.4	24,498.37		3.99%		54.45%	
Hewlett Packard Enterprise Co	HPE	1319.45006	24.56	32,405.69	0.08%	2.12%	0.00%	7.61%	0.01%
Abbott Laboratories	ABT	1740.45901	133.94	233,117.08	0.57%	1.76%	0.01%	9.97%	0.06%
Aflac Inc	AFL	534.83149	111.7	59,740.68		2.08%		25.77%	
Air Products and Chemicals Inc	APD	222.55364	270.9299	60,296.44	0.15%	2.64%	0.00%	3.42%	0.01%
Super Micro Computer Inc	SMCI	594.27331	47.94	28,489.46	0.07%			19.06%	0.01%
Royal Caribbean Cruises Ltd	RCL	271.62766	323.58	87,893.28		1.24%		22.77%	
Interactive Brokers Group Inc	IBKR	445.24698	68.81	30,637.44	0.07%	0.47%	0.00%	12.54%	0.01%
Lennox International Inc	LII	35.12428	529.36	18,593.39		0.98%			
Archer-Daniels-Midland Co	ADM	480.46448	59.74	28,702.95	0.07%	3.41%	0.00%	4.70%	0.00%
EMCOR Group Inc	EME	44.76425	649.54	29,076.17		0.15%			
Automatic Data Processing Inc	ADP	405.08952	293.5	118,893.77		2.10%			
Verisk Analytics Inc	VRSK	139.71497	251.51	35,139.71		0.72%			
AutoZone Inc	AZO	16.72871	4290.24	71,770.18	0.17%			13.66%	0.02%
Linde PLC	LIN	468.90953	475	222,732.03	0.54%	1.26%	0.01%	8.66%	0.05%
Avery Dennison Corp	AVY	77.98159	162.17	12,646.27	0.03%	2.32%	0.00%	6.84%	0.00%
MSCI Inc	MSCI	77.36524	567.41	43,897.81		1.27%			
Ball Corp	BALL	272.1489	50.42	13,721.75	0.03%	1.59%	0.00%	12.27%	0.00%
Axon Enterprise Inc	AXON	78.50444	717.64	56,337.93				28.56%	
Dayforce Inc	DAY	158.00648	68.89	10,885.07					
Carrier Global Corp	CARR	851.02284	59.7	50,806.06	0.12%	1.51%	0.00%	11.41%	0.01%
Bank of New York Mellon Corp/The	BK	705.24082	108.96	76,843.04	0.19%	1.95%	0.00%	14.85%	0.03%
Otis Worldwide Corp	OTIS	392.47523	91.43	35,884.01		1.84%			
Baxter International Inc	BAX	513.62106	22.77	11,695.15	0.03%	2.99%	0.00%	12.49%	0.00%
Becton Dickinson & Co	BDX	286.62747	187.17	53,648.06	0.13%	2.22%	0.00%	7.29%	0.01%
Berkshire Hathaway Inc	BRK/B	1378.54564	502.74	693,050.04					
Best Buy Co Inc	BBY	210.10127	75.62	15,887.86	0.04%	5.03%	0.00%	4.17%	0.00%
Boston Scientific Corp	BSX	1481.75163	97.63	144,663.41	0.35%			14.86%	0.05%
Bristol-Myers Squibb Co	BMY	2035.43584	45.1	91,798.16		5.50%		82.51%	
Brown-Forman Corp	BF/B	303.60888	27.08	8,221.73	0.02%	3.35%	0.00%	2.43%	0.00%
Coterra Energy Inc	CTRA	763.13997	23.65	18,048.26		3.72%		30.08%	
Hilton Worldwide Holdings Inc	HLT	235.19375	259.44	61,018.67	0.15%	0.23%	0.00%	12.75%	0.02%
Carnival Corp	CCL	1167.54105	28.91	33,753.61				21.87%	
Builders FirstSource Inc	BLDR	110.54693	121.25	13,403.82				-4.21%	

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
UDR Inc	UDR	331.34719	37.26	12,346.00	0.03%	4.62%	0.00%	1.33%	0.00%
Clorox Co/The	CLX	122.30941	123.3	15,080.75	0.04%	4.02%	0.00%	0.34%	0.00%
Paycom Software Inc	PAYC	57.8768	208.14	12,046.48	0.03%	0.72%	0.00%	9.16%	0.00%
CMS Energy Corp	CMS	299.33546	73.26	21,929.32	0.05%	2.96%	0.00%	7.51%	0.00%
Colgate-Palmolive Co	CL	808.22082	79.94	64,609.17	0.16%	2.60%	0.00%	4.85%	0.01%
EPAM Systems Inc	EPAM	55.69691	150.79	8,398.54					
Conagra Brands Inc	CAG	479.04969	18.31	8,771.40		7.65%		-7.51%	
Airbnb Inc	ABNB	429.07956	121.42	52,098.84	0.13%			10.47%	0.01%
Consolidated Edison Inc	ED	360.65167	100.52	36,252.71	0.09%	3.38%	0.00%	5.20%	0.00%
Corning Inc	GLW	856.61871	82.03	70,268.43	0.17%	1.37%	0.00%	18.16%	0.03%
GoDaddy Inc	GDDY	138.44902	136.83	18,943.98					
Cummins Inc	CMI	137.78604	422.37	58,196.69	0.14%	1.89%	0.00%	10.71%	0.02%
Danaher Corp	DHR	716.05159	198.26	141,964.39	0.35%	0.65%	0.00%	8.10%	0.03%
Target Corp	TGT	454.39915	89.7	40,759.60		5.08%		-1.37%	
Williams-Sonoma Inc	WSM	121.79033	195.45	23,803.92	0.06%	1.35%	0.00%	4.68%	0.00%
Deere & Co	DE	270.32939	457.26	123,610.82		1.42%		-2.85%	
Dominion Energy Inc	D	853.43363	61.17	52,204.54		4.36%		23.10%	
Trade Desk Inc/The	TTD	445.66693	49.01	21,842.14	0.05%			15.53%	0.01%
Dover Corp	DOV	137.13445	166.83	22,878.14	0.06%	1.25%	0.00%	11.53%	0.01%
Alliant Energy Corp	LNT	256.96923	67.41	17,322.30	0.04%	3.01%	0.00%	6.09%	0.00%
Steel Dynamics Inc	STLD	147.20459	139.43	20,524.74	0.05%	1.43%	0.00%	13.77%	0.01%
Duke Energy Corp	DUK	777.02168	123.75	96,156.43	0.23%	3.44%	0.01%	7.44%	0.02%
Regency Centers Corp	REG	181.55331	72.9	13,235.24	0.03%	3.87%	0.00%	5.02%	0.00%
Eaton Corp PLC	ETN	389.3	374.25	145,695.53	0.35%	1.11%	0.00%	13.81%	0.05%
Ecolab Inc	ECL	283.62491	273.86	77,673.52	0.19%	0.95%	0.00%	13.00%	0.02%
Revvity Inc	RVTY	116.07258	87.65	10,173.76	0.02%	0.32%	0.00%	6.16%	0.00%
Dell Technologies Inc	DELL	336.90462	141.77	47,762.97	0.12%	1.48%	0.00%	16.92%	0.02%
Emerson Electric Co	EMR	562.8	131.18	73,828.10	0.18%	1.61%	0.00%	10.06%	0.02%
EOG Resources Inc	EOG	545.99342	112.12	61,216.78		3.64%			
Aon PLC	AON	215.6266	356.58	76,888.13	0.19%	0.84%	0.00%	10.12%	0.02%
Entergy Corp	ETR	446.40907	93.19	41,600.86	0.10%	2.58%	0.00%	5.80%	0.01%
Equifax Inc	EFX	123.79738	256.53	31,757.74	0.08%	0.78%	0.00%	10.18%	0.01%
EQT Corp	EQT	624.06446	54.43	33,967.83		1.16%		41.56%	
IQVIA Holdings Inc	IQV	170	189.94	32,289.80	0.08%			8.97%	0.01%
Gartner Inc	IT	75.7358	262.87	19,908.67					
FedEx Corp	FDX	235.95546	235.81	55,640.66	0.14%	2.46%	0.00%	9.05%	0.01%
Brown & Brown Inc	BRO	329.84281	93.79	30,935.96	0.08%	0.64%	0.00%	11.27%	0.01%
Ford Motor Co	F	3909.00822	11.96	46,751.74		5.02%		-1.10%	
NextEra Energy Inc	NEE	2059.29259	75.49	155,456.00	0.38%	3.00%	0.01%	7.39%	0.03%
Franklin Resources Inc	BEN	519.19548	23.13	12,008.99		5.53%		-0.14%	
Garmin Ltd	GRMN	192.49395	246.22	47,395.86	0.12%	1.46%	0.00%	11.16%	0.01%
Freeport-McMoRan Inc	FCX	1435.77413	39.22	56,311.06		1.53%		24.99%	
Expand Energy Corp	EXE	238.14568	106.24	25,300.60		5.52%			
Dexcom Inc	DXCM	392.15527	67.29	26,388.13				23.31%	
General Dynamics Corp	GD	268.99334	341	91,726.73	0.22%	1.76%	0.00%	14.95%	0.03%
General Mills Inc	GIS	533.41642	50.42	26,894.86		4.84%		-2.94%	
Genuine Parts Co	GPC	139.09229	138.6	19,278.19		2.97%			
Atmos Energy Corp	ATO	160.52357	170.75	27,409.40		2.04%			
WW Grainger Inc	GWW	47.83224	952.96	45,582.21	0.11%	0.95%	0.00%	4.41%	0.00%
Halliburton Co	HAL	852.6021	24.6	20,974.01		2.76%			
L3Harris Technologies Inc	LHX	187.0948	305.41	57,140.62	0.14%	1.57%	0.00%	12.88%	0.02%
Healthpeak Properties Inc	DOC	694.92345	19.15	13,307.78	0.03%	6.37%	0.00%	4.24%	0.00%
Insulet Corp	PODD	70.39253	308.73	21,732.29				25.99%	
Fortive Corp	FTV	338.33635	48.99	16,575.10		0.49%			
Hershey Co/The	HSY	148.11072	187.05	27,704.11		2.93%		-8.41%	
Synchrony Financial	SYF	372.05755	71.05	26,434.69	0.06%	1.69%	0.00%	16.89%	0.01%
Hormel Foods Corp	HRL	549.99843	24.74	13,606.96		4.69%			
Arthur J Gallagher & Co	AJG	256.4	309.74	79,417.34		0.84%			
Mondelez International Inc	MDLZ	1293.94541	62.47	80,832.77	0.20%	3.20%	0.01%	1.85%	0.00%
CenterPoint Energy Inc	CNP	652.7284	38.8	25,325.86	0.06%	2.27%	0.00%	8.98%	0.01%
Humana Inc	HUM	120.27182	260.17	31,291.12	0.08%	1.36%	0.00%	14.02%	0.01%
Willis Towers Watson PLC	WTW	97.54799	345.45	33,697.95	0.08%	1.07%	0.00%	7.47%	0.01%
Illinois Tool Works Inc	ITW	291.5	260.76	76,011.54	0.18%	2.47%	0.00%	1.93%	0.00%
CDW Corp/DE	CDW	131.06075	159.28	20,875.36	0.05%	1.57%	0.00%	6.38%	0.00%
Trane Technologies PLC	TT	222.51536	421.96	93,892.58	0.23%	0.89%	0.00%	11.32%	0.03%
Interpublic Group of Cos Inc/The	IPG	366.26639	27.91	10,222.49	0.02%	4.73%	0.00%	9.40%	0.00%
International Flavors & Fragrances Inc	IFF	256.28708	61.54	15,771.91	0.04%	2.60%	0.00%	2.12%	0.00%
Generac Holdings Inc	GNRC	58.67595	167.4	9,822.35				20.91%	
NXP Semiconductors NV	NXPI	252.1146	227.73	57,414.06	0.14%	1.78%	0.00%	5.71%	0.01%
Kellanova	K	347.6692	82.02	28,515.83	0.07%	2.83%	0.00%	1.79%	0.00%
Broadridge Financial Solutions Inc	BR	117.12932	238.17	27,896.69		1.64%			
Kimco Realty Corp	KIM	679.49863	21.85	14,847.05	0.04%	4.58%	0.00%	3.88%	0.00%
Oracle Corp	ORCL	2850.79261	281.24	801,756.91	1.95%	0.71%	0.01%	18.09%	0.35%
Kroger Co/The	KR	662.67821	67.41	44,671.14	0.11%	2.08%	0.00%	6.37%	0.01%
Lennar Corp	LEN	227.60164	126.04	28,686.91		1.59%		-9.37%	
Eli Lilly & Co	LLY	946.45676	763	722,146.51	1.76%	0.79%	0.01%	18.00%	0.32%
Charter Communications Inc	CHTR	136.59098	275.105	37,576.86	0.09%			10.93%	0.01%
Loews Corp	L	207.4264	100.39	20,823.54		0.25%			
Lowe's Cos Inc	LOW	560.8249	251.31	140,940.91	0.34%	1.91%	0.01%	6.54%	0.02%
Hubbell Inc	HUBB	53.14001	430.31	22,866.68		1.23%			
IDEX Corp	IEX	75.28728	162.76	12,253.76		1.74%			
Marsh & McLennan Cos Inc	MMC	491.62404	201.53	99,076.99	0.24%	1.79%	0.00%	8.31%	0.02%
Masco Corp	MAS	209.36364	70.39	14,737.11	0.04%	1.76%	0.00%	6.47%	0.00%
S&P Global Inc	SPGI	312.5	486.71	152,096.88		0.79%			
Medtronic PLC	MDT	1282.68588	95.24	122,163.00	0.30%	2.98%	0.01%	5.90%	0.02%
Viatris Inc	VTRS	1165.87213	9.9	11,542.13		4.85%		-2.32%	
CVS Health Corp	CVS	1268.32638	75.39	95,619.13	0.23%	3.53%	0.01%	6.43%	0.01%
DuPont de Nemours Inc	DD	418.71669	77.9	32,618.03	0.08%	2.11%	0.00%	6.31%	0.01%
Micron Technology Inc	MU	1119.1251	167.32	187,252.01		0.27%		28.55%	
Motorola Solutions Inc	MSI	166.60389	457.29	76,186.29	0.19%	0.95%	0.00%	8.26%	0.02%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Cboe Global Markets Inc	CBOE	104.59013	245.25	25,650.73	0.06%	1.17%	0.00%	13.77%	0.01%
Newmont Corp	NEM	1098.44973	84.31	92,610.30	0.23%	1.19%	0.00%	16.41%	0.04%
NIKE Inc	NKE	1188.01574	69.73	82,840.34	0.20%	2.29%	0.00%	19.22%	0.04%
NiSource Inc	NI	470.85501	43.3	20,388.02		2.59%			
Norfolk Southern Corp	NSC	224.61489	300.41	67,476.56		1.80%			
Principal Financial Group Inc	PFG	222.76844	82.91	18,469.73	0.04%	3.76%	0.00%	12.73%	0.01%
Eversource Energy	ES	371.11518	71.14	26,401.13	0.06%	4.23%	0.00%	4.40%	0.00%
Northrop Grumman Corp	NOC	143.18298	609.32	87,244.25	0.21%	1.52%	0.00%	4.95%	0.01%
Wells Fargo & Co	WFC	3203.44121	83.82	268,512.44	0.65%	2.15%	0.01%	14.00%	0.09%
Nucor Corp	NUE	229.53545	135.43	31,085.99	0.08%	1.62%	0.00%	18.58%	0.01%
Occidental Petroleum Corp	OXY	984.43974	47.25	46,514.78		2.03%			
Omnicom Group Inc	OMC	193.72289	81.53	15,794.23	0.04%	3.43%	0.00%	7.99%	0.00%
ONEOK Inc	OKE	629.75598	72.97	45,953.29	0.11%	5.65%	0.01%	8.97%	0.01%
Raymond James Financial Inc	RJF	199.38398	172.1	34,313.98	0.08%	1.16%	0.00%	11.82%	0.01%
PG&E Corp	PCG	2197.8374	15.08	33,143.39	0.08%	0.66%	0.00%	8.91%	0.01%
Parker-Hannifin Corp	PH	126.54407	758.15	95,939.39	0.23%	0.95%	0.00%	7.61%	0.02%
Rollins Inc	ROL	484.64	58.74	28,467.75		1.12%			
PPL Corp	PPL	739.51524	37.16	27,480.39	0.07%	2.93%	0.00%	7.34%	0.00%
Aptiv PLC	APTV	217.75981	86.22	18,775.25	0.05%			16.62%	0.01%
ConocoPhillips	COP	1248.94231	94.59	118,137.45		3.30%			
PulteGroup Inc	PHM	197.29757	132.13	26,068.93		0.67%		-2.19%	
Pinnacle West Capital Corp	PNW	119.42724	89.66	10,707.85		3.99%			
PNC Financial Services Group Inc/The	PNC	393.80738	200.93	79,127.72	0.19%	3.38%	0.01%	10.42%	0.02%
PPG Industries Inc	PPG	225.7	105.11	23,723.33	0.06%	2.70%	0.00%	6.81%	0.00%
DoorDash Inc	DASH	398.68051	271.99	108,437.11					
Progressive Corp/The	PGR	586.20849	246.95	144,764.19		0.16%		50.71%	
Veralto Corp	VLTO	248.16085	106.61	26,456.43		0.41%			
Public Service Enterprise Group Inc	PEG	499.07975	83.46	41,653.20	0.10%	3.02%	0.00%	8.76%	0.01%
Cooper Cos Inc/The	COO	198.80892	68.56	13,630.34	0.03%			9.31%	0.00%
Edison International	EIX	384.83401	55.28	21,273.62	0.05%	5.99%	0.00%	9.60%	0.00%
Schlumberger NV	SLB	1493.87884	34.37	51,344.62		3.32%		-4.18%	
Charles Schwab Corp/The	SCHW	1815.2193	95.47	173,298.99	0.42%	1.13%	0.00%	19.98%	0.08%
Sherwin-Williams Co/The	SHW	249.33332	346.26	86,334.16	0.21%	0.91%	0.00%	6.92%	0.01%
West Pharmaceutical Services Inc	WST	71.90733	262.33	18,863.45	0.05%	0.34%	0.00%	8.04%	0.00%
J M Smucker Co/The	SJM	106.68516	108.6	11,586.01	0.03%	4.05%	0.00%	1.56%	0.00%
Snap-on Inc	SNA	52.16337	346.53	18,076.17	0.04%	2.47%	0.00%	4.10%	0.00%
AMETEK Inc	AME	230.95396	188	43,419.34	0.11%	0.66%	0.00%	9.13%	0.01%
Uber Technologies Inc	UBER	2085.41868	97.97	204,308.47				-3.85%	
Southern Co/The	SO	1100.19364	94.77	104,265.35	0.25%	3.12%	0.01%	6.75%	0.02%
Truist Financial Corp	TFC	1289.43517	45.72	58,952.98	0.14%	4.55%	0.01%	9.19%	0.01%
Southwest Airlines Co	LUV	525.18771	31.91	16,758.74		2.26%		58.26%	
W R Berkley Corp	WRB	379.29277	76.62	29,061.41	0.07%	0.47%	0.00%	6.85%	0.00%
Stanley Black & Decker Inc	SWK	154.79225	74.33	11,505.71		4.47%			
Public Storage	PSA	175.45285	288.85	50,679.56	0.12%	4.15%	0.01%	2.40%	0.00%
Arista Networks Inc	ANET	1256.86538	145.71	183,137.85	0.45%			18.74%	0.08%
Sysco Corp	SYY	478.21236	82.34	39,376.01		2.62%			
Corteva Inc	CTVA	683.01458	67.63	46,192.28	0.11%	1.06%	0.00%	16.37%	0.02%
Texas Instruments Inc	TXN	909.13717	183.73	167,035.77	0.41%	3.09%	0.01%	11.04%	0.04%
Textron Inc	TXT	178.2053	84.49	15,056.57	0.04%	0.09%	0.00%	10.03%	0.00%
Thermo Fisher Scientific Inc	TMO	377.61212	485.02	183,149.43	0.45%	0.35%	0.00%	7.56%	0.03%
TJX Cos Inc/The	TJX	1112.93875	144.54	160,864.17	0.39%	1.18%	0.00%	8.43%	0.03%
Globe Life Inc	GL	81.00354	142.97	11,581.08		0.76%			
Johnson Controls International plc	JCI	654.38544	109.95	71,949.68	0.17%	1.46%	0.00%	15.92%	0.03%
Ulta Beauty Inc	ULTA	44.83836	546.75	24,515.37	0.06%			4.39%	0.00%
Union Pacific Corp	UNP	593.04367	236.37	140,177.73	0.34%	2.34%	0.01%	7.79%	0.03%
Keysight Technologies Inc	KEYS	171.85625	174.92	30,061.10	0.07%			12.93%	0.01%
UnitedHealth Group Inc	UNH	905.67363	345.3	312,729.10	0.76%	2.56%	0.02%	14.00%	0.11%
Blackstone Inc	BX	737.09167	170.85	125,932.11		2.41%		24.34%	
Ventas Inc	VTR	454.47119	69.99	31,808.44	0.08%	2.74%	0.00%	9.69%	0.01%
Labcorp Holdings Inc	LH	83.1	287.06	23,854.69	0.06%	1.00%	0.00%	8.77%	0.01%
Vulcan Materials Co	VMC	132.12416	307.62	40,644.03	0.10%	0.64%	0.00%	14.51%	0.01%
Weyerhaeuser Co	WY	721.511	24.79	17,886.26		3.39%		-8.95%	
Williams Cos Inc/The	WMB	1221.17743	63.35	77,361.59		3.16%		22.27%	
Constellation Energy Corp	CEG	312.40558	329.07	102,803.30	0.25%	0.47%	0.00%	16.22%	0.04%
AppLovin Corp	APP	307.63637	718.54	221,049.04				80.10%	
WEC Energy Group Inc	WEC	321.8664	114.59	36,882.67	0.09%	3.12%	0.00%	7.65%	0.01%
Adobe Inc	ADBE	418.6	352.75	147,661.15	0.36%			14.13%	0.05%
Vistra Corp	VST	338.82032	195.92	66,381.68	0.16%	0.46%	0.00%	10.35%	0.02%
AES Corp/The	AES	712.04956	13.16	9,370.57	0.02%	5.35%	0.00%	11.17%	0.00%
Expeditors International of Washington Inc	EXPD	135.71852	122.59	16,637.73	0.04%	1.26%	0.00%	4.89%	0.00%
Amgen Inc	AMGN	538.36185	282.2	151,925.71	0.37%	3.37%	0.01%	5.37%	0.02%
Apple Inc	AAPL	14840.39	254.63	3,778,808.51	9.19%	0.41%	0.04%	14.26%	1.31%
Autodesk Inc	ADSK	213	317.67	67,663.71	0.16%			15.08%	0.02%
Cintas Corp	CTAS	404.39145	205.26	83,005.39		0.88%			
Comcast Corp	CMCSA	3682.76213	31.09	114,497.07	0.28%	4.25%	0.01%	1.88%	0.01%
Molson Coors Beverage Co	TAP	185.38756	45.25	8,388.79	0.02%	4.15%	0.00%	0.78%	0.00%
KLA Corp	KLAC	131.68453	1078.6	142,034.93	0.35%	0.70%	0.00%	10.30%	0.04%
Marriott International Inc/MD	MAR	271.45784	260.44	70,698.48	0.17%	1.03%	0.00%	10.15%	0.02%
Fiserv Inc	FI	543.59318	128.93	70,085.47					
McCormick & Co Inc/MD	MKC	253.0412	66.91	16,930.99	0.04%	2.69%	0.00%	6.37%	0.00%
PACCAR Inc	PCAR	525.10339	98.32	51,628.17		1.34%		-3.95%	
Costco Wholesale Corp	COST	443.47709	925.63	410,495.70	1.00%	0.56%	0.01%	6.75%	0.07%
Stryker Corp	SYK	382.3073	369.67	141,327.54	0.34%	0.91%	0.00%	10.57%	0.04%
Tyson Foods Inc	TSN	285.76038	54.3	15,516.79	0.04%	3.68%	0.00%	18.82%	0.01%
Lamb Weston Holdings Inc	LW	139.35248	58.08	8,093.59		2.55%		-2.55%	
Applied Materials Inc	AMAT	796.64243	204.74	163,104.57	0.40%	0.90%	0.00%	7.67%	0.03%
Cardinal Health Inc	CAH	237.58268	156.4493	37,169.64	0.09%	1.31%	0.00%	13.03%	0.01%
Cincinnati Financial Corp	CINF	156.37642	158.1	24,723.11	0.06%	2.20%	0.00%	3.48%	0.00%
DR Horton Inc	DHI	298.12353	169.47	50,522.99	0.12%	0.94%	0.00%	0.38%	0.00%
Electronic Arts Inc	EA	250.2073	201.7	50,466.81	0.12%	0.38%	0.00%	10.70%	0.01%

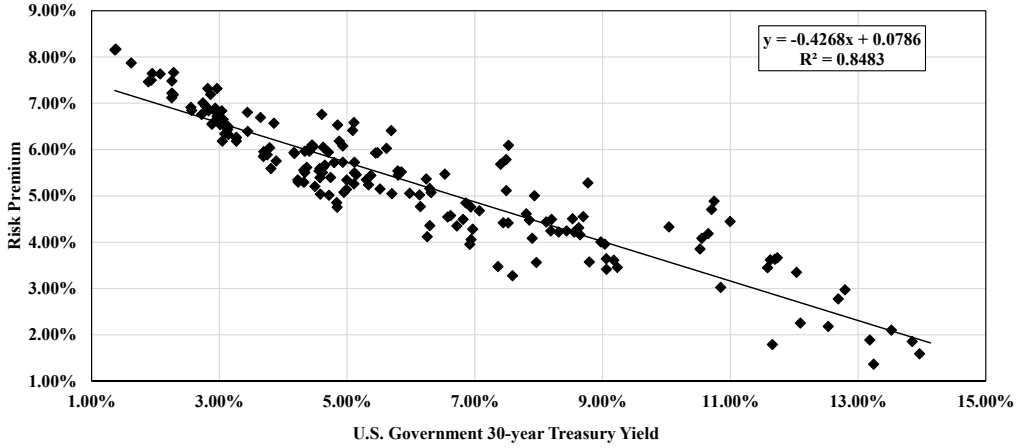
		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Erie Indemnity Co	ERIE	46.18907	318.16	14,695.51		1.72%			
Fair Isaac Corp	FICO	24.00366	1496.53	35,922.20					
Fastenal Co	FAST	1147.63662	49.04	56,280.10	0.14%	1.79%	0.00%	11.06%	0.02%
M&T Bank Corp	MTB	156.26929	197.62	30,881.94	0.08%	3.04%	0.00%	12.35%	0.01%
Xcel Energy Inc	XEL	591.42618	80.65	47,698.52	0.12%	2.83%	0.00%	8.88%	0.01%
Fifth Third Bancorp	FITB	661.88724	44.55	29,487.08		3.59%			
Gilead Sciences Inc	GILD	1240.80692	111	137,729.57		2.85%		29.15%	
Hasbro Inc	HAS	140.23254	75.85	10,636.64	0.03%	3.69%	0.00%	15.87%	0.00%
Huntington Bancshares Inc/OH	HBAN	1458.80004	17.27	25,193.48	0.06%	3.59%	0.00%	14.17%	0.01%
Welltower Inc	WELL	668.82594	178.14	119,144.65	0.29%	1.66%	0.00%	17.51%	0.05%
Biogen Inc	BIIB	146.6146	140.08	20,537.77	0.05%			0.90%	0.00%
Northern Trust Corp	NTRS	191.2333	134.6	25,740.00	0.06%	2.38%	0.00%	9.85%	0.01%
Packaging Corp of America	PKG	89.97878	217.93	19,609.08	0.05%	2.29%	0.00%	11.26%	0.01%
Paychex Inc	PAYX	359.89414	126.76	45,620.18		3.41%			
QUALCOMM Inc	QCOM	1079	166.36	179,502.44	0.44%	2.14%	0.01%	7.74%	0.03%
Ross Stores Inc	ROST	325.22627	152.39	49,561.23	0.12%	1.06%	0.00%	5.82%	0.01%
IDEXX Laboratories Inc	IDXX	80.00469	638.89	51,114.20	0.12%			13.50%	0.02%
Starbucks Corp	SBUX	1136.7	84.6	96,164.82		2.88%		-0.30%	
KeyCorp	KEY	1096.51584	18.69	20,493.88	0.05%	4.39%	0.00%	19.79%	0.01%
Fox Corp	FOXA	210.51946	63.06	13,275.36		0.89%		-1.49%	
Fox Corp	FOX	235.58103	57.29	13,496.44		0.98%		-1.49%	
State Street Corp	STT	283.69534	115.17	32,673.19	0.08%	2.92%	0.00%	12.69%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH	455.25095	24.63	11,212.83	0.03%			16.72%	0.00%
US Bancorp	USB	1556.18945	48.33	75,210.64	0.18%	4.30%	0.01%	9.63%	0.02%
A O Smith Corp	AOS	114.25952	73.41	8,387.79		1.85%			
Gen Digital Inc	GEN	615.86911	28.39	17,484.52	0.04%	1.76%	0.00%	13.08%	0.01%
T Rowe Price Group Inc	TROW	219.71524	102.64	22,551.57		4.95%		-0.94%	
Waste Management Inc	WM	402.83032	220.83	88,957.02	0.22%	1.49%	0.00%	11.23%	0.02%
Constellation Brands Inc	STZ	176.26624	134.67	23,737.77		3.03%		-2.05%	
Invesco Ltd	IVZ	445.96377	22.94	10,230.41	0.02%	3.66%	0.00%	14.17%	0.00%
Intuit Inc	INTU	278.805	682.91	190,398.72		0.70%			
Morgan Stanley	MS	1596.33576	158.96	253,753.53	0.62%	2.52%	0.02%	10.15%	0.06%
Microchip Technology Inc	MCHP	539.67967	64.22	34,658.23		2.83%		29.58%	
Crowdstrike Holdings Inc	CRWD	250.95514	490.38	123,063.38	0.30%			17.74%	0.05%
Chubb Ltd	CB	398.69029	282.25	112,530.33	0.27%	1.37%	0.00%	4.11%	0.01%
Hologic Inc	HOLX	222.41928	67.49	15,011.08	0.04%			7.67%	0.00%
Citizens Financial Group Inc	CFG	431.34899	53.16	22,930.51		3.16%		24.02%	
Jabil Inc	JBL	107.31884	217.17	23,306.43	0.06%	0.15%	0.00%	13.93%	0.01%
O'Reilly Automotive Inc	ORLY	848.49668	107.81	91,476.43	0.22%			10.54%	0.02%
Allstate Corp/The	ALL	263.50533	214.65	56,561.42		1.86%		20.50%	
Equity Residential	EQR	381.89806	64.73	24,720.26	0.06%	4.28%	0.00%	3.64%	0.00%
Keurig Dr Pepper Inc	KDP	1358.43528	25.51	34,653.68	0.08%	3.61%	0.00%	6.51%	0.01%
Host Hotels & Resorts Inc	HST	687.54288	17.02	11,701.98		4.70%		-0.96%	
Incyte Corp	INCY	195.27615	84.81	16,561.37				25.00%	
Simon Property Group Inc	SPG	326.48476	187.67	61,271.39	0.15%	4.58%	0.01%	1.32%	0.00%
Eastman Chemical Co	EMN	114.83241	63.05	7,240.18		5.27%			
AvalonBay Communities Inc	AVB	142.38302	193.17	27,504.13	0.07%	3.62%	0.00%	5.18%	0.00%
Prudential Financial Inc	PRU	352	103.74	36,516.48	0.09%	5.21%	0.00%	8.23%	0.01%
United Parcel Service Inc	UPS	736.0429	83.53	61,481.66		7.85%		-0.74%	
STERIS PLC	STE	98.49061	247.44	24,370.52		1.02%			
McKesson Corp	MCK	124.38439	772.54	96,091.92	0.23%	0.42%	0.00%	13.50%	0.03%
Lockheed Martin Corp	LMT	233.46506	499.21	116,548.09	0.28%	2.64%	0.01%	11.53%	0.03%
Cencora Inc	COR	193.87788	312.53	60,592.65	0.15%	0.70%	0.00%	10.33%	0.02%
Capital One Financial Corp	COF	639.51731	212.58	135,948.59		1.13%		22.86%	
Campbell's Company/The	CPB	297.99253	31.58	9,410.60		4.94%		-2.52%	
Waters Corp	WAT	59.52413	299.81	17,845.93	0.04%			9.42%	0.00%
Nordson Corp	NDSN	56.1863	226.95	12,751.48		1.45%			
Dollar Tree Inc	DLTR	203.96784	94.37	19,248.45	0.05%			9.96%	0.00%
Darden Restaurants Inc	DRI	116.31376	190.36	22,141.49	0.05%	3.15%	0.00%	10.59%	0.01%
Evergy Inc	EVRG	229.74594	76.02	17,465.29	0.04%	3.51%	0.00%	5.78%	0.00%
Match Group Inc	MTCH	240.62215	35.32	8,498.77	0.02%	2.15%	0.00%	16.37%	0.00%
NVR Inc	NVR	2.8698	8034.66	23,057.87	0.06%			1.72%	0.00%
NetApp Inc	NTAP	199.61839	118.46	23,646.79	0.06%	1.76%	0.00%	7.34%	0.00%
Old Dominion Freight Line Inc	ODFL	210.16814	140.78	29,587.47	0.07%	0.80%	0.00%	5.03%	0.00%
DaVita Inc	DVA	71.5	132.87	9,500.21	0.02%			10.59%	0.00%
Hartford Insurance Group Inc/The	HIG	281.17166	133.39	37,505.49	0.09%	1.56%	0.00%	8.89%	0.01%
Iron Mountain Inc	IRM	295.34823	101.94	30,107.80		3.08%			
Estee Lauder Cos Inc/The	EL	234.81506	88.12	20,691.90		1.59%			
Cadence Design Systems Inc	CDNS	272.49	351.26	95,714.84	0.23%			14.66%	0.03%
Tyler Technologies Inc	TYL	43.26181	523.16	22,632.85					
Universal Health Services Inc	UHS	56.38801	204.44	11,527.96	0.03%	0.39%	0.00%	10.17%	0.00%
Skyworks Solutions Inc	SWKS	148.42757	76.98	11,425.95		3.69%		-9.02%	
Quest Diagnostics Inc	DGX	111.82344	190.58	21,311.31	0.05%	1.68%	0.00%	1.06%	0.00%
Rockwell Automation Inc	ROK	112.4344	349.53	39,299.20	0.10%	1.50%	0.00%	14.56%	0.01%
Kraft Heinz Co/The	KHC	1183.59922	26.04	30,820.92		6.14%		-4.68%	
American Tower Corp	AMT	468.25123	192.32	90,054.08		3.54%		23.73%	
Regeneron Pharmaceuticals Inc	REGN	104.1703	562.27	58,571.83	0.14%	0.63%	0.00%	8.03%	0.01%
Amazon.com Inc	AMZN	10664.9121	219.57	2,341,694.75	5.69%			16.62%	0.95%
Jack Henry & Associates Inc	JKHY	72.6652	148.93	10,822.03		1.56%			
Ralph Lauren Corp	RL	38.69301	313.56	12,132.58	0.03%	1.16%	0.00%	13.40%	0.00%
BXP Inc	BXP	158.37552	74.34	11,773.64	0.03%	3.77%	0.00%	1.39%	0.00%
Amphenol Corp	APH	1220.92111	123.75	151,088.99		0.53%		26.21%	
Howmet Aerospace Inc	HWM	403.12632	196.23	79,105.48	0.19%	0.24%	0.00%	17.38%	0.03%
Valero Energy Corp	VLO	310.65174	170.26	52,891.57	0.13%	2.65%	0.00%	17.29%	0.02%
Synopsys Inc	SNPS	185.74867	493.39	91,646.54	0.22%			9.76%	0.02%
CH Robinson Worldwide Inc	CHRW	118.09116	132.4	15,635.27	0.04%	1.87%	0.00%	15.51%	0.01%
Accenture PLC	ACN	622.8527	246.6	153,595.48		2.64%			
TransDigm Group Inc	TDG	56.35029	1318.02	74,270.81	0.18%			12.86%	0.02%
Yum! Brands Inc	YUM	277.5357	152	42,185.43	0.10%	1.87%	0.00%	9.48%	0.01%
Prologis Inc	PLD	926.175	114.52	106,065.56	0.26%	3.53%	0.01%	5.72%	0.01%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
FirstEnergy Corp	FE	577.12618	45.82	26,443.92		3.88%		-4.30%	
VeriSign Inc	VRSN	93.4	279.57	26,111.84		1.10%			
Quanta Services Inc	PWR	149.00594	414.3201	61,736.16	0.15%	0.10%	0.00%	14.67%	0.02%
Henry Schein Inc	HSIC	121.2684	66.37	8,048.58	0.02%			4.67%	0.00%
Ameren Corp	AEE	270.40992	104.38	28,225.39	0.07%	2.72%	0.00%	8.89%	0.01%
FactSet Research Systems Inc	FDS	37.80677	286.49	10,831.26		1.54%			
NVIDIA Corp	NVDA	24300	186.58	4,533,894.00		0.02%		39.00%	
Cognizant Technology Solutions Corp	CTSH	488.39594	67.07	32,756.72		1.85%			
Intuitive Surgical Inc	ISRG	358.47651	447.23	160,321.45	0.39%			15.50%	0.06%
Take-Two Interactive Software Inc	TTWO	184.47021	258.36	47,659.72				58.37%	
Republic Services Inc	RSG	312.21582	229.48	71,647.29	0.17%	1.09%	0.00%	9.49%	0.02%
eBay Inc	EBAY	457	90.95	41,564.15	0.10%	1.28%	0.00%	10.81%	0.01%
Goldman Sachs Group Inc/The	GS	302.72109	796.35	241,071.94	0.59%	2.01%	0.01%	13.64%	0.08%
SBA Communications Corp	SBAC	107.37901	193.35	20,761.73	0.05%	2.30%	0.00%	8.73%	0.00%
Sempra	SRE	652.47246	89.335	58,288.63		2.89%			
Moody's Corp	MCO	179	476.48	85,289.92		0.79%			
ON Semiconductor Corp	ON	408.97399	49.31	20,166.51				-3.65%	
Booking Holdings Inc	BKNG	32.40989	5399.27	174,989.75	0.43%	0.71%	0.00%	16.74%	0.07%
F5 Inc	FFIV	57.44717	323.19	18,566.35	0.05%			7.13%	0.00%
Akamai Technologies Inc	AKAM	143.38553	75.76	10,862.89	0.03%			4.90%	0.00%
Charles River Laboratories International Inc	CRL	49.21418	156.46	7,700.05	0.02%			3.67%	0.00%
Devon Energy Corp	DVN	634.8	35.06	22,256.09	0.05%	2.74%	0.00%	4.26%	0.00%
Bio-Techne Corp	TECH	155.69102	55.63	8,661.09		0.58%			
Alphabet Inc	GOOGL	5817	243.1	1,414,112.70	3.44%	0.35%	0.01%	12.93%	0.44%
Allegion plc	ALLE	85.84652	177.35	15,224.88	0.04%	1.15%	0.00%	5.69%	0.00%
Netflix Inc	NFLX	424.92635	1198.92	509,452.70				26.62%	
Warner Bros Discovery Inc	WBD	2475.77228	19.53	48,351.83				40.59%	
Agilent Technologies Inc	A	283.50043	128.35	36,387.28	0.09%	0.77%	0.00%	7.99%	0.01%
Trimble Inc	TRMB	237.96909	81.65	19,430.18					
Elevance Health Inc	ELV	225.1783	323.12	72,759.61		2.12%		-0.92%	
CME Group Inc	CME	360.37704	270.19	97,370.27	0.24%	1.85%	0.00%	5.71%	0.01%
DTE Energy Co	DTE	207.51775	141.43	29,349.24	0.07%	3.08%	0.00%	6.37%	0.00%
Nasdaq Inc	NDAQ	573.79524	88.45	50,752.19	0.12%	1.22%	0.00%	15.63%	0.02%
Philip Morris International Inc	PM	1556.58934	162.2	252,478.79	0.61%	3.63%	0.02%	11.27%	0.07%
Salesforce Inc	CRM	952	237	225,624.00	0.55%	0.70%	0.00%	12.74%	0.07%
Ingersoll Rand Inc	IR	397.45252	82.62	32,837.53		0.10%			
Huntington Ingalls Industries Inc	HII	39.24063	287.91	11,297.77	0.03%	1.88%	0.00%	14.49%	0.00%
Roper Technologies Inc	ROP	107.61382	498.69	53,665.94		0.66%			
MetLife Inc	MET	665.02605	82.37	54,778.20	0.13%	2.76%	0.00%	12.81%	0.02%
Tapestry Inc	TPR	209.06857	113.22	23,670.74	0.06%	1.41%	0.00%	7.22%	0.00%
CSX Corp	CSX	1864.27701	35.51	66,200.48	0.16%	1.46%	0.00%	6.33%	0.01%
Edwards Lifesciences Corp	EW	587.1	77.77	45,658.77	0.11%			8.64%	0.01%
Ameriprise Financial Inc	AMP	94.27157	491.25	46,310.91	0.11%	1.30%	0.00%	10.55%	0.01%
Zebra Technologies Corp	ZBRA	50.84515	297.16	15,109.14					
Zimmer Biomet Holdings Inc	ZBH	198.09598	98.5	19,512.45	0.05%	0.97%	0.00%	4.65%	0.00%
CBRE Group Inc	CBRE	297.55433	157.56	46,882.66					
Camden Property Trust	CPT	106.85273	106.78	11,409.73	0.03%	3.93%	0.00%	1.63%	0.00%
Mastercard Inc	MA	897.27417	568.81	510,378.52	1.24%	0.53%	0.01%	15.34%	0.19%
Datadog Inc	DDOG	323.2707	142.4	46,033.75	0.11%			8.38%	0.01%
CarMax Inc	KMX	146.84504	44.87	6,588.94	0.02%			15.69%	0.00%
Intercontinental Exchange Inc	ICE	572.42309	168.48	96,441.84	0.23%	1.14%	0.00%	14.37%	0.03%
Smurfit WestRock PLC	SW	522.14418	42.57	22,227.68		4.05%		72.38%	
Fidelity National Information Services Inc	FIS	522.37858	65.94	34,445.64		2.43%			
Chipotle Mexican Grill Inc	CMG	1340.885	39.19	52,549.28	0.13%			15.60%	0.02%
Wynn Resorts Ltd	WYNN	103.97653	128.27	13,337.07	0.03%	0.78%	0.00%	4.22%	0.00%
Live Nation Entertainment Inc	LYV	234.47273	163.4	38,312.84					
Assurant Inc	AIZ	50.45921	216.6	10,929.46		1.48%			
NRG Energy Inc	NRG	193.4308	161.95	31,326.12		1.09%			
Regions Financial Corp	RF	892.30835	26.37	23,530.17	0.06%	4.02%	0.00%	7.96%	0.00%
Monster Beverage Corp	MNST	976.42819	67.31	65,723.38	0.16%			14.71%	0.02%
Mosaic Co/The	MOS	317.37833	34.68	11,006.68	0.03%	2.54%	0.00%	3.57%	0.00%
Baker Hughes Co	BKR	985.87912	48.72	48,032.03	0.12%	1.89%	0.00%	9.16%	0.01%
Expedia Group Inc	EXPE	118.19213	213.75	25,263.57	0.06%	0.75%	0.00%	18.12%	0.01%
Kimberly-Clark Corp	KMB	331.77994	124.34	41,253.52	0.10%	4.05%	0.00%	1.97%	0.00%
CF Industries Holdings Inc	CF	161.97296	89.7	14,528.97		2.23%		-4.53%	
Leidos Holdings Inc	LDOS	128.29733	188.96	24,243.06	0.06%	0.85%	0.00%	9.35%	0.01%
APA Corp	APA	357.78646	24.28	8,687.06		4.12%			
TKO Group Holdings Inc	TKO	82.13689	201.96	16,588.37		1.51%		93.41%	
Alphabet Inc	GOOG	5430	243.55	1,322,476.50	3.21%	0.34%	0.01%	12.93%	0.42%
First Solar Inc	FSLR	107.24765	220.53	23,651.32				37.61%	
Visa Inc	V	1698.68253	341.38	579,896.24	1.41%	0.69%	0.01%	13.36%	0.19%
Mid-America Apartment Communities Inc	MAA	117.07114	139.73	16,358.35	0.04%	4.34%	0.00%	1.55%	0.00%
Xylem Inc/NY	XYL	243.40969	147.5	35,902.93		1.08%			
Marathon Petroleum Corp	MPC	304.02031	192.74	58,596.87	0.14%	1.89%	0.00%	7.16%	0.01%
Advanced Micro Devices Inc	AMD	1622.84369	161.79	262,559.88				31.34%	
Tractor Supply Co	TSCO	529.95167	56.87	30,138.35	0.07%	1.62%	0.00%	9.79%	0.01%
ResMed Inc	RMD	146.41484	273.73	40,078.13	0.10%	0.88%	0.00%	9.57%	0.01%
Mettler-Toledo International Inc	MTD	20.59904	1227.61	25,287.59	0.06%			7.93%	0.00%
Jacobs Solutions Inc	J	119.53647	149.86	17,913.74	0.04%	0.85%	0.00%	13.35%	0.01%
Copart Inc	CPRT	967.73153	44.97	43,518.89					
VICI Properties Inc	VICI	1066.36978	32.61	34,774.32	0.08%	5.52%	0.00%	4.24%	0.00%
Fortinet Inc	FTNT	766.26603	84.08	64,427.65	0.16%			10.99%	0.02%
Albemarle Corp	ALB	117.68293	81.08	9,541.73		2.00%		83.68%	
Moderna Inc	MRNA	389.07976	25.83	10,049.93	0.02%			18.60%	0.00%
Essex Property Trust Inc	ESS	64.40402	267.66	17,238.38	0.04%	3.84%	0.00%	2.46%	0.00%
CoStar Group Inc	CSGP	423.65036	84.37	35,743.38				40.81%	
Realty Income Corp	O	914.30609	60.5205	55,334.26	0.13%	5.34%	0.01%	3.14%	0.00%
Palantir Technologies Inc	PLTR	2274.26158	182.42	414,870.80				40.62%	
Westinghouse Air Brake Technologies Corp	WAB	170.95318	200.47	34,270.98	0.08%	0.50%	0.00%	14.51%	0.01%
Pool Corp	POOL	37.31801	310.07	11,571.20	0.03%	1.61%	0.00%	5.27%	0.00%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Western Digital Corp	WDC	346.92213	120.06	41,651.47	0.10%	0.33%	0.00%	19.43%	0.02%
PepsiCo Inc	PEP	1369.0772	140.44	192,273.20	0.47%	4.05%	0.02%	3.51%	0.02%
TE Connectivity PLC	TEL	295.48149	219.53	64,867.05	0.16%	1.29%	0.00%	10.89%	0.02%
Diamondback Energy Inc	FANG	289.48612	143.1	41,425.46		2.80%			
Palo Alto Networks Inc	PANW	668.9	203.62	136,201.42	0.33%			11.82%	0.04%
ServiceNow Inc	NOW	208	920.28	191,418.24					
Church & Dwight Co Inc	CHD	243.6087	87.63	21,347.43	0.05%	1.35%	0.00%	6.71%	0.00%
Federal Realty Investment Trust	FRT	86.26612	100.18	8,642.14	0.02%	4.51%	0.00%	4.15%	0.00%
MGM Resorts International	MGM	272.19104	34.66	9,434.14	0.02%			9.69%	0.00%
American Electric Power Co Inc	AEP	534.79476	112.5	60,164.41	0.15%	3.31%	0.00%	5.30%	0.01%
Invitation Homes Inc	INVH	613.00822	29.33	17,979.53	0.04%	3.95%	0.00%	3.59%	0.00%
PTC Inc	PTC	119.7927	203.02	24,320.31				21.45%	
JB Hunt Transport Services Inc	JBHT	96.79928	134.17	12,987.56	0.03%	1.31%	0.00%	13.09%	0.00%
Lam Research Corp	LRCX	1261.0323	133.9	168,852.22	0.41%	0.78%	0.00%	14.44%	0.06%
Mohawk Industries Inc	MHK	62.13191	128.92	8,010.05	0.02%			4.49%	0.00%
Pentair PLC	PNR	163.93126	110.76	18,157.03	0.04%	0.90%	0.00%	9.47%	0.00%
GE HealthCare Technologies Inc	GEHC	456.56204	75.1	34,287.81	0.08%	0.19%	0.00%	6.34%	0.01%
Vertex Pharmaceuticals Inc	VRTX	256.39065	391.64	100,412.83					
Amcor PLC	AMCR	2308.35994	8.18	18,882.38	0.05%	6.23%	0.00%	8.74%	0.00%
Meta Platforms Inc	META	2168.96248	734.38	1,592,842.67	3.87%	0.29%	0.01%	16.81%	0.65%
T-Mobile US Inc	TMUS	1125.41904	239.38	269,402.81		1.70%			
United Rentals Inc	URI	64.34122	954.66	61,423.99	0.15%	0.75%	0.00%	7.70%	0.01%
Honeywell International Inc	HON	634.89656	210.5	133,645.73	0.32%	2.26%	0.01%	8.09%	0.03%
Alexandria Real Estate Equities Inc	ARE	172.95895	83.34	14,414.40		6.34%		-1.68%	
Robinhood Markets Inc	HOOD	773.96367	143.18	110,816.12	0.27%			14.47%	0.04%
Delta Air Lines Inc	DAL	652.9484	56.75	37,054.82	0.09%	1.32%	0.00%	4.60%	0.00%
Seagate Technology Holdings PLC	STX	212.96828	236.06	50,273.29		1.22%		23.91%	
United Airlines Holdings Inc	UAL	327.70387	96.5	31,623.42	0.08%			7.43%	0.01%
News Corp	NWS	188.0312	34.55	6,496.48		0.58%			
Centene Corp	CNC	491.133	35.68	17,523.63				-21.26%	
Block Inc	XYZ	549.574	72.27	39,717.71				34.36%	
Martin Marietta Materials Inc	MLM	60.306	630.28	38,009.67		0.53%		-9.33%	
Apollo Global Management Inc	APO	575.38125	133.27	76,681.06	0.19%	1.53%	0.00%	12.27%	0.02%
Teradyne Inc	TER	159.07353	137.64	21,894.88	0.05%	0.35%	0.00%	15.18%	0.01%
PayPal Holdings Inc	PYPL	955.37841	67.06	64,067.68	0.16%			12.38%	0.02%
Tesla Inc	TSLA	3325.15089	444.72	1,478,761.10					
Blackrock Inc	BLK	154.85334	1165.87	180,538.86	0.44%	1.79%	0.01%	12.40%	0.05%
Arch Capital Group Ltd	ACGL	373.2203	90.73	33,862.28	0.08%			2.01%	0.00%
KKR & Co Inc	KKR	890.94873	129.95	115,778.79		0.57%			
Dow Inc	DOW	705.76446	22.93	16,183.18	0.04%	6.11%	0.00%	3.37%	0.00%
Everest Group Ltd	EG	41.94329	350.23	14,689.80		2.28%		29.71%	
Teledyne Technologies Inc	TDY	46.8885	586.04	27,478.54	0.07%			10.05%	0.01%
GE Vernova Inc	GEV	272.22394	614.9	167,390.50		0.16%			
Domino's Pizza Inc	DPZ	33.94892	431.71	14,656.09	0.04%	1.61%	0.00%	9.94%	0.00%
News Corp	NWSA	376.77633	30.71	11,570.80		0.65%			
Exelon Corp	EXC	1009.53563	45.01	45,439.20	0.11%	3.55%	0.00%	7.22%	0.01%
Global Payments Inc	GPN	242.60711	83.08	20,155.80		1.20%			
Crown Castle Inc	CCI	435.47006	96.49	42,018.51		4.40%		32.78%	
Align Technology Inc	ALGN	72.48637	125.22	9,076.74	0.02%			10.93%	0.00%
Kenvue Inc	KVUE	1919.06992	16.23	31,146.50		5.11%		32.40%	
Targa Resources Corp	TRGP	215.19185	167.54	36,053.24		2.39%		21.00%	
Bunge Global SA	BG	200.06202	81.25	16,255.04	0.04%	3.45%	0.00%	2.09%	0.00%
Deckers Outdoor Corp	DECK	148.34336	101.37	15,037.57	0.04%			4.14%	0.00%
LKQ Corp	LKQ	257.29319	30.54	7,857.73		3.93%			
Workday Inc	WDAY	217	240.73	52,238.41					
Zoetis Inc	ZTS	443.18347	146.32	64,846.61	0.16%	1.37%	0.00%	8.70%	0.01%
Paramount Skydance Corp	PSKY	1064.65341	18.92	20,143.24		1.06%			
Coinbase Global Inc	COIN	226.15913	337.49	76,326.44				-3.18%	
Digital Realty Trust Inc	DLR	341.05044	172.88	58,960.80	0.14%	2.82%	0.00%	6.48%	0.01%
Equinix Inc	EQIX	97.86399	783.24	76,650.99		2.40%		32.66%	
Las Vegas Sands Corp	LVS	686.45361	53.79	36,924.34	0.09%	1.86%	0.00%	8.34%	0.01%
Molina Healthcare Inc	MOH	54.2	191.36	10,371.71				-9.17%	

Notes:

[1] Equals sum of Col. [9]
[2] Equals sum of Col. [11]
[3] Equals ([1] x (1 + (0.5 x [2]))) + [2]
[4] Bloomberg Professional as of September 30, 2025
[5] Bloomberg Professional as of September 30, 2025
[6] Equals [4] x [5]
[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and ≤20%
[8] Source: Bloomberg Professional, as of September 30, 2025
[9] Equals [7] x [8]
[10] Bloomberg Professional, as of September 30, 2025
[11] Equals [7] x [10]



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9210434
R Square	0.8483210
Adjusted R Square	0.8474641
Standard Error	0.0055326
Observations	179

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.03030	0.03030	989.93815	0.00000
Residual	177	0.00542	0.00003		
Total	178	0.03572			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0786	0.00	85.83	0.0000	0.0768	0.0804	0.0768	0.0804
U.S. Govt. 30-year Treasury	(0.4268)	0.01	(31.46)	0.0000	(0.4536)	(0.4001)	(0.4536)	(0.4001)

	[7] U.S. Govt. 30-year Treasury	[8] Risk Premium	[9] ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	4.79%	5.81%	10.60%
Bloomberg Professional Near-term Forecast (November 2025 - October 2027) [5]	4.87%	5.78%	10.65%
Blue Chip Long-Term Projected Forecast (2027-2031) [6]	4.40%	5.98%	10.38%
AVERAGE			10.54%

Notes:
[1] Source: Regulatory Research Associates, rate cases through September 30, 2025
[2] S&P Capital IQ Pro, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] − Column [2]
[4] S&P Capital IQ Pro, 30-day average as of September 30, 2025
[5] Bloomberg Professional
[6] Blue Chip Financial Forecasts, Vol. 44, No. 6, June 2, 2025, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.078577 + (-0.426828 x Column [7])
[9] Equals Column [7] + Column [8]

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized Natual Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
1980.1	13.45%	11.66%	1.79%
1980.2	14.38%	10.52%	3.85%
1980.3	13.87%	10.85%	3.02%
1980.4	14.35%	12.10%	2.25%
1981.1	14.71%	12.53%	2.18%
1981.2	14.61%	13.24%	1.36%
1981.3	14.86%	14.13%	0.72%
1981.4	15.70%	13.85%	1.86%
1982.1	15.55%	13.96%	1.59%
1982.2	15.62%	13.52%	2.10%
1982.3	15.77%	12.79%	2.97%
1982.4	15.63%	10.75%	4.89%
1983.1	15.41%	10.71%	4.71%
1983.2	14.84%	10.65%	4.19%
1983.3	15.24%	11.62%	3.62%
1983.4	15.40%	11.74%	3.66%
1984.1	15.39%	12.04%	3.35%
1984.2	15.07%	13.18%	1.89%
1984.3	15.46%	12.69%	2.77%
1984.4	15.33%	11.70%	3.63%
1985.1	15.03%	11.58%	3.45%
1985.2	15.44%	11.00%	4.45%
1985.3	14.64%	10.55%	4.08%
1985.4	14.37%	10.04%	4.33%
1986.1	14.05%	8.77%	5.28%
1986.2	13.28%	7.49%	5.79%
1986.3	13.09%	7.40%	5.69%
1986.4	13.62%	7.53%	6.09%
1987.1	12.61%	7.49%	5.11%
1987.2	13.04%	8.53%	4.51%
1987.3	12.70%	9.06%	3.64%
1987.4	12.69%	9.23%	3.46%
1988.1	12.94%	8.63%	4.31%
1988.2	12.48%	9.06%	3.41%
1988.3	12.79%	9.18%	3.61%
1988.4	12.98%	8.97%	4.00%
1989.1	12.99%	9.04%	3.96%
1989.2	13.25%	8.70%	4.55%
1989.3	12.56%	8.12%	4.44%
1989.4	12.94%	7.93%	5.00%
1990.1	12.68%	8.44%	4.24%
1990.2	12.81%	8.65%	4.16%
1990.3	12.36%	8.79%	3.57%
1990.4	12.78%	8.56%	4.22%
1991.1	12.69%	8.20%	4.49%
1991.2	12.53%	8.31%	4.22%
1991.3	12.43%	8.19%	4.24%
1991.4	12.33%	7.85%	4.48%
1992.1	12.42%	7.81%	4.61%
1992.2	11.98%	7.90%	4.09%
1992.3	11.87%	7.45%	4.42%
1992.4	11.94%	7.52%	4.42%
1993.1	11.75%	7.07%	4.68%
1993.2	11.71%	6.86%	4.85%
1993.3	11.39%	6.32%	5.07%
1993.4	11.16%	6.14%	5.02%
1994.1	11.12%	6.58%	4.54%
1994.2	10.84%	7.36%	3.47%
1994.3	10.87%	7.59%	3.28%
1994.4	11.53%	7.96%	3.56%
1995.2	11.00%	6.94%	4.06%
1995.3	11.07%	6.72%	4.35%
1995.4	11.61%	6.24%	5.37%
1996.1	11.45%	6.29%	5.16%
1996.2	10.88%	6.92%	3.95%
1996.3	11.25%	6.97%	4.28%
1996.4	11.19%	6.62%	4.57%
1997.1	11.31%	6.82%	4.49%
1997.2	11.70%	6.94%	4.76%
1997.3	12.00%	6.53%	5.47%
1997.4	10.92%	6.15%	4.77%
1998.2	11.37%	5.85%	5.52%
1998.3	11.41%	5.48%	5.93%

	[1]	[2]	[3]
Quarter	Average Authorized Natual Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
1998.4	11.69%	5.11%	6.58%
1999.1	10.82%	5.37%	5.44%
1999.2	11.25%	5.80%	5.45%
1999.4	10.38%	6.26%	4.12%
2000.1	10.66%	6.30%	4.36%
2000.2	11.03%	5.98%	5.05%
2000.3	11.33%	5.79%	5.54%
2000.4	12.10%	5.69%	6.41%
2001.1	11.38%	5.45%	5.93%
2001.2	10.75%	5.70%	5.05%
2001.4	10.65%	5.30%	5.35%
2002.1	10.67%	5.52%	5.15%
2002.2	11.64%	5.62%	6.03%
2002.3	11.50%	5.09%	6.41%
2002.4	11.01%	4.93%	6.08%
2003.1	11.38%	4.85%	6.53%
2003.2	11.36%	4.60%	6.76%
2003.3	10.61%	5.11%	5.50%
2003.4	10.84%	5.11%	5.73%
2004.1	11.06%	4.88%	6.18%
2004.2	10.57%	5.34%	5.24%
2004.3	10.37%	5.11%	5.26%
2004.4	10.66%	4.93%	5.73%
2005.1	10.65%	4.71%	5.94%
2005.2	10.54%	4.47%	6.07%
2005.3	10.47%	4.42%	6.05%
2005.4	10.32%	4.65%	5.66%
2006.1	10.68%	4.63%	6.05%
2006.2	10.60%	5.14%	5.46%
2006.3	10.34%	5.00%	5.34%
2006.4	10.14%	4.74%	5.40%
2007.1	10.52%	4.80%	5.72%
2007.2	10.13%	4.99%	5.14%
2007.3	10.03%	4.95%	5.08%
2007.4	10.12%	4.61%	5.50%
2008.1	10.38%	4.41%	5.97%
2008.2	10.17%	4.57%	5.59%
2008.3	10.55%	4.45%	6.10%
2008.4	10.34%	3.64%	6.69%
2009.1	10.24%	3.44%	6.80%
2009.2	10.11%	4.17%	5.94%
2009.3	9.88%	4.32%	5.56%
2009.4	10.31%	4.34%	5.97%
2010.1	10.24%	4.62%	5.61%
2010.2	9.99%	4.37%	5.62%
2010.3	10.43%	3.86%	6.57%
2010.4	10.09%	4.17%	5.92%
2011.1	10.10%	4.56%	5.54%
2011.2	9.85%	4.34%	5.51%
2011.3	9.65%	3.70%	5.95%
2011.4	9.88%	3.04%	6.84%
2012.1	9.63%	3.14%	6.50%
2012.2	9.83%	2.94%	6.89%
2012.3	9.75%	2.74%	7.01%
2012.4	10.06%	2.86%	7.19%
2013.1	9.57%	3.13%	6.44%
2013.2	9.47%	3.14%	6.33%
2013.3	9.60%	3.71%	5.89%
2013.4	9.83%	3.79%	6.04%
2014.1	9.54%	3.69%	5.85%
2014.2	9.84%	3.44%	6.39%
2014.3	9.45%	3.27%	6.18%
2014.4	10.28%	2.96%	7.32%
2015.1	9.47%	2.55%	6.91%
2015.2	9.43%	2.88%	6.55%
2015.3	9.75%	2.96%	6.79%
2015.4	9.68%	2.96%	6.71%
2016.1	9.48%	2.72%	6.76%
2016.2	9.42%	2.57%	6.85%
2016.3	9.47%	2.28%	7.19%
2016.4	9.67%	2.83%	6.84%
2017.1	9.60%	3.05%	6.55%
2017.2	9.47%	2.90%	6.57%
2017.3	10.14%	2.82%	7.32%
2017.4	9.70%	2.82%	6.88%

	[1]	[2]	[3]
Quarter	Average Authorized Natual Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
2018.1	9.68%	3.02%	6.66%
2018.2	9.43%	3.09%	6.34%
2018.3	9.71%	3.06%	6.65%
2018.4	9.53%	3.27%	6.26%
2019.1	9.55%	3.01%	6.54%
2019.2	9.73%	2.78%	6.94%
2019.3	9.95%	2.29%	7.67%
2019.4	9.74%	2.26%	7.48%
2020.1	9.35%	1.89%	7.46%
2020.2	9.55%	1.38%	8.17%
2020.3	9.52%	1.37%	8.15%
2020.4	9.50%	1.62%	7.87%
2021.1	9.71%	2.07%	7.63%
2021.2	9.48%	2.26%	7.22%
2021.3	9.43%	1.93%	7.50%
2021.4	9.59%	1.95%	7.65%
2022.1	9.38%	2.25%	7.12%
2022.2	9.23%	3.05%	6.18%
2022.3	9.52%	3.26%	6.26%
2022.4	9.65%	3.89%	5.75%
2023.1	9.64%	3.75%	5.89%
2023.2	9.40%	3.81%	5.59%
2023.3	9.53%	4.23%	5.30%
2023.4	9.62%	4.58%	5.04%
2024.1	9.62%	4.32%	5.29%
2024.2	9.97%	4.58%	5.40%
2024.3	9.58%	4.23%	5.35%
2024.4	9.70%	4.50%	5.21%
2025.1	9.73%	4.72%	5.02%
2025.2	9.69%	4.84%	4.86%
2025.3	9.60%	4.85%	4.75%
AVERAGE	11.31%	6.02%	5.29%
MEDIAN	10.67%	5.11%	5.45%

FLOTATION COST ADJUSTMENT

Company	Ticker	Date [i]	[1] Shares Issued (000)	[2] Offering Price	[3] Under-writing Discount [ii]	[4] Offering Expense ($000)	[5] Net Proceeds Per Share	[6] Total Flotation Costs ($000)	[7] Gross Equity Issue Before Costs ($000)	[8] Net Proceeds ($000)	[9] Flotation Cost Percentage
CMS Energy Corporation	CMS	3/30/2005	23,000	12.25	0.429	325	11.81	10,187	281,750	271,563	3.62%
CMS Energy Corporation	CMS	10/7/2004	32,775	9.10	0.319	325	8.77	10,764	298,253	287,489	3.61%
								$ 20,951	$ 580,003	$ 559,051	3.61%

[i] Offering Completion Date
[ii] Underwriting discount is calculated as the market price minus the offering price when not explicitly given in the prospectus.

The flotation cost adjustment is derived by dividing the dividend yield by 1 − F (where F = flotation costs expressed in percentage terms), or by 0.9639, and adding that result to the constant growth rate to determine the cost of equity. Using the formulas shown previously in my testimony, the Constant Growth DCF calculation is modified as follows to accommodate an adjustment for flotation costs:

$$k = \frac{D \times (1 + 0.5g)}{P \times (1 - F)} + g$$

Company	Ticker	[10] Annualized Dividend	[11] Stock Price	[12] Dividend Yield	[13] Expected Dividend Yield	[14] Expected Dividend Yield Adjusted for Flotation Costs	[15] Value Line Projected EPS Growth Rate	[16] S&P Capital IQ Projected EPS Growth Rate	[17] Zacks Projected EPS Growth Rate	[18] Average Earnings Growth	[19] Cost of Equity: Mean Growth Rate	[20] Cost of Equity Adjusted for Flotation Costs	
Atmos Energy Corporation	ATO	$ 3.48	$ 165.62	2.10%	2.18%	2.26%	7.00%	7.22%	7.30%	7.17%	9.35%	9.43%	
NiSource Inc.	NI	$ 1.12	$ 41.53	2.70%	2.81%	2.92%	9.50%	8.44%	7.90%	8.61%	11.43%	11.53%	
Northwest Natural Gas Company	NWN	$ 1.96	$ 42.14	4.65%	4.79%	4.97%	6.50%	5.75%	n/a	6.13%	10.92%	11.10%	
ONE Gas, Inc.	OGS	$ 2.68	$ 76.30	3.51%	3.61%	3.74%	4.50%	5.94%	5.60%	5.35%	8.95%	9.09%	
Southwest Gas Corporation	SWX	$ 2.48	$ 78.30	3.17%	3.34%	3.47%	10.00%	13.11%	10.40%	11.17%	14.51%	14.64%	
Mean											11.03%	11.16%	
Median											10.92%	11.10%	
Flotation Cost Adjustment (Mean)												0.13%	[21]
Flotation Cost Adjustment (Median)												0.18%	[22]

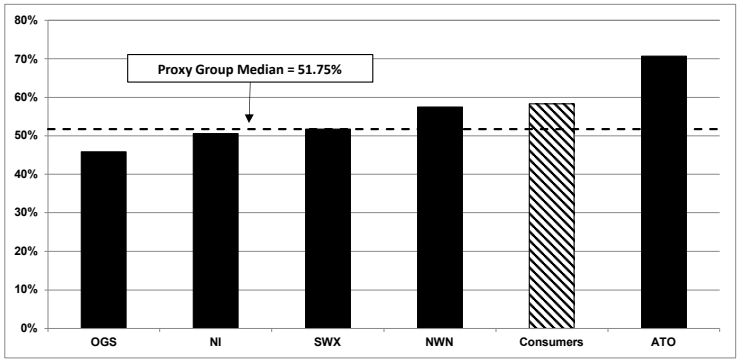
Notes:
[1] - [4] Sources: CMS Energy Corporation - Prospectus dated March 30, 2005 and Prospectus dated October 7, 2004.
[5] Equals [8]/[1]
[6] Equals [4] + ([1] x [3])
[7] Equals [1] x [2]
[8] Equals [7] - [6]
[9] Equals [6] / [7]
[10] Bloomberg Professional
[11] Bloomberg Professional, equals 30-day average as of September 30, 2025
[12] Equals [10] / [11]
[13] Equals [12] x (1 + 0.5 x [18])
[14] Equals [13] / (1 − Flotation Cost)
[15] Value Line
[16] S&P Capital IQ Pro
[17] Zacks Investment Research
[18] Equals Average of [15], [16], [17]
[19] Equals [13] + [18]
[20] Equals [14] + [18]
[21] Equals [20] (Mean) − [19] (Mean)
[22] Equals [20] (Median) − [19] (Median)

PROJECTED CAPITAL EXPENDITURES AS A PERCENT OF 2024 NET PLANT
($ Millions)

		[1]	[2]	[3]	[4]	[5]	[6]
		2024	**2026**	**2027**	**2028**	**2029**	**2026-2029 Cap. Ex. / 2024 Net Plant**
Atmos Energy Corporation	ATO						
Capital Spending per Share			$22.75	$22.18	$21.60	$21.60	
Common Shares Outstanding			167.00	176.00	185.00	185.00	
Capital Expenditures			$3,799.3	$3,902.8	$3,996.0	$3,996.0	70.68%
Net Plant		$22,204.0					
NiSource Inc.	NI						
Capital Spending per Share			$6.00	$6.50	$7.00	$7.00	
Common Shares Outstanding			500.00	512.50	525.00	525.00	
Capital Expenditures			$3,000.0	$3,331.3	$3,675.0	$3,675.0	50.59%
Net Plant		$27,044.0					
Northwest Natural Gas Company	NWN						
Capital Spending per Share			$10.00	$10.75	$11.50	$11.50	
Common Shares Outstanding			45.00	47.50	50.00	50.00	
Capital Expenditures			$450.0	$510.6	$575.0	$575.0	57.47%
Net Plant		$3,672.3					
ONE Gas, Inc.	OGS						
Capital Spending per Share			$11.60	$11.38	$11.15	$11.15	
Common Shares Outstanding			63.00	66.50	70.00	70.00	
Capital Expenditures			$730.8	$756.4	$780.5	$780.5	45.87%
Net Plant		$6,645.9					
Southwest Gas Corporation	SWX						
Capital Spending per Share			$13.50	$14.00	$14.50	$14.50	
Common Shares Outstanding			73.00	74.00	75.00	75.00	
Capital Expenditures			$985.5	$1,036.0	$1,087.5	$1,087.5	51.75%
Net Plant		$8,109.1					
Consumers Energy Natural Gas Operations	Consumers						
Capital Expenditures [7]			$1,300.0	$1,300.0	$1,200.0	$1,300.0	58.31%
Net Plant [8]		$8,746.0					

Notes:
[1] - [5] Value Line, as of August 22, 2025
[6] Equals (Column [2] + [3] + [4] + [5]) / Column [1]
[7] Source: Data provided by the Company
[8] Source: Exhibit No. A-2 (HLR-3), Schedule B-1, pg. 1

PROJECTED CAPITAL EXPENDITURES AS A PERCENT OF 2024 NET PLANT



Projected CAPEX / 2024 Net Plant

Rank	Company		Percent
1	ONE Gas, Inc.	OGS	45.9%
2	NiSource Inc.	NI	50.6%
3	Southwest Gas Corporation	SWX	51.8%
4	Northwest Natural Gas Company	NWN	57.5%
5	Consumers Energy Natural Gas Operations	Consumers	58.3%
6	Atmos Energy Corporation	ATO	70.7%
	Proxy Group Median		51.75%
	Consumers as % of Median		1.13

Notes:
Source: Exhibit A-14 (AEB-1), Schedule D-5, page 24, column [6]

COMPARISON OF CONSUMERS ENERGY AND PROXY GROUP COMPANIES
REGULATORY RISK ASSESSMENT

				[1]	[2]	[3]	[4]	[5]	[6]
					Revenue Stabilization				
Company	Operating Subsidiary	State	Utility Type	Test Year Convention	Revenue Decoupling	Formula-Based Rates	Straight Fixed Variable Rate Design	Overall Revenue Stabilization	Capital Cost Recovery
Atmos Energy Corp.	Atmos Energy Corp.	Kansas	Gas	Historical	Yes	No	No	Yes	Yes
	Atmos Energy Corp.	Kentucky	Gas	Fully Forecast	Yes	No	No	Yes	Yes
	Atmos Energy Corp.	Louisiana	Gas	Historical	Yes	Yes	No	Yes	No
	Atmos Energy Corp.	Mississippi	Gas	Historical	Yes	Yes	No	Yes	Yes
	Atmos Energy Corp.	Tennessee	Gas	Historical	Yes	Yes	No	Yes	No
	Atmos Energy Corp.	Texas RRC	Gas	Historical	Yes	Yes	No	Yes	Yes
	Atmos Energy Corp.	Virginia	Gas	Historical	Yes	No	No	Yes	Yes
NiSource Inc.	Northern Indiana Public Service Co.	Indiana	Electric	Fully Forecast	Yes	No	No	Yes	Yes
	Northern Indiana Public Service Co.	Indiana	Gas	Fully Forecast	Yes	No	No	Yes	Yes
	Columbia Gas of Kentucky Inc.	Kentucky	Gas	Fully Forecast	Yes	No	No	Yes	Yes
	Columbia Gas of Maryland Inc.	Maryland	Gas	Partially Forecast	Yes	No	No	Yes	Yes
	Columbia Gas of Ohio Inc.	Ohio	Gas	Partially Forecast	No	No	Yes	Yes	Yes
	Columbia Gas of Pennsylvania Inc.	Pennsylvania	Gas	Fully Forecast	Yes	No	No	Yes	Yes
	Columbia Gas of Virginia Inc.	Virginia	Gas	Fully Forecast	Yes	No	No	Yes	Yes
Northwest Natural Gas Company	Northwest Natural Gas Co.	Oregon	Gas	Fully Forecast	Yes	No	No	Yes	Yes
	Northwest Natural Gas Co.	Washington	Gas	Historical	No	No	No	No	No
ONE Gas, Inc.	Kansas Gas Service Co.	Kansas	Gas	Historical	Yes	No	No	Yes	Yes
	Oklahoma Natural Gas Co.	Oklahoma	Gas	Historical	Yes	No	No	Yes	No
	Texas Gas Service Co.	Texas RRC	Gas	Historical	Yes	No	No	Yes	Yes
Southwest Gas Corporation	Southwest Gas Corp.	Arizona	Gas	Historical	Yes	No	No	Yes	Yes
	Southwest Gas Corp.	California	Gas	Fully Forecast	Yes	No	No	Yes	No
	Southwest Gas Corp.	Nevada	Gas	Historical	Yes	No	No	Yes	Yes
Proxy Group Totals				Fully Forecast 8					
				Partially Forecast 2				Yes 21	Yes 17
				Historical 12				No 1	No 5
				% Forecast 45.45%				% Yes 95.45%	% Yes 77.27%
Consumers Energy [7]		Michigan	Gas	Projected	Proposing	No	No	Proposing	No

Notes:
[1] Regulatory Research Associates, effective as of September 30, 2025

[2] S&P Global Market Intelligence, Adjustment clauses: a state-by-state overview, released September 2025. Operating subsidiaries not covered in this report were excluded from this exhibit. A designation of "Yes" indicates full or partial decoupling
[3] S&P Capital IQ, Alternative Regulation
[4] S&P Global Market Intelligence, Adjustment clauses: a state-by-state overview, released September 2025.
[5] Equals IF(AND([2]=No, [3]=No, [4]=No), No, Yes)
[6] S&P Global Market Intelligence, Adjustment Clauses: a state-by-state overview, dated September 22, 2025. Yes, if noted by S&P as a having a capital tracker to recover either "Traditional generation", "Renewables/Non-traditional generation", "Delivery infrastructure", "Environmental compliance" or "Transmission costs".
[7] Data provided by the Company

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

AMY M. CONRAD

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Amy M. Conrad, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. In what capacity are you employed?

A. I am employed as the Manager of Compensation Operations for Consumers Energy Company ("Consumers Energy" or the "Company").

Q. What is your educational background?

A. I graduated from Central Michigan University in 1999 with a Bachelor of Science Degree in Business Administration with a major in Accounting. In addition, I am designated as a Certified Compensation Professional and Certified Executive Compensation Professional by WorldatWork and a Certified Public Accountant by the Michigan Association of Certified Public Accountants. WorldatWork is an international professional organization focused on human resources issues, including compensation, benefits, work life, and integrated total rewards to attract, motivate, and retain a talented workforce.

Q. What have your job responsibilities entailed with Consumers Energy?

A. In February 2002, I joined Consumers Energy as a Financial Reporting and Technical Accounting Analyst. My duties included accounting and reporting of equity-based compensation, technical accounting standard research, and preparation of quarterly and annual Securities and Exchange Commission ("SEC") filings. After eight years of progressing responsibilities in this role, I transferred to the position of Principal Human Resources Consultant. In 2013, I was promoted to the position of Director of Compensation. In this role I had the responsibility for administering Consumers Energy's compensation function and partnering with Labor Relations on union compensation

matters. This included developing compensation programs designed to attract and retain a qualified workforce for the Company. My duties included gathering of comparable wage and salary data in order to determine how Consumers Energy's pay level compares to the labor market and developing compensation programs that are competitive and deliver pay to employees that is fair and equitable and that motivates employees to perform at their full potential.

My responsibilities also consisted of assisting with preparation of materials for the Compensation Committees of the Consumers Energy and CMS Energy Boards of Directors, including the Compensation Discussion & Analysis section of the annual proxy statement for the named executive officers.

In May 2018, I took on the role of Director of Executive and Incentive Compensation. My responsibilities consisted of assisting with preparation of materials for the Compensation Committees of the Consumers Energy and CMS Energy Boards of Directors, including the Compensation Discussion & Analysis section of the annual proxy statement for the named executive officers. My responsibilities also included administering the incentive plans for CMS Energy, including Consumers Energy.

In August 2023, I took on the role of Manager of Compensation Operations. My Manager of Compensation Operations responsibilities consisted of the implementation of new and revised non-officer compensation programs, policies, and procedures for non-officers to align with the Company's goals and competitive practices. This position is also responsible for ensuring that compensation programs are consistently administered in compliance with internal policies and government regulations. The Manager of Compensation Operations role focuses primarily on the coordination and implementation

of the non-officer merit, incentive, stock administration, survey participation, and ensuring accuracy of data for non-officer programs.

In January 2024, I took on the role of Director of Compensation. My Director of Compensation responsibilities consist of the implementation of new and revised officer and non-officer compensation programs, policies, and procedures for officers and non-officers to align with the Company's goals and competitive practices. This position is also responsible for ensuring that compensation programs are consistently administered in compliance with internal policies and government regulations. The Director of Compensation Operations role focuses primarily on the coordination and implementation of the officer and non-officer merit, incentive, stock administration, survey participation, and ensuring accuracy of data for officer and non-officer programs. Lastly, the Director of Compensation consists of assisting with preparation of materials for the Compensation Committees of the Consumers Energy and CMS Energy Boards of Directors, including the Compensation Discussion & Analysis section of the annual proxy statement for the named executive officers. In February 2025, I returned to the Manager of Compensation Operations role which I previously held from August 2023 through December 2023.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes, I have testified in Case Nos. U-17087, U-17197, U-17643, U-17735, U-17882, U-17990, U-18124, U-18322, U-18424, U-20134, U-20322, U-20650, U-20697, U-21148, U-21224, U-21308, U-21389, U-21490, U-21806, and U-21870.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide support for Consumers Energy's request for rate recovery for costs of its annual Employee Incentive Compensation Plan ("EICP") at target levels. The EICP is a form of short-term incentive. Short-term incentive pay is designed to focus and reward performance over periods of approximately one year or less.

First, I will discuss Consumers Energy's overall compensation philosophy. In this section of my direct testimony, I will discuss the importance of paying employees a competitive level of compensation and the reasonableness of the overall compensation levels that the Company is requesting in this case. In addition, I will discuss (i) the fact that EICP compensation is part of an employee's overall market-based compensation and not in addition to it, and (ii) why Consumers Energy has included EICP at target levels as part of overall market-based compensation.

Second, I will discuss the EICP incentives and provide support for the Company's request for rate recovery in this case related to Consumers Energy's non-officer and officer operational goal portion of EICP. In my direct testimony, I will discuss the design of the EICP.

Third, I will discuss customer-related benefits that result from use of the incentive plans and how customers are best served when Consumers Energy can attract, retain, and motivate a talented workforce with compensation packages that are competitive and fair. Elimination of the EICP would result in Consumers Energy's employee compensation being below market and would hinder the Company's ability to attract and retain a qualified workforce that best serves customers.

Q. Please summarize your conclusions.

A. My conclusions include the following: (i) use of incentive compensation by utility companies is an accepted, common, and reasonable practice; (ii) Consumers Energy's decision to make a portion of compensation at-risk and subject to incentives is reasonable; (iii) the amount of overall compensation included by Consumers Energy in this case is reasonable and is reasonably necessary to attracting and retaining a talented workforce; (iv) incentive compensation is part of the reasonable level of market-based compensation and not in addition to it; (v) recovering costs of Consumers Energy's EICP employee incentive plans will not result in excess rates; (vi) Consumers Energy's EICP performance goals and thresholds provide customer-related benefits; and (vii) the EICP goals provide customer-related benefits at no incremental cost to customers above those included in market-based compensation.

Q. How is the remainder of your direct testimony organized?

A. The remainder of my direct testimony is organized as follows:

I. OVERVIEW

II. EMPLOYEE COMPENSATION PHILOSOPHY

III. INCENTIVE COMPENSATION PLANS

A. Description of Incentive Plans

B. Assessment of Customer Benefits of the Incentive Compensation Plans

IV. CONCLUSION

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-51 (AMC-1) EICP Performance Measures;

Exhibit A-52 (AMC-2)	Target Pay Level Market Analysis;
Exhibit A-53 (AMC-3)	Summary of Actual and Projected – Annual Incentive O&M Expenses;
Exhibit A-54 (AMC-4)	Summary of Officer Compensation - Proxy Data for Consumers and Peer Group;
Exhibit A-55 (AMC-5)	Most Recent CMS Summary Compensation Table from the Proxy statement; and
Exhibit A-56 (AMC-6)	Allocation of Base Salary and Incentive Expense for the Historical Period.

Q. Were these exhibits prepared by you or under your supervision?

A. Yes.

I. OVERVIEW

Q. What is the Company's compensation philosophy for non-officer employees?

A. Consumers Energy's compensation philosophy for its non-officer, non-union employees is to provide market-based compensation tied to performance. A competitive compensation policy benefits customers by attracting and retaining employees with the necessary skills and experience to deliver world-class customer service and minimize the risks and costs of employee turnover. Incentive pay is a component of providing market-based compensation.

Q. What is the Company's compensation philosophy for officer employees?

A. Consumers Energy's compensation philosophy for its officers is centered around four principles:

1. Align with increasing shareholder and customer value;
2. Enable the Company to compete for and secure top executive talent;
3. Reward measurable results; and
4. Be fair and competitive.

Incentive pay is a reasonable component of delivering this philosophy.

Q. How does Consumers Energy structure non-officer compensation for its salaried employees?

A. Consumers Energy first determines what a competitive level of pay is for salaried non-officer employees. It does so by using various market surveys. The practice of using multiple surveys is common practice. It allows for a broader participant pool and confirmation that the survey data is representative of market competitive wages and trends. Consumers Energy then structures the compensation by allocating this market-based wage between base salary and incentive compensation. The incentive compensation is part of the overall total market-based competitive level and it is not in addition to it.

Q. How does Consumers Energy structure officer compensation?

A. Officer compensation levels are determined by the Compensation Committees of the Boards of Directors of Consumers Energy and CMS Energy. The Company creates a compensation package for officers that delivers base salary, annual incentive compensation, and long-term incentive compensation targeted at the median or 50th percentile of the competitive market. In determining individual officer compensation levels, the Compensation Committees are advised by an independent third-party consultant and take into consideration market research, experience levels, and individual contributions.

Q. In this proceeding, is the Company requesting rate recovery of all Operating and Maintenance ("O&M") gas expenses related to short-term incentive compensation plans?

A. No. The Company utilizes both financial and non-financial (operational) goals in its short-term incentive compensation plan. While the Company believes that both financial and non-financial (operating) short-term incentive compensation expenses are reasonable, the Company in this case is excluding the costs of short-term incentive compensation linked to financial goals ($5.1 million). Included in that $5.1 million amount is the removal of the affordability (O&M savings) operational measure. This results in 25% of officer pay and 41.67% of non-officer directly linked to operational measures, with the removal of the affordability (O&M savings) operational measure.

The Company determined that the affordability measure, although included among the Company's operational goals for purposes of the EICP, is financial in nature; therefore, the Company removed the dollars attributable to that measure from the rate request in this case along with the dollars attributable to the other financial measures.

Q. Is Consumers Energy requesting recovery of all officer incentive pay linked to non-financial (operational) goals in this rate case proceeding?

A. Yes. The Company is seeking recovery for the incentive costs associated with the operational goals portion for all officers in this case.

Q. Is Consumers Energy requesting recovery of long-term incentive pay in this rate case proceeding?

A. No. The Company is not seeking recovery for the costs of long-term incentive compensation (sometimes referred to as restricted stock plans) in its rate recovery request in this case.

Q. Why is the Company requesting rate recovery of short-term incentive compensation operational goal expenses?

A. Consumers Energy uses market data to determine an overall competitive level of compensation. Competitive compensation includes base salary and short-term incentive compensation for officers and non-officers. Consumers Energy's overall compensation levels are reasonable compared to the market. Compensation levels without these incentive payments would be below market competitive levels. Paying non-competitive levels of compensation would result in a less qualified workforce that would not best serve customers. According to ManpowerGroup's latest Talent Shortage survey nearly three-quarters of employers, 71% still struggle to find skilled talent. This marks a jump from a decade ago, when only 40% of employers reported such challenges. To hire and retain qualified personnel, it is necessary to either pay a competitive incentive or increase base salaries to make up for the missing incentive compensation component. Use of annual incentive mechanisms is a recognized management technique for companies, including utility companies. Incentive pay is the number one compensation design element used to influence short- to mid-term performance results. Incentive mechanisms help communicate priorities, engage the employees in operating and financial success, reward valued skills and behaviors, and create business understanding for employees. Consumers

Energy's incentive programs are structured in a way that is designed to help keep non-officers and officers focused on operational performance areas such as continuous improvement, safety, cost, reliability, and delivery. The incentive compensation program encourages employees to deliver outcomes which result in meeting customers' expectations. The EICP incentive compensation costs are reasonable costs of doing business and, therefore, should be recovered in rates.

Q. Who is eligible for the EICP incentives?

A. All non-union employees are eligible for EICP incentives, with the exception of employees who are rated as "under-performing" or "needs improvement" on their annual performance appraisals. These under-performing employees are ineligible to receive an EICP incentive. Both non-officers and officers participate in an annual EICP incentive.

Q. How are the EICP incentives structured?

A. The EICP incentives are structured by non-officer and officer EICP. The 2024 and 2025 non-officer EICP equally weights the operational measures with the financial measures:

- Half (50.0%) of employees' incentive will be based on the achievement of operational performance measures. (For 2024 and 2025, there are six operational measures.); and

- Half (50.0%) of employees' incentive will be based on the achievement of one financial measure, Earnings Per Share ("EPS"). Consumers Energy is a vital part of the Michigan economy, and it is important that the utility remains financially strong so that it can provide the utility service that customers expect and deserve; however, Consumers Energy is not seeking recovery of the financial portion of the EICP.

The goals are the same for the officer EICP, but the weightings are different. Officers are 30% based on the achievement of operational measures and 70% based on the achievement of financial measures.

II. EMPLOYEE COMPENSATION PHILOSOPHY

Q. What is Consumer Energy's philosophy about the overall level of compensation?

A. The Company's management believes Consumers Energy should pay a fair and reasonable salary, comparable to the market that is equitable to employees, consistent with Company values and strategies, and that supports the highest level of customer service at a reasonable cost.

Q. What are the components of Consumers Energy's compensation for non-officer employees?

A. There are two parts of overall compensation for non-officer employees of Consumers Energy. The first part is base pay or salary. The second part for salaried employees is annual (short-term) incentive compensation.

Q. What are the components of Consumers Energy's compensation for officers?

A. There are three parts of overall compensation for officers of Consumers Energy. The first two parts are cash compensation through base pay and annual (short-term) incentive compensation. The third part is equity-based long-term incentive. As I mentioned earlier in my direct testimony, the Company is not seeking recovery for the costs of long-term incentive compensation in its rate recovery request in this case.

Q. Why does the Company make a portion of compensation subject to incentives?

A. A wide body of research supports the view that incentive pay (a variable pay component) works. One researcher states, "theory and research show that incentive pay can substantially increase individual and organizational performance and can represent a powerful tool for establishing a competitive advantage within an industry." (Dow Scott, *Incentive Pay: Creating a Competitive Advantage* – WorldatWork Press, 2007). There are

many more cases of incentive plans as an effective motivational tool. Group incentive plans can contribute to organizational collaboration and achievement of company goals which lead to benefits for customers. A May 15, 2018, Forbes article entitled "The Key to an Effective Incentive Plan" (Bill Fotsch and John Case) continues to support this theory indicating:

> Incentive plans, by definition, are supposed to affect people's behavior on the job, day in and day out. They incent people to work harder and smarter, to go the extra mile, to collaborate with their coworkers, to come up with new ideas to improve some aspect of the business.

People don't work for money alone, but they do respond to incentives.

When properly selected and implemented, incentives motivate employees, focus employees on a company's goals, and increase both individual work performance and team performance. When goals are challenging yet achievable, employees are motivated to increase productivity and performance to achieve the goal. In addition, incentives increase a company's ability to attract, hire, and retain qualified and motivated individuals. A study by the International Society of Performance Improvement showed that incentive pay programs increase performance by an average of 22.0%. (International Society of Performance Improvement, "Incentives Motivation and Workplace Performance Research and Best Practices," Spring 2002). As stated by the Society of Human Resource Management:

> Research has demonstrated that some human resource programs and initiatives produce a significant impact on performance in organizations (as measured by factors such as quality, productivity, speed, customer satisfaction and unwanted turnover). The two initiatives that consistently showed statistically significant positive results were linking pay to performance and using variable pay. Research has established the potential of variable pay to produce the

desired business results. [Robert Greene, "Variable Pay: How to Manage it Effectively, Society of Human Resource Management," April 2003.]

Consumers Energy has adopted incentives that are designed to emphasize operational performance criteria in areas that are critical to the Company's utility business and customers. Focusing employees on these goals provides both qualitative and quantitative benefits for Consumers Energy's utility customers. High-level qualitative customer benefits are listed later in my testimony. Company witness Angel L. Green's testimony illustrates the quantitative benefits to customers.

Q. Are the overall compensation levels for employees subject to the non-officer EICP reasonable?

A. Yes. Overall compensation levels for employees subject to the non-officer EICP and management's decision of how to allocate the overall compensation between base salary and EICP are reasonable. As stated later in my testimony, it is common practice for companies to have a variable pay (i.e. EICP) component of total competitive compensation levels.

Q. How does Consumers Energy determine what level of overall compensation for non-officers is reasonable?

A. First, Consumers Energy's management targets compensation to the market median. Second, Consumers Energy's management actively reviews compensation levels so that employees are neither overpaid nor underpaid relative to the market. Third, the Company uses a rigorous survey process which uses valid and reliable data from multiple third-party sources to determine median levels of compensation. Fourth, the Company reviews incentive compensation levels from third-party data sources to determine the target level of compensation. The fact that a portion of the compensation is in the form of an incentive

payment does not mean that employees are paid in excess of market rates when they receive their incentive payment. To the contrary, removing the incentive from employees' compensation package or failing to meet incentive performance goals, would render their compensation below-market.

Q. Would it be reasonable for Consumers Energy to pay employees below market level on an ongoing basis?

A. No.

Q. Why would it be unreasonable for Consumers Energy to pay below market level?

A. Consumers Energy has a responsibility to customers to employ a competent workforce that is ready, willing, and best able to provide service for its customers. Paying competitive wages and salaries is necessary to fulfill that commitment. It would not be reasonable or fair to the Company, its employees, or customers for the MPSC to set rates at a level that did not include reasonable levels of overall market-based compensation.

The level of service that customers deserve requires a qualified, experienced, and motivated workforce. The Company can attract, retain, and motivate talented employees when its overall compensation is competitive with market levels. A decision to compensate employees below market levels would detract from the Company's ability to assemble the committed and customer-focused workforce that customers deserve. Over time, this would be detrimental to customers, as well as being unreasonable to the Company's diligent, hardworking employees. Compensating employees below market levels will eventually result in their leaving for jobs that are paying at market levels. Over time, the workforce would tend to be less qualified, less experienced, less productive, and less capable of serving customers (as the most capable would, in general, tend to go to employers paying

at competitive levels). This, in turn, could lead to less efficiency and could result in a need to hire more employees to produce the same service to customers, thus increasing costs to customers.

Q. How does the Company determine the level of compensation for salaried non-officer employees?

A. For salaried non-officer employees, the Company uses salary survey data from utility and energy companies. Using this survey data, a benchmarking analysis of base pay and incentive pay is made between the Company's jobs and comparable market survey jobs. Benchmarking analysis is a comparison of jobs commonly found in the labor marketplace and/or a job that is highly relevant/populated within a company. This comparison indicates where the Company's pay stands relative to the market. The Company's goal is to target base pay levels within plus or minus 5.0% of the market median for non-officers. While pay for individuals inevitably varies from the survey market levels due to differences in experience levels, education, job performance, longevity, position responsibilities, etc., the survey data indicate that the Company's overall non-officer compensation levels, assuming the EICP payment at the target level, are on average within target pay level of plus or minus 5.0% of market median. Exhibit A-52 (AMC-2) provides a summary of average exempt and non-exempt base pay and total cash (base pay plus target incentive) compensation for Company benchmark jobs by job family compared to market using 2024 data for 2025 pay structure purposes.

Paying compensation that approximates the market median is particularly important given that Consumers Energy will continue to experience significant attrition (current employees eligible for retirement is 19% of the workforce) and have a need over

the next few years to hire engineers, information technology, and other personnel to staff various projects and serve customers. Competitive pay is necessary to retain the talent needed to deliver on the Company's Integrated Resource Plan ("IRP"). In competing for engineers, as well as other personnel that are skilled, high-performing customer-focused candidates, it will be important to have a reputation for paying a competitive level of overall compensation. Excluding the incentive target amounts would result in the Company's pay levels being as much as or greater than 10.0% below market level.

Q. How do you know the market data that the Company is using are appropriate and are not inflating salary levels?

A. The Company uses several third-party survey sources to compare to the non-officer salaried workforce. The Company participates in and uses an industry survey performed by Willis Towers Watson, Aon Hewitt ("Aon"), and Mercer LLC ("Mercer"), which are well-respected, independent third-party compensation experts. These surveys are conducted by surveying companies which report data on an anonymous basis. When using the survey data, the Company looks at the base pay and incentive reported for highly populated jobs for which there is a comparable job match. In this way, the Company is matching the relevant market, not trying to lead the market, and thus not inflating its overall compensation above prevailing market levels. By using multiple independent survey sources, the Company can determine if any one source is varying significantly from another.

Q. Can you give an example of the relationship between the Company's base pay levels and the market's pay levels?

A. See Exhibit A-52 (AMC-2) for a summary of average exempt and non-exempt base pay and total cash compensation for Company benchmark jobs by job family.

Q Does the Company attempt to keep salaries consistent with the rate of inflation?

A. No. The Company's pay levels are designed to stay consistent with the costs of labor. Labor costs and rate of inflation are not interchangeable. Cost of labor is what a particular geographic market offers as the "going rate" or compensation for its jobs. Inflation is a measure of the rate of rising prices of goods and services in an economy. Labor rates and inflation rates can change based on different factors or influences and at different rates. Labor rates follow what companies are doing to stay competitive, inflation follows economic trends which can be unrelated to how people are paid. Consumers Energy's compensation is designed to be competitive with what is seen in the labor market including rewarding and motivating talent rather than trying to keep up with inflation. For purposes of escalating EICP labor costs for revenue requirements in this rate case, an inflation factor is used. For rate making purposes, the Company follows the direction of the Commission's December 22, 2021 Order in Case No. U-20963[1] and uses the same inflation factor to adjust both labor and non-labor expenses for determining projected labor costs. The actual merit budget, or historical merit averages, is not used.

Q. Are incentive plans common in the utility industry?

A. Yes, incentive plans are quite common. Annual incentive programs are a critical and highly integral part of competitive compensation packages for many organizations.

[1] See pages 244-251 for the discussion regarding inflation rates.

Research from Willis Towers Watson's 2012 Survey Report indicates that approximately 80.0% of companies offer annual incentive (variable pay) programs. That number is slightly higher at 81.2% for those companies within the utility industry sector. The survey data supports the conclusions that including incentive pay as part of a competitive pay package is a standard industry practice and is required to attract and retain good employees.

Research from Mercer's 2014/2015 U.S. Compensation Planning Survey Report indicates that approximately 83.0% of companies offer annual incentive (variable pay) programs. For companies within the utility industry sector, the survey indicated that 98.0% of executives, 99.0% of management, 94.0% of non-sales professionals, and 86.0% of clerical and technicians were eligible for an annual incentive.

A 2012 Mercer study of more than 1,200 organizations reveals that actual company spending on variable pay for salaried exempt employees, as a percentage of pay, is 12.0% and salaried/hourly non-exempt employees, as a percentage of pay, is 6.0% to 7.0% for energy companies. A 2009 Hewitt Associates study of more than 1,100 organizations further reports that companies were budgeting variable pay for salaried exempt employees at 11.8%, and 5.5% to 6.1% for salaried/hourly non-exempt employees, for 2010. Ken Abosch, leader of Hewitt's North American Broad-Based Compensation Consulting business, added:

> Over the past decade, we've seen companies steadily shift from a fixed pay model to one that emphasizes true performance-based awards, and we expect this trend will continue.

Consumers Energy's practice of making a portion of overall employee compensation subject to incentives is consistent with best practices for compensation.

Q. What has been the trend in variable or incentive pay?

A. A 2016 study by Aon indicated a 72% growth in variable pay spend over the past 20 years. Variable pay grew from 4.1% of base salaries in 1996 to 12.9% of base salaries in 2015. Business incentive plans are the most prevalent with 77% of companies using this type of variable pay award in 2015 up from 55% in 1996. Business incentive plans refer to plans that are based on Company financial and/or operational goals. According to a 2021 study published by WorldatWork and Compensation Advisory Partners, the vast majority of companies (99%) have short-term incentive programs ("Incentive Pay Practices: Publicly Traded Companies," July 2021, WorldatWork and Compensation Advisory Partners). Moreover, a 2020 study by Willis Towers Watson on Salary Increases shows that 89% of energy companies utilized short-term incentive (EICP) compensation programs.

Q. Why is the use of incentive pay such a widespread practice?

A. Incentive pay is the number one design used to influence short- to mid-term business or performance results. Coupled with clear strategy, solid leadership, and good, safe working conditions, variable pay incentive designs:

- Increase employees' understanding of what is important to the Company;
- Increase employees' identification with the Company's success and the factors by which it is measured;
- Reward valued skills and behaviors; and
- Enhance employee engagement by educating them on how and why their contributions will benefit them, the Company, and our customers.

Dividing overall compensation between base salary and incentive compensation is an approach that is common and effective in business today.

Q. How many employees does the Company have that will be eligible for the non-officer EICP payout?

A. Consumers Energy has approximately 4,500 employees (total utility) who are eligible to receive an incentive if, and when, the requirements for a payout are met. The risk of no payout is the same for all these eligible employees. Either every eligible employee receives a payout, or no one receives any incentive compensation.

Q. How did the Company determine the level of compensation that would be provided as incentive compensation for these eligible employees?

A. For the historical test year, the EICP target level for each pay grade was established by reviewing third-party market data on the mix of base salary and at-risk variable pay (EICP), historical rate case relief and amounts that will assist in motivating performance that will result in benefits to customers. The EICP compensation is part of the overall market-based competitive level of compensation, not in addition to it. Beginning in 2024, the EICP target levels are based on career stream and job level established by reviewing third-party market data on the mix of base salary and at-risk variable pay.

Q. Did the Company reduced base pay when it started to pay incentive awards in order to obtain market-based pay based on total compensation (i.e. base pay plus incentive)?

A. No. The Company has always had a broad-based incentive compensation plan in place for management level. In 2003, an EICP for employees in former salary grades 18 and below (typically individual contributors in technical, professional, or support roles) was initiated. Base pay levels were not reduced for these employees at the time the plan was implemented. This was due to the fact that at the time the plan was implemented, total

compensation, which is base salary and annual incentive, was slightly below the 50th percentile (median) point of survey results. The Company targets pay levels of plus or minus 5.0% of market median. The Company's pay level, including the additional incentive, continues to be within this range.

Q. Is there an alternative to providing incentive pay for salaried employees?

A. The alternative would be to increase the base compensation to a level that approximates the overall competitive market level of compensation. Absent the higher base pay, Consumers Energy's compensation offering would not be competitive with the labor market. For example, if the base target were $50,000 for a hypothetical job and market-based average pay was $50,000 plus a $2,000 incentive award, then the Company would need to offer $52,000 to match the market's current pay. So, the alternative to having an incentive component of overall compensation would be to raise base pay to the market's overall compensation. Eliminating incentive pay would result in the same compensation costs, but employees would lose focus on continuous improvement, safety, quality, cost, reliability, and delivery to the customer. Increasing base pay would also result in a higher level of fixed costs tied to base pay, such as certain pension and defined contribution benefit plans, life insurance, disability insurance, and other salary-based employee benefits.

The Company's overall compensation needs to be comparable to the market for salaried employees regardless of whether it is composed of only base pay or composed of base pay plus the target incentive award amount. The Company has maintained overall compensation at competitive levels through base pay plus the target incentive award amount.

Q. Would elimination of incentive pay be in the best interests of customers?

A. No. With incentive compensation, the employees and the Company must re-earn the at-risk compensation each year. If high levels of performance are not met each year, incentive pay can be reduced or eliminated. The elimination of variable "at risk" pay would create a situation where all compensation is guaranteed and would remove an important incentive to improve service. This result would be counter to customer interests. The elimination of variable "at risk" pay would create a situation where compensation would be below market competitive levels. Competitive pay is needed to attract and retain the high-quality talent required to deliver exceptional service to customers. It would be difficult to achieve the Company's purpose of world-class performance delivering hometown service without the right talent. The knowledge, skills, and abilities of Consumers Energy's employees are key determinants in the quality and timeliness of service that customers receive. Our ability to deliver what customers expect such as reliable and safe energy delivery, on-time completion of service orders, and energy savings depends upon having the right talent in the right job at the right time. Having incentive compensation that is structured around goals that provide benefits to customers is in the best interest of the customer.

Q. How does the Company determine the level of overall compensation for officers?

A. A utility must maintain a competitive total compensation package to attract and retain executive talent. As discussed above, Consumers Energy creates a compensation package for officers that delivers base salary, annual incentives, and long-term incentives (excluded from the Company's request in this rate case) targeted at the 50th percentile of the market, as defined by a Compensation Peer Group approved by the Compensation Committees of the Boards of Directors. The Compensation Peer Group consists of energy companies

comparable in business focus and size to CMS Energy with which the Company might compete for executive talent. The Compensation Peer Group currently includes 18 companies.

Q. How do you know the market data that you are using for officer compensation are appropriate and are not inflating salary levels?

A. Annually, the Compensation Committees engage an independent third-party consultant to provide advice and information regarding compensation practices of a Compensation Peer Group, which it develops based on criteria discussed below, as well as taking into account additional information from published surveys of compensation in the public utility sector and general industry. During the Compensation Committees' review of officers' compensation levels, consideration is given to the advice and information received from the independent compensation consultant; however, the Compensation Committees are ultimately responsible for determining the form and amount of the compensation programs.

Where available by position, Compensation Peer Group data serves as the primary reference point for pay comparisons of utility specific roles, and broader survey data and published proxy data are also provided by the compensation consultant as a point of reference for utility-specific roles and comparisons of general industry roles. Where available by position, the independent executive compensation consultant of the Compensation Committees gathers compensation data from Willis Towers Watson's Energy Services Executive Database (over 50 investor-owned utilities) and Willis Towers Watson's General Industry Executive Database (approximately 500 participating companies), which it regresses based on CMS Energy's revenues to provide additional market context to the Compensation Peer Group. In selecting members of the

Compensation Peer Group, financial and operational characteristics are considered. The criteria for selection of the Compensation Peer Group included comparable revenue, relevant utility industry group, similar business mix (revenue mix between regulated and non-regulated operations), and availability of compensation and financial performance data.

The survey data indicate that the Company's overall officer compensation levels, assuming the EICP and restricted stock payment at the target market-based level, are reasonable.

In addition, annually, proxy-advisor service companies Glass Lewis & Co. and Institutional Shareholders Services assist institutional investors in their advisory vote on the reasonableness of compensation pay and practices of the proxy-named executive officers by providing a vote recommendation. The incentive pay practices for the proxy-named executive officers are the same as for the remaining officer group. In 2024, both proxy advisory service firms recommended a vote "for" the proxy-named executive officer compensation pay and practices. Also, shareholders voted 95% in favor to approve executive compensation as described in the 2024 Proxy Statement which is above the S&P 500 average of 92%.

Q. Is survey data information for the third-party consultant proprietary information?

A. Yes. Consumers Energy's Compensation Committees engage an independent third-party consultant to provide information regarding officer compensation practices of the Compensation Peer Group as well as additional information from Willis Towers Watson published surveys of compensation in the public utility sector and general industry.

The Willis Towers Watson survey sources used by Pay Governance are produced solely for use by database participants and are maintained by Willis Towers Watson in connection with the participant's own internal human resources management department. The surveys are the confidential and proprietary work product of Willis Towers Watson, which owns all related intellectual property rights. Pay Governance has written consent from both Willis Towers Watson and CMS Energy to use the surveys on CMS Energy's behalf. Pay Governance is prohibited from using or reproducing the database and survey reports prepared by Willis Towers Watson.

Q. Is the Company able to provide the survey data?

A. No. The market median information the Company utilizes is confidential, proprietary, and commercially sensitive data belonging to third parties. Consumers Energy is contractually prohibited from sharing this information.

Although the Company is prohibited from sharing the market data used in setting compensation for its top five officers, the Company recognizes that it could be helpful to have access to some market data to evaluate the reasonableness of the compensation included in rates for the Company's top five officers. Therefore, the Company compiled and provided non-confidential market data using the following compensation elements from the Compensation Peer Group's publicly filed proxy statements: salary, stock awards, and non-equity incentive in Exhibit A-54 (AMC-4). Exhibit A-54 (AMC-4) is the extract for the summary compensation table for the Company's most recent proxy statement.

Because this market data uses only publicly available non-proprietary information, it does not perfectly represent the information that the Company used to benchmark and assist the Compensation Committees to determine compensation for Consumers Energy's

top five officers. However, that does not support the conclusion that it is inadequate to support the level of compensation for the Company's top five officers. First, the proprietary benchmarking information alone does not mechanically decide how compensation will be set. When making pay adjustments, the Compensation Committees consider the CEO's recommendations, along with proprietary Compensation Peer Group data, internal equity, tenure, and other proprietary market data from surveys provided by the independent compensation consultant. Actual compensation decisions are based on the following as described on page 22 through page 24 of my testimony. Second, the data provided in Exhibit A-54 (AMC-4) is sufficiently consistent with the proprietary data that it does allow for a valid comparison of the compensation of the highest paid through the 2nd, 3rd, 4th, and 5th highest paid named officers compared to the Company's compensation peer group.

Q. Does the independent consultant provide other services for CMS Energy or Consumers Energy that could result in a conflict of interest?

A. No. The independent consultant is required to obtain approval of the Compensation Committees of the Boards of Directors before undertaking any activity on behalf of the management of CMS Energy or Consumers Energy. During the time the consultant has been engaged as the compensation consultant for the Boards of Directors, it has not performed any services on behalf of the management of CMS Energy or Consumers Energy. The independent consultant is hired by and serves the Compensation Committees; it is not hired by or provide services to CMS Energy or Consumers Energy.

Q. Are surveys the only determining measure used in setting officer compensation levels?

A. No. Additionally, the Compensation Committees considers experience levels and individual contributions of the respective officers.

Q. Are incentive plans for officers common in the utility industry or in other industries?

A. Yes, incentive plans are prevalent. Research from Mercer's U.S. Compensation Planning 2014/2015 survey indicates that approximately 96.0% of companies, and 98.0% of energy companies, offer annual incentive (variable pay) programs for officers. This level of prevalence still exists based on a 2021 World at Work survey with 99% of publicly traded companies providing annual incentives to executives. The survey data support the conclusions that including incentive pay as part of a competitive pay package is a standard practice and is required to attract and retain qualified officers.

III. INCENTIVE COMPENSATION PLANS

A. Description of Incentive Plans

Q. Please describe the EICP that was in place for 2024.

A. The EICP for 2024 was based on achieving performance goals related to critical areas of the Company's operations. The goals focused on continuous improvement measures and maintaining financial health to deliver value benefits to customers (not seeking recovery of financial goals in this case). The Company's EICP goals seek to encourage employees to provide reliable energy, customer value, and responsive service to customers, and to do so safely. Each year, the Company establishes utility-specific performance criteria which focus on continuous improvement goals and breakthrough goals. For 2024, there were six specific operational performance measures, and one measure related to being financially

healthy. The EICP Operational Performance Measures are summarized on Exhibit A-51 (AMC-1). The 2024 officer and non-officer goals and weighting are shown on page 1 and operational goal targets on page 2.

Q. Please describe Exhibit A-51 (AMC-1).

A. Exhibit A-51 (AMC-1) identifies the operational performance areas that the EICP focuses on and identifies the specific measures that have been adopted for each of these areas. For the 2024 historical year, 50.0% of the non-officer incentive compensation and 30% of officer incentive compensation were based on operational performance. For purposes of this rate case, the Affordability (O&M savings from Waste Elimination) measure associated cost has been removed from the rate request as the Company has determined that it is financial in nature.

Q. Is the structure of the EICP goals for 2025 similar to 2024?

A. The specific performance measures and targets for 2025 are, as in prior years, a combination of measures related to operational performance and financial performance. As indicated above, the Company is not seeking recovery of the financial performance measures in the case. For non-officers, the operational performance and financial health goals will be weighted equally (50% operational and 50% financial). For officers, the operational performance and financial performance measures are weighted 30% operational and 70% financial. The officer operational goals are the same as the non-officer operational goals.

Q. Will the non-officer performance measures continue to incorporate measures that provide benefits to Consumers Energy's customers?

A. Yes. Performance measures will continue the focus on world class performance delivering hometown service and will continue to have as their foundation continuous improvement and breakthrough measures. While the number and precise phrasing of operational goals may vary from the historical test year, areas of focus will continue to include safety, reliability, cost, delivery, and customer care.

Q. Will the officer performance measures continue to incorporate measures that provide benefits to Consumers Energy's customers?

A. Yes. Operational and financial performance measures will continue the focus on world class performance delivering hometown service and will continue to have as their foundation continuous improvement and breakthrough measures. The operational measures will hold a weighting of 30%, meaning 30% of the officer incentive compensation is based on operational performance (same goals as non-officers) and the remaining 70% is based on financial performance. As noted above, the Company is not seeking recovery of the financial performance measure in this case.

Q. Please discuss the strategy and process for developing the EICP goals.

A. Company witness Green provides a discussion of the strategy and process for developing the EICP goals.

Q. Why has the Company's management chosen to design the EICP with broad goals and objectives on a Company-wide basis rather than individual goals and objectives for individual employees?

A. It is necessary and appropriate for a large organization, such as Consumers Energy, to establish broad goals and objectives that are communicated to all employees as matters that are important to the success of the organization. Some employees will be in a better position to influence whether particular goals and objectives are met, but having every employee linked to a set of common customer-focused objectives is an effective method for emphasizing the importance of customer value and service. Having common goals and objectives (i) provides clear communication of Company goals, (ii) encourages employees to support each other and work together for common goals, and (iii) provides a scorecard with a focus on corporate-wide goals that benefit customers.

Consumers Energy incorporates individual goals through the annual performance feedback process, which includes the creation and review of individual goals and objectives for each salaried employee and the opportunity to recognize and reward individual performance. The existence of a common set of customer objectives enables supervisors and employees to establish individual goals and objectives which are supportive of, and in alignment with, the corporate goals reflected in the EICP.

Q. Were there any incentive plan changes in the historical test year or planned changes to the future years?

A. There were no plan changes to the EICP for officers and non-officers in 2024 or plans to make any changes for 2025 or 2026.

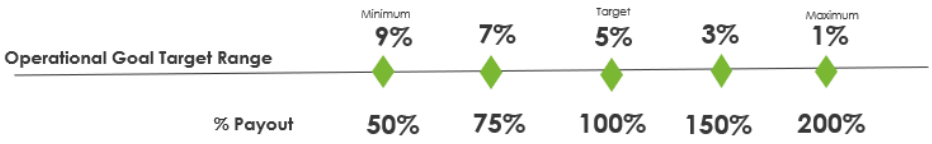
Q. How are the payout levels that are shown on Exhibit A-51 (AMC-1) set?

A. When setting payout levels, threshold is set at a level of achievement that can typically be reached 80% to 90% of the time in a 10-year period. Maximum payout is for exceptional performance (10% to 20% of the time in a 10-year period). These levels are to engage the employees in meeting the goals. Employees must re-earn the incentive at-risk portion of compensation each year. If the threshold to achieve a payout were set at a level viewed as not achievable, it would be difficult to maintain employee motivation and would result in fewer customer benefits. Overall compensation levels, including the EICP at target (100%) level that Consumers Energy seeks, are not excessive. It is reasonable for Consumers Energy to pay its employees competitive levels of compensation.

Q. Are the payout levels that are shown on Exhibit A-51 (AMC-1) similar to 2024 and the projected test year?

A. Yes, each operational measure will have its own threshold, target, and maximum for payout. This practice aligns better with market practice and with engaging and motivating performance. Gallup research supports substantial and well-established connections between employee engagement and the achievement of outcomes critical to the business and to customers. See illustration of banded goals below:

Example (Illustration Only):



This structure was in place for 2024 and planned to be in place for the projected test year.

Q. Why are you including both gas and electric performance measures in this plan as this is a gas rate case?

A. For purposes of efficiency and improved service, the Company has combined operations as one organization. For that reason, the plan contains both gas and electric measures. EICP eligibility or expense is not broken down by which employees support the electric or gas operations or a combination.

Q. How are the targets for the annual officer EICP incentives measures determined?

A. As mentioned earlier, the goals are the same for the officer and non-officer EICPs, but the weightings are different.

Q. Why is the weighting different for the officer plan?

A. Officer annual incentive awards were based on the achievement of EPS and utility operational goals for the historical test year. As indicated above, the officer plan has a 30% weighting of the same operational goals as non-officers. This strengthens the linkage of officer and non-officer performance while aligning with typical indicators of officer strategy execution through financial goals (weighted at 70%) and corresponding higher weighting.

Q. How are the target amounts for the annual officer incentives determined?

A. The Compensation Committees determine the target amounts of the annual officer incentives. In determining the amount of target incentives, the Compensation Committees consider the following factors:

- The target incentive level and actual incentives paid in recent years;
- The relative importance, in any given year, of each performance goal established; and

- The advice of the Compensation Committees' compensation consultant as to compensation practices at other companies in the Compensation Peer Group and the utility industry.

B. Assessment of Customer Benefits of the Incentive Compensation Plans

Q. What level of expenses for Consumers Energy's incentive plans have been included in the test year revenue requirement?

A. The Company is requesting recovery of gas O&M expenses related to EICP incentive compensation plans at target (100.0%) levels. The following is a listing of the goals illustrated in Exhibit A-52 (AMC-2) for which the Company is requesting recovery:

- **Employee Safety** (OSHA Recordable)
  (Incidents, High Risk Injuries and Zero fatalities)
- **Culture Index**
  (Employee Empowerment, Employee Engagement and DEI)
- **Customer Experience** - Cxi
  (Survey measuring Customer Experience)
- **Electric Reliability** - SAIDI
  (System Average Interruption Duration Index)
- **Methane Emission Reduction**
  (Reduction of Methane Emissions through replacements of Mains and Services, etc.)

The level of expense is approximately $1.1 million as illustrated in Exhibit A-53 (AMC-3).

Q. Please explain Exhibit A-53 (AMC-3), page 2.

A. Exhibit A-53 (AMC-3), page 2, presents the amounts of the projected O&M expenses that were developed by applying either an inflation rate to historical O&M expense. Page 2, column (b), shows the historical O&M expense. Column (c) shows the historical amount that an inflation was applied to. Columns (e) and (g) show the amounts to which an inflation rate increase were applied for each bridge period, respectively. Columns (d), (f), and (h) show the labor and inflation increases for each respective period. Amounts that

were projected using other methods are included in column (i). Column (j) is the projected test year O&M and is the sum of columns (b), (d), (f), (h), and (i). For purposes of incentive expense, labor increase uses an inflation rate applicable. No merit or labor rate was applied.

Q. How are the gas expenses of $1.1 million related to annual incentive compensation calculated?

A. The $1.1 million for EICP incentive compensation is based on the following:

- For officers: The rate case expense amount is based on salaries multiplied by the approved target incentive percentage of salary from the Compensation & Human Resources Committees of the Board of Directors. Factors that impact the incentive expense year-over-year are retirements of officers and successors being at lower incentive amounts (decrease expense), forecasted salary increases (increase expense), and addition of new officers (increase expense) as indicated below.

- For non-officers: The rate case expense amount is based on an estimate of the number of employees in each career stream and job level multiplied by the plan prescribed incentive target amount. Progression to higher job levels as employees gain additional work experience will increase the amount of incentive expense year-over-year and headcount reductions will decrease the amount of incentive expense year-over-year.

Q. How was the gas portion of the incentive compensation expense determined?

A. The allocation percentages were supplied by the Accounting department.

Q. What is the allocation percentage of EICP expense to gas operations?

A. The allocation percentages between electric and gas operations for EICP are supplied by the accounting department. All officers and non-officer EICP is allocated between electric and gas based on Consumers Energy's historical labor allocation study from the previous year as described in Exhibit A-56 (AMC-6). The allocation is based on the type of activities the departments or business units perform. These factors include but are not limited to: (i) percentage of time; (ii) property, plant, and investments; (iii) operating

revenue; (iv) headcount; and (v) labor. Only the gas portion of the EICP expense is being requested in this case. The percentage allocation to gas operations is as follows:

- non-officer is 39%, and
- officer is 38%.

Q. Is a portion of the gas incentive compensation expense allocated between O&M and capital?

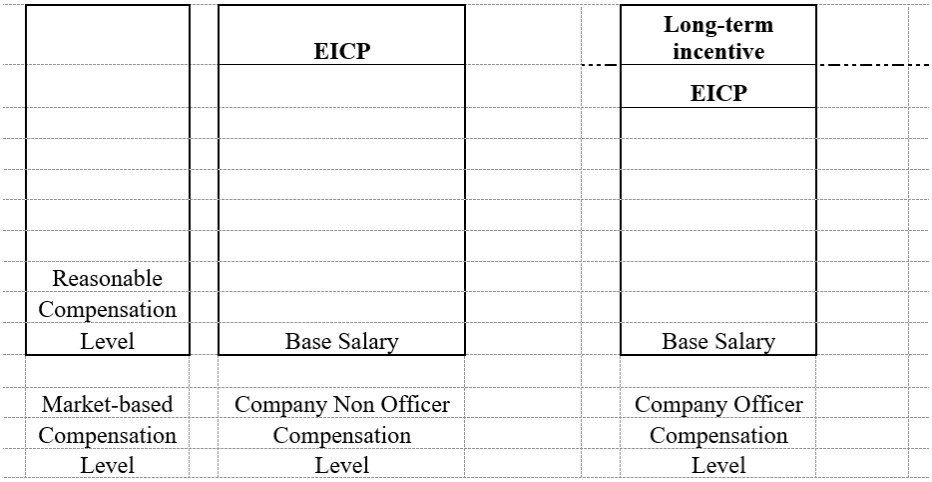
A. Yes. In the Company's 2014 Electric Rate Case, Case No. U-17735, the Commission issued an Order on November 19, 2015, approving the recovery of annual incentive (EICP) in rates for non-officers and non-proxy officers. As a result, in the first quarter of 2016, the Company began classifying annual incentive expense for the approved employee groups as a labor cost. The labor percentages charge between O&M and capital is based on labor studies performed by each business unit for the operational goals portion of the cost. Costs associated with financial performance measures are charged to O&M only.

Q. Do Consumers Energy's gas customers benefit from making a portion of employee compensation subject to incentives?

A. Yes. Paying a competitive level of compensation is an essential prerequisite to being able to attract, retain, and motivate qualified employees. Consumers Energy has determined a reasonable level of compensation and then made a portion of that compensation at risk. Structuring employee compensation so that it includes both base pay and incentive compensation provides motivation for an employee to strive for the total compensation for their position by contributing to the achievement of performance measures. Customers receive both qualitative and quantitative benefits at no additional cost above market-based compensation.

Q. Why do you say there is no additional cost above market-based compensation?

A. The officer and non-officer incentive plans are designed so that the total base salary plus incentive payments will be equivalent to the market-based compensation level. The EICP is part of the overall reasonable level of market-based compensation. It is not in addition to it. This is illustrated in the following diagram:



Q. What is the appropriate standard from a business perspective in evaluating the reasonableness of the EICP costs?

A. Making a portion of compensation subject to incentives is a recognized, well-established, common practice in the utility industry and is reasonable and appropriate. The appropriate standard from a business perspective in evaluating whether the level of compensation is reasonable is whether the *overall* level of compensation, including both base salary and incentive compensation, is reasonable. Using this standard would also be appropriate for ratemaking purposes. Looking at whether the overall level of compensation is reasonable will provide a better indication of whether the incentive plan results in excess rates than attempting to examine the cost allocable to the incentive compensation compared to

benefits to customers. The overall level of compensation that Consumers Energy has included in its request in this case is reasonable.

Q. Under the Company's proposal, do shareholders bear a portion of the EICP costs?

A. Yes. The Company's incentive compensation proposal in this case does result in shareholders bearing a portion of incentive costs. The Company's proposal to include incentive compensation costs at target levels will result in the Company absorbing the incentive compensation costs in those years when the actual payouts are greater than target level and for the financial performance measures' cost. Thus, shareholders will absorb any resulting increase in costs arising from above-target performance and for financial measures. If actual payouts in future years are less than target levels due to under performance, then the Company's shareholders will absorb the consequence of underperformance results along with customers. The Company is allocating to shareholders 100% of the costs of incentive compensation for above-target performance and financial measures.

Q. Is the payment of incentive compensation reasonable given the economic conditions facing the Company's customers?

A. Yes. The incentive compensation costs are reasonable costs of doing business. The market median of survey data reflects current economic conditions and current pay practices. The Company maintains an annual practice of surveying the external market. Any trends in compensation – increases/decreases – would be reflected in the market survey results. Paying a reasonable level of compensation is in the best interests of the Company's customers. Incentive compensation does not result in excessive compensation and is reasonably necessary to attract, retain, and motivate a talented workforce to serve

customers. Further, gaps between the skills that employers require and those available in the labor market are growing. Paying a reasonable level of compensation which includes incentive compensation is necessary to attract, retain, and motivate a talented workforce. As of December 2024, the unemployment rate was 5.0% in Michigan and 4.1% nationally, according to the Bureau of Labor Statistics ("BLS"). In addition, BLS data show that there are more job openings in the United States than there are unemployed people. The war for talent is real, and the Company must offer a compelling value proposition to attract and retain the talent required to realize our Company purpose of world-class performance delivering hometown service.

Q. Is the EICP a bonus or profit-sharing plan?

A. No. The EICP is not a bonus or profit-sharing plan. A bonus is a discretionary payment given without predetermined goals or objectives and a profit-sharing plan entitles employees to a share of the profits of the Company without pre-determined goals or objectives and is not part of total cash compensation market levels. Consumers Energy offers incentive compensation, which is based on predetermined goals and objectives and award levels. Incentive compensation is part of an employee's overall compensation and not in addition to it, like a bonus or profit-sharing plan. The fact that a portion of compensation is in the form of an incentive payment does not mean that employees are paid in excess of market rates when they receive their incentive payment. Employee compensation is a reasonable cost of doing business. If overall compensation levels are reasonable, then those costs should be recoverable through utility rates.

Q. What are some of the ways the EICP incentives benefit customers?

A. Customers derive benefits by having a portion of compensation shifted to the EICP Program since the goals of the program are in the interests of customers. Customer benefits are achieved without any additional cost to customers since this program has been structured as a "carve out" of the employee's base salary. If the EICP costs had not been allocated to incentive compensation, those costs would need to be recovered as base compensation for Consumers Energy to have a reasonable competitive level of compensation.

Also, customers are best served when Consumers Energy can attract, retain, and motivate talented salaried employees and executives with compensation packages that are competitive and fair. Performance-based incentives (like Consumers Energy's) permit the Company to provide an incentive to accomplish specific annual goals that represent performance priorities for Consumers Energy and its customers. With variable pay, the employee and the Company must re-earn the incentive award every year. If performance goals are not achieved, cash compensation is reduced or eliminated. Variable pay creates a performance culture rather than an entitlement culture.

In addition, an incentive program structured to focus employee attention on operational performance results in both qualitative and quantitative customer benefits. Among other things, customers benefit from increased cyber security, reliability, and on-time delivery and the focus on employee and public safety that helps reduce potential increased costs.

A quantitative analysis of the benefits received by the customer as a result of the EICP is discussed by Company witness Green in her direct testimony in this case.

Q. Has Consumers Energy assessed whether benefits to customers of this program equal or exceed costs?

A. Yes. The performance measures provide appreciable benefits to customers. The costs of the EICP are projected at approximately $1.1 million for the test year. The quantifiable gas benefits illustrated in Company witness Green's direct testimony and exhibits are greater than $10 million, which shows that the benefits to customers of the Company's EICP Program outweigh the costs of the program. Since this amount is part of the overall level of reasonable compensation, rather than being in addition to it, all benefits to customers are achieved at zero additional cost to customers. Achievement of the Company's EICP goals and objectives result in pay that is competitive with the labor market, not above the market. The EICP costs are not in addition to the reasonable level of compensation, they are part of the reasonable level of market-based compensation. If these amounts are not paid, then overall compensation would be at a level which is below the market level. There is no valid basis to eliminate incentive costs from the cost of service recovered in rates because they are a part of an incentive plan rather than including these costs as part of base pay. As stated before, overall levels of compensation are at levels that are not excessive. Rate recovery of 100.0% should be allowed.

IV. CONCLUSION

Q. Is the Company's overall compensation program, including the customer-focused incentive, reasonable?

A. Yes. The approach used by the Company is a reasonable approach, is consistent with industry standards, and represents well-established best practices for creating customer focus through compensation design, and it does so without any additional customer cost

above the market. The overall compensation levels are reasonable relative to the market, are determined in a reasonable manner, and are a reasonable cost of doing business. Compensation is structured in a manner that rewards improved operational and financial performance that benefits customers. The incentive compensation costs should, therefore, be included in the cost of service recovered from customers. These are legitimate and reasonable costs of doing business. Rates established in this rate case should include approximately $1.1 million for incentive compensation expense.

Q. Please summarize reasons why full recovery of incentive compensation costs should be allowed in this case.

A. Reasons that full recovery of operational goal incentive compensation costs should be allowed include the following:

- Employee compensation is a reasonable cost of doing business, has been set at a reasonable level, and has been determined using a reasonable methodology;
- The amount of compensation that is subject to incentive measurements is part of the market-based compensation level, not in addition to it;
- The incentive compensation plan does not result in excessive pay levels beyond what is reasonably necessary to attract a talented workforce to best serve the customer;
- Making a portion of compensation subject to incentives is a recognized, well-established, and common industry practice and is neither irrational nor unreasonable;
- The decision of Consumers Energy to allocate a portion of overall compensation that would otherwise have been in base pay so that it is subject to incentives does not provide a valid basis to disallow these expenses;
- The plan incorporates operational as well as financial performance goals;
- Quantitative and qualitative customer benefits of having a portion of compensation subject to incentives occur at no additional cost above market-based compensation to customers given the compensation structure adopted;

- Investors, including shareholders, bear the expense of incentive compensation in excess of the target levels and for incentive compensation provided to proxy officers; and

- The focus should be on whether the overall level of compensation is reasonable, not on the precise structure of the compensation program.

It is reasonable for Consumers Energy to pay its employees competitive levels of compensation. Paying employees at competitive market levels is reasonable and prudent. Those incentive pay costs are reasonable costs of doing business and are recoverable from customers.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

AMY M. CONRAD

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

OFFICER PLAN

Category	2024 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate & High-Risk Injuries (equally weighted) and Zero fatalities)	**5.0%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**5.0%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**5.0%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**5.0%**
Price	**Affordability** (O&M Savings through Waste Elimination)	**5.0%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**5.0%**
	Total Operational Goals	**30%**
Financial	**Earnings** (Earnings Per Share)	**70%**
	Total Financial Goals	**70%**

NON-OFFICER PLAN

Category	2024 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate & High-Risk Injuries (equally weighted) and Zero fatalities)	**8.3%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**8.3%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**8.3%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**8.3%**
Price	**Affordability** (O&M Savings through Waste Elimination)	**8.3%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**8.3%**
	Total Operational Goals	**50%**
Financial	**Earnings** (Earnings Per Share)	**50%**
	Total Financial Goals	**50%**

2024 Plan Year

	50% Threshold	75%	100% Target	125%	150%	175% Max
Employee Safety	a.1.76	a.1.23	**a. 0.96**	a. 0.92	a. 0.86	a. 0.75
(Recordable Incidents Rate, High-Risk Injuries[1], & No fatalities[2])	b. 25	b.20	**b.13**	b.12	b.11	b. 10
Culture Index (Empowerment, Employee Engagement & DEI)	1 index at Target[3]	2 index at Target[3]	**All 3 indexes at Target[3]**	2 indexes at Target &1 Index above Target	1 index at Target & 2 Indexes above Target	3 Indexes above Target
Customer Experience (Survey Measuring CXi)	64	67	**69**	71	75	81
Electric Reliability (SAIDI in minutes)	185	180	**170**	160	155	150
Affordability[4] (O&M Savings through Waste Elimination)	$45M	$55M	**$63M**	$66M	$70M	$74M
Methane Emission (Reduction through replacement of mains and services)	278 MT	290 MT	**302 MT**	335 MT	366 MT	375 MT

1 High-Risk = Recordable or non-recordable injury caused by a release of high energy
2 A fatality = zero payout for employee safety
3 Target = 2023 Q4 actual +2 points (Averaged results from semi-annual employee survey).
4 The Company is not seeking recovery of this measure as it is financial in nature.

OFFICER PLAN

Category	2025 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate (70% weighting) & High-Risk Injuries (30% weighting) and Zero fatalities)	**5%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**5%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**5%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**5%**
Price	**Affordability** (O&M Savings through Waste Elimination)	**5%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**5%**
	Total Operational Goals	**30%**
Financial	**Earnings** (Earnings Per Share)	**70%**
	Total Financial Goals	**70%**

NON-OFFICER PLAN

Category	2025 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate (70% weighting) & High-Risk Injuries (30% weighting) and Zero fatalities)	**8.3%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**8.3%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**8.3%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**8.3%**
Price	**Waste Elimination** (O&M Savings through Waste Elimination)	**8.3%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**8.3%**
	Total Operational Goals	**50%**
Financial	**Earnings** (Earnings Per Share)	**50%**
	Total Financial Goals	**50%**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
EICP Operational Performance Measures

Case No.: U-21981
Exhibit No.: A-51 (AMC-1)
Page: 4 of 4
Witness: AMConrad
Date: December 2025

2025 Plan Year

Metric	50% Threshold	75%	100% Target	125%	150%	175% Max
Employee Safety						
a. Recordable Incidents Rate (30%),	a.1.24	a.1.12	**a.1.00**	a.0.98	a.0.96	a.0.94
b. High-Risk Injuries[1] (70%),	b.20	b.16	**b.12**	b.11	b.10	b.9
c. No fatalities[2]						
Culture Index						
a. Employee Engagement (33%),	a.70 + 1	a.70 + 2	**a.**70 + 3	a.70 + 4	a.70 + 6	a.70 + 8
b. Empowerment (33%), &	b.64 + 1	b.64 + 2	**b.**64 + 3	b.64 + 4	b.64 + 6	b.64 + 8
c. Diversity, Equity, & Inclusion (33%)	c.72 + 1	c.72 + 2	**c.**72 + 3	c.72 + 4	c.72 + 6	c.72 + 8
(Overall outcome = avg of each index award)						
Customer Experience [1] (Survey Measuring CXi)	**64**	**65**	**66**	**68**	**70**	**75**
Electric Reliability (SAIDI)	165 mins	160 mins	155 mins	150 mins	145 mins	140 mins
Waste Elimination[3] (O&M Savings through Waste Elimination)	$44M	$49M	$53M	$58M	$66M	$75M
Methane Emission Reduction (Reduce fugitive methane emissions associated with gas distribution)	74 MT	78 MT	82 MT	93 MT	114 MT	135 MT

1 High-Risk = Recordable or non-recordable injury caused by a release of high energy
2 A fatality = zero payout for employee safety
3 The Company is not seeking recovery of this measure as it is financial in nature.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Target Pay Level Market Analysis
Non-officer _ Salary

Case No.: U-21981
Exhibit No.: A-52 (AMC-2)
Page: 1 of 2
Witness: AMConrad
Date: December 2025

Exempt Jobs:
2024 Market study

Job Family	# of Employees	Annual Salary	Market Data	Avg. Salary vs Market
ACCOUNTING	53	$ 121,501.53	$ 121,913.79	-0.3%
ACCOUNTS PAYABLE & RECEIVABLE	6	$ 105,804.00	$ 113,164.17	-6.5%
ADMINISTRATIVE SUPPORT	27	$ 85,900.00	$ 84,119.81	2.1%
ANALYTICS	70	$ 112,087.37	$ 127,132.29	-11.8%
ASSET PROCUREMENT	10	$ 119,448.00	$ 112,046.70	6.6%
BENEFITS	13	$ 113,963.08	$ 113,751.77	0.2%
BUSINESS DEVELOPMENT	23	$ 174,340.17	$ 183,825.09	-5.2%
BUSINESS PROCESS & SERVICE QUALITY	60	$ 113,506.12	$ 110,197.92	3.0%
BUSINESS QUALITY MANAGEMENT	34	$ 139,986.35	$ 132,192.15	5.9%
BUSINESS STRATEGY & PLANNING	111	$ 142,848.43	$ 146,419.97	-2.4%
BUSINESS SYSTEMS ANALYSIS	28	$ 112,425.46	$ 115,650.07	-2.8%
CHEMICAL	2	$ 159,828.00	$ 147,405.00	8.4%
CIVIL	31	$ 120,803.23	$ 117,942.87	2.4%
COMMUNICATIONS	22	$ 116,962.91	$ 114,108.64	2.5%
COMPENSATION	9	$ 151,332.78	$ 146,988.78	3.0%
CONSTRUCTION PROJECT MANAGEMENT	97	$ 154,729.61	$ 150,794.22	2.6%
CORPORATE AFFAIRS	31	$ 136,849.42	$ 135,238.58	1.2%
CORPORATE GOVERNANCE	5	$ 144,230.40	$ 152,691.40	-5.5%
CO-WORKER CONNECTIONS	9	$ 158,218.67	$ 157,647.22	0.4%
CUSTOMER SERVICE	43	$ 98,384.09	$ 96,270.81	2.2%
CYBER SECURITY	60	$ 140,483.80	$ 142,277.70	-1.3%
DATA SCIENCE	36	$ 134,300.67	$ 138,491.61	-3.0%
DATABASE ADMINISTRATION	4	$ 133,986.00	$ 137,494.00	-2.6%
DESIGN SERVICES	1	$ 102,048.00	$ 93,161.00	9.5%
DIVERSITY EQUITY & INCLUSION	6	$ 129,000.00	$ 132,014.50	-2.3%
DOCUMENTATION & RECORD KEEPING	7	$ 92,334.86	$ 100,834.86	-8.4%
ELECTRICAL	198	$ 121,907.92	$ 127,931.19	-4.7%
EMPLOYEE RELATIONS	20	$ 136,746.00	$ 139,649.30	-2.1%
ENGINEERING & TECHNICAL LEADERSHIP	177	$ 160,669.56	$ 170,706.50	-5.9%
ENVIRONMENTAL & EMPLOYEE HEALTH & SAFETY	66	$ 129,996.42	$ 134,869.11	-3.6%
ETHICS & COMPLIANCE	39	$ 122,044.31	$ 120,516.03	1.3%
EXPLORATION & PRODUCTION OPERATIONS	92	$ 139,557.13	$ 135,417.59	3.1%
FACILITIES MANAGEMENT & PLANNING	11	$ 128,026.91	$ 123,308.45	3.8%
FINANCIAL CONTROL	14	$ 128,370.86	$ 125,048.14	2.7%
FINANCIAL FORECASTING	83	$ 133,686.27	$ 126,986.08	5.3%
HR TECHNOLOGY	6	$ 117,402.00	$ 118,153.83	-0.6%
INDUSTRIAL	11	$ 129,165.82	$ 129,749.64	-0.4%
INFORMATION & TECHNOLOGY LEADERSHIP	59	$ 181,749.76	$ 187,434.47	-3.0%
INFORMATION & TECHNOLOGY MANAGEMENT	42	$ 135,950.86	$ 134,786.26	0.9%
INTERNAL AUDIT	8	$ 151,854.00	$ 148,818.00	2.0%
INVESTOR RELATIONS	3	$ 144,136.00	$ 143,514.33	0.4%
LABOR RELATIONS	10	$ 118,992.00	$ 121,904.80	-2.4%
LABORATORY SERVICES	26	$ 116,136.92	$ 117,100.08	-0.8%
LEARNING & DEVELOPMENT	76	$ 109,511.68	$ 110,963.63	-1.3%
LEGAL PROFESSIONALS	27	$ 175,537.04	$ 192,811.52	-9.0%
MACHINE OPERATIONS	6	$ 159,164.00	$ 145,817.17	9.2%
MANUFACTURING PLANT MANAGEMENT	4	$ 163,359.25	$ 165,219.00	-1.1%
MARKETING GENERALISTS	39	$ 116,196.31	$ 113,782.21	2.1%
MECHANICAL	103	$ 125,972.85	$ 130,358.18	-3.4%
ORGANIZATIONAL DEVELOPMENT	11	$ 115,641.82	$ 119,591.45	-3.3%
PAYROLL	4	$ 105,756.00	$ 99,783.50	6.0%
PHYSICAL SECURITY	9	$ 126,021.33	$ 140,078.56	-10.0%
POWER GEN TRANSMISSION & DISTRIBUTION	320	$ 124,388.39	$ 127,190.68	-2.2%
PROCUREMENT	54	$ 105,523.48	$ 110,463.26	-4.5%
PROGRAM MANAGEMENT	39	$ 131,620.31	$ 135,340.49	-2.7%
PROJECT & PROGRAM MANAGEMENT	76	$ 131,642.05	$ 134,917.13	-2.4%
PROPERTY MANAGEMENT	3	$ 97,968.00	$ 116,946.00	-16.2%
RATES & REGULATION	17	$ 141,940.94	$ 148,034.41	-4.1%
REAL ESTATE MANAGEMENT	18	$ 125,030.67	$ 138,267.89	-9.6%
REGULATORY AFFAIRS	6	$ 142,528.00	$ 137,235.83	3.9%
RELATIONSHIP MANAGEMENT	37	$ 136,626.81	$ 127,225.43	7.4%
REPAIR & MAINTENANCE TRADES	19	$ 135,179.47	$ 132,335.11	2.1%
RISK MANAGEMENT	22	$ 134,107.64	$ 134,280.50	-0.1%
SALES & MARKETING	35	$ 152,831.20	$ 150,467.74	1.6%
SOFTWARE DEVELOPMENT	18	$ 123,482.67	$ 128,455.83	-3.9%
SOFTWARE PRODUCT ENGINEERING	193	$ 131,971.13	$ 141,143.11	-6.5%
SUPPLY CHAIN PLANNING & OPERATIONS	41	$ 119,682.15	$ 105,292.59	13.7%
SYSTEMS ADMINISTRATION & REPORTING	8	$ 128,673.00	$ 121,396.13	6.0%
SYSTEMS ARCHITECTURE	30	$ 147,988.40	$ 145,224.07	1.9%
SYSTEMS OPS & PRODUCTION CONTROL	7	$ 117,106.29	$ 105,890.00	10.6%
TALENT ACQUISITION	11	$ 114,759.27	$ 106,441.55	7.8%
TAX	14	$ 151,348.86	$ 137,469.86	10.1%
TECHNICAL ANALYST	206	$ 111,962.96	$ 120,420.50	-7.0%
TECHNOLOGY SUPPORT	16	$ 106,557.00	$ 112,983.69	-5.7%
TELECOM & INTERNET	4	$ 114,234.00	$ 122,458.50	-6.7%
TREASURY	4	$ 134,946.00	$ 125,379.75	7.6%
UTILITIES OPERATIONS	354	$ 135,218.66	$ 133,695.19	1.1%
WAREHOUSING & DISTRIBUTION	18	$ 108,813.33	$ 103,754.67	4.9%
WORKFORCE ANALYTICS	3	$ 158,040.00	$ 174,916.00	-9.6%
Grand Total	**1586**			**-0.3%**

Non-Exempt:
2024 Market study

Job Family	# of Employees	Annual Salary	Market Data	Avg. Salary vs Market
ACCOUNTING	9	$ 72,508.78	$ 79,252.67	-8.5%
ACCOUNTS PAYABLE & RECEIVABLE	79	$ 64,337.84	$ 59,553.71	8.0%
ADMINISTRATIVE SUPPORT	43	$ 63,534.30	$ 56,417.07	12.6%
ASSET PROCUREMENT	3	$ 66,463.00	$ 65,221.00	1.9%
BENEFITS	2	$ 75,452.00	$ 73,156.00	3.1%
BUSINESS PROCESS & SERVICE QUALITY	15	$ 73,600.07	$ 70,174.13	4.9%
CREDIT & COLLECTIONS	5	$ 60,686.00	$ 65,770.20	-7.7%
CUSTOMER SERVICE	21	$ 64,369.00	$ 66,299.90	-2.9%
CYBER SECURITY	16	$ 55,946.63	$ 64,331.88	-13.0%
DESIGN SERVICES	1	$ 122,720.00	$ 100,191.00	22.5%
DOCUMENTATION & RECORD KEEPING	13	$ 64,747.15	$ 58,365.69	10.9%
EMPLOYEE RELATIONS	5	$ 68,369.80	$ 68,332.20	0.1%
ENGINEERING TECHNOLOGISTS & TECHNICIANS	287	$ 83,419.85	$ 89,010.38	-6.3%
ENVIRONMENTAL & EMPLOYEE HEALTH & SAFETY	4	$ 64,818.25	$ 54,675.75	18.6%
ETHICS & COMPLIANCE	30	$ 64,275.43	$ 69,058.43	-6.9%
FACILITIES MANAGEMENT & PLANNING	2	$ 73,174.50	$ 63,583.00	15.1%
HEAVY EQUIPMENT & CONSTRUCTION TRADES	4	$ 68,229.25	$ 61,920.00	10.2%
LABORATORY SERVICES	31	$ 75,824.13	$ 86,520.55	-12.4%
LEGAL PROFESSIONALS	4	$ 89,835.25	$ 96,839.75	-7.2%
MACHINE OPERATIONS	73	$ 77,143.51	$ 81,074.10	-4.8%
PAYROLL	16	$ 62,561.19	$ 60,594.25	3.2%
POWER GEN TRANSMISSION & DISTRIBUTION	124	$ 72,070.82	$ 73,390.63	-1.8%
PROCUREMENT	7	$ 70,312.71	$ 76,071.71	-7.6%
PROJECT & PROGRAM MANAGEMENT	145	$ 78,933.39	$ 77,160.83	2.3%
PROPERTY MANAGEMENT	6	$ 63,065.50	$ 68,762.83	-8.3%
REGULATORY AFFAIRS	17	$ 71,635.24	$ 75,127.82	-4.6%
REPAIR & MAINTENANCE TRADES	23	$ 85,917.48	$ 82,548.39	4.1%
UTILITIES OPERATIONS	32	$ 75,026.84	$ 67,728.16	10.8%
WAREHOUSING & DISTRIBUTION	2	$ 61,641.00	$ 64,109.00	-3.8%
Grand Total	**1019**			**1.1%**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Target Pay Level Market Analysis
Non-officer _Total Target Cash

Case No.: U-21981
Exhibit No.: A-52 (AMC-2)
Page: 2 of 2
Witness: AMConrad
Date: December 2025

Exempt Jobs:
2024 Market study

Job Family	# of Employees	Average Total Cash Actual	Average Market Total Target Cash 50th	Average Total Cash to Average Market Total
ACCOUNTING	53	$ 128,416.63	$ 141,810.00	-9.4%
ACCOUNTS PAYABLE & RECEIVABLE	6	$ 111,666.50	$ 129,963.33	-14.1%
ADMINISTRATIVE SUPPORT	27	$ 87,616.46	$ 87,262.93	0.4%
ANALYTICS	70	$ 115,869.83	$ 140,003.93	-17.2%
ASSET PROCUREMENT	10	$ 125,953.51	$ 121,477.50	3.7%
BENEFITS	13	$ 118,149.43	$ 124,592.54	-5.2%
BUSINESS DEVELOPMENT	23	$ 207,156.30	$ 238,764.96	-13.2%
BUSINESS PROCESS & SERVICE QUALITY	60	$ 116,379.70	$ 119,904.27	-2.9%
BUSINESS QUALITY MANAGEMENT	34	$ 144,194.69	$ 145,801.00	-1.1%
BUSINESS STRATEGY & PLANNING	111	$ 151,099.48	$ 169,468.27	-10.8%
BUSINESS SYSTEMS ANALYSIS	28	$ 114,660.26	$ 125,089.93	-8.3%
CHEMICAL	2	$ 163,848.00	$ 153,275.00	6.9%
CIVIL	31	$ 123,680.73	$ 124,824.87	-0.9%
COMMUNICATIONS	22	$ 120,194.29	$ 124,930.59	-3.8%
COMPENSATION	9	$ 156,443.71	$ 164,910.00	-5.1%
CONSTRUCTION PROJECT MANAGEMENT	97	$ 161,576.16	$ 165,898.05	-2.6%
CORPORATE AFFAIRS	31	$ 141,923.77	$ 153,173.71	-7.3%
CORPORATE GOVERNANCE	5	$ 153,074.40	$ 176,768.00	-13.4%
CO-WORKER CONNECTIONS	9	$ 169,289.12	$ 187,848.67	-9.9%
CUSTOMER SERVICE	43	$ 102,417.72	$ 107,019.63	-4.3%
CYBER SECURITY	60	$ 145,824.96	$ 159,633.28	-8.7%
DATA SCIENCE	36	$ 137,620.00	$ 150,994.11	-8.9%
DATABASE ADMINISTRATION	4	$ 135,326.00	$ 144,563.00	-6.4%
DESIGN SERVICES	1	$ 103,388.00	$ 94,116.00	9.9%
DIVERSITY EQUITY & INCLUSION	6	$ 132,685.00	$ 151,947.17	-12.7%
DOCUMENTATION & RECORD KEEPING	7	$ 95,706.13	$ 106,958.86	-10.5%
ELECTRICAL	198	$ 124,628.35	$ 136,089.01	-8.4%
EMPLOYEE RELATIONS	20	$ 145,447.28	$ 159,976.85	-9.1%
ENGINEERING & TECHNICAL LEADERSHIP	177	$ 171,097.59	$ 190,738.90	-10.3%
ENVIRONMENTAL & EMPLOYEE HEALTH & SAFETY	66	$ 135,111.60	$ 153,732.27	-12.1%
ETHICS & COMPLIANCE	39	$ 127,347.82	$ 138,404.74	-8.0%
EXPLORATION & PRODUCTION OPERATIONS	92	$ 148,117.75	$ 150,922.68	-1.9%
FACILITIES MANAGEMENT & PLANNING	11	$ 131,460.78	$ 135,514.09	-3.0%
FINANCIAL CONTROL	14	$ 130,705.01	$ 132,923.14	-1.7%
FINANCIAL FORECASTING	83	$ 140,387.32	$ 144,824.98	-3.1%
HR TECHNOLOGY	6	$ 121,031.16	$ 129,978.17	-6.9%
INDUSTRIAL	11	$ 132,042.69	$ 147,802.45	-10.7%
INFORMATION & TECHNOLOGY LEADERSHIP	59	$ 193,990.68	$ 230,444.98	-15.8%
INFORMATION & TECHNOLOGY MANAGEMENT	42	$ 139,696.05	$ 147,711.36	-5.4%
INTERNAL AUDIT	8	$ 159,154.32	$ 180,155.13	-11.7%
INVESTOR RELATIONS	3	$ 150,054.33	$ 173,258.00	-13.4%
LABOR RELATIONS	10	$ 123,458.12	$ 134,716.00	-8.4%
LABORATORY SERVICES	26	$ 119,929.93	$ 128,495.27	-6.7%
LEARNING & DEVELOPMENT	76	$ 112,414.79	$ 122,169.01	-8.0%
LEGAL PROFESSIONALS	27	$ 189,136.22	$ 238,210.44	-20.6%
MACHINE OPERATIONS	6	$ 168,990.67	$ 161,169.17	4.9%
MANUFACTURING PLANT MANAGEMENT	4	$ 163,359.25	$ 213,662.25	-23.5%
MARKETING GENERALISTS	39	$ 118,940.18	$ 123,838.54	-4.0%
MECHANICAL	103	$ 128,854.02	$ 135,967.69	-5.2%
ORGANIZATIONAL DEVELOPMENT	11	$ 119,631.36	$ 131,470.55	-9.0%
PAYROLL	4	$ 107,766.00	$ 107,880.00	-0.1%
PHYSICAL SECURITY	9	$ 130,861.64	$ 162,021.44	-19.2%
POWER GEN TRANSMISSION & DISTRIBUTION	320	$ 129,541.61	$ 142,013.02	-8.8%
PROCUREMENT	54	$ 107,807.69	$ 122,834.69	-12.2%
PROGRAM MANAGEMENT	39	$ 135,127.64	$ 144,737.95	-6.6%
PROJECT & PROGRAM MANAGEMENT	76	$ 135,913.86	$ 149,182.18	-8.9%
PROPERTY MANAGEMENT	3	$ 99,307.99	$ 149,723.00	-33.7%
RATES & REGULATION	17	$ 148,906.38	$ 183,588.29	-18.9%
REAL ESTATE MANAGEMENT	18	$ 130,407.04	$ 158,770.78	-17.9%
REGULATORY AFFAIRS	6	$ 150,166.18	$ 160,935.00	-6.7%
RELATIONSHIP MANAGEMENT	37	$ 143,701.09	$ 146,919.35	-2.2%
REPAIR & MAINTENANCE TRADES	19	$ 141,099.54	$ 150,200.68	-6.1%
RISK MANAGEMENT	22	$ 139,513.74	$ 152,698.82	-8.6%
SALES & MARKETING	35	$ 168,128.14	$ 189,411.26	-11.2%
SOFTWARE DEVELOPMENT	18	$ 125,951.84	$ 140,465.44	-10.3%
SOFTWARE PRODUCT ENGINEERING	193	$ 134,988.16	$ 159,601.39	-15.4%
SUPPLY CHAIN PLANNING & OPERATIONS	41	$ 123,723.45	$ 117,376.71	5.4%
SYSTEMS ADMINISTRATION & REPORTING	8	$ 129,845.50	$ 131,418.38	-1.2%
SYSTEMS ARCHITECTURE	30	$ 154,605.85	$ 166,923.63	-7.4%
SYSTEMS OPS & PRODUCTION CONTROL	7	$ 118,253.29	$ 113,573.71	4.1%
TALENT ACQUISITION	11	$ 120,227.84	$ 119,867.27	0.3%
TAX	14	$ 156,895.32	$ 161,722.07	-3.0%
TECHNICAL ANALYST	206	$ 113,761.66	$ 125,907.99	-9.6%
TECHNOLOGY SUPPORT	16	$ 107,832.54	$ 120,355.81	-10.4%
TELECOM & INTERNET	4	$ 118,002.74	$ 132,348.00	-10.8%
TREASURY	4	$ 139,412.21	$ 141,634.75	-1.6%
UTILITIES OPERATIONS	354	$ 142,815.57	$ 152,776.63	-6.5%
WAREHOUSING & DISTRIBUTION	18	$ 110,619.22	$ 116,013.89	-4.7%
WORKFORCE ANALYTICS	3	$ 171,028.11	$ 212,962.67	-19.7%
Grand Total	**1586**			**-7.7%**

Non-Exempt:
2024 Market study

Job Family	# of Employees	Average Total Target Cash Actual	Average Market Total Cash 50th	Average Total Target Cash to Average Market Total
ACCOUNTING	9	$ 73,242.02	$ 81,891.56	-10.6%
ACCOUNTS PAYABLE & RECEIVABLE	79	$ 65,175.17	$ 61,708.11	5.6%
ADMINISTRATIVE SUPPORT	43	$ 64,318.34	$ 58,185.84	10.5%
ASSET PROCUREMENT	3	$ 67,066.00	$ 69,238.00	-3.1%
BENEFITS	2	$ 76,390.00	$ 75,026.00	1.8%
BUSINESS PROCESS & SERVICE QUALITY	15	$ 74,471.08	$ 71,302.20	4.4%
CREDIT & COLLECTIONS	5	$ 61,610.60	$ 67,448.20	-8.7%
CUSTOMER SERVICE	21	$ 65,129.64	$ 69,318.81	-6.0%
CYBER SECURITY	16	$ 56,726.74	$ 70,082.63	-19.1%
DESIGN SERVICES	1	$ 123,460.66	$ 104,158.00	18.5%
DOCUMENTATION & RECORD KEEPING	13	$ 65,654.23	$ 60,784.23	8.0%
EMPLOYEE RELATIONS	5	$ 69,246.51	$ 70,435.40	-1.7%
ENGINEERING TECHNOLOGISTS & TECHNICIANS	287	$ 84,356.06	$ 92,190.44	-8.5%
ENVIRONMENTAL & EMPLOYEE HEALTH & SAFETY	4	$ 65,692.55	$ 55,223.00	19.0%
ETHICS & COMPLIANCE	30	$ 65,129.05	$ 72,603.93	-10.3%
FACILITIES MANAGEMENT & PLANNING	2	$ 74,045.50	$ 63,743.00	16.2%
HEAVY EQUIPMENT & CONSTRUCTION TRADES	4	$ 68,229.25	$ 62,284.00	9.5%
LABORATORY SERVICES	31	$ 76,722.02	$ 91,409.13	-16.1%
LEGAL PROFESSIONALS	4	$ 90,756.51	$ 102,640.50	-11.6%
MACHINE OPERATIONS	73	$ 77,171.16	$ 85,148.89	-9.4%
PAYROLL	16	$ 63,419.09	$ 62,425.13	1.6%
POWER GEN TRANSMISSION & DISTRIBUTION	124	$ 72,940.58	$ 71,057.52	2.7%
PROCUREMENT	7	$ 71,078.43	$ 79,506.71	-10.6%
PROJECT & PROGRAM MANAGEMENT	145	$ 79,836.73	$ 79,873.92	0.0%
PROPERTY MANAGEMENT	6	$ 63,958.83	$ 70,974.33	-9.9%
REGULATORY AFFAIRS	17	$ 72,721.32	$ 78,485.82	-7.3%
REPAIR & MAINTENANCE TRADES	23	$ 86,168.95	$ 86,210.35	0.0%
UTILITIES OPERATIONS	32	$ 75,834.65	$ 71,396.94	6.2%
WAREHOUSING & DISTRIBUTION	2	$ 61,641.00	$ 64,109.00	-3.8%
Grand Total	**1019**			**-1.1%**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Annual Employee Incentive Compensation
($000)

Case No.: U-21981
Exhibit No.: A-53 (AMC-3)
Page: 1 of 2
Witness: AMConrad
Date: December 2025

Line No.	(a) Description	(b) Actual 12-Mos Ended 12/31/2024	(c) Projected 12-Mos Ending 10/31/2027
1	**Officer Annual Incentive Compensation**	**$ 227**	**$ 245**
	Labor	227	245
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	-	-
2	**Non-Officer Annual Incentive Compensatin**	**889**	**835**
	Labor	889	835
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	-	-
3	**Total Annual Employee Incentive Compensation**	**$ 1,116**	**$ 1,080**
	Labor	1,116	1,080
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	-	-

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
Annual Employee Incentive Compensation
($000)

Case No.: U-21981
Exhibit No.: A-53 (AMC-3)
Page: 2 of 2
Witness: AMConrad
Date: December 2025

Line No.	(a) Description	(b) Actual 12 Mos Ended 12/31/2024	(c) Inflation Impacts on Historical Costs Test Year (b) * Compounded Inflation Rate	(d) Scope/ Cost Increases Net of Productivity Gains	(e) Projected O&M 12 Mos Ending 10/31/2027 (b) + (c) + (d)
1	Officer Annual Incentive Compensation	$ 227	$ 17	$ 1	$ 245
2	Non-Officer Annual Incentive Compensatin	889	65	(119)	835
3	**Total Annual Employee Incentive Compensation**	**$ 1,116**	**$ 81**	**$ (117)**	**$ 1,080**

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

Highest-Paid Officer Total Compensation Summary

			Total Compensation Opportunity					
Company	**Executive**	**Position**	**Base Salary**	**Target Annual Incentive ($)**	**Target Annual Incentive (%)**	**Target Total Cash Compensation [1]**	**Total Long-Term Incentive**	**Target Total Direct Compensation [2]**
Alliant Energy Corp	Lisa M. Barton	Pres. and CEO	$1,075,000	$1,343,750	125%	$2,418,750	$4,437,940	$6,856,690
Ameren Corporation	Martin J. Lyons Jr.	Chairman, Pres. and CEO	$1,275,000	$1,593,750	125%	$2,868,750	$5,209,678	$8,078,428
Atmos Energy Corporation	John K. Akers	Pres. and CEO	$1,100,000	$1,210,000	110%	$2,310,000	$4,560,079	$6,870,079
CenterPoint Energy, Inc.	Jason P. Wells	Pres. and CEO	$1,150,000	$1,437,500	125%	$2,587,500	$5,749,994	$8,337,494
Consolidated Edison, Inc.	Timothy P. Cawley	Pres. and CEO	$1,400,000	$1,750,000	125%	$3,150,000	$7,993,638	$11,143,638
DTE Energy Company	Gerardo Norcia	Chairman and CEO	$1,340,000	$1,809,000	135%	$3,149,000	$7,687,858	$10,836,858
Edison International	Pedro J. Pizarro	Pres. and CEO	$1,400,000	$1,890,000	135%	$3,290,000	$9,310,106	$12,600,106
Entergy Corporation	Andrew S. Marsh	Chairman and CEO	$1,250,000	$1,625,000	130%	$2,875,000	$7,190,821	$10,065,821
Evergy, Inc.	David A. Campbell	Chairman, Pres., and CEO	$1,056,000	$1,320,000	125%	$2,376,000	$4,961,250	$7,337,250
Eversource Energy	Joseph R. Nolan Jr.	Chairman, Pres. and CEO	$1,384,770	$1,960,000	142%	$3,344,770	$7,510,128	$10,854,898
Hawaiian Electric Industries, Inc.	Scott W. H. Seu	Pres. and CEO	$995,750	$995,750	100%	$1,991,500	$1,695,190	$3,686,690
NiSource Inc	Lloyd Yates	Pres. and CEO	$1,150,000	$1,495,000	130%	$2,645,000	$8,266,043	$10,911,043
OGE Energy Corp.	Sean Trauschke	Chairman, CEO and Pres.	$1,204,622	$1,325,084	110%	$2,529,706	$5,099,875	$7,629,581
Pinnacle West Capital Corporation	Theodore N. Geisler	Chair of the Board, Pres. and CEO	$1,000,000	$1,200,000	120%	$2,200,000	$3,000,000	$5,200,000
PPL Corporation	Vincent Sorgi	Pres. and CEO	$1,238,060	$1,547,575	125%	$2,785,635	$6,741,435	$9,527,070
Public Service Enterprise Group Incorporated	Ralph A. LaRossa	Chair of the Board, Pres. and CEO	$1,345,600	$1,816,560	135%	$3,162,160	$8,500,035	$11,662,195
Sempra Energy	Jeffrey W. Martin	Chairman, CEO and Pres.	$1,600,000	$2,800,000	175%	$4,400,000	$13,503,977	$17,903,977
WEC Energy Group Inc	Scott J. Lauber	Pres. and CEO	$1,130,118	$1,582,165	140%	$2,712,283	$5,518,335	$8,230,618
Xcel Energy Inc.	Bob Frenzel	Chairman, Pres. and CEO	$1,400,000	$1,960,000	140%	$3,360,000	$12,078,539	$15,438,539
n=19								
		Summary Statistics [3]						
		25th Percentile	$1,115,059	$1,334,417	125%	$2,474,228	$5,030,563	$7,483,416
		50th Percentile	$1,238,060	$1,582,165	125%	$2,785,635	$6,741,435	$9,527,070
		Average	$1,236,575	$1,613,744	129%	$2,850,319	$6,790,259	$9,640,578
		75th Percentile	$1,365,185	$1,812,780	135%	$3,156,080	$8,129,841	$11,027,341
CMS Energy Corporation	**Garrick J. Rochow**	**Director, Pres. and CEO**	**$1,250,000**	**$1,562,500**	**125%**	**$2,812,500**	**$6,651,245**	**$9,463,745**

Notes:
1. Target TCC (total cash compensation) includes base salary and target annual incentive.
2. Target TDC (total direct compensation) = base salary + target annual incentive + long-term incentive.
3. Data are independently arrayed and thus will not sum to total cash/total direct compensation.

Second Highest-Paid Officer Total Compensation Summary

			Total Compensation Opportunity					
Company	Executive	Position	Base Salary	Target Annual Incentive ($)	Target Annual Incentive (%)	Target Total Cash Compensation [1]	Total Long-Term Incentive	Target Total Direct Compensation [2]
Alliant Energy Corp	Robert J. Durian	EVP and CFO	$650,000	$520,000	80%	$1,170,000	$1,469,465	$2,639,465
Ameren Corporation	Michael L. Moehn	Senior EVP and CFO	$860,000	$731,000	85%	$1,591,000	$3,366,103	$4,957,103
Atmos Energy Corporation	Christopher T. Forsythe	SVP and CFO	$575,000	$402,500	70%	$977,500	$1,003,828	$1,981,328
CenterPoint Energy, Inc.	Christopher A. Foster	EVP and CFO	$725,000	$580,000	80%	$1,305,000	$3,834,987	$5,139,987
Consolidated Edison, Inc.	Kirkland Andrews	SVP and CFO	$810,000	$648,000	80%	$1,458,000	$3,201,000	$4,659,000
DTE Energy Company	David Ruud	EVP and CFO	$710,192	$616,250	87%	$1,326,442	$2,129,484	$3,455,926
Edison International	Maria Rigatti	EVP and CFO	$800,000	$680,000	85%	$1,480,000	$2,200,142	$3,680,142
Entergy Corporation	Kimberly A. Fontan	EVP and CFO	$706,250	$600,313	85%	$1,306,563	$1,861,141	$3,167,704
Evergy, Inc.	W. Bryan Buckler	EVP and CFO	$660,000	$528,000	80%	$1,188,000	$3,086,663	$4,274,663
Eversource Energy	John M. Moreira	EVP, CFO and Treasurer	$826,925	$680,000	82%	$1,506,925	$2,083,794	$3,590,719
Hawaiian Electric Industries, Inc.	Ann C. Teranishi	ASB Pres. and CEO	$800,000	$600,000	75%	$1,400,000	$520,000	$1,920,000
NiSource Inc	Shawn Anderson	EVP and CFO	$650,000	$487,500	75%	$1,137,500	$2,211,442	$3,348,942
OGE Energy Corp.	Charles B. Walworth	CFO and Treasurer	$560,019	$392,013	70%	$952,032	$840,029	$1,792,061
Pinnacle West Capital Corporation	Andrew D. Cooper	SVP and CFO	$630,000	$441,000	70%	$1,071,000	$1,602,875	$2,673,875
PPL Corporation	Dean A. Del Vecchio	EVP and Chief Technology and Innovation Officer	$650,000	$552,500	85%	$1,202,500	$2,360,112	$3,562,612
Public Service Enterprise Group Incorporated	Daniel J. Cregg	EVP and CFO	$825,000	$742,500	90%	$1,567,500	$3,597,723	$5,165,223
Sempra Energy	Trevor I. Mihalik	EVP and Group Pres., California	$950,000	$950,000	100%	$1,900,000	$4,032,724	$5,932,724
WEC Energy Group Inc	Xia Liu	EVP and CFO	$841,853	$715,575	85%	$1,557,428	$2,107,082	$3,664,510
Xcel Energy Inc.	Brian Van Abel	EVP and CFO	$800,000	$680,000	85%	$1,480,000	$2,516,691	$3,996,691
n=19								
		Summary Statistics[3]						
		25th Percentile	$650,000	$524,000	78%	$1,179,000	$1,732,008	$2,920,789
		50th Percentile	$725,000	$600,313	82%	$1,326,442	$2,200,142	$3,590,719
		Average	$738,434	$607,745	82%	$1,346,178	$2,317,120	$3,663,299
		75th Percentile	$817,500	$680,000	85%	$1,493,463	$3,143,832	$4,466,832
CMS Energy Corporation	**Rejji P. Hayes**	**EVP and CFO**	**$810,000**	**$648,000**	**80%**	**$1,458,000**	**$2,082,626**	**$3,540,626**

Notes:
1. Target TCC (total cash compensation) includes base salary and target annual incentive.
2. Target TDC (total direct compensation) = base salary + target annual incentive + long-term incentive.
3. Data are independently arrayed and thus will not sum to total cash/total direct compensation.

Third Highest-Paid Officer Total Compensation Summary

			Total Compensation Opportunity					
Company	**Executive**	**Position**	**Base Salary**	**Target Annual Incentive ($)**	**Target Annual Incentive (%)**	**Target Total Cash Compensation [1]**	**Total Long-Term Incentive**	**Target Total Direct Compensation [2]**
Alliant Energy Corp	Raja Sundararajan	EVP, Strategy and Customer Solutions	$600,000	$450,000	75%	$1,050,000	$1,002,623	$2,052,623
Ameren Corporation	Mark C. Birk	Chairman and Pres., Ameren Missouri	$650,000	$520,000	80%	$1,170,000	$1,174,177	$2,344,177
Atmos Energy Corporation	Karen E. Hartsfield	SVP, GC, and Corporate Secretary	$510,000	$306,000	60%	$816,000	$718,561	$1,534,561
CenterPoint Energy, Inc.	Monica Karuturi	EVP and GC	$725,000	$580,000	80%	$1,305,000	$1,884,988	$3,189,988
Consolidated Edison, Inc.	Matthew Ketschke	Pres., Con Edison of New York	$824,000	$659,200	80%	$1,483,200	$2,470,440	$3,953,640
DTE Energy Company	Joi Harris	Pres. and COO	$626,154	$578,000	92%	$1,204,154	$1,718,346	$2,922,500
Edison International	Steven D. Powell	Pres. and CEO, SCE	$770,000	$654,500	85%	$1,424,500	$2,002,101	$3,426,601
Entergy Corporation	Roderick K. West	Former Group Pres., Utility Operations	$835,753	$668,602	80%	$1,504,355	$1,603,709	$3,108,064
Evergy, Inc.	Kevin E. Bryant	Former EVP and COO and Former EVP, Corporate Initiatives	$645,000	$516,000	80%	$1,161,000	$1,357,053	$2,518,053
Eversource Energy	Paul W. Chodak III	EVP and COO	$850,002	$680,000	80%	$1,530,002	$1,886,789	$3,416,791
Hawaiian Electric Industries, Inc.	Shelee M. T. Kimura	Hawaiian Electric Pres. and CEO	$650,000	$487,500	75%	$1,137,500	$704,346	$1,841,846
NiSource Inc	Michael Luhrs	EVP, Risk and Strategy and Chief Commercial Officer	$600,000	$450,000	75%	$1,050,000	$2,084,541	$3,134,541
OGE Energy Corp.	W. Bryan Buckler	Former CFO and VP	$509,304	$356,513	70%	$865,817	$862,455	$1,728,272
Pinnacle West Capital Corporation	Adam C. Heflin	EVP and Chief Nuclear Officer of PVGS, APS	$735,000	$551,250	75%	$1,286,250	$1,337,015	$2,623,265
PPL Corporation	Joseph P. Bergstein Jr.	EVP and CFO	$691,150	$587,478	85%	$1,278,628	$1,792,118	$3,070,746
Public Service Enterprise Group Incorporated	Kim C. Hanemann	Pres. and COO, PSE&G	$775,000	$658,750	85%	$1,433,750	$1,800,019	$3,233,769
Sempra Energy	Justin C. Bird	EVP, CEO, Sempra Infrastructure	$780,000	$702,000	90%	$1,482,000	$2,035,528	$3,517,528
WEC Energy Group Inc	Michael W. Hooper	Pres. WI Utilities	$650,000	$520,000	80%	$1,170,000	$1,116,330	$2,286,330
Xcel Energy Inc.	Amanda Rome	EVP, Group Pres., Utilities and Chief Customer Officer	$700,000	$560,000	80%	$1,260,000	$2,016,739	$3,276,739
n=19								
		Summary Statistics [3]						
		25th Percentile	$635,577	$501,750	75%	$1,149,250	$1,145,254	$2,315,254
		50th Percentile	$691,150	$560,000	80%	$1,260,000	$1,718,346	$3,070,746
		Average	$690,861	$551,884	79%	$1,242,745	$1,556,204	$2,798,949
		75th Percentile	$772,500	$656,625	83%	$1,429,125	$1,944,445	$3,255,254
CMS Energy Corporation	**Shaun M. Johnson**	**GC and SVP, Business Optimization**	**$620,000**	**$465,000**	**75%**	**$1,085,000**	**$1,249,550**	**$2,334,550**

Notes:
1. Target TCC (total cash compensation) includes base salary and target annual incentive.
2. Target TDC (total direct compensation) = base salary + target annual incentive + long-term incentive.
3. Data are independently arrayed and thus will not sum to total cash/total direct compensation.

Fourth Highest-Paid Officer Total Compensation Summary

			Total Compensation Opportunity					
Company	Executive	Position	Base Salary	Target Annual Incentive ($)	Target Annual Incentive (%)	Target Total Cash Compensation [1]	Total Long-Term Incentive	Target Total Direct Compensation [2]
Alliant Energy Corp	David A. de Leon	SVP and Pres. of WPL	$465,000	$325,500	70%	$790,500	$545,784	$1,336,284
Ameren Corporation	Leonard P. Singh	Chairman and Pres., Ameren Illinois	$625,000	$500,000	80%	$1,125,000	$1,129,033	$2,254,033
Atmos Energy Corporation	John S. McDill	SVP, Utility Operations	$500,000	$300,000	60%	$800,000	$718,561	$1,518,561
CenterPoint Energy, Inc.	Jason M. Ryan	EVP, Regulatory Services and Government Affairs	$525,000	$367,500	70%	$892,500	$1,050,003	$1,942,503
Consolidated Edison, Inc.	Deneen L. Donnley	SVP and GC	$695,700	$486,990	70%	$1,182,690	$1,394,034	$2,576,724
DTE Energy Company	Trevor F. Lauer	Vice Chairman and Group Pres.	$669,231	$544,000	81%	$1,213,231	$1,507,506	$2,720,737
Edison International	Adam S. Umanoff	EVP, GC and Corporate Secretary	$710,000	$603,500	85%	$1,313,500	$1,562,058	$2,875,558
Entergy Corporation	Marcus V. Brown	EVP and GC	$791,754	$633,403	80%	$1,425,157	$1,493,209	$2,918,366
Evergy, Inc.	Charles A. Caisley	EVP, Public Affairs and Chief Customer Officer	$575,000	$402,500	70%	$977,500	$1,144,511	$2,122,011
Eversource Energy	Susan Sgroi	EVP, Human Resources and Information Technology	$533,654	$389,000	73%	$922,654	$1,559,857	$2,482,511
Hawaiian Electric Industries, Inc.	Scott T. DeGhetto	EVP, CFO and Treasurer	$620,000	$620,000	100%	$1,240,000	$296,863	$1,536,863
NiSource Inc	Melody Birmingham	EVP and Group Pres., Utilities	$670,000	$502,500	75%	$1,172,500	$1,583,297	$2,755,797
OGE Energy Corp.	William H. Sultemeier	GC, Corporate Secretary and Chief Compliance Officer	$517,394	$336,306	65%	$853,700	$766,669	$1,620,369
Pinnacle West Capital Corporation	Jacob Tetlow	EVP and CFO of APS	$560,000	$420,000	75%	$980,000	$1,587,016	$2,567,016
PPL Corporation	Francis X. Sullivan	EVP and COO	$682,000	$579,700	85%	$1,261,700	$1,768,409	$3,030,109
Public Service Enterprise Group Incorporated	Tamara L. Linde	Former EVP, GC and CLO	$737,400	$626,790	85%	$1,364,190	$1,800,019	$3,164,209
Sempra Energy	Karen L. Sedgwick	EVP and CFO	$630,000	$567,000	90%	$1,197,000	$2,125,712	$3,322,712
WEC Energy Group Inc	Margaret C. Kelsey	EVP, GC and Corporate Secretary	$640,665	$480,499	75%	$1,121,164	$1,090,360	$2,211,524
Xcel Energy Inc.	Timothy O'Connor	EVP and COO	$800,000	$680,000	85%	$1,480,000	$1,766,730	$3,246,730
n=19								
		Summary Statistics [3]						
		25th Percentile	$546,827	$395,750	70%	$950,077	$1,070,182	$2,032,257
		50th Percentile	$630,000	$500,000	75%	$1,172,500	$1,493,209	$2,567,016
		Average	$628,831	$492,905	78%	$1,121,736	$1,309,981	$2,431,717
		75th Percentile	$688,850	$591,600	85%	$1,250,850	$1,585,157	$2,896,962
CMS Energy Corporation	**LeeRoy Wells Jr.**	**SVP, Operations**	**$575,000**	**$431,250**	**75%**	**$1,006,250**	**$1,067,357**	**$2,073,607**

Notes:
1. Target TCC (total cash compensation) includes base salary and target annual incentive.
2. Target TDC (total direct compensation) = base salary + target annual incentive + long-term incentive.
3. Data are independently arrayed and thus will not sum to total cash/total direct compensation.

Fifth Highest-Paid Officer Total Compensation Summary

			Total Compensation Opportunity					
Company	Executive	Position	Base Salary	Target Annual Incentive ($)	Target Annual Incentive (%)	Target Total Cash Compensation [1]	Total Long-Term Incentive	Target Total Direct Compensation [2]
Ameren Corporation	Chonda J. Nwamu	Former EVP, GC and Secretary	$658,000	$460,600	70%	$1,118,600	$1,018,855	$2,137,455
Atmos Energy Corporation	John M. Robbins	SVP and Human Resources	$383,000	$229,800	60%	$612,800	$718,561	$1,331,361
CenterPoint Energy, Inc.	Lynne Harkel Rumford	Former EVP and CHRO	$475,000	$332,500	70%	$807,500	$949,976	$1,757,476
Consolidated Edison, Inc.	Robert Sanchez	Pres., Shared Services, Con Edison of New York	$585,300	$468,240	80%	$1,053,540	$1,173,459	$2,226,999
DTE Energy Company	Mark W. Stiers	Pres. and CFO, DTE Vantage and Energy Trading	$624,769	$476,250	76%	$1,101,019	$1,317,750	$2,418,769
Edison International	Caroline Choi	EVP, Public Policy and Corporate Affairs	$542,880	$352,872	65%	$895,752	$841,635	$1,737,387
Entergy Corporation	Peter S. Norgeot Jr.	EVP and COO	$669,760	$502,320	75%	$1,172,080	$1,529,283	$2,701,363
Evergy, Inc.	Heather A. Humphrey	SVP, GC and Corporate Secretary	$547,500	$355,875	65%	$903,375	$817,075	$1,720,450
Eversource Energy	Gregory B. Butler	EVP and GC	$727,156	$512,000	70%	$1,239,156	$1,219,021	$2,458,177
Hawaiian Electric Industries, Inc.	Kurt K. Murao	EVP, GC, Chief Administrative Officer and Corporate Secretary	$499,800	$299,880	60%	$799,680	$478,622	$1,278,302
NiSource Inc	William Jefferson	EVP, Operations and Chief Safety Officer	$625,000	$468,750	75%	$1,093,750	$1,476,957	$2,570,707
OGE Energy Corp.	D.O. Jones	VP, Utility Operations	$454,553	$318,187	70%	$772,740	$721,679	$1,494,419
PPL Corporation	Wendy E. Stark	EVP, Utilities and CLO	$620,000	$527,000	85%	$1,147,000	$1,213,156	$2,360,156
Public Service Enterprise Group Incorporated	Charles V. McFeaters	Pres. and Chief Nuclear Officer	$676,000	$507,000	75%	$1,183,000	$1,200,076	$2,383,076
Sempra Energy	Diana L. Day	CLO	$510,000	$306,000	60%	$816,000	$866,171	$1,682,171
WEC Energy Group Inc	Robert M. Garvin	EVP, External Affairs	$577,692	$433,269	75%	$1,010,961	$979,768	$1,990,729
Xcel Energy Inc.	Rob Berntsen	EVP, Chief Legal and Compliance Officer	$600,000	$450,000	75%	$1,050,000	$1,716,772	$2,766,772
n=17								
		Summary Statistics[3][4]						
		25th Percentile	$510,000	$332,500	65%	$816,000	$841,635	$1,720,450
		50th Percentile	$585,300	$450,000	70%	$1,050,000	$1,018,855	$2,137,455
		Average	$575,083	$411,797	71%	$986,880	$1,072,872	$2,059,751
		75th Percentile	$625,000	$476,250	75%	$1,118,600	$1,219,021	$2,418,769
CMS Energy Corporation	**Brandon J. Hofmeister**	**SVP, Sustainability and External Affairs**	**$545,000**	**$354,250**	**65%**	**$899,250**	**$905,858**	**$1,805,108**

Notes:
1. Target TCC (total cash compensation) includes base salary and target annual incentive.
2. Target TDC (total direct compensation) = base salary + target annual incentive + long-term incentive.
3. Data are independently arrayed and thus will not sum to total cash/total direct compensation.
4. Analysis does not include fifth highest-paid officers for Alliant or Pinnacle West Capital because the Executive Chairman was excluded from the analysis for Alliant and the former CFO was excluded for Pinnacle West Capital.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Proxy Statement Summary Compensation Table

Case No.: U-21981
Exhibit No.: A-55 (AMC-5)
Page: 1 of 1
Witness: AMConrad
Date: December 2025

Below is the actual compensation of the named executive officers from the most recent Securities and Exchange Commission executive compensation public disclosure requirement under Regulation 14A (referred to as the proxy statement).

2024 SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary (1)	Stock Awards (2)	Non-Equity Incentive Plan Compensation (3)	Change in Pension Value and Nonqualified Deferred Compensation Earnings (4)	All Other Compensation (5)	Total
(a)	(b)	($) (c)	($) (e)	($) (f)	($) (g)	($) (h)	($) (i)
Garrick J. Rochow President and CEO, CMS and Consumers	2024	1,250,000	6,651,245	2,078,125	261	421,778	10,401,409
	2023	1,235,000	6,033,036	1,945,125	198	423,851	9,637,210
	2022	1,150,000	5,265,456	1,987,200	107	303,431	8,706,194
Rejji P. Hayes Executive Vice President and CFO, CMS and Consumers	2024	810,000	2,082,626	861,840	—	256,918	4,011,384
	2023	790,000	1,936,135	796,320	—	233,154	3,755,609
	2022	768,836	1,721,432	885,699	—	210,712	3,586,679
Brandon J. Hofmeister Senior Vice President, Sustainability and External Affairs, CMS and Consumers	2024	545,000	905,858	471,152	—	139,267	2,061,277
	2023	535,000	877,706	438,165	—	143,337	1,994,208
	2022	525,000	810,105	491,400	—	114,174	1,940,679
Shaun M. Johnson General Counsel and Senior Vice President, Business Optimization, CMS and Consumers	2024	620,000	1,249,550	618,450	—	160,576	2,648,576
	2023	565,000	1,006,849	533,925	—	157,421	2,263,195
	2022	540,000	810,105	583,200	—	117,805	2,051,110
LeeRoy Wells Jr. (6) Senior Vice President, Operations, CMS and Consumers	2024	575,000	1,067,357	573,562	—	135,586	2,351,505
	2023	545,000	955,139	480,690	—	132,003	2,112,832
	2022	—	—	—	—	—	—

(1) The amounts reported in this column include amounts deferred by the NEOs.

(2) The amounts represent the aggregate grant date fair value of the awards, which, with respect to those awards with a performance component, is based upon the probable outcome of the performance conditions, determined pursuant to ASC 718 and take into account the expected CMS common stock dividend yield associated with the 2022, 2023 and 2024 awards. See Note 11, Stock-based Compensation, to the Consolidated Financial Statements included in CMS' and Consumers' Annual Report on Form 10-K for the year ended December 31, 2024, for a discussion of the relevant assumptions used in calculating the aggregate grant date fair value pursuant to ASC 718. The TSR vesting condition related to the performance-based restricted stock awards is considered a market condition and not a performance condition under ASC 718. Accordingly, there is no grant date fair value below or in excess of the amounts reflected in the table above that could be calculated and disclosed based on achievement of market conditions. The EPS growth vesting condition is a performance condition under ASC 718.

The 2024 grant date fair value for the EPS growth performance-based restricted stock, based on the probable achievement of the performance goals at the time of grant, was $2,395,316 for Rochow, $750,015 for Hayes, $326,226 for Hofmeister, $449,986 for Johnson and $384,380 for Wells Jr.

The grant date fair value for the EPS growth performance-based restricted stock, assuming the maximum achievement of the performance goals, would have been $4,790,631 for Rochow, $1,500,029 for Hayes, $652,452 for Hofmeister, $899,972 for Johnson and $768,759 for Wells Jr.

(3) The amounts reported in this column for 2024 consist of cash incentive awards earned in 2024 under our Annual Incentive Plan.

(4) This column does not reflect compensation paid to the NEO but instead represents the aggregate annual increase, as of December 31, 2022, December 31, 2023 and December 31, 2024, in actuarial values of each of the participating NEO's benefits under the Cash Balance Plan. The actuarial values are calculated pursuant to Financial Accounting Standards Board Accounting Codification Topic 715, Compensation — Retirement Benefits (ASC 715), and take into account discount rates and implementation of the current 2021 mortality table. See Note 10, Retirement Benefits, to the Consolidated Financial Statements included in CMS' and Consumers' Annual Report on Form 10-K for the year ended December 31, 2024, for a discussion of the relevant assumptions used in determining these amounts. Rochow was covered by the Cash Balance Plan.

(5) Detail supporting all other compensation for 2024 is reflected in the *2024 All Other Compensation Table*, below.

(6) Wells Jr. was not a NEO prior to 2023.

Consumers Energy Company
Allocation of Base Salary and Incentive Expense for the 2024 Historical Period

1. *Base Salary and Short-Incentive Company Allocation*

Base salaries and short-term incentive of the officers are allocated to CMS Energy, Consumers and NorthStar. The following officers have a portion of base salary allocated to other companies outside of Consumers Energy based on an estimated percentage of time spent.

- President & Chief Executive Officer
- Exec VP & Chief Financial Officer
- Sr. VP of Governmental/ Public and Regulatory Affairs
- Sr. VP & General Counsel
- Sr. VP Strategy
- Sr. VP People & Culture
- Sr. VP & Chief Customer Officer
- VP & Corporate Secretary and Chief Compliance Officer
- VP & Deputy General Counsel
- VP Applications & Analytics
- VP IT & Security and Chief Info Officer

No officers have a portion of base salary and short-term incentive allocated to other companies outside of Consumers Energy based on customer count.

The following officers have a portion of base salary and short-term incentive allocated to other companies outside of Consumers Energy based on Massachusetts formula allocation.

- Chief Accounting Officer, Controller and VP Tax
- VP of Treasury and Investor Relations

The remaining officer roles have 100% of their base salary and short-term incentive allocated to Consumers Energy based on the fact that 100% of their time is spent on Consumers Energy.

2. *Base Salary Business Allocation (ie Electric and Gas Split)*

Operating and maintenance allocation of base salaries for the following officers were based on the three factors: (1) Net Plant, Investments, Inventory and Goodwill (2) the 12-month ended operating revenue (3) and 12 months ended payroll.

- President and Chief Executive Officer
- Chief Accounting Officer, Controller and VP Tax
- Sr. VP Governmental/ Public and Regulatory Affairs
- VP & Corporate Secretary
- Sr. VP Strategy
- Sr. VP & General Counsel
- VP & Deputy General Counsel
- Operating and maintenance allocation of base salary for, Sr. VP & Chief Customer Officer; VP Supply Chain and VP Customer Experience is based on customer count.

Operating and maintenance allocation of base salaries and short-term incentive for the following officers were based on bank balances ratio. Bank balances ratio is calculated as average electric and gas percentages of total construction expenditures and total operating and maintenance expense.

- Executive VP and Chief Financial Officer
- VP of Treasury and Investor Relations

Operating and maintenance allocation of base salaries for the VP Operations Performance matters are based on the time spent on electric versus gas work.

Operating and maintenance allocation of base salaries for the Sr. VP Operations is based on their time spent on electric versus gas work and customer count.

Operating and maintenance allocation of base salaries for the Sr. VP of People and Culture, VP Cmty Affairs & Chief Diversity Officer; VP Applications & Analytics; VP IT & Security and Chief Info Officer; and VP People & Culture Operations is allocated between electric and gas based on a corporate headcount.

Operating and maintenance allocation of base salaries for the VP of Electric Grid Integration and VP Electric Operations and are allocated 100% to electric.

Operating and maintenance allocation of base salaries for the Sr. VP and VPs responsible for Transformation, Engineering & Operation Support, are allocated to electric and gas based on the weighted average of operating and maintenance and construction dollars expended in the various functions (Engineering, Operations Support, and VP Renewables Development & Enterprise Prj. Mgmt.).

3. *Incentive Business Allocation (ie Electric and Gas Split)*

Electric and gas allocation of annual incentive for all officers is based on total Consumers' labor allocation within historical 12 months period.

4. *Base Salary and Incentive Cost Allocation (ie O&M and Capital)*

Annual incentive expense has always been considered a labor cost; however it was not categorized as one in the MPSC chart of accounts. Prior to Case No. U-17735 it was a "disallowed" labor cost. In Case No. U-16191, the Commission staff requested that payments in excess of rate recoverable charges (for example: incentive compensation plan, supplemental executive retirement plan, etc.) be recorded to account 426.5 "Other Deductions". The Company followed this order and charged incentive expense to account 426.5. In Case No. U-17735, the Commission approved the recovery of the short-term EICP program, which then allowed the Company to charge the approved short-term incentive costs to operating and maintenance expense and capital as a component of labor for the Company. The Company is currently splitting the cost of short-term incentive associated with operating goals at threshold level (50% of non-officer labor costs and 30% of officers) between operating and maintenance and capital based on time spent. Based on Case No. U-17990 only approving the recovery of the short-term incentive cost associated with operating goals, However, 100% of the top 5 officer annual incentive labor costs is allocated to account 426.5 "Other Deductions".

5. *Base Salary and Incentive Cost Allocation %*

HISTORICAL YEAR 2024

	Percentage Split		Percentage Split		Electric		Gas	
Officer TITLE	**Incentive Charged to Consumers**	**Other**	**Electric**	**Gas**	**% to O&M**	**% to Capital**	**% to O&M**	**% to Capital**
President & CEO	95.0%	5.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Exec VP & CFO	80.0%	20.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Sr VP & Operations	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
SR VP Customer Experience & CIO	99.0%	1.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Sr VP Transformation & Engineering	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Sr VP Strategy	75.0%	25.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Sr VP People & Culture	99.7%	0.3%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
SVP Sustainability & External Affairs	80.0%	20.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
SVP Bus Optimization & General Counsel	80.0%	20.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP & Corporate Secretary & CCO	50.0%	50.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
Chief Accounting Officer, Controller and VP Tax	96.2%	3.8%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Rates & Deputy General Counsel	80.0%	20.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Investor Relations and Treasurer	96.2%	3.8%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP People & Culture Operations	99.9%	0.1%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Applications & Analytics	99.0%	1.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Customer Experience	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Shared Services	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Electric Distribution	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Electric Supply	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Renewables Development & Enterprise Prj. Mgmt.	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Gas Engineering & Supply	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Generation Operations	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Gas Operations	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allocation of Base Salary and Incentive Expense

Case No.: U-21981
Exhibit No.: A-56 (AMC-6)
Page: 5 of 5
Witness: AMConrad
Date: December 2025

	Percentage Split	Percentage Split	Electric	Gas				
Officer TITLE	Incentive Charged to Consumers	Other	Electric	Gas	% to O&M	% to Capital	% to O&M	% to Capital
VP Electric Operations	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Operations Performance	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP CmtyAffairs & Chief Diversity Officer	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP Supply Chain	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%
VP IT & Security and Chief Info Officer	100.0%	0.0%	61.0%	39.0%	47.0%	53.0%	39.0%	61.0%

VP= Vice President; Sr.= Senior

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

MATTHEW J. FOSTER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Matthew J. Foster, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. By whom are you employed and in what capacity?

A. I am a Principal Rate Analyst for Consumers Energy Company ("Consumers Energy" or the "Company").

Q. Please state your educational background.

A. I graduated from Michigan State University with a Bachelor of Business Administration with a major in finance.

Q. What are your responsibilities in your current position?

A. In my role as a Principal Rate Analyst, I am responsible for the development of Capital and Operations & Maintenance ("O&M") plan targets that align with rate case results.

Q. Please describe your prior work experience.

A. I have held my current position since April 2018. Prior to this role, I held various accounting analyst roles within the finance organization, including in the General Accounting and Property Accounting Departments. In these roles, I have been responsible for property records, financial results, accounting entry, analysis, and reporting, including Federal Energy Regulatory Commission ("FERC") and Michigan Public Service Commission ("MPSC" or the "Commission") report filings.

Q. Have you previously testified before the Commission?

A. Yes. I testified in Case Nos. U-21224, U-21308, U-21389, U-21490, U-21585, U-21806, and U-21870 which include the Company's most recent natural gas and electric general rate cases.

Q. What is the purpose of your direct testimony in this proceeding?

A. My direct testimony is in five parts. In Part 1, I am presenting testimony supporting the test year O&M expense for Corporate Services, insurance expense, uncollectible expense, injuries and damages, Manufactured Gas Plant ("MGP") direct project management costs, and digitization of Company records project costs. In Part 2, I address the test year capital expenditure for Corporate Services. In Part 3, I address technology projects that support the Corporate Services functions. In Part 4, I am presenting testimony requesting approval for the use of regulatory assets or regulatory liabilities, as needed, by the Defined Benefit ("DB") Pension/Other Post-Employment Benefits ("OPEB") Volatility Mechanism, and the Staking Volume Variability Deferral Mechanism. In Part 5, I am presenting testimony demonstrating Consumers Energy's compliance with the guidelines for intercompany transactions between affiliates as ordered by the Commission.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-57 (MJF-1)	Summary of Actual and Projected Gas & Common O&M Expense for the years 2024 and the 12 Months Ending October 31, 2027;
Exhibit A-58 (MJF-2)	Gas Actual and Projected Corporate Services O&M Expense for the years 2024 and the 12 Months Ending October 31, 2027;
Exhibit A-59 (MJF-3)	Gas Actual and Projected Property, Liability and Other Insurance O&M Expense for the Years 2020 through 2024 and the 12 Months Ending October 31, 2027;

Exhibit A-60 (MJF-4)		Gas Uncollectible Accounts Expense for the Years 2020 through 2024 and the 12 Months Ending October 31, 2027;
Exhibit A-61 (MJF-5)		Gas Injuries and Damages Expense for the Years 2020 through 2024 and the 12 Months Ending October 31, 2027;
Exhibit A-62 (MJF-6)		Manufactured Gas Plant Amortization Schedule and Direct Project Management Costs for the years 2005 through the 12 Months Ending October 31, 2027;
Exhibit A-63 (MJF-7)		Organization Chart, Affiliate Group of Companies Doing Business with Consumers Energy Company – 2024; and Purpose of Business, Affiliate Group of Companies Doing Business with Consumers Energy Company – 2024;
Exhibit A-64 (MJF-8)		Summary of Costs Billed to Affiliated Companies for the Year Ended December 31, 2024; and Summary of Payments Made to Affiliated Companies for the Year Ended December 31, 2024;
Exhibit A-65 (MJF-9)		Impact on Gas Operations for Costs Billed to Affiliated Companies for the Year Ended December 31, 2024;
Exhibit A-66 (MJF-10)		Impact on Gas Operations for Payments Made to Affiliated Companies for the Year Ended December 31, 2024;
Exhibit A-67 (MJF-11)		Affiliated Companies – Rate of Return on Common Equity for the Year Ended December 31, 2024; and
Exhibit A-12 (MJF-12)	Schedule B-5.2	Gas Actual and Projected Corporate Services Capital Expense for the Years 2024 through the 12 Months Ending October 31, 2027.

Q. Were these exhibits prepared by you or under your direction and supervision?

A. Yes, they were.

PART 1 – GAS CORPORATE O&M EXPENSE

Q. Please describe Exhibit A-57 (MJF-1).

A. Exhibit A-57 (MJF-1), page 1, summarizes the Company's total 2024, and 12 months ending October 31, 2027 gas O&M expense for Corporate Services, insurance expense, uncollectible expense, injuries and damages, MGP direct project management costs, and digitizing Company records expense. Column (a) of this exhibit provides the O&M expense category, column (b) provides the 2024 actual O&M, column (c) provides the projected test year 12 months ending October 31, 2027 O&M. Exhibit A-57 (MJF-1), page 2, illustrates how historical O&M costs are adjusted to reflect inflation, additional cost increases, and anticipated productivity gains. Column (a) of this exhibit provides the O&M expense category, column (b) provides the source exhibit, column (c) presents the historical O&M expense, column (d) shows the expected increase in these costs based solely on projected inflation rates, column (e) captures cost increases beyond inflation, column (f) represents the total projected test year O&M expense, calculated as the sum of columns (c), (d), and (e). These expense categories are discussed below.

Corporate Services O&M Expense

Q. What areas are included within the Corporate Services O&M expense category, as shown in Exhibit A-57 (MJF-1), page1, line 1?

A. Corporate Services includes those areas common to the administrative functions of a regulated corporation. These include Sustainability and External Affairs; Legal, Ethics, Regulatory and Risk Management; People and Culture ("P&C"), Learning and

Development; Finance and Shared Services; General Activities; and administration and other costs.

Q. Please provide a brief overview of the various areas within the Corporate Services area.

A. The areas within Corporate Services include:

- Sustainability & External Affairs – This area acts as a conduit between the Company and its employees, customers, and external stakeholders. The group manages storm communications, promotes safety messaging, advances clean energy programs for the benefit of customers via public media relations and inquiries, advertising, corporate news releases, social media management, and trade association dues and memberships. This area also manages regulatory commission expenses, foundation operations, and community programs. It is responsible for employee diversity and inclusion and strategic talent sourcing;

- Legal, Ethics, Regulatory, and Risk Management – This area includes the Legal Organization, the Corporate Compliance Department, the Corporate Secretary Department, the Securities Law Group, Corporate Information Governance, Risk Management, Quality Lean Department, and it is responsible for determination and management of regulatory filings, and management of the interface between the Company and regulatory staffs. The Corporate Compliance Department is responsible for maintaining a healthy ethical culture, including training on the Company's Code of Conduct and Guide to Ethical Business Behavior, misconduct investigations, and oversight for 40 regulatory compliance areas. The Corporate Secretary Department is responsible for sound corporate governance, including board meetings, shareholder meetings, minutes, shareholder services, and Board of Directors ("BoD") costs. The Securities Law Group is responsible for ensuring full and fair disclosure to investors through compliance with public-company regulatory and legal requirements. Corporate Information Governance is responsible for creating and sustaining a company culture where all employees treat information as an asset, including adherence to the information governance principles: accountability, transparency, integrity, protection, compliance, availability, retention, and disposition. The Risk Management area provides services for corporate insurance programs, surety bonds, and review of commodity and credit risks associated with natural gas, electric fuel, and power purchases. Gas and electric insurance programs include the premiums for property and casualty insurance paid to cover the business including property damage, director and officer's liability insurance, public liability insurance, workers' compensation insurance, fiduciary liability insurance, and fidelity insurance. The Legal Organization is responsible for legal matters involving litigation, credit and collections, environmental, contracts, and other transactions, real property,

labor and benefits, business development, and regulatory matters at the state and federal levels. The Quality Lean department is responsible for the Company's quality management system. This department establishes and maintains standards, processes, procedures, and policies that ensure both Company and regulatory requirements are consistently met. Key responsibilities include developing and implementing standards, processes, procedures, and policies, supporting overall business efficiency by reducing waste and errors, and enhancing customer satisfaction by addressing potential or identified non-conformances.

- P&C and Learning and Development – This area is responsible for creating and executing on the employee experience for all co-workers at Consumers Energy. An engaging employee experience is critical for hiring and retaining the necessary talent to benefit customers and the State of Michigan. The employee experience is comprised of all interactions and services that employees experience during their time with the Company, including recruiting, hiring, training and development, succession planning, compensation, payroll, performance management, workforce relations, employee engagement, and benefits administration. Also included is compliance assurance, which addresses legal and regulatory requirements such as Equal Employment Opportunity, Americans with Disabilities Act, and Family and Medical Leave Act;

- Finance and Shared Services – This area provides the preparation of utility strategic plans, budgets, forecasts, and specialized financial studies. This area also includes the preparation and control of accounting records, including financial statements and reports, and the administration of accounting systems. These systems include budgeting and management reporting, general ledger, accounts payable, fixed assets, and financial and regulatory reporting. The internal audit functions (appraisal of business unit effectiveness of financial controls) and the internal control functions are conducted in this area. The corporate tax function includes all aspects of compliance with federal, state, and local income, sales and use, property, franchise, and excise taxes, book accounting for taxes, tax planning of transactions, tax research, the analysis of tax legislation and regulations, the management and negotiation of tax audits, and tax litigation. Treasury includes all aspects of Company financing, including capital market activities, sourcing and negotiating Company credit facilities and maintaining sufficient liquidity in addition to managing relationships with banks and rating agencies. Treasury includes cash management, and treasury operations including initiating cash wire transfer transactions, processing checks for deposit, maintenance of all bank account related activities, borrowing, and investing. In addition, investor relations, rating agency, and investor support are included in the Finance and Shared Services area.

- General Activities – These costs are an aggregation of expenses and credits that are not attributable to any one department but are incurred on behalf of the Company as a whole. Examples include capitalized credits to O&M, billing credits for Administrative and General ("A&G") labor, expenses, and outside services as part of a full-cost loading adder, and senior management time and expenses; and

- Administrative and Other – These costs are primarily for American Gas Association dues and intervenor funding.

Q. How are Corporate Services expenses allocated between the Company's electric and gas businesses?

A. Allocations are developed based upon the type of cost. For example, billing costs are allocated based on customer counts for the electric and gas business, benefits are allocated based on either employee counts or labor, general costs are allocated based on the Three Factor Allocation Method, with other costs being directly charged for identified activities, allocated based on capital and O&M spending levels and special studies.

Q. What is the Three Factor Allocation Method?

A. The Three Factor Allocation Method uses the average of three factors (Operating Revenue, Labor and Property, and Plant and Investments) to allocate costs between the electric and gas businesses.

Q. Explain how the Adjusted Corporate Services O&M was calculated.

A. Exhibit A-58 (MJF-2), line 12, provides the Company's gas portion of total Corporate Services expenses, before adjustments. The 2024 actual O&M expenses were obtained from the Company's records. Specific line-item changes are included as increases or decreases as appropriate to reflect exclusions, remove one-time costs, reflect transfers of costs into or out of the Corporate Services area, or reflect significant ongoing changes in Corporate Services O&M expenses. Exhibit A-58 (MJF-2), line 15, column (d), shows the

total normalizations of one-time costs from 2024 total Corporate Services expense. One-time Consultant Expenses and one-time Corporate Card Service Agreement Incentive were removed in the normalizations line. The total of items disallowed by Commission order related to corporate giving, communications, dues, donations, and lobbying payments were removed on Exhibit A-58 (MJF-2), line 18. Total adjusted Corporate Services expense is found on Exhibit A-58 (MJF-2), line 19.

Q. What is the projected rate of inflation?

A. The assumed rate of inflation is based on the Consumer Price Index ("CPI") which considers factors specific to pricing of goods and services, such as the cost of food, energy, and housing. The CPI is 2.8% for 2025, 2.4% for 2026, and 2.3% for 2027. Consumers Energy uses these inflation rates to project Corporate Services O&M.

Q. What is the source for the CPI?

A. The June 2025 edition of the S&P Global U.S. Economic Outlook. Company witness Heather L. Rayl supports the inflation rates.

Q. In addition to increases related to inflation, what other specific line-item changes are included to arrive at the test year O&M expense projection?

A. Exhibit A-58 (MJF-2), column (m) ,includes one line-item change resulting in a $30,000 increase to the projected test year for credit rating agency ("CRA") fees.

Q. Please describe the specific line-item change included in Exhibit A-58 (MJF-2), column (m), related to credit rating agency fees.

A. The Company pays CRA fees to have a credit rating assigned to a debt instrument at the time of an offering. In addition, the Company pays the CRA for ongoing surveillance services including evaluating the Company's financial condition to assess creditworthiness

and assign a rating. The rate of fees paid for the surveillance has increased every year, in addition the amount of fees paid increases based the amount of the Company's debt outstanding. As a result of expected debt issuances, CRA fees will grow greater than the rate of inflation.

Q. Please explain how the projected increase in CRA fees was calculated.

A. The Company analyzed recent trends in CRA fees associated with debt issuances. This analysis informed the calculation of the projected increase in Gas O&M expenses for the test year. The resulting CRA expense was then compared to inflation-based projections, leading to the proposed $30,000 increase in Gas O&M.

Q. Are the costs associated with restricted stock and the Employee Incentive Compensation Program ("EICP") included in the 2024 actuals or projected Corporate Services O&M expense?

A. No. Further details regarding restricted stock and EICP expenses are covered under the direct testimony of Company witness Amy M. Conrad.

Gas Insurance Expense

Q. Please describe Exhibit A-59 (MJF-3).

A. Exhibit A-59 (MJF-3) summarizes the Company's total 2020 through 2024 actual gas insurance expense and projected insurance expense for the 12 months ending October 31, 2027.

Q. What expense level is the Company proposing to recover in this case as part of the test year?

A. The Company projects the insurance expense for the test year at $14,362,153 as shown on Exhibit A-59 (MJF-3), line 6, column (h).

Q. How did the Company determine the insurance expense included in the test year?

A. The projected insurance premiums expense is based on the historical compound annual growth rate for 2020 through 2024 actual insurance premiums as shown on Exhibit A-59 (MJF-3), column (g). The historical compound annual growth rate is then applied to the 2024 actual insurance premiums to calculate the projected test year insurance premiums as shown on Exhibit A-59 (MJF-3), line 4, column (h). Given the year-to-year variability in refund distributions, the projected amount used the five-year average actual distributions from 2020 to 2024 as shown on Exhibit A-59 (MJF-3), line 5, column (h). The projected insurance O&M for the test year, as shown on Exhibit A-59 (MJF-3), line 6, Column (h), is derived by offsetting premiums with refund distributions.

Q. Why did the Company use the compound annual growth rate instead of the annual inflation rate to project insurance expenses for the test year?

A. In recent years, the Company's gas insurance expenses have increased at a rate exceeding the annual inflation rates. In a previous gas rate case, Case No. U-21308, the year 2021 was used as the historical test year, with projections extending through the 12 months ending September 30, 2024. The actual gas insurance expense for 2021 was $8.4 million, which, when adjusted for inflation, resulted in a projected expense of $9.5 million for the test year. However, the actual gas insurance expense for 2024 was $11.8 million, indicating an under-recovery of approximately $2.3 million compared to the inflation-adjusted projection. This supports the need to use the compound annual growth rate to project gas insurance O&M.

Gas Uncollectible Expense

Q. How did the Company determine the uncollectible expense included in the test year?

A. The Company projects the uncollectible accounts expense for the test year at $17,140,386 as shown on Exhibit A-60 (MJF-4), page 1, line 1, column (c). The projected test year uncollectible accounts expense is based on a three-year historical average Bad Debt Loss Ratio ("BDLR") of uncollectible accounts expense to gas service revenue for the years 2022 through 2024, as shown on Exhibit A-60 (MJF-4), page 2. This ratio is applied to the test year gas service revenue, plus energy waste reduction surcharge revenue, to arrive at test year uncollectible accounts expense on Exhibit A-60 (MJF-4), page 2, line 7, column (g).

Q. Does the estimate of test year uncollectible accounts expense consider changing natural gas prices, their impact on customer bills, and the corresponding impact on uncollectible accounts expense?

A. Yes. By using the test year revenues in the calculation, the latest gas commodity cost projections are taken into account.

Q. Does this method provide a reasonable estimate of uncollectible expense?

A. Yes. The Company continuously strives to reduce uncollectible accounts expense. However, year-over-year, uncollectible accounts expense can be impacted by many factors. The economy, the effectiveness of collection practices, funding of low-income assistance programs, extreme weather fluctuations, or any number of other factors that could impact customers' ability to pay. As a result, the Company is proposing a three-year average BDLR from 2022 through 2024 in this rate case filing. This method most effectively

captures the recent trends of the many factors that can impact uncollectible accounts expenses.

Q. What mitigation strategies has the Company used to manage uncollectible expense?

A. Over the last several years, the Company has implemented mitigation strategies serving to reduce uncollectible expense. First, turn on compliance was implemented to stop the cycle of carrying a past-due balance to a newly opened account. Processes were put in place that required customers with an unpaid balance to pay the old balance in full, prior to opening a new utility account. Second, the Company prioritized collection activities on high risk and high volume past due accounts to reduce the overall Company arrears balance.

Gas Injuries and Damages Expense

Q. Please describe Exhibit A-61 (MJF-5).

A. Exhibit A-61 (MJF-5) summarizes the Company's total 2020 through 2024 actual gas injuries and damages expense and projected injuries and damages expense for the 12 months ending October 31, 2027.

Q. Please describe the costs related to injuries and damages.

A. Gas injuries and damages include liabilities that arise in the normal course of Company business for various types of items such as compensation for damaged trees and crops; restoration of driveways, lawns, and fences; and accidents and lawsuits that are below the various insurance deductibles or are otherwise uninsurable events. Further, workers' compensation costs are included in injuries and damages along with associated internal legal costs.

Q. What expense level is the Company proposing to recover in this case as part of the test year?

A. The Company is proposing that a total of $2,186,912 be included for the test year as shown on Exhibit A-61 (MJF-5), line 4, column (g).

Q. How was this amount determined?

A. The injuries and damages expense is comprised of three components: gas injuries and damages, internal legal costs, and workers' compensation costs. Exhibit A-61 (MJF-5), line 1, reflects the gas property and liability damages. Line 2 represents the amount of internal legal costs that are charged to injuries and damages. Line 3 represents the level of workers' compensation costs for each year. The test year amounts for each of the three components of total injuries and damages expense is based on a five-year average of actual expense for the years 2020 through 2024.

MGP Site Remediation and Direct Project Management Costs

Q. How did the Commission previously address environmental investigation and remediation expenditures at former MGP sites?

A. In Case No. U-10755, the Commission approved deferred accounting for these expenditures, with amortization over 10 years, beginning the year after expenditures are incurred. The approach adopted by the Commission envisioned that prudence reviews would occur in rate cases and that following a prudence review: (i) the amortization expense would be included in rates; and (ii) the deferred balance would be included in rate base and would earn a return at the authorized rate of return. The approach adopted by the Commission also provided for deferred accounting and amortization of third-party recoveries in excess of the costs of recovery over 10 years, the inclusion of the unamortized

balance in rate base, and deferred tax accounting. In Case No. U-13000, the Commission upheld this accounting treatment.

Q. Please explain Exhibit A-62 (MJF-6), page 1, line 1, which provides deferred cash expenditures for MGP remediation costs.

A. Line 1 shows deferred cash expenditures for MGP remediation costs for years 2005 through 2024 and projected expenditures through December 31, 2025.

Q. Why are you including projected expenditures through December 31, 2025 and not through the projected test year ending October 31, 2027?

A. I am including projected expenditures through December 31, 2025 to reflect an estimate of actual expenditures that will be available for review by MPSC Staff ("Staff") during this case. Actual expenditures available through the date of Staff's review will be made available at that time.

Q Please explain the remainder of Exhibit A-62 (MJF-6), page 1.

A. Line 2 shows the third-party insurance recoveries for the years 2005 through 2024 and projected recoveries through December 31, 2025. Lines 3 through 23 show the annual amortization of these deferred MGP remediation costs using a 10-year amortization period. Amortization of the third-party recoveries on line 2 is shown on line 24 and acts as a credit to the amortization of expenditures identified in this case. Line 25 is the net MGP amortization expense. It should be noted that until these expenditures are incorporated in a future order, the Company is required to absorb the associated carrying cost and amortization of these costs. Net amortization expense on Exhibit A-62 (MJF-6), page 1, line 25, is included in Exhibit A-13 (HLR-43), Schedule C-6, of Company witness Rayl.

Q. Please explain Exhibit A-62 (MJF-6), page 1, line 26.

A. Line 26 is the project management costs that the Commission provided for recovery as direct costs rather than deferred and amortized costs as part of its November 21, 2006 Order in Case No. U-14547. The change became effective for the calendar year 2006 onward. These costs are carried forward to line 5 of Exhibit A-57 (MJF-1).

Q. Please explain Exhibit A-62 (MJF-6), page 2, related to the rate base treatment of the MGP unamortized balance.

A. Exhibit A-62 (MJF-6), page 2, provides the net unamortized balance of actual deferred MGP remediation costs and third-party recoveries for the years 2005 through 2024 and projected balances for the year 2025. Column (b) reflects the average unamortized balance to be included in rate base for the test year. Columns (c) and (d) reflect the year-end balances for the 12 months ending October 31, 2026 and 12 months ending October 31, 2027. Column (e) reflects the original costs of the deferred expenditures and third-party recoveries by year.

Q. What ratemaking treatment is the Company proposing in this proceeding for MGP environmental costs?

A. The Company is requesting that the Commission: (i) find that the costs sponsored by Company witness Heather M. Prentice, are reasonable and prudent; (ii) authorize recovery of amortization expense in the amount of $6.9 million as provided on Exhibit A-62 (MJF-6), page 1; (iii) approve test year direct project management costs of $1,075,833 as provided on Exhibit A-62 (MJF-6), page 1; and (iv) include the deferred net unamortized balance in the amount of $14.8 million in rate base as provided on Exhibit A-62 (MJF-6), page 2.

Digitization of Company Records Costs

Q. Please describe the digitization of Company records.

A. The digitization of Company records involves transforming approximately 41,000 boxes of physical documents into electronic formats using scanning technology and specialized software, enabling them to be easily searched, shared, and accessed remotely. The initiative includes document shredding to ensure proper disposal of physical materials.

Q. What type of Company records will be included in the digitization of Company records?

A. Company records to be digitized include work orders, equipment details, personnel files, real estate deeds, easements, contracts, environmental documentation, and financial reports.

Q. What expense level is the Company proposing to recover in this case as part of the test year?

A. The Company is proposing that a total of $740,000 be included for the test year as shown on Exhibit A-57 (MJF-1), page1, line 6, column (c).

Q. How did the Company arrive at the projected expense for the test year?

A. The digitization of Company records is expected to incur annual costs of $2 million, with a total estimated expense of $10 million over a five-year period. The allocation of the projected gas and electric expenses was performed using the Three Factor Allocation Method, as discussed earlier in my testimony.

Q. What are the benefits of digitizing company records?

A. There are numerous benefits to digitizing Company records in addition to fulfilling regulatory compliance.

- **Increased Accessibility and Responsiveness** – The Company will be able to access necessary records efficiently, eliminating delays associated with locating, scanning, and electronically transmitting physical copies. Digitization eliminates some of the wasted time spent waiting for information, allowing employees to serve customers faster and be more efficient. Text recognition and other functionalities can make searches or retrieval of information possible in ways that are nearly impossible with paper records. Centralized data can provide Artificial intelligence ("AI") tools with increased data to utilize, resulting in better analytics and improved forecasting abilities. Digitizing records enables the Company to focus on value added tasks instead of manual processes and labor through paper-based work. In the event of a disaster or recovery effort, the Company will have quicker and easier access to essential information, allowing focus on restoring operations rather than locating critical records. Digitized records enable faster responses to regulatory and other inquiries, while also ensuring more thorough, efficient, and reliable preservation of records when required.

- **Improved Safety and Security** - Paper records are at a higher risk of destruction, loss, or theft than a digital version which can be backed up and have more extensive security measures in place. These security measures provide customers and the Company with greater protection of privacy and confidentiality of personal information. Employees in high-risk roles will have greater and faster access to critical information, supporting safer operations through more informed decision-making. Paper and other physical media have a limited lifespan, making records susceptible to damage or becoming unreadable over time. In contrast, digital records can be preserved indefinitely, transferred easily, and maintain their quality without the risk of deterioration. The process helps the Company meet regulatory compliance of the records lifecycle.

- **Cost Savings and Improved Service for Customers –** The Company can utilize data that is not readily available in paper form to make more informed decisions and reduce the amount of time a customer waits for a response or completion of work. This results in improved decision making that is customer focused. The current records retention site can be repurposed for something of greater benefit to customers instead of a space to indefinitely store paper records. Digitized records enhance the efficiency of customer-facing processes such as scheduling, dispatch, and field operations, ultimately leading to better overall customer experience.

PART 2 – GAS CORPORATE SERVICES CAPITAL EXPENDITURE

Q. Please describe Exhibit A-12 (MJF-12), Schedule B-5.2.

A. Exhibit A-12 (MJF-12), Schedule B-5.2, summarizes the Company's total 2024 through the 12 months ending October 31, 2027, gas capital expenditures for Corporate Services. Column (a) of this exhibit provides the description; column (b) provides the 2024 actual capital; column (c) provides the projected 2025 capital; column (d) provides the projected 10 months ending October 31, 2026 capital; column (e) provides the projected 22 months ending October 31, 2027 capital; and column (f) provides the projected test year 12 months ending October 31, 2027 capital of $755,000. Categories of expenses include costs to equip and support Learning & Development equipment and Corporate Services areas primarily at Company headquarter locations with office furniture and equipment.

Q. Please explain how the projected Corporate Services Capital expense was calculated.

A. The 2024 actual Capital expenses were obtained from the Company's records and subsequent costs were projected using inflation rates.

PART 3 – CORPORATE TECHNOLOGY PROJECTS

Q. Is the Company planning technology projects that support the Corporate Services functions?

A. Yes. Company witness Stacy H. Baker includes, in her direct testimony and exhibits, three technology projects that are critically important in enabling the Company's Corporate Services functions to support the Gas business in a safe, effective, efficient, and compliant manner. These projects are described below:

- The **Incident Command System ("ICS") Management Software** project requires $0 in capital and $5,803 in O&M in the test year.

Description: The ICS Management Software will allow Company departments to manage emergency situations more efficiently, automate manual processes, and reduce response times. This tool will also assist the Company in enhancing and maturing its response capabilities and support digital automation in alignment with the Company's Destination 2035 Strategy.

Problem Statement: The current business continuity and disaster recovery program management tool does not offer the capabilities to advance program maturity and to foster a world class response to a business interruption. The current tool limits automation opportunities and has gaps in how it handles template enhancements, which results in the need for manual workarounds in order to prevent losing critical data. The lack of capability affects reporting, upstream / downstream impact mapping, ICS documentation automation, and user administration.

Value Statement: This project will create value for the Company by: (1) maintaining the documentation that supports the recovery efforts of critical processes and associated essential functions that, if disrupted, would present significant impact to the Company and customers; (2) limiting business and community impact while providing a critical energy service; (3) prioritization of the recovery of critical processes and resource allocation during a business continuity incident; (4) providing a consistent, organized and expedient response process (ICS) that is flexible to meet the needs of any incident, regardless of severity or scope; (5) providing a mechanism for identifying restorations gaps between critical business processes and IT recovery capabilities; (6) reducing or eliminating human error and waste; and (7) improved and more efficient user experience.

Scope: The project scope includes: (1) framework for the development and maintenance of Business Continuity, System (Application) Recovery Plans, ICS, and Disaster Recovery Plans that are effective and easily accessible during an event; (2) automation for reporting to track status and to measure effectiveness and maturity of the program (Business Continuity, Emergency Management, Disaster Recovery Programs); (3) component for facilitating effective training exercises and response efforts through incident management tools that utilize concepts from the Federal Emergency Management Agency ("FEMA") National Incident Management System ("NIMS"); (4) program management tools to monitor required program deliverables; (5) template for developing and maintaining site hazard assessments; (6) dependency mapping of critical business processes and IT applications; and (7) integrated business impact analysis process.

Alternatives Considered: Alternatives considered include: (1) Purchasing licenses and implementing Incident and Crisis Management functionality from the Company's current Disaster Recovery and Business Continuity Application vendor. This alternative was not selected because it does not currently offer the

capabilities needed to advance program maturity for a comprehensive response to business interruptions. It does not meet existing functional requirements to manage ICS activations and would require considerable customization for ICS form creation, resource management during an incident, and alignment with FEMA standards. (2) Continuing to use manual processes through Microsoft Excel, Word, and Teams. This alternative was not selected as the manual process is time-consuming for all Company departments leveraging ICS, leading to duplicative work, deviations from the Emergency Management Standard, insufficient support for large-scale/multi-department activations, and reduced response efficiency and management. (3) Implementing a Cloud Software as a Service ("SaaS") solution. This alternative was selected as there are better SaaS solutions that fit the outlined needs. The final application will be determined after issuing a Request for Proposal and selecting a vendor during the project plan phase.

- The **Enterprise Risk Management ("ERM")** project requires $0 in capital and $1,897 in O&M in the test year.

  Description: The project will implement software to streamline ERM processes, improve efficiency, provide risk identification and repository tools, and deliver real-time risk data.

  Problem Statement: The Enterprise Risk Team ("ERT") works with Risk Owners ("RO") on an annual basis to identify new risks, update existing risks, quantify impacts and likelihoods of these risks, document mitigation plans, identify trends, and formulate risk tolerance metrics. This work is accomplished through an iterative back-and-forth process between ERT and ROs to gain alignment on content. This effort culminates in multiple Risk Map PowerPoint, Microsoft Word and email documents organized by area of risk. These risk maps are then presented to senior management and to the BoD on an annual basis. The intensive, time-consuming manual ERM process creates risks of human error that can over or under quantify risks, introduce data anomalies, and create version tracking issues. The existing process results in substantial inefficient use of time by risk analysts and RO throughout the Company, limits the breadth of analysis that can be provided, and limits the overall ability of the Company to timely identify, analyze, and communicate risks to senior leaders, thereby causing potential delays in responding to emerging risks. Because of the lengthy manual process, it is only performed once a year, but must be performed more frequently to proactively manage enterprise risk. Utility industry peers leverage software to more effectively manage enterprise risk management programs.

  Value Statement: This project creates value for the Company by: (1) providing real-time risk information to interested parties including the risk team, risk owners, senior management, and the BoD supporting proactive risk

management; (2) creating a centralized repository for risk identification, management, and mitigation plans; (3) eliminating waste by simplifying processes; and (4) improving efficiency of the RO and analysts.

Scope: The scope of the project includes: (1) create risk analysis templates and tools for automated reporting; (2) configure automated workflow to perform risk updates; (3) configure dynamic templates that prompt the RO based on prior selections; (4) organize risk assessments through an online and searchable data capture (repository); (5) create new reports and executive dashboards; (6) data conversion; and (7) set record retention rules.

Alternatives Considered: Alternatives considered include: (1) Continue use of the current manual processes which result in waste, lack of quality results, and annual review of risks. (2) Build a custom internal enterprise risk solution. This option was not selected as it will not result in an enterprise risk program that leverages best practices that exist in software provided by the leaders in risk management software. (3) Implement a software solution from a leading enterprise risk solution vendor. While this would introduce new license and ongoing support costs, it is the preferred option because it leverages industry best practices with a proven solution; provides application reliability, security, and stability through ongoing vendor support; and brings innovation and insights via the reporting of risk information through management dashboards. In addition, it aligns the Company with utility industry peer practices for more effective enterprise risk management.

- The **2025 Union Contract Changes** project requires $0 in capital and $17,099 in O&M in the test year.

Description: The Human Resources - 2025 Union Changes project will implement SAP and other system changes required as a result of three collective bargaining agreements which will be renegotiated and ratified.

Problem Statement: Collective bargaining agreements expire every five years for Operating Maintenance and Construction ("OM&C"), Customer Contact Center ("CCC"), and Zeeland employee groups. For OM&C, the current agreement ends June 1, 2025. The CCC agreement ends August 1, 2025. The Zeeland agreement ends October 1, 2025. Technology changes are required to reflect these new agreements. Otherwise, employees in these union groups may not be paid appropriately or get correct benefits.

Value Statement: Completion of this project will provide value to the Company and its customers through: (1) waste elimination by making changes in the software for any pay and benefit changes as required by the new agreements; (2) defect reduction by adding process automation to otherwise manual processes for tracking and recording work, premium, and absence time;

and (3) improved employee engagement among the OM&C, CCC, and Zeeland union employees.

Scope: The scope of this project encompasses making any system changes required to support the new working agreement for the OM&C, CCC, and Zeeland employees. Exact details will be finalized after the negotiation process is completed and contracts are approved.

Alternatives Considered: Three alternatives were considered for this project: (1) Make no system changes after the contracts are ratified. This option was not chosen because it exposes the Company to possible fines, disengaged employees, union grievances, significant manual processes leading to greater possibility of error, hiring additional staff to perform activities outlined in the agreements, and increased legal costs due to employee grievances. (2) Find other third-party software to support the changes required by the union agreements. This option was not chosen because it would require SAP integration along with additional software licensing and maintenance costs. (3) Make system changes to eliminate manual updating, comply with the working agreement language, support union employee engagement, and reduce grievances. Option (3) was chosen because it leverages current SAP technology, automates what would otherwise require manual processing, and is the least costly option.

PART 4 – ACCOUNTING REQUESTS

DB Pension/OPEB Volatility Mechanism

Q. Does the implementation of the DB Pension/OPEB Volatility Mechanism, discussed in Company witness Kendra K. Grob's direct testimony, require any specific accounting approvals?

A. Yes. The mechanism would result in deferred debits or credits until balances are fully amortized over 10 years. The Company requests approval to continue recognizing regulatory assets or liabilities as needed to record these deferred amounts as approved in the settlement agreement in Gas Rate Case No. U-21308.

Staking Volume Variability Deferral Mechanism

Q. Does the volatility in staking program demand, discussed in Company witness Pnacek's direct testimony, require any specific accounting approvals?

A. Yes. The mechanism would result in deferred debits or credits for test year O&M as discussed starting in Company witness Pnacek's direct testimony.

PART 5 – AFFILIATED COMPANY TRANSACTIONS

Q. What is the purpose of your direct testimony with respect to Affiliated Company Transactions?

A. I am sponsoring Exhibits A-63 (MJF-7), A-64 (MJF-8), and A-65 (MJF-9) to comply with the filing requirements for gas rate cases before the Commission, as clarified in Case No. U-10039. I am also sponsoring two additional exhibits, Exhibits A-66 (MJF-10) and A-67 (MJF-11), as described below.

Q. Please explain Exhibit A-63 (MJF-7).

A. Page 1 of this exhibit provides an organizational chart showing the interrelationship of the affiliated companies that had transactions with Consumers Energy relative to providing/receiving services or commodities. In addition, pages 2 and 3 list their affiliation, percentage ownership, and purpose of business.

Q. Please explain Exhibit A-64 (MJF-8).

A. This exhibit summarizes costs billed to affiliated companies, page 1, and payments made to affiliated companies, page 2, for the year 2024.

Costs Billed to Affiliated Companies

Q. For the costs billed to affiliated companies, how are the costs classified and how are they priced?

A. These costs are classified as to whether they impact the balance sheet, other operating income, or utility operating income. These costs are all priced on a full-cost basis.

Q. What is meant by "costs are all priced on a full-cost basis"?

A. The full-cost basis means total direct costs along with applicable overheads. For services provided, it would be primarily labor costs incurred along with allocated overheads and employee benefits. For commodities purchased, it would be the contracted amount for the commodity based on a negotiated purchase by the Gas Supply organization or, on the electric side, the Electric Supply organization. Property leased is priced per contract.

Q. For commodity purchases, what is the difference between the full-cost amount and market amount?

A. At the time of the purchase, the full-cost amount and market amount would be the same. In other words, it is the agreed upon price between the purchaser and seller of the commodity.

Q. Please describe the types of services performed by Consumers Energy for affiliated companies.

A. Most services performed are administrative services such as payroll, corporate communications, human resources, and computer services; employee benefits related to health care, life insurance, and savings plan; or professional services such as engineering, accounting, legal, and tax.

Q. What types of billing activity are directly classified to the balance sheet?

A. These are the direct costs incurred for employee benefits or for rendering services to affiliated companies that are separately accounted for in Consumers Energy's accounting system and translate to an individualized receivable from the associated company (Account 146).

Q. What types of billing activity are classified as other operating income?

A. Billing activity classified as other operating income consists of income related to the cost of money.

Q. Please explain the cost of money.

A. The cost of money is the recovery of Consumers Energy's cost for the use of its funds expended to render services prior to reimbursement. This recovery is recorded in Account 419, Interest Income.

Q. What types of billing activity are classified as utility operating income?

A. Billing activity classified as utility operating income consists of overhead costs. These costs affect A&G expenses and revenue accounts.

Q. What is the impact of this utility operating income activity on gas operations?

A. As shown on Exhibit A-65 (MJF-9), gas operations were favorably impacted by $586,540.

Payments Made to Affiliated Companies

Q. Please describe the types of goods provided by affiliates and services performed for Consumers Energy as shown on Exhibit A-64 (MJF-8), page 2.

A. Services provided include officer services and professional services, such as accounting, engineering, finance, legal, energy purchases, and tax.

Q. For payments made to affiliated companies, how are they classified and how are they priced?

A. These payments are classified as to whether they impact the balance sheet, other operating income, or utility operating income. These payments are priced on a full-cost basis.

Q. What types of payment activity are classified as balance sheet items?

A. The payments classified as balance sheet items consist of costs deferred on the balance sheet for subsequent reclassification, amounts to be billed, or amounts recorded as liabilities.

Q. What types of payments are classified as utility and other operating income?

A. Payments consist generally of CMS Energy Corporation costs for restricted stock, energy purchases, and professional services.

Q. Is the Massachusetts Formula method used to allocate administrative costs of the parent company to Consumers Energy?

A. Yes. The Massachusetts Formula is used to allocate certain parent company indirect costs to its subsidiaries, which includes Consumers Energy.

Q. Why is the Massachusetts Formula method used to allocate costs?

A. This method is used to allocate indirect costs that cannot be readily identified to any particular subsidiary or affiliated company.

Q. How long has the Massachusetts Formula been used to allocate costs?

A. This allocation method has been used to allocate costs within CMS Energy Corporation since 1987.

Q. Are parent company costs that can be identified to Consumers Energy charged directly to Consumers Energy?

A. Yes. When the costs can be specifically attributed to Consumers Energy, these costs are charged directly to Consumers Energy.

Q. Why is the Massachusetts Formula method an appropriate allocation method for certain Company costs?

A. This method provides a practical means to allocate a pool of common costs based on an equitable and consistent basis. Subjectivity and inability to directly charge costs is the reason the Massachusetts Formula is utilized by entities to allocate costs.

Q. Did Consumers Energy develop the Massachusetts Formula?

A. No. It was first conceived as a method for state tax administration in Massachusetts. Subsequently, the formula was adopted for allocating A&G expense in diversified corporations.

Q. Has FERC approved the use of the Massachusetts Formula?

A. Yes. Examples of specific companies that have used this method include: Duke Energy, Entergy Services, Inc., San Diego Gas & Electric, and Williams Natural Gas Company.

Q. What is the impact of payments classified as utility operating income on gas operations?

A. The amount of payments applicable to gas operations for these activities in 2024 is $927 as shown on Exhibit A-66 (MJF-10).

Q. Please explain Exhibit A-67 (MJF-11).

A. This exhibit shows the rate of return on common equity for the affiliates doing business with Consumers Energy.

Q. Is Consumers Energy in compliance with the guidelines for intercompany transactions between affiliates as ordered by the Commission in Case No. U-18361?

A. To the best of my knowledge, Consumers Energy is in compliance with these guidelines.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

MATTHEW J. FOSTER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Summary of Projected Gas Corporate and Other O&M Expense
($000)

Case No.: U-21981
Exhibit No.: A-57 (MJF-1)
Page: 1 of 2
Witness: MJFoster
Date: December 2025

Line No.	(a) Description	(b) Actual 12-Mos Ended 12/31/2024	(c) Projected 12-Mos Ending 10/31/2027
1	**Corporate Services Expense**	**$ 23,434**	**$ 25,171**
	Labor	15,356	16,475
	Material	-	-
	Contractor	5,004	5,368
	Non-Labor Overheads	-	-
	Non-Labor Other	3,074	3,328
2	**Insurance Expense**	**11,826**	**14,362**
	Labor	-	-
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	11,826	14,362
3	**Uncollectible Expense**	**12,187**	**17,140**
	Labor	-	-
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	12,187	17,140
4	**Injuries & Damages Expense**	**2,136**	**2,187**
	Labor	-	-
	Material	-	-
	Contractor	-	-
	Non-Labor Overheads	-	-
	Non-Labor Other	2,136	2,187
5	**Manufactured Gas Plant - Direct Project Management Costs**	**632**	**1,076**
	Labor	-	-
	Material	-	-
	Contractor	-	
	Non-Labor Overheads	-	-
	Non-Labor Other	632	1,076
6	**Digitizing Company Records Expense**	**-**	**740**
	Labor	-	-
	Material	-	-
	Contractor	-	740
	Non-Labor Overheads	-	-
	Non-Labor Other	-	-
7	**Total**	**$ 50,214**	**$ 60,676**
	Labor	15,356	16,475
	Material	-	-
	Contractor	5,004	6,108
	Non-Labor Overheads	-	-
	Non-Labor Other	29,854	38,093

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
Summary of Projected Gas Corporate and Other O&M Expense
($000)

Case No.: U-21981
Exhibit No.: A-57 (MJF-1)
Page: 2 of 2
Witness: MJFoster
Date: December 2025

Line No.	(a) Description	(b) Source	(c) Actual 12 Mos Ended 12/31/2024	(d) Inflation Impacts on Historical Costs Test Year	(e) Scope/ Cost Increases Net of Productivity Gains	(f) Projected O&M 12 Mos Ending 10/31/2027
				(b) * Compounded Inflation Rate		(b) + (c) + (d)
1	Corporate Services Expense	Exhibit A-58 (MJF-2)	$ 23,434	$ 1,707	$ 30	$ 25,171
2	Insurance Expense	Exhibit A-59 (MJF-3)	11,826	861	1,675	14,362
3	Uncollectible Expense	Exhibit A-60 (MJF-4)	12,187	888	4,066	17,140
4	Injuries & Damages Expense	Exhibit A-61 (MJF-5)	2,136	156	(105)	2,187
5	Manufactured Gas Plant - Direct Project Management Costs	Exhibit A-62 (MJF-6)	632	46	398	1,076
6	Digitizing Company Records Expense	Not Applicable	-	-	740	740
7	**Total**		**$ 50,214**	**$ 3,658**	**$ 6,804**	**$ 60,676**

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Projected Corporate Services O&M Expense
for the Years 2024, 2025, 2026; and the 12 Months Ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-58 (MJF-2)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	Description	(a)	(b) 2024 Actual	(c) 2024 Non-Labor Actual	(d) Total 2024 Actual	(e) Labor Inflation Projected	(f) Non-Labor Inflation Projected	(g) Total Inflation Projected	(m) Adjustment	(n) 12 Mos Ending 10/31/2027 Total Projected
1						(b) * inflation	(c) * Inflation	(d) + (e) + (f)		(g) + (m)
2	Sustainability & External Affairs		$ 2,047	$ 1,459	3,506	$ 149	$ 106	$ 3,761	$ -	$ 3,761
3	Legal, Ethics, Regulatory, and Risk		4,818	3,973	8,791	351	289	9,431	-	9,431
4	People & Culture and Learning and Development		12,680	2,094	14,774	924	153	15,851	-	15,851
5	Finance and Shared Services		7,649	3,103	10,752	557	226	11,535	30	11,565
6	General Activities		(2,770)	(1,739)	(4,509)	(202)	(127)	(4,837)	-	(4,837)
7	Total		$ 24,424	$ 8,890	$ 33,314	$ 1,779	$ 648	$ 35,741	$ 30	$ 35,771
8	Less: EICP		8,991	-	8,991	655	-	9,645	-	9,645
9	Less: Transfers Out		-	-	-	-	-	-	-	-
10	Total Corporate Service Departments		$ 15,434	$ 8,890	$ 24,324	$ 1,124	$ 648	$ 26,095	$ 30	$ 26,125
11	Administration & Other-Gas Portion		-	1,623	$ 1,623	-	118	1,741		1,741
12	**Total Corporate Services**		$ 15,434	$ 10,513	$ 25,947	$ 1,124	$ 766	$ 27,837	$ 30	$ 27,867
	Normalizations									
13	One-time Legal Consultant Expense			(2,239)	(2,239)	-	(163)	(2,402)	-	(2,402)
14	One-time Corporate Card Service Agreement Incentive			158	158	-	11	169	-	169
15	**Total Normalizations**		$ -	$ (2,081)	$ (2,081)	$ -	$ (152)	$ (2,233)	$ -	$ (2,233)
	Less Giving and Communications									
16	Corporate Giving Salaries per WP-HLR-12, line 1 and 3		(78)		(78)	(6)	-	(83)	-	(83)
17	Dues, Donations & Lobbying Expenses per WP-HLR-14, line 17			(354)	(354)	-	(26)	(380)	-	(380)
18	**Total Giving and Communications**		$ (78)	$ (354)	$ (432)	$ (6)	$ (26)	$ (463)	$ -	$ (463)
19	**TOTAL ADJ CORPORATE SERVICES EXPENSE**		$ 15,356	$ 8,078	**$ 23,434**	$ 1,119	$ 588	**$ 25,141**	$ 30	**$ 25,171**

		12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
20	Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
	Number of months in the period	12	12	10	
	Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Insurance Expense
for the Years 2020 through the 12 Months Ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-59 (MJF-3)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	(a) Insurance Description		(b) 2020 Actual	(c) 2021 Actual	(d) 2022 Actual	(e) 2023 Actual	(f) 2024 Actual	(g) Compound Annual Growth Rate 2020-2024	(h) Projected O&M 12 Months Ending 10/31/2027
1	Property Insurance	[1]	$ 1,082	$ 1,257	$ 1,528	$ 1,825	$ 1,772	13.136%	$ 2,514
2	Liability Insurance	[2]	7,761	8,023	8,346	8,988	10,276	7.268%	12,536
3	Other	[3]	5	5	5	6	6	5.996%	7
4	Total Premiums		**$ 8,848**	**$ 9,285**	**$ 9,879**	**$ 10,818**	**$ 12,054**		**$ 15,057**
5	Distributions (Refunds)	[4]	(864)	(916)	(901)	(563)	(228)		(694)
6	Gas Insurance Expense		**$ 7,984**	**$ 8,369**	**$ 8,978**	**$ 10,256**	**$ 11,826**		**$ 14,362**

[1] Property Insurance costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used the 5-year coupound annual growth rate (2020 - 2024).

[2] Liability Insurance costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used the 5-year coupound annual growth rate (2020 - 2024).

[3] Other Insurance costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used the 5-year acoupound annual growth rate (2020 - 2024).

[4] Distributions (Refunds) are 2020 - 2024 actuals. Test Year Ending 10/31/2027 used a 5-year average (2020 - 2024).

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Uncollectible Accounts Expense
for the Years 2024, and the 12 Months Ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-60 (MJF-4)
Page: 1 of 2
Witness: MJFoster
December 2025

Line No.	(a) Description	(b) 2024 Actual	(c) 12 Months Ending 10/31/2027
1	Uncollectible Accounts Expense	$ 12,187	**$ 17,140** [1]

[1] Exhibit A-60 (MJF-4) Page 2, row 7, column (g) (3-Year Average BDLR 2022-24)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Uncollectible Accounts Expense
for the 12 Months Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-60 (MJF-4)
Page: 2 of 2
Witness: MJFoster
Date: December 2025

Line No.	(a) Year	(b) Gross Write-Offs	(c) Less Recoveries	(d) Net Write-Offs (Col. (b)-Col. (c))	(e) Less Non-Energy Write-Offs	(f) Net Energy Write-Offs (Col. (d)-Col. (e))	(g) MPSC P-522 Pg. 300 Tot. Gas Svc Rev.	(h) BDLR (Col. (d)/Col. (e))
1	2020	$ 14,085	$ 5,013	$ 9,072	$ 1,823	$ 7,249	$ 1,629,602	0.445%
2	2021	$ 14,593	$ 3,365	$ 11,228	$ 468	$ 10,760	$ 1,803,408	0.597%
3	2022	$ 18,971	$ 3,407	$ 15,564	$ 1,304	$ 14,260	$ 2,527,764	0.564%
4	2023	$ 21,472	$ 3,864	$ 17,609	$ 374	$ 17,234	$ 2,215,687	0.778%
5	2024	$ 15,476	$ 3,525	$ 11,951	$ (235)	$ 12,187	$ 1,899,812	0.641%
6	3-Year Average 2022-24					$ 14,560	$ 2,214,421	0.658%
	Test-Year Total Sales & Transport Revenue							
	Exhibit A-15 (MAS-14), Schedule E-10, Page 1 of 1							
5	Row 12, Column (h) - Row 12, Column (c).						$ 2,606,803	
6	3-Year Average 2022-24 BDLR							0.658%
7	Projected Uncollectible Accounts Expense						**$ 17,140**	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Injuries and Damages Expense
for the Years 2020 through the 12 Months Ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-61 (MJF-5)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	(a) Program Description		(b) 2020 Actual	(c) 2021 Actual	(d) 2022 Actual	(e) 2023 Actual	(f) 2024 Actual	(g) 12 Months Ending 10/31/2027
1	Gas Injuries & Damages	[1]	$ 2,128	$ 2,584	$ 1,934	$ 1,397	$ 1,717	$ 1,952
2	Internal Legal Costs	[2]	94	85	88	98	91	91
3	Workers' Compensation	[3]	(75)	205	288	(28)	327	143
4	Total Gas Injuries & Damages		**$ 2,147**	**$ 2,874**	**$ 2,310**	**$ 1,467**	**$ 2,136**	**$ 2,187**

[1] Gas Injuries & Damages costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used a 5-year average (2020 - 2024).

[2] Legal costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used a 5-year average (2020 - 2024).

[3] Gas Workers' Compensation costs are 2020 - 2024 actual expense. Test Year Ending 10/31/2027 used a 5-year average (2020 - 2024).

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Manufactured Gas Plant Amortization Schedule and Direct Project
Management Costs 2005 through the 12 Months Ending 10/31/2027
($000)

Case No.: U-21981
Exhibit No.: A-62 (MJF-6)
Page: 1 of 2
Witness: MJFoster
Date: December 2025

Line No.	(a) Item Description	(b) Accounts	(c) 1752107 2005	(d) 1752108 2006	(e) 1752109 2007	(f) 1752110 2008	(g) 1752111 2009	(h) 1752112 2010	(i) 1752113 2011	(j) 1752114 2012	(k) 1752115 2013	(l) 1752116 2014	(m) 1752117 2015	(n) 1752118 2016	(o) 1752119 2017	(p) 1752120 2018	(q) 1752121 2019	(r) 1752122 2020	(s) 1752123 2021	(t) 1752101 2022	(u) 1752102 2023	(u) 1752103 2024	(v) Forecast 1752104 2025	(w) Forecast 2026	(x) Forecast 2027	(y) 12-Months Ended 10/31/27
1	MGP Expenditures Deferred		$ 8,968	$ 4,627	$ 5,341	3,074	2,910	$ 3,745	$ 7,041	$ 7,616	$ 7,087	$ 5,009	$ 6,386	$ 5,402	$ 27,748	$ 13,904	$ 10,984	$ 10,357	$ 1,087	$ 864	$ 397	$ 1,540	$ 1,634			
2	Insurance Settlements		$ (61)	$ (3,467)	-	(6)	(5)	(1)	(12)	(17)		(5)	(1)	(2)	-	(4)	-	-	-	-	-	-				
	Amortization Expense																									
3	2005	5890000	-	897	897	897	897	897	897	897	897	897	897													
4	2006	5890000	-	-	462	462	462	462	462	462	462	462	462	462												
5	2007	5890000	-	-	-	534	534	534	534	534	534	534	534	534	534											
6	2008	5890000					307	307	307	307	307	307	307	307	307	307										
7	2009	5890000						291	291	291	291	291	291	291	291	291	291									
8	2010	5890000							374	374	374	374	374	374	374	374	374	374								
9	2011	5890000								704	704	704	704	704	704	704	704	704	704							
10	2012	5890000									761	761	761	761	761	761	761	761	761	761						
11	2013	5890000										709	709	709	709	709	709	709	709	709	709		-	-		-
12	2014	5890000											501	501	501	501	501	501	501	501	501	501				-
13	2015	5890000												639	639	639	639	639	639	639	639	639	639			-
14	2016	5890000													540	540	540	540	540	540	540	540	540	540		90
15	2017	5890000														2,775	2,775	2,775	2,775	2,775	2,775	2,775	2,775	2,775	2,775	2,775
16	2018	5890000															1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390
17	2019	5890000																1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098
18	2020	5890000																	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036
19	2021	5890000																		109	109	109	109	109	109	109
20	2022	5890000																			86	86	86	86	86	86
21	2023	5890000																				40	40	40	40	40
22	2024	5890000																					154	154	154	154
23	2025	5890000																						163	163	163
24	Insurance Settlement Amortization		$ (1,900)	$ (1,906)	$ (2,252)	(2,253)	(2,253)	$ (2,254)	$ (2,254)	$ (386)	$ (387)	$ (362)	$ (359)	$ (353)	$ (5)	$ (4)	(4)	(4)	$ (4)	(2)	(1)	(1)	(1)	-	-	-
25	Net amortization expense		$ (1,900)	$ (1,009)	$ (893)	$ (360)	$ (53)	$ 237	$ 611	$ 3,183	$ 3,943	$ 4,677	$ 5,181	$ 4,929	$ 5,355	$ 7,597	$ 8,680	$ 9,487	$ 10,149	$ 9,556	$ 8,882	$ 8,213	$ 7,866	$ 7,391	$ 6,851	$ 6,941
26	MGP Expenditures Not Deferred	5890000													$ 533	$ 640	$ 744	$ 481	$ 815	$ 733	$ 949	$ 632	$ 1,125	$ 910	$ 1,109	$ 1,076

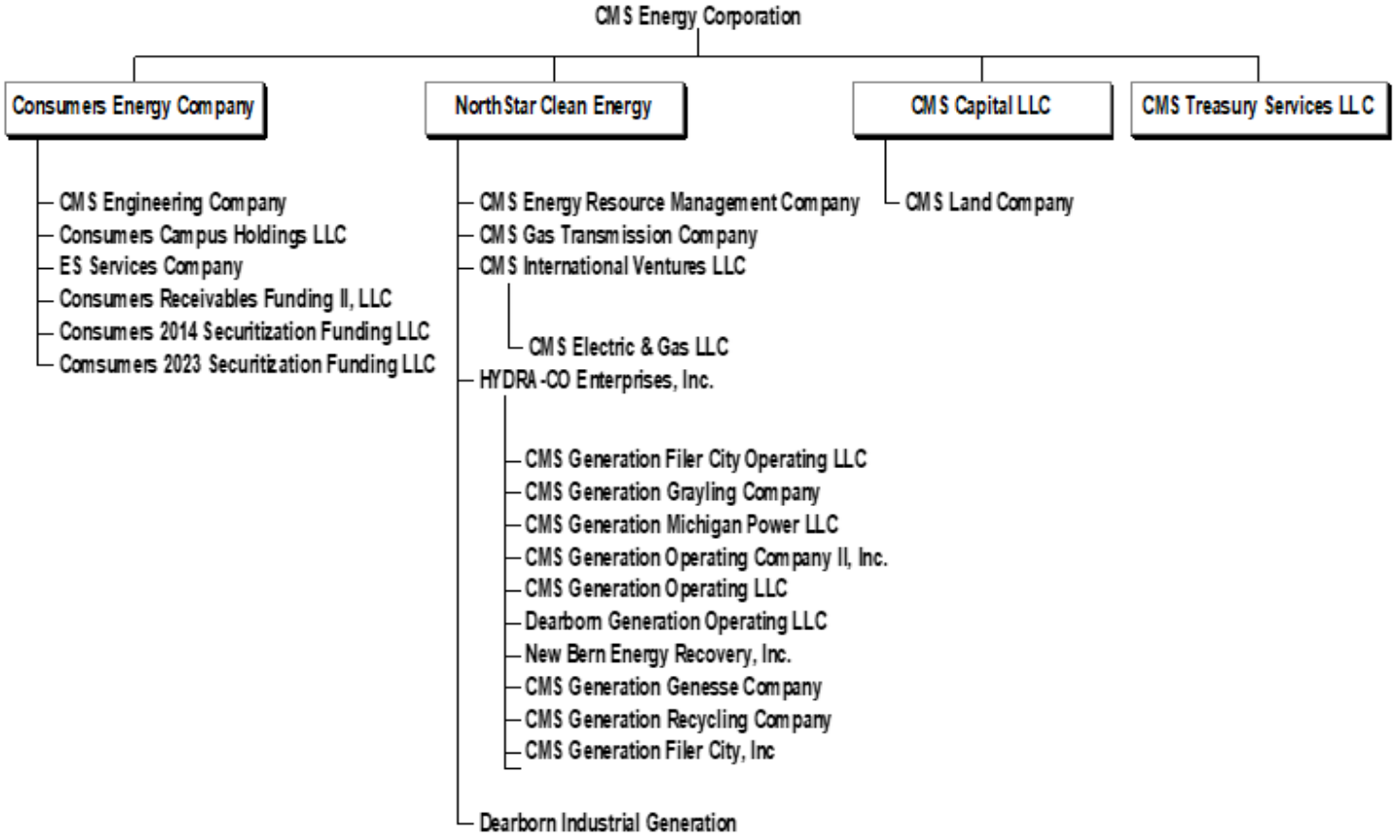
MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
MGP Unamortized Balance
for the 12 Months Ending October 31, 2027

Case No.: U-21981
Exhibit No.: A-62 (MJF-6)
Page: 2 of 2
Witness: MJFoster
Date: December 2025

Line No.		(a)	(b) (Col. (c)+Col. (d))/2 Average Balance October 31, 2027	(c) 12 Months Ended October 31, 2026	(d) 12 Months Ended October 31, 2027	(e) Original Cost
	Assets:					
1	182	MGP Deferred Exp-2005	0	-	-	8,968
2	182	MGP Deferred Exp-2006	0	-	-	4,627
3	182	MGP Deferred Exp-2007	0	-	-	5,341
4	182	MGP Deferred Exp-2008	0	-	-	3,074
5	182	MGP Deferred Exp-2009	0	-	-	2,910
6	182	MGP Deferred Exp-2010	0	-	-	3,745
7	182	MGP Deferred Exp-2011	0	-	-	7,041
8	182	MGP Deferred Exp-2012	0	-	-	7,616
9	182	MGP Deferred Exp-2013	0	-	-	7,087
10	182	MGP Deferred Exp-2014	0	-	-	5,009
11	182	MGP Deferred Exp-2015	0	-	-	6,386
12	182	MGP Deferred Exp-2016	45	90	-	5,402
13	182	MGP Deferred Exp-2017	1,850	3,237	462	27,748
14	182	MGP Deferred Exp-2018	2,318	3,013	1,622	13,904
15	182	MGP Deferred Exp-2019	2,929	3,478	2,380	10,984
16	182	MGP Deferred Exp-2020	3,798	4,315	3,280	10,357
17	182	MGP Deferred Exp-2021	508	562	453	1,087
18	182	MGP Deferred Exp-2022	490	533	446	864
19	182	MGP Deferred Exp-2023	265	285	245	397
20	182	MGP Deferred Exp-2024	1,181	1,258	1,104	1,540
21	182	MGP Deferred Exp-2025	1,389	1,471	1,307	1,634
22		Total Assets:	$ 14,771			
	Liabilities:					
23	253	MGP Deferred Liabilities 2005	0	-	-	(61)
24	253	MGP Deferred Liabilities 2006	0	-	-	(3,467)
25	253	MGP Deferred Liabilities 2007	0	-	-	-
26	253	MGP Deferred Liabilities 2008	0	-	-	(6)
27	253	MGP Deferred Liabilities 2009	0	-	-	(5)
28	253	MGP Deferred Liabilities 2010	0	-	-	(1)
29	253	MGP Deferred Liabilities 2011	0	-	-	(12)
30	253	MGP Deferred Liabilities 2012	0	-	-	(17)
31	253	MGP Deferred Liabilities 2013	0	-	-	-
32	253	MGP Deferred Liabilities 2014	0	-	-	(5)
33	253	MGP Deferred Liabilities 2015	0	-	-	(1)
34	253	MGP Deferred Liabilities 2016	0	-	-	(2)
35	253	MGP Deferred Liabilities 2017	0	-	-	-
36	253	MGP Deferred Liabilities 2018	0	-	-	(4)
37	253	MGP Deferred Liabilities 2019	0	-	-	-
38	253	MGP Deferred Liabilities 2020	0			-
39	253	MGP Deferred Liabilities 2021	0			-
40	253	MGP Deferred Liabilities 2022	0			
41	253	MGP Deferred Liabilities 2023	0			
42	253	MGP Deferred Liabilities 2024	0			
43	254	MGP Deferred Liabilities 2025	0			
44		Total Liabilities:	$ -			
45		**Unamortized Balance to be included in rate base: (000)**	**$ 14,771**			

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Organization Chart
Affiliate Group of Companies Doing Business With Consumers Energy Company 2024

Case No.: U-21981
Exhibit No.: A-63 (MJF-7)
Page: 1 of 3
Witness: MJFoster
Date: December 2025



MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Purpose of Business
Affiliate Group of Companies Doing Business With Consumers Energy Company 2024

Case No.: U-21981
Exhibit No.: A-63 (MJF-7)
Page: 2 of 3
Witness: MJFoster
Date: December 2025

Line No.	Company Name	Affiliation, Percentage Ownership	Purpose of Business
	(a)	(b)	(c)
1	CMS Capital LLC	CMS Energy Sub, 100%	Formed to assist in securing financing for CMS Energy Corporation and its subsidiaries and affiliates
2	CMS Electric & Gas LLC	CMS Enterprises Sub, 100%	Formed to hold a portion of CMS Energy's international interests in projects located in South America
3	CMS Energy Corporation	Parent Company	Formed for the purpose of a Holding Company for both regulated and non-regulated businesses
4	CMS Energy Resource Management Co	CMS Enterprises Sub, 100%	Involved in providing gas, electric, oil and coal marketing, risk management and energy management services
5	CMS Engineering Company	Consumers Sub, 100%	Engaged in offering design, engineering project management and related construction services to natural gas utilities, natural gas exploration and production companies, and other energy businesses
6	NorthStar Clean Energy	CMS Energy Sub, 100%	Owns subsidiaries engaged in the development, acquisition and management of energy-related businesses and projects worldwide - FORMERLY KNOW AS CMS ENTERPRISES - NAME CHANGE ONLY
7	CMS Enterprises Sustainable Energy	CMS Enterprises Sub, 100%	Organized to engage in wind and solar projects
8	CMS Gas Transmission Company	CMS Enterprises Sub, 100%	Organized to engage in the transmission and processing of natural gas
9	CMS Generation Filer City Operating LLC	CMS Enterprises Sub, 100%	Formed to operate a coal and wood waste-fueled power plant
10	CMS Generation Michigan Power LLC	CMS Enterprises Sub, 100%	Owns generating units which are to be sited in Michigan for the purpose of generating power during peak demand periods
11	CMS Generation Operating Company II, Inc.	CMS Enterprises Sub, 100%	Involved in the operation of various power plants throughout the United States
12	CMS Generation Operating LLC	CMS Enterprises Sub, 100%	Involved in the operation of various power plants including Grayling and Genesee
13	CMS International Ventures LLC	CMS Enterprises Sub, 98.5%	Formed to own, manage and sell certain of CMS Energy's international investments
14	CMS Land Company	CMS Capital Sub, 100%	Formed to act as a repository for any unused real property formerly owned by Consumers Power and hold the same for possible non-utility development
15	CMS Treasury Services LLC	CMS Energy Sub, 100%	Formed to handle cash management functions/intercompany banking operations for CMS and certain of its subsidiaries and affiliates. No invoicing or payments made to this company
16	Consumers Campus Holdings LLC	Consumers Sub, 100%	The lessee in the synthetic lease financing of the new Consumers Energy Company office building. No invoicing or payments made to this company
17	Consumers Reveivable Funding II LLC	Consumers Sub, 100%	Buys certain accounts receivable from Consumers and sells them to a third party.

Line No.	Company Name	Affiliation, Percentage Ownership	Purpose of Business
	(a)	(b)	(c)
18	Consumers 2014 Securitization Funding LLC	Consumers Sub, 100%	Formed to engage in Securitization Financing
19	Craven County Wood Limited Partnership	NorthStar Clean Energy, 50%	Owns power plant fueled on waste-wood and poultry waste.
20	Dearborn Generation Operating LLC	NorthStar Clean Energy Sub, 100%	Operates the Ford/Rouge project (both the base units and the peaking unit)
21	Dearborn Industrial Generation LLC	NorthStar Clean Energy Sub, 100%	Parent of DIG (100%) Operates Air permit for DIG
22	ES Services Company	Consumers Sub, 100%	For the purpose of offering design, engineering project management and related services primarily to electric utilities and generation facilities and building Solar projects for customers.
23	Flambeau Solar Partners, LLC	NorthStar Clean Energy Sub, 100%	Formed to develop a solar photovoltaic electric generating system in Phillips, Wisconsin
24	Genesee Power Station LP	NorthStar Clean Energy, 50%	Formed to develop, construct and operate a waste wood cogeneration facility
25	Grand River Wind, LLC	NorthStar Clean Energy Sustainable Energy, 1(	Develops and operates Wind assets/projects
26	Grand River Solar, LLC	NorthStar Clean Energy Sustainable Energy, 1(	Develops and owns Solar assets/projects
27	Grayling Generating Station LP	NorthStar Clean Energy, 50%	Owns a waste-wood fueled power plant
28	HCE - Biopower, Inc	NorthStar Clean Energy Sub, 100%	Formed to hold partnership interests in various power projects.
29	HYDRA-CO Enterprises, Inc.	NorthStar Clean Energy Sub, 100%	Engaged in the ownership and/or operation, by itself or with others, of one or more cogeneration, small hydro or alternate energy production facilities thru partnership interests and ownership of domestic corporations
30	Minnigan Holdings Co	NorthStar Clean Energy, 50%	Joint venture formed to develop Renewable Energy Projects.
31	New Bern Energy Recovery, Inc.	NorthStar Clean Energy Sub, 100%	Formed to participate as a general partner in the Craven County Wood Energy limited partnership formed to construct, operate and own a wood-fired electric generating facility
32	T.E.S. Filer City Station LP	NorthStar Clean Energy, 50%	Owns a wood chip and coal cogeneration plant

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Costs Billed to Affiliated Companies
for the Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-64 (MJF-8)
Page: 1 of 2
Witness: MJFoster
Date: December 2025

Line No.	Company Name	Affiliation	Description: Nature of Goods & Services	Classified to Operating Income (1)	Classified to Other Operating Income (2)	Classified to Balance Sheet (3)	Total	Account Number See Footnotes (1), (2), (3)	Billing Method
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	CMS Capital LLC	CMS Energy Sub	Professional Svcs	$ -	$ -	$ -	$ -		Full Cost
2	CMS Electric & Gas LLC	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	-	-	-	-		Full Cost
3	CMS Energy Corporation	Parent Company	Professional Svcs, Emp Benefits	837,445	23,833	15,035,921	15,897,199		Full Cost
4	CMS Energy Resource Management Co.	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	36,889	1,756	327,669	366,314		Full Cost
5	CMS Engineering Company	Consumers Sub	Professional Svcs	-	-	-	-		Full Cost
6	NorthStar Clean Energy	CMS Energy Sub	Professional Svcs, Emp Benefits	494,501	47,395	10,553,158	11,095,054		Full Cost
7	CMS Gas Transmission Company	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	920	154	31,292	32,366		Full Cost
8	CMS Generation Filer City Operating LLC	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	21,977	6,484	1,385,182	1,413,642		Full Cost
9	CMS Generation Michigan Power LLC	NorthStar Clean Energy S	Operation & Maintenance Svcs	-	-	1,522,803	1,522,803		Full Cost
10	CMS Generation Operating Company II, Inc.	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	22,545	6,669	1,421,855	1,451,069		Full Cost
11	CMS Generation Operating LLC	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	59,621	18,921	4,081,492	4,160,035		Full Cost
12	CMS International Ventures LLC	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	-	64	14,300	14,364		Full Cost
13	CMS Land Company	CMS Capital Sub	Professional Svcs, Emp Benefits	9,653	327	59,777	69,756		Full Cost
14	Craven County Wood Limited Partnership		Professional Svcs	-	-	-	-		Full Cost
15	Dearborn Generation Operating LLC	NorthStar Clean Energy S	Professional Svcs	47,208	15,026	3,421,914	3,484,148		Full Cost
16	Dearborn Industrial Generation	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	-	-	-	-		Full Cost
17	ES Services Company	Consumers Sub	Professional Svcs	1,513	393	79,020	80,926		Full Cost
18	Genesee Power Station LP	NorthStar Clean Energy	Operation & Maintenance Svcs	-	-	18,815	18,815		Full Cost
19	Grayling Generating Station LP	NorthStar Clean Energy	Operation & Maintenance Svcs	-	-	58,442	58,442		Full Cost
20	HYDRA-CO Enterprises, Inc.	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	9,163	545	104,067	113,776		Full Cost
21	Minnigan Holdings Co		Professional Svcs	-	-	-	-		Full Cost
22	New Bern Energy Recovery, Inc.	NorthStar Clean Energy S	Professional Svcs, Emp Benefits	629	49	9,570	10,248		Full Cost
23	T.E.S. Filer City Station LP	NorthStar Clean Energy	Operation & Maintenance Svcs	-	-	42,278	42,278		Full Cost
24	Total			$ 1,542,063	$ 121,617	$ 38,167,556	$ 39,831,236		

Notes:
(1) Operating Income- Accounts 920, 921, 923-926, 930, 931, 935, 408, 456, 495
(2) Other Operating Income- Account 419
(3) Balance Sheet- Account 146

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Payments Made to Affiliated Companies
for the Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-64 (MJF-8)
Page: 2 of 2
Witness: MJFoster
Date: December 2025

Line No.	Company Name	Affiliation	Description: Nature of Goods & Services	Classified to Operating Income	Classified to Other Operating Income	Classified to Balance Sheet	Total	Account Number	Billing Method
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	CMS Energy Corporation	Parent Company	Restricted Stock	$ -	$ 27,606,113	$ -	$ 27,606,113	426.5	Full Cost
2	CMS Generation Oper	NorthStar Clean Energy	Executive Services	2,377	-	-	2,377	923/583/593	Full Cost
3	CMS Generation Oper II	NorthStar Clean Energy	Executive Services	484	-	-	484	923/583/593	Full Cost
4	Genesee Power Station LP	NorthStar Clean Energy	Energy Purchases	20,624,670	-	-	20,624,670	253,555	Full Cost
5	Grayling Generating Station LP	NorthStar Clean Energy	Energy Purchases	21,215,656	-	-	21,215,656	555	Full Cost
6	T.E.S. Filer City Station LP	NorthStar Clean Energy	Energy Purchases	41,465,881	-	-	41,465,881	555	Full Cost
7	Total			$ 83,309,068	$ 27,606,113	$ -	$ 110,915,181		

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Impact on Gas Operations for Costs Billed to Affiliated Companies
for the Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-65 (MJF-9)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	Expense Description	Total Billed	Gas Operations	Account
	(a)	(b)	(c)	(d)
1	Administrative & General Salaries	$ 214,175	$ 77,103	920
2	Office Supplies and Expenses	55,686	20,047	921
3	Outside Services	171,340	61,682	923
4	Property Insurance	4,284	1,542	924
5	Injuries and Damages	8,567	3,084	925
6	Pension and Benefits	188,474	75,390	926
7	Miscellaneous General Expenses	12,851	4,626	930
8	GO Rents	4,284	1,542	931
9	Maintenance of General Plant	29,985	10,795	935
10	Payroll Taxes	329,830	128,634	408
11	Property Taxes	81,388	33,369	408
12	Depreciation	171,340	65,109	495
13	Return on Investment on Utility Assets	162,774	61,854	456
14	Other Comp & Benefits	107,085	41,763	426.5
15	**Total**	$ 1,542,063	$ 586,540	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Impact on Gas Operations for Payments Made to Affiliated Companies
for the Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-66 (MJF-10)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	Company	Transaction	Total Paid	Gas Operations	Account
	(a)	(b)	(c)	(d)	(e)
1	CMS Energy Company	Corporate Insurance & Executive Serv	$ -	$ -	923/583/593
		Subtotal	-	-	
2	CMS Generation Oper	Corporate Insurance & Executive Serv	$ 2,377	$ 927	923/583/593
		Subtotal	2,377	927	
3	CMS Generation Oper II	Executive Services	$ 484	$ 189	
		Subtotal	484	189	
4	Genesee Power Station LP	Energy Purchases	$ 20,624,670	-	
		Subtotal	20,624,670	-	
5	Grayling Generating Station LP	Energy Purchases	$ 21,215,656	-	
		Subtotal	21,215,656	-	
6	T.E.S. Filer City Station LP	Energy Purchases	$ 41,465,881	-	
		Subtotal	41,465,881	-	
			83,309,068	927	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Affiliated Companies - Rate of Return on Common Equity
for the Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-67 (MJF-11)
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No.	Company Name	Net Income	Average Common Equity	Return On Common Equity
1	CMS Energy Corporation Consolidated (1)	$ 992,627,236	$ 7,662,745,174	12.95%
2	CMS Enterprises Company Consolidated	55,602,585	931,127,565	5.97%
3	CMS Enterprises Sustainable Energy	40,186,491	633,444,031	6.34%
4	CMS Capital LLC Consolidated (1)	(2,540,495)	39,737,655	-6.39%
5	CMS Energy Resource Management Co Consolidated	505,909	15,334,324	3.30%
6	CMS Gas Transmission Company Consolidated	5,054,302	54,957,769	9.20%
7	CMS International Ventures LLC Consolidated	99,613	2,552,885	3.90%
8	CMS Treasury Services	845,200	1,024,475	82.50%
9	Dearborn Industrial Generation LLC	24,079,696	85,414,307	28.19%
10	HYDRA-CO Enterprises, Inc. Consolidated	8,353,428	108,726,195	7.68%
11	CMS Engineering Company	(1)	272,488	0.00%
12	ES Services Company	(4,744)	11,983,631	-0.04%

(1) CMS Energy and CMS Capital had income from discontinued operations during 2023. Below is the rate of return on common equity based on net income from continuing operations, which excludes income from discontinued operations.

- CMS Capital & Subs	(2,540,495)	39,737,655	-6.39%

Schedule: B-5.2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Gas Corporate Services Capital Expenditures
($000)

Case No.: U-21981
Exhibit No.: A-12 (MJF-12)
Schedule: B-5.2
Page: 1 of 1
Witness: MJFoster
Date: December 2025

Line No	Description	(a)	(b) Historical Year	(c) Projected Bridge Year	(d) Projected Bridge Year	(e) Projected Bridge Year	(f) Projected Test Year
			12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2027	12 Mos Ending 10/31/2027
						(c) + (d)	
1	Corporate Capital		702	722	614	1,336	755
	Contractor		408	419	357	776	439
	Labor		51	53	45	98	55
	Materials		155	159	135	294	167
	Business Expenses		88	91	77	168	94
	Contingency		-	-	-	-	-
	Other (Loadings, Chargebacks)		-	-	-	-	-
2	**Total Capital**		702	722	614	1,336	755

		Projected			
		10 Mos Ending 10/31/2025	12 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	34 Mos Ending 10/31/2027
3	Corporate Capital	541	795	755	2,091
	Contractor	314	462	439	1,215
	Labor	39	58	55	152
	Materials	120	175	167	462
	Business Expenses	68	100	94	262
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
4	**Total Capital**	541	795	755	2,091

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

ANGEL L. GREEN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Angel L. Green, and my work address is One Energy Plaza, Jackson, MI 49201.

Q. By whom are you employed and what is your present position?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company") as a Senior Lean Strategy Manager.

Q. Please review your educational and business experience.

A. I hold a bachelor's degree in Business Administration with a specialization in Leadership and Governance from Davenport University, and an MBA with an emphasis on Organizational Excellence from Central Michigan University. Since joining Consumers Energy in 2005, I have held multiple roles over the past two decades focused on advancing performance metrics through lean methodologies across gas, electric, and customer operations. For the last four years, I have been accountable for leading cross-functional teams dedicated to driving performance improvement and achieving targets associated with the Employee Incentive Compensation Plan ("EICP") operational goals.

Q. What are your responsibilities as a Senior Lean Strategy Manager?

A. In the Senior Lean Strategy Manager role, I am responsible for the development, governance, and administration of the EICP operational goals. This includes but is not limited to the development of annual goals and associated targets, facilitating the development of plans to support goal achievement, ensuring the Company's lean operating system is leveraged to manage performance at various levels of the organization, and ensuring internal reporting standards are met.

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose is to provide support for Consumers Energy's request for rate recovery for the test year employee compensation costs related to the EICP operational goals. Specifically, I will outline the operational goals included in Consumers Energy's EICP and how they provide customer-related benefits.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit A-68 (ALG-1)	2024-2025 EICP Operational Goals;
Exhibit A-69 (ALG-2)	2024 Customer Benefits: Employee Safety;
Exhibit A-70 (ALG-3)	2024 Customer Benefits: Reliability; and
Exhibit A-71 (ALG-4)	2024 Customer Benefits: Culture Index – Reduced Employee Turnover.

Q. Please explain the process for establishing the Company's EICP goals.

A. Each year, the Company identifies key operational and financial goals to focus on for the next year. The EICP operational goals are established by analyzing progress on the Company's strategic initiatives and developing key performance indicators that focus on driving performance improvement. The Company establishes operational goals grounded in delivering customer value through safe, reliable, affordable, and clean energy service across the business. Operational goals are intended to be cross-functional and apply to all eligible employees to incentivize goal achievement through daily continuous improvement and application of the Company's Lean operating system, The CE Way. Operational goals are developed in partnership with the Company's leadership team and are approved annually by the Board of Directors. The process for developing annual targets is outlined later in my testimony.

Q. What operational goals make up the 2025 EICP portfolio?

A. The EICP operational goals for 2025 include Employee Safety, Culture Index, Customer Experience Index, Electric Reliability, Waste Elimination, and Methane Emission Reduction. As outlined in Company witness Amy M. Conrad's testimony, the Company is not seeking recovery for Waste Elimination due to the financial nature of the operational goal. As outlined in Exhibit A-51 (AMC-1), operational goals have not changed from the 2024 to 2025 plan year; however, targets have changed to drive continuous improvement.

Q. Please explain the Employee Safety goal.

A. The Employee Safety goal is composed of three components: (1) Recordable Incident Rate, (2) High Risk Injuries, and (3) Fatalities. The Recordable Incident Rate accounts for 30% of the metric and is measured using the Occupational Safety and Health Administration ("OSHA") industry standard. High-Risk Injuries account for 70% of the metric and include both OSHA recordable and non-recordable incidents with the potential for resulting in a severe injury or fatality. The Edison Electric Institute's ("EEI") Safety Classification Learning Model is leveraged as the industry standard for reporting and High-Energy Serious Injury or Fatality ("HSIF") and Potential Serious Injury or Fatality ("PSIF") are included. If there is a fatality, there is a 0% payout for the Employee Safety operational goal in its entirety. Please refer to Exhibit A-69 (ALG-2) for additional information on the calculation method.

Q. Why is the Employee Safety goal included in the EICP?

A. Employee Safety is foundational to the success of the Company. Creating and maintaining a safe workplace and culture shows the Company's commitment to its coworker's wellbeing and their ability to go home safely every day.

When employees work safely it translates to delivering safe, reliable, affordable, and clean energy services to customers—while completing the work more efficiently, and avoiding costs associated with injuries. Customer benefits associated with Employee Safety are outlined later in my testimony.

Q. Please explain the Culture Index goal.

A. The Company uses an all-employee survey to determine the Culture Index, which is made up of three indices: (1) Engagement; (2) Empowerment; and (3) Diversity, Equity, and Inclusion. The indices are measured leveraging industry standards established by Korn Ferry, and data is collected leveraging the Qualtrics survey platform. Each of the three indices are derived by averaging the favorability score from employee responses. Additional information on the calculation method is outlined in Exhibit A-68 (ALG-1).

Q. Why is the Culture Index goal included in the EICP?

A. The Culture Index goal aims to enhance employee experience and engagement. Gallup's meta-analysis shows that companies with high employee engagement have 10% higher customer loyalty and engagement, 14% higher productivity, 43% less turnover, and 18% less absenteeism compared to those with low engagement[1]. Benchmark data indicates that peer utilities have a turnover rate of 7.9%, while the Company's four-year historical average is 2.4%. Gallup estimates turnover costs at 1.5-2.0 times the employee's salary. By maintaining a 2% competitive advantage over peers and using a 1.5 multiplier as the conservative end of Gallup's estimate, the Company avoids at least $7,064,260 in annual turnover costs. Exhibit A-71 (ALG-4) shows the calculation in further detail.

[1] https://www.gallup.com/workplace/285674/improve-employee-engagement-workplace.aspx%23ite-285704

Q. Please explain the Customer Experience Index goal.

A. The Customer Experience Index is an industry standard developed and administered by Forrester[2] to measure the quality of customer service based on three questions: Did we meet your needs? Was it easy to do business with us? Was the experience enjoyable? The metric focuses on the following experiences: (1) Billing and Payment, (2) Outage, (3) Moving, (4) Field, and (5) Other across the following channels: (1) Digital (website and mobile application), (2) Live agent, and (3) the Interactive Voice Response ("IVR"). Please refer to Exhibit A-68 (ALG-1) for additional information on the calculation method.

Q. Why is the Customer Experience Index goal included in EICP?

A. The Customer Experience Index goal focuses on ensuring when customers contact Consumers Energy, customer needs are met, the interaction is easy for the customer, and the experience is enjoyable for the customer. This results in enhanced productivity (e.g. reducing the number and duration of customer calls, which benefits the Company and the customer) and customer value (e.g. quick, easy, and enjoyable solutions for customer experiences).

Q. Please explain the Electric Reliability goal.

A. The Electric Reliability goal is measured using the System Average Interruption Duration Index ("SAIDI") as the industry standard to measure and improve performance. SAIDI has two components for measuring and reporting reliability as follows:

(1) The System Average Interruption Frequency Index ("SAIFI") – this indicates the frequency of outages that occur due to system condition, configuration, and related external conditions (e.g. weather patterns, forecasts, etc.); and

[2] https://www.forrester.com/research/

(2) The Customer Average Interruption Duration Index ("CAIDI") – this indicates how long interruptions last due to system conditions, resources available, number of interruptions, and storm restoration activities.

SAIDI results are calculated by multiplying SAIFI and CAIDI. SAIDI is calculated excluding Major Event Days ("MEDs") to normalize performance data for unusually severe weather.

Q. Why is the Electric Reliability goal included in EICP?

A. Benchmarking and internal data indicate that reliability is one of the top drivers for overall customer satisfaction, and the Company is committed to providing safe, reliable, and affordable electric service. The Electric Reliability goal is directly aligned with the Company's Electric Reliability Roadmap[3] (i.e. Electric Distribution Infrastructure Investment Plan) and will position the Company for future success as electric demand increases. Improving electric reliability also provides an economic benefit to customers and is discussed later in my testimony.

Q. Please explain the Methane Emissions Reduction goal.

A. The Methane Emissions Reduction goal aims to reduce fugitive methane emissions associated with the Company's natural gas delivery system.

Reductions are achieved through the following work activities:

(1) Retiring and replacing miles of natural gas distribution mains;

(2) Retiring and replacing natural gas distribution services (both vintage and non-vintage materials);

(3) Completing natural gas distribution system leak replacements; and

(4) Performing well plug and abandonment activities.

[3] https://www.consumersenergy.com/-/media/CE/Documents/company/electric-generation/ediip-report.pdf

Reductions are measured in metric tons, leveraging the emission factors outlined in the Environmental Protection Agency's Greenhouse Gas Reporting Rule, 40 CFR Part 98 Subpart W.

Q. Why is the Methane Emission Reduction goal included in EICP?

A. In 2020, Michigan's Governor signed an executive order creating the Michigan Healthy Climate Plan, which outlines goals for Michigan to achieve economy-wide carbon neutrality no later than 2050, and to maintain net negative greenhouse gas emissions thereafter. The executive order aims for a 28% reduction below 2005 levels of greenhouse gas emissions by 2025[4]. The federal government has established goals to reduce greenhouse gas emissions by 50-52% by 2030 and achieve net-zero emissions by 2050[5]. The EICP Methane Emissions goal is directly in support of state and federal goals and aligns with the Company's Natural Gas Delivery Plan that is founded on the Company's commitment to providing safe, reliable, affordable, and increasingly clean natural gas for Michigan, and outlines the goal to achieve net-zero methane emissions by 2030.

Q. Please explain the annual target setting process.

A. Targets for the EICP operational goals are proposed by subject matter experts, leveraging industry benchmarking, best practices, long-term strategies, annual work plans, and historical performance data. These targets are then recommended to the Company's officer team to validate that targets are both challenging and achievable and will result in the delivery of customer value. The officers present recommendations to the Board of Directors for final approval.

[4] https://www.michigan.gov/whitmer/news/state-orders-and-directives/2020/09/23/executive-directive-2020-10
[5] https://www.energy.gov/topics/net-zero-economy

Q. Has the Company quantified customer benefits that are tied to EICP?

A. Yes. Although specific quantification of the benefits is not easy to perform for every metric, the Company has evaluated direct quantitative benefits of customers for three key operational goals: Employee Safety, Electric Reliability, and Culture Index. The Company has assessed indirect and/or qualitative benefits associated with the other goals.

Q. Is there a direct tie between the design of the EICP operational goals and desirable benefits for customers?

A. Yes. There is a direct tie between the design of the EICP operational goals and desirable benefits for customers. The operational goals focus on delivering customer value through safe, reliable, affordable, and clean energy services—all desirable benefits for customers.

Q. Do you believe that benefits to customers from the EICP goals will, at a minimum, be commensurate with the program's costs?

A. Yes. Company witness Conrad and I present evidence in support of including EICP costs at the 100% payout level, proving that including these costs will not result in excessive rates, and the costs of the EICP will, at a minimum, be commensurate with the programs' costs. Company witness Conrad discusses various benefits to customers from the design of the Company's EICP. In addition, there are both quantitative and qualitative benefits to the successful achievement of these goals. The design of the EICP clearly leads to lower costs and improved service which benefit customers.

Q. How have you evaluated the EICP goals' direct quantitative benefits?

A. The direct quantitative benefits associated with Employee Safety, Electric Reliability, and Culture Index have been calculated. For each of these metrics the Company uses a four-year historical average baseline. The first of those metrics is Employee Safety. The

Employee Safety goal for 2025, when met, will reduce incidents by 34% from the four-year historical average. The resulting reduction in lost workdays and medical expenses is $1,278,673 of annual direct savings. Expected indirect savings, calculated using OSHA's recommended multiplier, totals $889,864 of annual savings. Together, the projected annual direct and indirect savings that accrue to the benefit of the customer totals $2,168,537. Exhibit A-69 (ALG-2) provides the calculation of these savings.

The second metric that can be readily translated to quantifiable cost avoidance for customers is in electric reliability. Using cost per outage minute estimates from Berkeley Labs[6], the 8.0-minute average annual reduction in outage minutes from the four-year historical performance has resulted in annual economic benefits to customers more than $25,115,262. Exhibit A-70 (ALG-3) provides the calculation of these savings.

Third, there are benefits related to the Culture Index created by reducing employee turnover for Company employees with <1-4 years of tenure by 2% as compared with industry peers. The average annual salary of an employee with tenure of <1-4 years of experience is $99,990, and lower turnover avoids costs equal to at least 1.5 times the employees' annual salaries. This means that by reducing turnover in this employee group by 2%, when compared to utility peers, the Company will avoid costs of $7,064,260. Exhibit A-71 (ALG-4) shows the calculation in further detail.

Q. How have you evaluated the EICP goals' other qualitative benefits?

A. The Methane Emission Reduction goal is essential to achieving the Company's goal of net-zero methane emissions from its natural gas system by 2030, which supports the Michigan Governor's goal for Michigan to achieve economy-wide net-zero greenhouse gas

[6] https://www.osti.gov/servlets/purl/963320

emissions, and to be carbon neutral by 2050. The direct economic benefits for customers are difficult to calculate, but the qualitative benefits are beyond dispute. Improved Customer Experience is another benefit of achieving EICP goals that is difficult to quantify but nonetheless quite real. The benefits of pursuing improvement in Customer Experience have been discussed above.

Q. Why have you included both electric and natural gas benefits in your quantification?

A. Consumers Energy's utility operations are combined in one organization and operational goals are established in critical areas to drive the delivery of customer value through safe, reliable, affordable, and clean energy services across electric and natural gas operations. The quantified benefits of Employee Safety, the Culture Index, and Methane Reduction show that benefits to gas customers clearly exceed the employee incentive compensation amounts that Consumers Energy has requested be included in rates in this case.

Q. What portion of the direct benefits that you have quantified above do you conclude benefit gas customers?

A. A portion of the quantified benefits in Employee Safety and the Culture Index directly benefit gas customers. By allocating 40% of these combined customer benefits, the Company calculates annual savings for gas customers as follows: $867,415 from Employee Safety, $2,825,704 from avoided turnover costs associated with the Culture Index. This totals $3,693,119 in value specifically for gas customers, exceeding the total costs of the EICP allocated to gas customers.

Q. Why did you use a 40% allocation to evaluate benefits to gas customers?

A. The 40% allocation reflects the share of Consumers Energy customers who are gas customers. Allocating benefits by customer count is a reasonable method since the

Employee Safety and Culture Index goal benefits apply Company-wide rather than to a single business line, consistent with standard cost allocation practices.

Q. Should the Company be pursuing these benefits independent of the EICP?

A. Yes. The EICP takes this into consideration. As discussed by Ms. Conrad in her direct testimony, incentive mechanisms help communicate priorities, engage employees in business success, reward valued skills and behaviors, and create business understanding for employees. The EICP is structured in a way that focuses employees on delivering customer value through continuous improvement. Making it clear to employees that a portion of their market-based compensation is at risk and depends upon their collective ability to meet these targets emphasizes the importance of goal achievement and encourages coworkers to deliver their best performance.

Q. Do you believe that the EICP is the reason that the above benefits have been realized?

A. Yes. I believe the design of the EICP is intended to and does make it significantly more likely customer benefits will be achieved by establishing operational goals to improve the Company's ability to continuously improve the delivery of customer value through safe, reliable, affordable, and clean energy services. By placing a portion of employees' market-based compensation at-risk, employees are incentivized to meet the EICP operational goals.

Q. Are you confident the Company can consistently achieve 100% targets on the EICP operational goals?

A. Yes. Over the past four years, the Company and its employees have, on average, slightly exceeded the 100% targets of the EICP operational goals. Refer to Exhibit A-51 (AMC-1) for EICP Operational Performance Metrics for the operational goals and targets.

Q. Do you believe that any of the metrics included in the EICP are duplicative?

A. No. The metrics included in the EICP are designed to complement, rather than duplicate, each other. Each metric targets a distinct operational or cultural outcome that collectively supports the Company's commitment to safety, reliability, and culture.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

ANGEL L. GREEN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
2024 and 2025 EICP Operational Goals

Case No.: U-21981
Exhibit No.: A-68 (ALG-1)
Page: 1 of 1
Witness: ALGreen
Date: December 2025

Employee Incentive Compensation Plan - Metric Explanation and Measurement or Calculation Method

Line		Metric	Explanation	Measurement or Calculation Method
1	Employee Safety	**Recordable Incident Rate**	Recordable Incident Rate is the number of recordable injuries multiplied by 200,000 (industry standard) divided by the total hours worked	# of recordable injuries * 200,000 / total hours worked
2		**High Risk Injuries**	Number of injuries (Recordable and Non-Recordable) that are classified against the EEI Safety Classification Learning Model as High Risk which includes: HSIF & PSIF	# of injuries classified as HSIF & PSIF
3	Culture Index	**Employee Engagement Index**	The Employee Engagement index is an average favorability score derived from the taking the total favorable responses received for the 4 questions within the Employee Engagement Category from each of the Company's employee engagement surveys administered by Korn Ferry and they use Qualtrics as the survey platform (https://www.qualtrics.com/) and dividing by the total number of responses received. The Company's Engagement, Empowerment and Diversity, Equity and Inclusion indexes are how we measure our culture values in action. The indexes focus on things like ensuring we have simple processes, fix problems, keep our workforce engaged by measuring the combination of emotional commitment (are you proud to work here?) and rational commitment (do you plan to stay?) and embed diversity, equity and inclusion into everything we do.	This index is an average of the scores of 4 questions: 1. I would recommend my Company as a good place to work. 2. I understand how my job contributes to the Company's strategic priorities and goals. 3. I feel proud to work for the Company. 4. I feel motivated to do more than is required of me.
4		**Employee Empowerment Index**	The Employee Empowerment index is an average favorability score derived from the taking the total favorable responses received for the 4 questions within the Employee Empowerment Category from each of the Company's employee engagement surveys administered by Korn Ferry and they use Qualtrics as the survey platform (https://www.qualtrics.com/) and dividing by the total number of responses received. The Company's Engagement, Empowerment and Diversity, Equity and Inclusion indexes are how we measure our culture values in action. The indexes focus on things like ensuring we have simple processes, fix problems, keep our workforce engaged by measuring the combination of emotional commitment (are you proud to work here?) and rational commitment (do you plan to stay?) and embed diversity, equity and inclusion into everything we do.	This index is an average of the scores of 4 questions: 1. My job makes good use of my skills and abilities. 2. I feel encouraged to come up with new and better ways of doing things. 3. I have enough autonomy to do my job well. 4. There are no significant barriers at work to doing my job well.
5		**Diversity, Equity & Inclusion Index**	The Diversity, Equity and Inclusion index is an average favorability score derived from the taking the total favorable responses received for the 4 questions within the Diversity, Equity and Inclusion Category from each of the Company's employee engagement surveys administered by Korn Ferry and they use Qualtrics as the survey platform (https://www.qualtrics.com/) and dividing by the total number of responses received. The Company's Engagement, Empowerment and Diversity, Equity and Inclusion indexes are how we measure our culture values in action. The indexes focus on things like ensuring we have simple processes, fix problems, keep our workforce engaged by measuring the combination of emotional commitment (are you proud to work here?) and rational commitment (do you plan to stay?) and embed diversity, equity and inclusion into everything we do.	This index is an average of the scores of 4 questions. 1. My Company values and promotes employee diversity. 2. I am treated with respect as an individual. 3. In my work environment, everyone is treated fairly regardless of personal background or characteristics. 4. I feel like I belong at my Company.
6		**Customer Experience Index**	Customer Experience Index is a survey administered by Forrester (https://go.forrester.com/analytics/) and is a measure of customer service based on 3 questions – Did we meet your needs? Was it easy to do business with us? Was the experience enjoyable.	The metric is calculated by asking those 3 questions of customers on a scale of 1 to 5 with 4s and 5s being positive responses, 1s and 2s being negative responses, and 3s being a neutral response. To calculate the score, the number of negative responses is subtracted by the number of positive responses, which is then divided by the total number of customers responding. The results of the three questions are averaged together to calculate the Customer Experience Index score.
7		**Electric Reliability**	Electric Reliability/SAIDI (System Average Interruption Duration Index) is a utility-industry benchmark; SAIDI measures the total time an average customer experiences a non-momentary power interruption in a one-year period.	Use of IEEE (Institute of Electrical and Electronics Engineers) 2.5beta standard to exclude outlier events/MEDs (Major Event Dates); total customer-minutes of interruption divided by total customers served (i.e. customers on the system).
8		**Methane Emmisions Reduction**	Reduce fugitive methane emissions associated with natural gas system. Reductions are obtained as a result of replacing and/or retiring older, aging infrastructure from natural gas distribution.	Summation of reduction in methane emissions associated with Vintage Service Replacements (VSR), Enhanced Infrastructure Replacement Program (EIRP), Other Non-Vintage Replacements (Mains & Services), Well Plug & Abandonment (P&A) and capital replacements from the Leak Backlog. See sub-categories below for more details. Note: Compression Venting was included in previous years; however, is not included in 2025. **Vintage Service Replacements** - The methane emission reductions are calculated using emission factors (EFs) for the type of service replaced (copper and Bare steel). The EFs and formulas used are consistent with those defined in EPA's Greenhouse Gas Reporting Rule. **EIRP** - The methane emission reductions are calculated using EFs for the type of main or service replaced. EFs for mains are based on miles replaced while services, as with VSRs above, are based on the number of services. The EFs and formulas used are consistent with those defined in EPA's Greenhouse Gas Reporting Rule. **Other Mains & Services** - same calculations as VSR and EIRP. **Well Plug & Abandon** - The methane emission reductions are calculated using emission factors (EFs) for the type of component retired. The EFs and formulas used are consistent with those defined in EPA's Greenhouse Gas Reporting Rule. **Gas Leak Backlog** - same calculation as VSR.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Customer Benefits: Employee Safety

Case No.: U-21981
Exhibit No.: A-69 (ALG-2)
Page: 1 of 1
Witness: ALGreen
Date: December 2025

CE Employee Safety

424.86 Average of daily run rate of Non-Exempt & Union from P&C

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	LOST TIME			**Lost Days**	**Lost Days**	**Lost Days**			
	Year	**# Safety Incidents**	**# Lost Days**	**Per Incident**	**Cost Per Year**	**Per Incident**	**Medical Expense, Workers Comp, Other Exposure (Annual actual paid Workers**	**Per Incident**	
1	2021	135	3207	23.8	$ 1,362,526	$ 10,093	$ 1,306,947	$ 9,681	
2	2022	107	2993	28.0	$ 1,271,606	$ 11,884	$ 2,752,881	$ 25,728	
3	2023	125	2598	20.8	$ 1,103,786	$ 8,830	$ 1,980,835	$ 15,847	
4	2024	139	4062	29.2	$ 1,725,781	$ 12,416	$ 3,369,397	$ 24,240	
5	**Average**	126.5	3215	25.4	$ 1,365,925	$ 10,798	$ 2,352,515	$ 18,597	
6	**2025 Target**	83	2109	23.8	$ 896,219	$ 10,798	$ 1,543,547	$ 17,641	
									Total
7	**Projected Savings**	**11**	**1106**		**$ 469,705**		**$ 808,968**		**$ 1,278,673**
8	**Indirect Cost Savings**	**$889,864**	Notes: 1.1 Multiplier per OSHA Pays Software						
9	**GRAND TOTAL**	**$ 2,168,537**							

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Customer Benefits: Reliability

Case No.: U-21981
Exhibit No.: A-70 (ALG-3)
Page: 1 of 1
Witness: ALGreen
Date: December 2025

SYSTEM AVERAGE INTERRUPTION DURATION INDEX - SAIDI

Estimated Societal Benefits of Customer Reliability

Line No.	Description [1]	Customers [2] 2024 (000)	Cost of Interruption [3] ($ per min)	COI Std Deviation [3] ($ per min)	SAIDI [4] 2020-2023 (min / cust)	SAIDI [4] 2024 (min / cust)	Cost/(Benefit) to Society [5] Min ($000)	Average ($000)	Max ($000)	Min ($000 per min)	Average ($000 per min)	Max ($000 per min)
1	Residential	1,662.0	$ 0.03	$ 0.04	195	155	$ 216	$ (2,192)	$ (4,601)	$ 5	$ (55)	$ (115)
2	Small C&I	233.0	11.65	7.73	195	155	(36,536)	(108,569)	(180,602)	(913)	(2,714)	(4,515)
3	Medium / Large C&I	2.0	185.19	100.56	195	155	(6,770)	(14,815)	(22,860)	(169)	(370)	(571)
4	Total	1,897.0	----	----	----	----	$ (43,090)	$ (125,576)	$ (208,063)	$ (1,077)	$ (3,139)	$ (5,202)

from OMS as of [3/4/2025]

x 8.0 minute average annual reduction

$ 25,115,262.26

C&I - Commercial and Industrial
COI - Cost of Interruption
SAIDI - System Average Interruption Duration Index
Std Deviation - Standard Deviation

Notes

(1) Consumers Energy commercial class assigned to Small C&I and industrial class assigned to Medium / Large C&I
(2) 2024 customer count data based on premises count from OMS system. The model does not take into consideration any changes to customer counts from 2020 to 2024.
(3) Berkeley National Laboratory "Estimated Value of Service Reliability for Electric Utility Customers in the United States", June 2009
(a) Estimates based on 2023 mean costs for 4-hour interruption (Tables 3.2, 4.2, and 5.2) adjusted for inflation
(b) Standard Deviations based on 2021 4-hour interruption (Tables 3.2, 4.2, and 5.2) at 75% confidence level adjusted for inflation
(c) Inflation based on CPI from Bureau of Labor Statistics
(4) Consumers Energy Company Reliability Reports - excluding Major Event Days

	Actual SAIDI
2020	195
2021	228
2022	182
2023	176
2024	155
CAGR (2024 / 2020)	-5.5%

Average annual SAIDI reduction from 2020 to 2024 = -8.0

(5) Average C/(B) to Society = (COI) x (2024 SAIDI x Customers - 2020 SAIDI x Customers)
Minimum C/(B) to Society = (COI - Std Dev) x (2024 SAIDI x Customers - 2020 SAIDI x Customers)
Maximum C/(B) to Society = (COI + Std Dev) x (2024 SAIDI x Customers - 2020 SAIDI x Customers)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Customer Benefits: Culture Index - Reduced Employee Turnover

Case No.: U-21981
Exhibit No.: A-71 (ALG-4)
Page: 1 of 1
Witness: ALGreen
Date: December 2025

Line No.		(a)	(b)	(c)	(d)	(e)
	Annual Employee Turnover					Average
1	Tenure	2021	2022	2023	2024	
2	<1 - 4 years	4.4%	4.5%	5.5%	5.2%	4.9%
3	5+ years	1.1%	1.6%	1.5%	1.7%	1.5%
4	Total Company	2.0%	2.5%	2.7%	2.6%	2.4%
5	Average Turn Over for peer utilities benchmark					7.9%
6	Average Annual Salary <1-4					$ 99,990
7	Total Employees <1-4					2355
8	2% reduction in turnover for employees with tenure of <1-4 years					47
9	Cost avoidance of 1.5 times average annual salary					$ 7,064,260
10	Cost avoidance of 2.0 times average annual salary					$ 9,419,013

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

DIRECT TESTIMONY

OF

MICHAEL P. GRIFFIN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Michael P. Griffin, and my business address is 4600 Coolidge Highway, Royal Oak, MI 48073.

Q. By whom are you employed?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company").

Q. What is your position with Consumers Energy?

A. I presently hold the position of Senior Strategy Manager in the Gas Strategy Department, a position I have held since July 2021.

Q. What are your responsibilities as Senior Strategy Manager?

A. I am responsible for the cross-functional research, analysis, and oversight of natural gas transmission and certain distribution assets and transmission portfolio management strategy. This includes the development, recommendation, and administration of the Natural Gas Delivery Plan ("NGDP").

Q. Please describe your educational background.

A. I earned a Bachelor of Arts in Marketing from Michigan State University in 1985, and earned a Master of Business Administration from Wayne State University in 1998.

Q. Please describe your work experience.

A. I began working for the Company in 1987. Since that time, I have held positions of increasing responsibility including Marketing Consultant, Customer Energy Specialist, Senior Business Support Consultant in the financial area, Gas Budgeting Director, and Director of Rate Cases and Controls, a position I held beginning in 2008. As Director of Rate Cases and Controls, I was instrumental in the development of testimony and exhibits, and in supporting various witnesses in multiple gas and electric rate cases for the Gas and

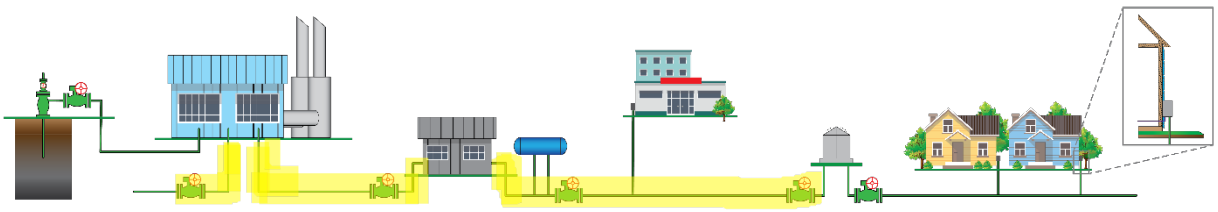
Electric Engineering, Operations, and Customer Operations departments. Since July 2021, I have held the role of Senior Strategy Manager for the Company's transmission assets.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes, I have recently provided testimony in Case No. U-21148, Case No. U-21308, Case No. U-21490, and Case No. U-21806.

Q. What is the purpose of your direct testimony?

A. My direct testimony explains the Company's request for rate relief as it relates to its Gas Transmission and certain Distribution capital expenditures and Operating and Maintenance ("O&M") expenses for the programs identified below. These expenditures are primarily related to operations of the Company's high-pressure distribution and transmission systems. Specifically, these investments relate to the portion of the Company system that receives the high-pressure gas at the outlet of the Compressor Stations, and delivers the gas to the city gates, and from the city gates to the regulator stations. In the diagram below, these investments are inside the yellow highlighted section. These investments will help the Company meet its objectives of supplying safe, reliable, affordable, and clean energy to customers as described in the NGDP, Exhibit A-30 (TMB-1), sponsored by Company witness Trevor M. Blattner.



My direct testimony is divided into four sections: (i) Asset Relocation Transmission capital expenditures; (ii) Regulatory Compliance O&M and capital costs; (iii) Capacity/Deliverability capital expenditures: and (iv) Fleet Expansion Purchases.

Q. Are you sponsoring any exhibits with your direct testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-72 (MPG -1)		Summary of Actual & Projected Regulatory Compliance O&M Expenses;
Exhibit A-12 (MPG-2)	Schedule B-5.3	Summary of Actual and Projected Capital Expenditures Transmission & Distribution Plant;
Exhibit A-73 (MPG-3)		Actual & Projected Gas Transmission Capital Expenditures - Asset Relocation Transmission Program;
Exhibit A-74 (MPG-4)		Actual & Projected Gas Transmission Capital Expenditures – Regulatory Compliance Program;
Exhibit A-75 (MPG-5)		Actual & Projected Gas Transmission and Distribution Capital Expenditures - Capacity/Deliverability Program;
Exhibit A-76 (MPG-6)		Summary of Historical Gas Capital Expenditures 2020 to 2024 - Transmission & Distribution Plant; and
Exhibit A-77 (MPG-7)		Projected Capital Expenditures - Transmission & Distribution Plant, Summary of Actual & Projected Gas Capital Expenditures.

Q. Were these exhibits prepared by you or under your direction or supervision?

A. Yes.

Q. Please describe Exhibit A-72 (MPG-1).

A. Exhibit A-72 (MPG-1) shows the total O&M expenses for the Regulatory Compliance Program that I am sponsoring. In my testimony, I will describe the program expenses and projects contained within this program. As shown on line 5 of Exhibit A-72 (MPG-1), the total O&M expenses I am sponsoring were $23,527,000 in 2024 and are projected to be $32,179,000 for the 12 months ending October 31, 2027.

Q. Please describe Exhibit A-12 (MPG-2), Schedule B-5.3.

A. Exhibit A-12 (MPG-2), Schedule B-5.3, shows the total capital expenditures I am sponsoring. In my testimony I will describe each of the programs, any sub-programs, and corresponding expenditures for these items. As shown on line 4 of Exhibit A-12 (MPG-2), Schedule B-5.3, the capital expenditures for the programs I am sponsoring were $317,534,000 in 2024, and are projected to be $198,611,000 in 2025, $185,651,000 for the 10 months ending October 31, 2026, and $227,064,000 for the 12 months ending October 31, 2027.

Q. Does the NGDP discuss the Company's gas transmission assets?

A. Yes, it does.

Q. Please describe the Company's 10-year investment plan for its gas transmission and distribution assets that you are sponsoring.

A. Over the next 10 years, the Company will focus its transmission efforts to continue complying with inspection requirements, reducing risk, and increasing its remediation pace for critical assets. To reach these objectives, the Company has completed the planned Transmission Enhancements for Deliverability & Integrity ("TED-I") pipeline projects and will be moving forward with smaller-scale infrastructure projects like valve replacements and upgrades, along with line lowerings and the re-build schedule for city gate facilities.

This information can be found in Exhibit A-30 (TMB-1), Section IV.C Transmission Asset Plan of the NGDP. The Company is also rebuilding distribution regulator station facilities. This information can be found in Exhibit A-30 (TMB-1), Section IV.D of the NGDP.

I. ASSET RELOCATION TRANSMISSION PROGRAM

Q. Please describe the capital expenditures related to the Asset Relocation Transmission Program as shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 1.

A. The Asset Relocation Transmission Program includes gas transmission infrastructure replacement projects that are required due to civic improvement activities, initiated by federal, state, or local governmental units. This program also includes projects where transmission pipeline location or depth of cover requires relocation of an existing pipeline to prevent third-party damage, eliminate physical conflicts with other utilities, and ensure continued safe operation. Civic improvement projects replace or improve aging public infrastructure such as roadways, bridges, sewer lines, water lines, and drainage ditches. The Transmission Pipeline Engineering Department reviews all civic improvement projects to determine if conflicts require pipeline relocation. The Asset Relocation Transmission Program also includes relocation and lowering of natural gas transmission infrastructure to remediate reduction in cover due to geohazards, grading and/or erosion.

For actual and potential asset relocation projects reviewed as a result of civic improvement projects, to minimize scope and expense, the Company works with the governmental units involved to coordinate work and to negotiate design criteria wherever possible. For instance, the Company reviews municipal project plans and tries to negotiate design changes to eliminate potential direct conflicts with Company facilities, such as gas

transmission lines, valve sites, or city gate stations. These negotiations reduce overall project scope and thus reduce the costs to both the taxpayer and the customer.

In addition, to further reduce costs, the Company coordinates project timelines with municipalities to align construction and restoration schedules. An example of the Company's ongoing coordination with municipalities in which civic improvement projects required pipeline relocation was in Oakland County when lowering segments of Line 1600 along Taft Road ahead of scheduled municipal road improvements planned by the City of Novi. This effort was undertaken to minimize disturbance and impact to the community. Furthermore, additional coordination in Saginaw County allowed the Company to lower a segment of Line 300 within the Parker Swamp Drain to safely facilitate scheduled drain maintenance activities.

Projects are also scoped as a result of instances where location or lack of depth of cover requires the relocation of an existing transmission pipeline to ensure continued safe operation and for damage prevention purposes. Projects are evaluated to determine if the reestablishment of cover can be a long-term, viable remediation option. Most projects are not selected for this type of remediation method given the likelihood of continued cover degradation over a period of time. The Asset Relocation Transmission Program projects are designed and constructed to comply with minimum soil cover requirements specified by state and federal regulations, see, e.g., 49 CFR 192.317, 49 CFR 192.327(a), Michigan Gas Safety Standards, and Company requirements. These project types are described in more detail later in my direct testimony.

As shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 1, the capital expenditures for this program were $17,019,000 in 2024, and are projected to be

$24,867,000 in 2025, $24,656,000 for the 10 months ending October 31, 2026, and $9,690,000 for the 12 months ending October 31, 2027.

Q. Please describe the development of the Company's Asset Relocation Transmission Program capital expenditure projections.

A. These projections are based upon knowledge of specific projects planned for the next several years and prioritized accordingly by established risk and/or external third-party/civic schedule commitments. Examples of asset relocation projects included in these projected expenditures include:

- Line 1200A line lowering at Wetlands BR014 and BR017 in Branch County;
- Line 1200A Townline Road line lowering in Branch County;
- Line 1200A Needham Road line lowering in Branch County;
- Line 600 Console St, Stevens Road, and Judah Road line lowering in Oakland County; and
- Line 2070 Butler Road Galloway Creek line lowering in Oakland County.

The Company's projected expenditures are required to complete the level of asset relocations for known transmission civic improvement and line lowering projects. Exhibit A-73 (MPG-3) provides further details on the expenditures included in this program.

Q. Please describe the Line 100B SHSP re-route project.

A. The Company filed for a certificate of public convenience and necessity pursuant to 1929 Public Act 9 ("Act 9") in Case No. U-21179 on December 15, 2021, for this project. The Act 9 was approved on March 3, 2022 and the project was completed in 2024.

Q. Please explain the methodology for selecting the Company-initiated projects in the Asset Relocation Transmission Program.

A. Company-initiated projects executed under the Asset Relocation Transmission Program are selected based on a variety of considerations, including physical depth of cover, customer notifications, and Consumers Energy transmission pipeline risk model results, as determined by the System Integrity group. Risk modeling for the Asset Relocation Transmission Program involves determining the anticipated overall risk reduction that would result from reducing the relative risk score for third-party damage (by a percentage commensurate with increased depth of cover) and holding all other individual threat risk scores constant. Segments showing a higher overall risk reduction as a result of increased depth of cover are graded as higher priority within the Asset Relocation Program. Prioritization may also be adjusted based on availability of transmission pipeline outages, continued coordination with local municipalities or governing authorities for civic-related work, and anticipated future replacement under another program (such as TED-I).

Q. Please describe the customer benefits attained from the projects in this program.

A. For Company-initiated Asset Relocation Transmission Projects, replacing and lowering pipeline segments in locations where grading or erosion has reduced cover to less than the depths specified by 49 CFR 192.327(a) and Company standard requirements provides benefits to customers by reducing the potential for third-party damage from activities such as plowing and drain maintenance. For example, industry data for risk management indicates that increasing the depth of cover from 3.0 feet to 4.5 feet reduces the threat of third-party damage occurrence by up to 56% (Muhlbauer, Pipeline Risk Management Manual). These projects also mitigate the risks of additional reduction in cover and future

exposure of pipelines, which may in turn result in increased risk of vehicle damage, external loading, coating damage, pipe scouring, washouts, sinking, and corrosion at the soil-to-air interface. For Asset Relocation Transmission Projects initiated by civic improvement projects, customer benefits include reduced risk of third-party damage, maintenance of underground clearances specified by 49 CFR 192.325, and facilitation of the civic improvement projects. Customers also benefit when the Company coordinates with civic improvement projects as street and road disruptions are minimized.

II. REGULATORY COMPLIANCE PROGRAM

Q. Please describe the capital expenditures related to the Regulatory Compliance Program as shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 2.

A. As shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 2, the capital expenditures for this program were $33,968,000 in 2024, and are projected to be $29,561,000 in 2025, $22,609,000 for the 10 months ending October 31, 2026, and $46,471,000 for the 12 months ending October 31, 2027.

I am sponsoring the following four programs in the Regulatory Compliance capital program:

- Pipeline Integrity Transmission Program;
- Pipeline Integrity Transmission Operated by Distribution ("TOD") Program;
- Cathodic Compression, Storage and Pipeline Program; and
- Maximum Allowable Operating Pressure ("MAOP") Compliance Pipeline Program.

Q. Please describe the O&M expenses related to the Regulatory Compliance Program as shown on Exhibit A-72 (MPG-1).

A. As shown on line 5 of Exhibit A-72 (MPG-1), the O&M expenses for this program were $23,527,000 in 2024 and are projected to be $32,179,000 for the 12 months ending October 31, 2027.

I am sponsoring the following four programs in the Regulatory Compliance O&M program:

- Pipeline Integrity Transmission O&M Program;
- Pipeline Integrity TOD O&M Program;
- Corrosion Control Transmission O&M Program; and
- MAOP Transmission O&M Program.

As these O&M expenses are primarily tied to the capital expenditures in the capital programs described above, they will be consolidated below to describe the overall program spending.

A. PIPELINE INTEGRITY TRANSMISSION PROGRAM AND PIPELINE INTEGRITY – TOD PROGRAM

Q. Please describe the Pipeline Integrity Program.

A. The Pipeline Integrity Program represents the necessary inspections and remediation O&M expenses and capital expenditures that allow the Company to remain compliant with regulations mandated by the federal Pipeline & Hazardous Materials Safety Administration ("PHMSA") and the Commission. The program costs are a function of the overall number of assessments, inspection tool types, baseline assessments, or reassessments to be completed in accordance with the Company's Pipeline Integrity Program.

Q. Please describe PHMSA's requirements for a Pipeline Integrity Program.

A. Federal regulation, 49 CFR Part 192, Subpart O, specifies how pipeline operators must identify, prioritize, assess, evaluate, repair, and validate the integrity of natural gas transmission pipelines that could, in the event of a leak or failure, affect High Consequence Areas ("HCA"). These are areas where pipeline releases could have greater consequences to health, safety, or the environment. As a transmission pipeline operator, Consumers Energy must comply with these minimum federal safety standards. Under 49 CFR 192.907, by December 17, 2004, all pipeline operators, including Consumers Energy, were required to develop and follow a written Transmission Integrity Management Program ("TIMP") that addresses the risks on each covered transmission pipeline segment. In addition, Consumers Energy has updated its standards, procedures, and processes to adhere to the additional requirements in Safety of Gas Transmission Pipelines, including Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments ("RIN2") by May 24, 2023, and other dates as outlined in the final rule.

Q. Please describe the MPSC's requirements for a Pipeline Integrity Program.

A. The MPSC has adopted and is the enforcement agency for the federal regulations. Additionally, the MPSC has published the Michigan Gas Safety Standards. These standards are additional rules the Company is required to follow.

Q. What is the importance of a Pipeline Integrity Program?

A. As stated above, a Pipeline Integrity Program is in place to validate and ensure the integrity of pipelines in HCA and outside of HCA, including inline inspectable Moderate Consequence Areas ("MCA") and segments within a Class 3 or Class 4 location operating

above 30% specified minimum yield strength ("SMYS"). This program provides a critical avenue that increases public safety through the identification and remediation of potentially hazardous conditions on the pipelines. Additionally, the program is important to ensure the reliability of the Company's transmission system remains intact by taking measures to prevent an unexpected failure on the system.

Q. How was the Company's Pipeline Integrity Program developed?

A. Consumers Energy's TIMP contains information related to how the Company identifies, prioritizes, assesses, evaluates, repairs, and validates the integrity of its gas transmission pipelines that could, in the event of a leak or failure, affect HCA. The TIMP is updated based upon regulations that have become effective since the inception of the program. To minimize environmental and safety risks, Consumers Energy's TIMP delivers the following:

- Identifies HCA, required assessments Outside of HCA, and threats to covered pipeline segments:
  - Assessments Outside of HCA
    - Inline Inspectable MCA; and
    - Segments located within a Class 3 or 4 location operating above 30% SMYS;
- Establishes a baseline assessment plan, including criteria for establishing reassessment intervals, a direct assessment plan, and a communication plan;
- Remediates conditions found during assessments;
- Specifies continual evaluation and assessment of the overall TIMP;
- Establishes a plan for confirmatory direct assessment;
- Requires additional preventative and mitigative measures, recordkeeping, and management of change; and
- Establishes a quality assurance process.

Pursuant to the federal regulations, this written document has been modified over the years for various reasons. Some of the reasons for modification include changes in inspection technology, changes or clarifications received from PHMSA, feedback from the MPSC Staff ("Staff"), and Company-driven changes.

Q. Is the TIMP Manual provided to Staff?

A. Yes. Staff has access to the Company's TIMP Manual, and when revisions to the TIMP Manual are made, a copy is sent to Staff.

Q. As part of Transmission Integrity Management, do companies need to continuously improve their program?

A. Yes, 49 CFR 192.907 and 49 CFR 192.911 require that an operator must make continual improvements to the program.

Q. Does the Company's NGDP, Exhibit A-30 (TMB-1), discuss Consumers Energy's 10-year plan related to the Pipeline Integrity Program?

A. Yes. Over the 10-year period of the NGDP, the Company is focusing on complying with inspection requirements, de-risking, and increasing its remediation pace for critical assets. The Company is continuing its current practice of striving toward six-year inspection and remediation cycles for HCA segments. The Company has updated its risk ranking methodology for the transmission assets as described in the Transmission Integrity Management regulation from a relative risk model into a probabilistic risk model to ensure investments are prudently undertaken in the right areas. As discussed in the NGDP, the Company will undertake the following:

- Complete baseline inspections for approximately 25 miles of the Company's mainline transmission system pipeline by year-end 2025 and maintain that plan based on a reassessment plan;

- Assess and develop a plan to proactively remediate high-risk pipe segments that are prone to higher risk threats like Stress Corrosion Cracking ("SCC") and corrosion; and

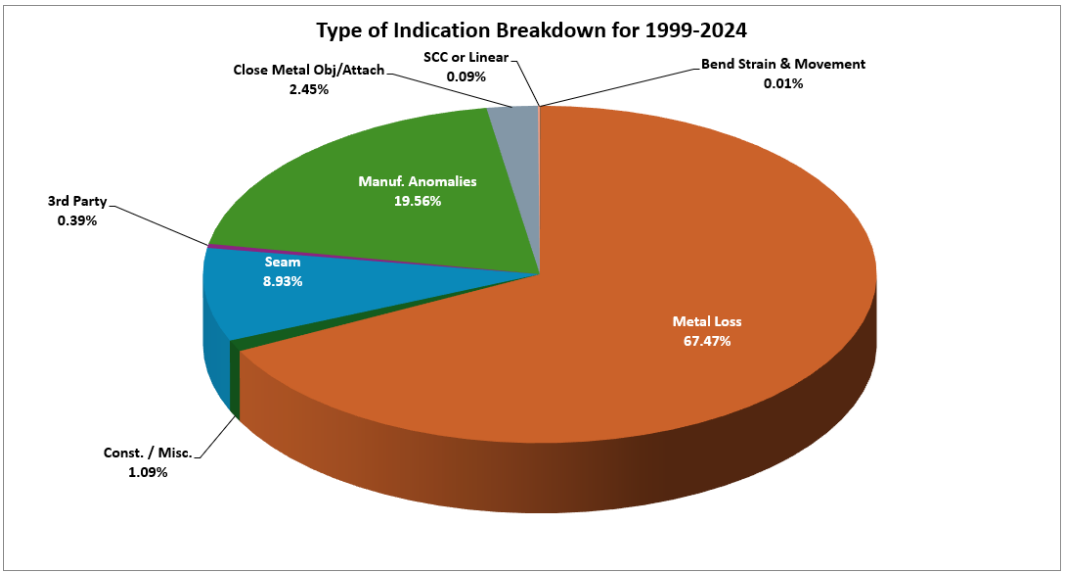
- Evaluate transmission-classified segments embedded in the distribution system—referred to as TOD—to determine if a baseline assessment or replacement is needed on a prioritized basis.

Exhibit A-30 (TMB-1), Section IV.C.2, provides additional information on these objectives.

Q. What types of anomalies and threats has the Company experienced on its gas transmission system?

A. Consumers Energy's TIMP has proven to find anomalies the Company is able to remediate, providing safe and reliable operations for customers. The Company has experienced several different types of anomalies on its gas transmission system and continues to find new pipeline safety threats that require mitigation. A breakdown of the type of anomalies found through traditional in-line inspection ("ILI") tool runs from 1999 to 2024 is shown in the Figure 1 below:

Figure 1
Type of Anomalies Found Through ILI Tool Runs 1999 through 2024



The anomaly indications are as follows:

1. Metal Loss encompasses all external and internal corrosion in the body of the pipe that has been predicted by the ILI tools;

2. Manufacturing anomalies include metal loss due to the manufacturing of the pipe and other manufacturing anomalies predicted in the body of the pipe;

3. Seam anomalies covers all external and internal corrosion in the seam weld, crack indications in the seam, and metal loss in the seam weld due to manufacturing processes;

4. Construction and Miscellaneous category includes reinforced girth welds, sleeves, and other items that appear on or near the pipeline;

5. Metal Object and Attachment category includes extra metal and close metal objects to the pipelines;

6. Third-Party Damage includes any dents, deformations, and gouges on the pipelines;

7. SCC or Linear includes crack indications found in the body of the pipe and not on a seam; and

8. Locations on the system that have indication of Bend Strain or pipeline movement due to geohazards or construction activities.

As illustrated in the chart, the largest percentages of anomalies are metal loss or corrosion. From an industry perspective, corrosion is the number one threat to a transmission pipeline system. In keeping with regulatory and industry requirements, the Company promptly addresses this threat through a strong TIMP, and a robust corrosion control process that reduces the corrosion rate on pipelines.

The Company's TIMP program also addresses the threat of SCC. Many factors can affect the initiation and propagation of SCC, but a primary barrier to SCC is a pipeline's coating system. A secondary barrier is a cathodic protection system. When the coating on a pipe is compromised, the environmental factors that support SCC can develop under the right conditions. Since 2015, the Company has been assessing its pipelines that have the

highest potential for SCC to occur, and there have been instances where SCC was found and remediated.

The Company also continues to conduct bending strain analyses and pipe movement studies on sections of its natural gas transmission system to identify potential areas of high strain on its transmission pipelines. Since 2017, the Company has performed 62 bending strain analyses and performed remediation based on those results to improve the safety and reliability of the system.

Q. Is a probabilistic risk model recommended by federal or state regulators?

A. Yes, both. PHMSA has identified the probabilistic risk model as a potential best practice for pipeline operators over other risk models, as discussed in the technical information document, Pipeline Risk Modeling: Overview of Methods and Tools for Improved Implementation, published February 1, 2020, by PHMSA. Additionally, the MPSC recommended the transition in its September 11, 2019 Michigan Statewide Energy Assessment Final Report ("SEA").

Q. How is the probabilistic risk model being utilized within the TIMP?

A. The Transmission Probabilistic Risk Model was developed for the TIMP with the purpose of calculating the total risk of an asset, the threats listed in ASME B31.8S which are driving that risk, the probability of a failure occurring due to those threats, and the consequence of a failure (nine different failure modes) at any location along those pipe assets. The TIMP workplans are developed to comply with federal regulations for assessment compliance dates, assessment methodology, and remediation timelines for all segments within the transmission system. The probabilistic model is then used to ensure the proper prioritization of each asset within the assessment plan as well to confirm that the

appropriate threats are assessed by the assigned work plan. The total risk of the asset is used to prioritize the work and the probability of failure is used to ensure that the project is scheduled within a timeline to ensure safe operation of the pipe asset. The Company then selects the most appropriate method of remediation based on multiple considerations (i.e. cost effectiveness, operational considerations, system demand, and environmental constraints). Thus, the Company's processes prudently address system risk in a cost-effective manner.

Q. Please explain the development of the Pipeline Integrity Transmission O&M expenses.

A. As shown on Exhibit A-72 (MPG-1), line 4, the Company's Pipeline Integrity - Transmission O&M expense was $18,444,000 in 2024, and is projected to be $26,351,000 for the test year ending October 31, 2027. The mileage the Company intends to inspect in 2024 through 2027 is shown in Table 1 below. The O&M cost projections for remediation digs are based upon recent inline inspection results. The O&M includes costs for inspections, remediation, and where applicable material verification and MAOP reconfirmation.

Table 1

Inspection Mileage			
2024	2025	2026	2027
374.6	198.7	297.0	329.7

Additionally, there are certain baseline assessments on longer pipeline segments that will lead to additional digs. These expenses were not projected utilizing inflation factors.

Consumers Energy recognizes there is risk related to public safety and employee safety on pipelines outside of HCA, and is inspecting and remediating those segments,

which are also included in the expenses in this program. Through previous inspections performed on non-HCA segments of pipeline, the Company has been able to gather additional data regarding the integrity of its overall transmission system. Similar anomalies are found in both non-HCA and HCA because the pipeline characteristics are the same. The data shows that most of the anomalies found and remediated on Consumers Energy's transmission system are in non-HCA.

Q. Are there additional activities included in the Company's Pipeline Integrity Transmission O&M expenses?

A. Yes. The Company's projection also includes the performance of geohazard assessments of the Company's transmission pipeline systems. These geohazard assessments will provide additional information on potential geohazard outside force threats to the Company's transmission pipelines. This additional information will inform the Company's risk/threat assessments and potential mitigative measures the Company can take to minimize those threats on the transmission system. Included in the projection is additional material testing on remediation digs where required to properly mitigate threats to the safe operation of that asset.

The Company's projection also includes the performance of bending strain analyses and pipe movement studies. Additionally, running Electro Magnetic Acoustic Transducer ("EMAT") tools on pipelines that are susceptible to SCC is part of this projection. Through the use of EMAT tools, the Company has detected and remediated different anomalies than what has previously been found using more traditional ILI tools.

Q. Please explain why there are variations in the O&M expense for this program from year to year.

A. Inflation is not utilized to project the costs in the Pipeline Integrity Program. The program costs are largely influenced by which assets are being inspected, the forecasted number of remediation digs per asset, and the technology required to inspect for the threats on those assets. Assets in the work plan are on a six- or nine-year reassessment cycle and each asset has an assessment cost which is determined by the threats requiring assessment and the technology required to assess these threats. Some of these assets, in addition to the inspections, require chemical cleaning to minimize the threat of internal corrosion as well as to ensure quality data from the inline inspection tool. Remediation costs which are also included in these expenses are determined by forecasting the expected number of remediation digs which is based upon the condition of that asset. The remediation dig count is forecasted to be higher in 2027 than in the historical year due to the factors mentioned above. The cost per dig is based on five years of historical costs. The test year includes inspection technology which was not required in 2024. In 2024, the Company did not conduct an EMAT inspection as the threats within the workplan for that year did not require that technology to be utilized. In 2026, there are three EMAT inspections scheduled along with two EMAT inspections in 2027. These inspections have a higher cost than standard inspection tools to run and analyze and require additional remediation digs over a standard magnaflux leakage ("MFL") tool inspection.

Q. Please describe the Pipeline Integrity – TOD Program.

A. In addition to ILIs and remediation on the transmission system, the Company performs assessments of TOD pipe. These pipeline segments are operated on the distribution system

above 20% SMYS and thus are covered under the Transmission regulations. As shown on Exhibit A-72 (MPG-1), line 3, the Company's Pipeline Integrity – TOD Program O&M expenses were $889 000 in 2024, and are projected to be $913,000 for the test year ending October 31, 2027. For pipe within HCA, the Company assessed 15.6 miles in 2024 and will assess 30.96 miles in 2025, 34.8 miles in 2026, and 41.8 miles in 2027. Assessments include inspection digs for External Corrosion Direct Assessment ("ECDA") which includes casing assessments, inspection digs for Internal Corrosion Threat Evaluation, or Internal Corrosion Direct Assessment ("ICDA"). Dig locations are determined from analysis of survey and historical corrosion issues. In addition, starting in 2023, the Company began performing ECDA assessments or Risk Mitigation Assessments on non-HCA segments to reduce overall risk on TOD assets. The indirect surveys needed to perform the direct assessments are included in the O&M expense. Also, ECDA digs that result in coating repairs only, verification digs, and additional assessments on non-HCA pipelines are included in the projection. This is the third time the Company has assessed the casings on the system since the requirement went into effect in 2004. In order to levelize work and cost, the casing projects are spread across two years (2025 and 2026 in this case), every seven years with the projected cost based upon historical replacement costs.

Q. Please explain the development of the Pipeline Integrity - Transmission capital expenditures.

A. As shown on Exhibit A-74 (MPG-4), line 1, the capital expenditures for this program were $21,978,000 in 2024, and are projected to be $14,611,000 in 2025, $7,753,000 for the 10 months ending October 31, 2026, and $23,247,000 for the 12 months ending

October 31, 2027, as set forth on this exhibit on line 1, column (b); line 1, column (c); line 1, column (d); and line 1, column (f), respectively.

Pipeline Integrity - Transmission expenditures include remediation of pipeline anomalies where 50 feet or more of pipe is replaced, the installation of Ultrasonic Thickness ("UT") sensors, corrosion coupons, and robotic ILIs. Both UT sensors and corrosion coupons allow the Company to measure and determine the corrosion rate to determine current condition and potential replacement. Internal UT sensors physically measure the pipe wall and allow the Company to obtain this information without physically digging up the location. This reduces the need to re-excavate the same locations every seven years to evaluate the condition of the pipe as would be required if the sensor was not installed, thus reducing costs to determine the integrity of the pipe at that location. Corrosion coupons (external corrosion) tell the Company the corrosivity of the soil and the adequacy of the cathodic protection to help ensure system integrity. The Company projects 15% of the remediation digs will be capital.

Q. Please explain the major components of the Pipeline Integrity - Transmission capital expenditures in the test year.

A. In addition to the remediation of anomalies forecasted based upon the mileage inspected, tools and other factors mentioned above, the test year includes pipeline replacements on segments of lines 1200A-3 and 1700. Line 1200A-3 has a crack-like indication that was identified via an EMAT inspection under Beaver Creek and Line 1700 has a corrosion anomaly under the Clinton River that has a response time requiring a direction boring to remediate the section of pipeline. Additionally, segment 1900-4 will have launcher and

receiver work completed to modernize the equalizing lines and improve pigging operations.

Q. Please explain the development of the Pipeline Integrity – TOD Program capital expenditures.

A. As shown on Exhibit A-74 (MPG-4), line 2, the capital expenditures for this program were $5,904,000 in 2024, and are projected to be $6,624,000 in 2025, $8,506,000 for the 10 months ending October 31, 2026, and $15,944,000 for the 12 months ending October 31, 2027, as set forth on this exhibit on line 2, column (b); line 2, column (c); line 2, column (d); and line 2, column (f), respectively.

As part of the direct assessments performed, UT sensors (for internal corrosion) and UT coupons (for external corrosion) are frequently installed to monitor corrosion rates. The corrosion rate information is then reviewed and evaluated to determine the effectiveness of corrosion control measures. To date, approximately 1,243 UT sensors and 865 UT coupons are being monitored. Typical remediation of pipe found during the inspections involves pipe replacements.

Q. Are there any additional details you would like to provide regarding significant projects included in the Pipeline Integrity – TOD Program?

A. Yes. In 2023, the RIN2 requirements were implemented for 49 CFR 192.927 that increased requirements for ICDA assessments. These changes increased the number of excavations required to complete an ICDA assessment. While there was an increase in dig requirements, installation of UT sensors during prior assessment digs reduced the total number of excavations being performed since many of the required locations were already being monitored. Additionally, there are additional capital costs related to the Risk

Mitigation Assessments (coupon, anode and rectifier installations) and Casing Assessments (robotic ILIs and pipeline replacements) as discussed in the O&M section above.

B. CORRODION CONTROL – TRANSMISSION PROGRAM AND CATHODIC COMPRESSION, STORAGE, AND PIPELINE PROGRAM

Q. Please describe the Corrosion Control – Transmission O&M Program.

A. The O&M expense for the Corrosion Control – Transmission Program was $1,169,000 in 2024, and is projected to be $2,261,000 for the test year ending October 31, 2027, as shown on Exhibit A-72 (MPG-1), line 2. O&M expenses for corrosion control on the transmission system were not projected utilizing inflation factors. These expenses were projected based on the work being undertaken which includes projects such as large atmospheric painting projects, pipeline recoating projects, shorted casing remediation, and close interval surveys. Similar to the capital program (Cathodic Protection – Compression, Storage and Pipeline), O&M projects are typically identified during yearly surveys and typically occur in a short timeframe. The Company's projected expense amount is based on historical averages (100 miles of close interval survey), the re-coating of pipeline sections that have poor coating conditions based on the close interval surveys, and work to clear shorted casings. The projected expense also includes additional atmospheric painting projects at sites that have not been painted in several years and that have had numerous small touch-ups done to prevent corrosion. The test year projection will allow the Company to increase the amount of recoat and painting projects compared to what was done in 2024. This additional work will not only allow the Company to continue to meet the regulatory obligations for corrosion control, but also will ensure and enhance the safety of its natural

gas delivery systems and reduce the amount of repeat visits to repaint small sections over time.

Q. Please describe the Cathodic Compression, Storage, and Pipeline Capital Program.

A. The Cathodic Compression, Storage, and Pipeline Capital Program allows the Company to maintain compliance with federal regulations for cathodic protection of facilities. As shown on Exhibit A-74 (MPG-4), line 3, the capital expenditures for the Cathodic Compression, Storage, and Pipeline Capital Program were $5,983,000 in 2024, and are projected to be $6,813,000 in 2025, $5,964,000 for the 10 months ending October 31, 2026, and $6,539,000 for the 12 months ending October 31, 2027, as set forth on this exhibit on line 3, column (b); line 3, column (c); line 3, column (d); and line 3, column (f), respectively. The capital activities included in this program are the installation of new or replacement rectifiers and anode beds, the installation of UT Coupon Test Stations and Remote Monitoring Units ("RMUs"), installation of Alternating Current ("AC") mitigation, the installation of insulators, and installation of coupons for monitoring corrosion rates for its Transmission system. The projects undertaken are identified during yearly routine inspections of the cathodic protection systems. When issues are identified, like pipe-to-soil potentials below criteria, repairs typically must occur within one year of identification. As such, the dollar amounts identified for these programs are based on historical averages. One area that has increased in this program is the installation of AC Mitigation. These projects are intended to mitigate stray AC voltages on the pipeline that can cause corrosion or a shock hazard. Additionally, new rules implemented by PHMSA in 2022 require additional testing and mitigation for possible stray current issues. As a

result of these additional requirements, the Company has increased monitoring and identified projects to mitigate stray AC voltages.

C. MAOP COMPLIANCE PIPELINE PROGRAM AND MAOP TRANSMISION PROGRAM

Q. Please describe the MAOP Compliance Pipeline Program.

A. The MAOP Compliance Pipeline Program involves MAOP verification and remediation of the Company's transmission pipelines, including TOD pipelines. This work initially began in 2012, in response to the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, which required the PHMSA to direct each owner or operator of a natural gas transmission pipeline and associated features to provide verification that their records accurately reflect a pipeline's MAOP. This will improve compliance with state and federal pipeline records requirements and confirm historic system MAOP values. On October 1, 2019, PHMSA published the Safety of Transmission & Gathering Lines Rule which codifies the requirement for MAOP establishing documentation to meet traceable, verifiable, and complete criteria. This rule is also identified starting on page 83 of the SEA, which states:

> In 2016, PMHSA published a proposed rulemaking titled "Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines" to update 49 CFR Part 192. This proposed rule included significant changes to the transmission integrity management requirements, along with other general changes to transmission and gathering pipelines with enhancements to the following areas:
>
> 1. Re-establishing maximum allowable operating pressure.
> 2. Verifying material properties.
> 3. Performing integrity assessments outside of high-consequence areas.
> 4. Management of change enhancements.
> 5. Corrosion control enhancements.
> 6. Modifying the regulation of onshore gas gathering lines.

Q. How will the Company verify and adequately document the MAOP of these pipelines?

A. This will be accomplished with a detailed engineering analysis or Standardized Engineering Analysis of the Company's Transmission System. The analysis will determine where work is required to meet the traceable, verifiable, and complete criteria, and upgrade the documentation archiving from a historical perspective to a newly developed engineering content management database integrated with the Company's geospatial information system database. The record database will link record files to the data mined from those records and entered into the geospatial information database for MAOP calculation from those design and testing values. For each transmission pipeline segment identified as not meeting the record criteria established by the newly published rule, the Company will address these segments through an engineering evaluation that will consider the six regulatory methods of MAOP Reconfirmation identified in 49 CFR 192.624 in conjunction with a solution that provides benefits in regard to pipeline safety, reliability, and deliverability. The six methods are:

1. Pressure Test;
2. Pressure Reduction;
3. Engineering Critical Assessment;
4. Pipe Replacement;
5. Pressure Reduction for Pipeline Segments with Small Potential Impact Radius; and
6. Alternative Technology.

Material verification will require a management program for identifying pipeline segments for which the material property value documents necessary to calculate MAOP are not Traceable, Verifiable, or Complete ("TVC"). The management program will provide

identification of those segments for when the Company may expose pipe for purposes other than the 49 CFR 192.614 Damage Prevention Program. When exposed, these segments would require either destructive or nondestructive testing to attain material property values. Evaluation is based on an analysis including, but not limited to, the following factors:

- Nature of the records gap identified (e.g. segments with material verification issues prioritized for replacement);
- Pipeline performance history and pipeline field evaluations;
- Minimizing the impact of service to customers;
- Coordination with other planned work and the need to maintain service to customers; and
- Pipeline location and cost to replace (i.e. population density).

Depending upon the work performed, the project would be an O&M expense or a capital expenditure. The Company's MAOP Reconfirmation capital expenditure projections are based on previously completed work orders of similar magnitude and requirements when pipe replacements are performed. As shown on Exhibit A-74 (MPG-4), line 4, the capital expenditures for the MAOP Compliance Pipeline Capital Program were $104,000 in 2024, and are projected to be $1,513,000 in 2025, $386,000 for the 10 months ending October 31, 2026, and $741,000 for the 12 months ending October 31, 2027, as set forth on this exhibit on line 4, column (b); line 4, column (c); line 4, column (d); and line 4, column (f), respectively. Capital projects include a drain and a blowdown replacement at the Mount Clemens city gate, valve replacements at the Metamora city gate, and valves and piping at the Plainwell valve site. There is also a project at the Muskegon River Compressor Station ("MRCS") involving the installation of a permanent 16" bypass and valving necessary for addressing needed pressure test documentation to meet TVC requirements. The Company continues to monitor the gas system for segments without TVC pressure tests to comply

with the new PHMSA-published Safety of Transmission & Gathering Lines Rule. Future projects will be identified from the above-mentioned Standardized Engineering Analysis.

Q. Please describe the O&M expenses related to the Regulatory Compliance - MAOP Transmission Program as shown on Exhibit A-72 (MPG-1), line 1.

A. As shown on Exhibit A-72 (MPG-1), page 1, line 1, the O&M expenses for this program were $3,025,000 in 2024 and are projected to be $2,654,000 for the test year ending October 31, 2027. The test year O&M expense comprises five parts.

The first part is an annual expense of $640,000 for an Aerial population density survey to fulfill the requirements of 49 CFR 192.609 and 49 CFR 192.611. Beginning in 2026, the Company will be including TOD pipelines in the aerial survey which was initially conducted on transmission pipelines. The second part is projects involving pressure tests or small sections of pipe or other equipment replaced due to pressure test records on being TVC or due to class location changes.

The third part of the test year expense is an annual expense of $50,000 for Third Party Coordination Surveys. To limit risk, both physically and/or fiscally, this expense will utilize survey data to collect information to determine location (vertical and horizontal) during the pre-planning period. The information gathered through survey data can proactively provide details of Company facilities and will be incorporated into third-party plans where potential conflicts can be identified and mitigated prior to the third-party construction. This data will primarily be utilized for Asset Relocation projects.

The fourth part of the test year expense is for in-field trouble shooting and repairs on problem valves, purchasing repair parts for valves or actuators, outside training for personnel involved in valve inspections and repairs, and outside support from equipment

specialists and diagnostic assistance from valve and actuator representatives. Through annual valve and operator inspections required per 47 CFR 192.745, numerous valves are reported with issues sealing or operating. These issues often lead to valve replacement projects, which are costly and time-consuming. There is a need to address these valve issues promptly and effectively to reduce the frequency and cost of valve replacements. The objective of this expense is to fund quality troubleshooting and repairs on valves before they are deemed inoperable and/or needing replacement. By doing so, the aim is to extend the lifespan of existing valves, improve operational efficiency, and reduce the number of valve replacement projects.

The fifth part of the test year expense is the expensing of the O&M portion of the Standardized Engineering Analysis costs. In 2021, in response to a Staff recommendation in Case No. U-20650, the Company moved these expenditures to Account 183.2 - Other Preliminary Survey and Investigation Account. The Company is proposing in this proceeding to expense the O&M portion of this account for the 2024 time period, based upon the percentage of orders that resulted in an O&M or capital replacement. The Company proposes to continue the practice of expensing a portion of the Account 183.2 balance in subsequent general rate case proceedings. The capital portion of the account will be allocated to capital projects. In 2024, the Company expensed $1,866,354 for the 2022 and 2023 Standardized Engineering Analysis expense. In the test year, the Company projects to expense $1,043,678 for the 2024 expenses. Company witness Heather L. Rayl discusses the reduction to rate base for the 2024 amount.

Q. Please explain page 2 of Exhibit A-72 (MPG-1).

A. Page 2 of Exhibit A-72 (MPG-1) presents an illustration of the amounts of the O&M expenses I am sponsoring if one were to apply an inflation rate to the historical O&M expenses. The expenses that I am supporting have not been projected utilizing inflation factors. Instead, as discussed above, the projected expenses discussed in my testimony are based upon the expenses necessary to comply with regulations and improve system safety.

III. CAPACITY/DELIVERABILITY PROGRAM

Q. Please describe the capital expenditures relating to the Capacity/Deliverability Program as shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 3.

A. As shown on Exhibit A-12 (MPG-2), Schedule B-5.3, line 3, the capital expenditures for this program were $266,547,000 in 2024, and are projected to be $144,184,000 in 2025, $138,386,000 for the 10 months ending October 31, 2026, and $170,902,000 for the 12 months ending October 31, 2027. These capital expenditures address needed increases in transmission pipeline capacity and ensure measurement accuracy, which help ensure adequate capacity and deliverability throughout the system. These expenditures are driven by projects in TED-I, Deliverability Base Field Measurement, Deliverability Base Pipeline, Regulator Stations – Distribution, and Transmission and Storage ("T&S") City Gates as further described below.

Q. Why are Capacity/Deliverability projects necessary?

A. Capacity requirements can increase due to changes in customer population density in specific locations, and also because of changes in system requirements. Examples of changes in system requirements include the need to support load and maintain pressure (both base and peak day), as well as the need to ensure pipeline configuration to allow for

in-line inspection through the Pipeline Integrity Program. Deliverability Program expenditures include city gate and regulation station rebuilds and improvements. This program also includes expenditures for the TED-I projects to ensure continued safe, reliable, and deliverable operation of transmission pipelines. Other project work in this program includes investments to ensure gas quality and gas measurement accuracy. Natural gas quality is critical to ensuring that customers' equipment functions properly and safely. Natural gas measurement accuracy ensures that Consumers Energy is properly measuring and accounting for gas purchased for and delivered to customers, as detailed below.

A. TED-I PROJECTS

Q. Please explain the TED-I projects shown on Exhibit A-75 (MPG-5), line 1.

A. The TED-I projects are focused on maintaining deliverability and integrity, and on improving the ability to control gas flows. As shown on Exhibit A-75 (MPG-5), line 1, the capital expenditures for the TED-I Program were $138,767,000 in 2024, and are projected to be $17,626,000 in 2025, $13,436,000 for the 10 months ending October 31, 2026, and $24,753,000 for the 12 months ending October 31, 2027. Major projects may include replacing transmission pipeline segments that contain higher-risk type pipe to ensure integrity and safe operation. In certain cases, city gate stations may be upgraded to enable abandonment of a pipeline or to reduce pressures on pipeline segments to comply with any new MAOP requirements of replacement pipelines. Also included in TED-I are the installation of Remote Control Valves ("RCVs"), Rupture Mitigation Valves ("RMVs") and Pressure-Limiting Devices ("PLDs") to control pressure and flows during normal operations and in the event of abnormal operation.

Q. Please describe Consumers Energy's investments in its natural gas transmission system as part of the TED-I projects and how they benefit customers.

A. As described in the NGDP, Exhibit A-30 (TMB-1), Section IV.C.2, TED-I pipeline projects improve customer reliability and advance public safety by replacing or retiring higher relative risk pipe segments and, in some cases, increase capacity. Additionally, the replaced pipelines also have enhanced pipeline pressure control and isolation capabilities.

Q. Please explain the TED-I major pipeline projects.

A. TED-I major pipeline projects focus on maintaining integrity and deliverability, and include transmission pipeline replacements of higher relative risk pipe to ensure integrity and safe operation. Higher relative risk pipe includes segments with previous anomalies or stress characteristics related to integrity management risk mitigation. Capacity requirements are factored into line replacements to ensure customer deliverability. The major TED-I construction project included in this filing is the Mid-Michigan Pipeline project which was put into service in 2024.

Q. Please describe the Mid-Michigan Pipeline project.

A. The Mid-Michigan Pipeline project replaced approximately 55 miles of Line 100A, between Ovid City Gate in Clinton County and Chelsea Interchange in Washtenaw County. The project addresses integrity and deliverability concerns with the current pipeline and increase the diameter of the pipeline, from 20-inch to 36-inch within existing pipeline right-of-way ("ROW"). Major construction commenced in 2023 and concluded in 2024. Site restoration and environmental monitoring will continue beyond 2025.

Q. Please explain the RCV and RMV expenditures.

A. The installation of these devices is consistent with federal and state guidance. In the SEA, at page 200, the Commission recommended that "utilities continue to conduct analyses to evaluate increasing the number of remote shutoff valve systems in high consequence areas to minimize the impact during emergency events." Further, in April 2022, PHMSA promulgated regulations requiring operators to install automatic shutoff valves or RCVs and RMVs on new and entirely replaced transmission pipelines as a means of rupture detection and mitigation. Recognizing the significance of these devices, the Company has developed a comprehensive RCV installation plan as outlined in the NGDP, Exhibit A-30 (TMB-1), Section IV.C.2. The Company installs RCVs and RMVs on complete pipeline replacements, such as Line 100A (Mid-Michigan Pipeline Project). The costs for those RCVs and RMVs were included in the project expenditures. RCVs are also being installed to reduce response time on certain Class 4 locations and Class 3 locations within HCAs to improve public safety. The costs for those RCVs are included in the Deliverability Base Pipeline Program. The valves do not prevent failures from occurring but are intended to minimize the time gas flows after a failure and any subsequent fire that would prevent emergency first responders from entering the impacted area. RCVs and RMVs reduce the loss of natural gas should a pipeline failure occur and can be operated remotely by Gas Control for potential reduction in response times. RCVs and RMVs will not close inadvertently due to load changes, purging activities, or failure of sensing lines. In 2024, the Company installed 23 RCVs and is projected to install 17 in 2025, 16 in 2026, and 16 in 2027. These installation numbers represent all RCVs installed in all programs and projects. The capital expenditures for RCVs installed as part of the TED-I program

outside of major pipeline projects were $2,038,000 in 2024, and are projected to be $5,117,000 in 2025, $11,701,000 for the 10 months ending October 31, 2026, and $13,368,000 for the 12 months ending October 31, 2027. In 2025, RMVs were installed with the Mid-Michigan Pipeline and thus included in the expenditures for that project.

Q. Please explain the reason for the variability in expenditures for RCVs from 2024 to the test year.

A. As explained above, RCVs are also installed in other programs and projects. In 2024, a majority of the RCVs installed were either on the Mid-Michigan Pipeline or in the Deliverability Base Pipeline program. In 2025, many of the RCVs are being installed alongside other projects so some of the costs are shared with those projects. In 2026 and 2027, the majority of RCVs will be stand-alone projects with most of the cost being charged to the TED-I program.

Q. Please explain the PLD expenditures.

A. The PLD installation locations were selected pursuant to 49 CFR 192.619 and 49 CFR 192.195. As modification of the Consumers Energy pipeline system occurred due to class location changes, system additions, and purchases over the years, the MAOPs were impacted. Public safety risk is reduced when PLD equipment is installed, which is reliable and adequately protects against potential over pressurization. In 2024, the Company completed a comprehensive program to install PLDs with the installation of a PLD as part of the Mid-Michigan Pipeline Project. The Company continually analyzes the pipeline system for areas where the operational safety of the system should be enhanced.

Q. What other projects are included in the TED-I Program?

A. Also included in this program are projects that are related to other TED-I projects that are not RCVs, RMVs, nor PLDs. These include valve site junctions so the Company can use the existing pipelines for outage or other emergent situations and final restoration, property acquisition, and closure of environmental permit requirements related to completed pipeline and other major projects. As part of this program the Company is planning a transmission interconnect with DTE Gas Company in 2025 that will improve overall system resiliency to benefit customers of both utilities and in 2027, a pipeline relocation project on line 300.

Q. Please provide further information concerning the transmission interconnect project.

A. The transmission interconnect project, which the Company calls the Oakland Resilience Interconnect, is a project the Company is coordinating with DTE Gas and is for the benefit of both utilities' customers. This project is part of the Company's response to Natural Gas Recommendations for Mitigating Risk, found within the SEA. Once in service, this facility will allow either utility to provide natural gas to the other utility to address an emergency, as defined in 18 CFR 284.262, that poses a risk to the ability to provide natural gas service for customers in the state of Michigan. Natural gas supply through this interconnect in response to an emergency will be provided in a best-efforts manner. DTE Gas and Consumers Energy received a certificate of necessity to construct and operate the interconnect through an Act 9 filing on October 10, 2024 in Case No. U-21510. The Company's capital expenditures for this project were $1,339,000 in 2024, and are projected to be $4,510,000 in 2025, $264,000 for the 10 months ending October 31, 2026, and $3,000 for the 12 months ending October 31, 2027.

Q. Please provide further information concerning the line 300 reroute project.

A. The line 300 reroute project will remove a navigable waterway crossing, eliminate the need for identified integrity issues under the navigable waterway and eliminate the need to upgrade the existing pipe to class 3 piping due to population increase. Conducting this project will also allow the Company to avoid the construction constraints of working around an existing eagle's nest and will add resiliency to the transmission system in the area by tying into the existing Line 2800 and Line 250. The Company plans to file for a certificate of necessity to construct and operate the reroute through an Act 9 filing in early 2026. The Company's capital expenditures for this project were $0 in 2024, and are projected to be $241,000 in 2025, $1,054,000 for the 10 months ending October 31, 2026, and $10,647,000 for the 12 months ending October 31, 2027.,000 for the 12 months ending October 31, 2027.

B. DELIVERABILITY BASE FIELD MEASUREMENT PROGRAM

Q. Please describe the Deliverability Base Field Measurement Program investments.

A. The Deliverability Base Field Measurement Program is essential to ensure accurate gas quality and measurement. Exhibit A-75 (MPG-5), line 3, identifies the total capital expenditures for the Deliverability Base Field Measurement Program. The capital expenditures for this program were $5,704,000 in 2024, and are projected to be $9,150,000 in 2025, $9,846,000 for the 10 months ending October 31, 2026, and $25,371,000 for the 12 months ending October 31, 2027. Field measurement projects are associated with remote gas measurement equipment monitoring, gas volume calculations, gas transmission metering, Transport Metering Stations ("TMS"), Interstate Interconnection sites, gas quality improvement and processing, gas sampling systems, and other ancillary equipment.

These investments directly impact the Company's ability to conform to the MPSC technical standard requirements concerning natural gas quality, measurement accuracy, and Lost and Unaccounted For ("LAUF") gas. Additional projects in this program include measurement equipment upgrades that allow for improvements in American Gas Association volume calculation algorithms, fuel usage report automation, and transducer replacements. The placement of measurement facilities and equipment at appropriate locations can assist in reducing LAUF gas volumes and improve gas quality monitoring. For additional information on LAUF, please see the direct testimony of Company witness Timothy K. Joyce.

Q. Are there any other activities involved in the Deliverability Base Field Measurement Program?

A. Yes. The Deliverability Base Field Measurement Program also involves the installation of meter facilities to validate delivery volumes from interstate suppliers. These projects help improve measurement accuracy of volumes received. The Company is also installing gas quality and gas processing equipment such as chromatographs and water and hydrogen sulfide analyzers to verify gas received from suppliers or withdrawn from storage meets the requirements of pipeline quality gas in accordance with regulatory requirements. The Company is also planning to construct the Williamston Transmission Meter Proving, Testing, and Development Station in the test year. This station will allow a testing environment for gas transmission measurement technology to comply with API-1164, which requires any new protocol, application, or software proposed to be added to the Supervisory Control and Data Acquisition ("SCADA") network should be run in a test-bed

or development environment to evaluate the potential for impairing the performance of the SCADA system.

Major projects included in this filing include:

- Lahser Ultrasonic Meter ("USM") Installation. Project year 2025;
- Perry Morrice USM Installation. Project year 2025;
- Laingsburg LN 400 Meter Installation. Project year 2025;
- Grand Blanc LN 500 Meter Installation. Project year 2025;
- Northville Line 1200A Meter Installation. Project year 2026;
- SCADA Gas Quality Hydraulic Modeling. Project year 2026;
- Goodison City Gate Meter Replacement. Project year 2026;
- Williamston City Gate Chromatograph Upgrade. Project year 2026;
- Jackson Park RD Chromatograph Install. Project year 2027;
- Eureka City Gate Meter Upgrade. Project year 2027;
- Winterfield 12 Chromatograph Upgrade. Project year 2027;
- Williamston Transmission Meter Proving Station. Project year 2027;
- MCV Dow Meter Replacement. Project year 2027;
- Charlotte City Gate Meter Replacement. Project year 2027;
- Rose Center City Gate Meter Replacement. Project year 2027; and
- White Pigeon LN 1800 Meter Replacement. Project year 2027.

Q. Please describe the Williamston Transmission Meter Proving Station Project.

A. This station will allow a testing environment for gas transmission measurement technology to comply with API-1164, which requires any new protocol, application, or software proposed to be added to the SCADA network should be run in a test-bed or development environment to evaluate the potential for impairing the performance of the SCADA system.

Further, the Transportation Security Administration ("TSA") requires the management of software/credentials on measurement devices and a physical testing laboratory with functional versions of all equipment subject to hardware/firmware upgrades to enable testing/validation of firmware in a controlled/non-production environment. The Company currently does not have a test environment for transmission meters or gas analytical equipment.

C. DELIVERABILITY BASE PIPELINE PROGRAM

Q. Please explain the Deliverability Base Pipeline expenditures.

A. The Deliverability Base Pipeline expenditures support maintaining operations in accordance with the Michigan Gas Safety Standards ("MGSS"). Types of projects include: (i) the replacement of valves, and if necessary, the associated valve operators, when inspection determines that the valves no longer perform as needed, which may mean valves no longer turn or they may not fully seal off the flow of gas (MGSS Rules 192.145, 192.150, 192.179); (ii) the replacement of piping due to MAOP revisions identified as a result of class location changes (49 CFR 192.5 and 192.611); (iii) construction of new sectionalizing valves and tap valves to improve system deliverability, and help meet valve spacing requirements defined by 49 CFR 192.179; (iv) reconfiguration of tap piping (i.e. laterals) and associated valving upstream of city gate facilities as companion projects to city gate rebuilds; and (v) installation or retirement of pipeline taps to TMS facilities being attached to the Company's system. Exhibit A-75 (MPG-5), line 4, identifies the total capital expenditures for the Deliverability Base Pipeline Program. The capital expenditures for this program were $18,844,000 in 2024, and are projected to be

$22,843,000 in 2025, $19,841,000 for the 10 months ending October 31, 2026, and $24,649,000 for the 12 months ending October 31, 2027.

Q. Please explain how the Company is made aware of the projects in the Deliverability Base Pipeline program.

A. The Company conducts annual aerial surveys to enhance the GIS data set to provide more accurate building data along with more accurate occupancy data. There are a number of class location changes indicated by the annual aerial survey. Per 49 CFR 192.611, these are segments of pipeline that need to be replaced within 24 months of the change in class location in order to operate the pipeline under the published MAOP. These segment replacements are included in the projection for this program.

Secondly, the Company conducts annual system wide valve spacing studies that review each Transmission Pipeline segment against the current class location to determine if the pipeline segments are in compliance with 49 CFR 192.179. These studies identify the valve(s) required to be compliant with 49 CFR 192.179.

D. REGULATOR STATIONS - DISTRIBUTION

Q. Please describe the regulator station investments.

A. Distribution regulator stations reduce pressure supplied from a higher pressure distribution system to another with a lower pressure distribution system. For example, a regulator station could be used to supply a medium pressure (60 psig MAOP) system from a high pressure system (400 psig MAOP). Exhibit A-75 (MPG-5), line 5, identifies the total capital expenditures for the Regulator Station Program. The capital expenditures for this program were $50,514,000 in 2024, and are projected to be $49,264,000 in 2025, $43,351,000 for the 10 months ending October 31, 2026, and $47,595,000 for the

12 months ending October 31, 2027. The scope of the expenditures in this program is aimed at maintaining the integrity of 637 regulator stations. Additional benefit is realized by the modernization of the fleet of regulator stations through the reduction of unintended methane emissions. The Company's regulator station installation plan is further described in Section IV.D.6 of the Company's NGDP, Exhibit A-30 (TMB-1). The Company currently has 94 odorizers, which are considered distribution assets, funded as part of this program as well, despite the fact that they are often co-located at city gate sites. These odorizers add odor to the downstream gas systems, which is a critical safety element and is required by code (49 CFR 192.625). Planned projects, location, and project type are listed below. This program also funds emergent issues, as well as SCADA installations, retrofitting of existing gas heaters with modern burner management systems ("BMS"), installation of slam-shut overpressure protection devices and electrical improvements at regulator stations. Investments being made to regulator stations improve employee safety and ergonomics. Regulator stations located in pits may be difficult to enter and pose risk for operators. These projects are selected based on discussions with subject matter experts and major stakeholders, which include Operations and Engineering, but are also based on asset performance and age of the facility. The major projects in this filing include:

2024

- 21 Mile & Romeo Plank Rd. (Rebuild – Macomb Twp)
- Selfridge – Rosso Hwy. (Rebuild – Mt. Clemens)
- Ithaca Reg Station (Rebuild – Ithaca)
- State & Hemmeter (Rebuild – Saginaw)
- Grand River & Mechanic (Rebuild – Williamston)
- Lake Lansing & Rutherford (Rebuild – East Lansing)

- Attica & Lake Pleasant (Rebuild – Attica Twp)
- Plainwell Valve Site Odorizer (Rebuild – Plainwell)

2025

- Stoney Corners and Burkett (New Station - McBain)
- Hotchkiss & M-84 (Rebuild – Bay City)
- Poseyville (Rebuild – Midland)
- Center & Boltwood (Rebuild – Hastings)
- Sheridan & Lansing (Rebuild – Gaines Twp.)
- Silver Lake & Dixie (Rebuild – Waterford Twp.)
- Gardner & 7 Mile (Heater Install/Partial Rebuild – Northville)
- Clintonia Rd. Valve Site Odorizer (Rebuild – Danby Twp.)
- Joslyn & Waldon (Heater Replacement – Orion)
- Genesee St (Heater Replacement – Lapeer)
- Maple & Coolidge (Heater Replacement – Royal Oak)

2026

- Cedar & Josephine (Rebuild – Mason)
- Sohn Rd (Rebuild – Vassar)
- Wessen St (Rebuild – Pontiac)
- Leroy St & 6th (Rebuild – Flint)
- Pinconning & 5th (Rebuild – Pinconning)
- Clinton River & Kleino (Heater Replacement – Sterling Heights)
- James & Alcott (Rebuild – Kalamazoo)
- 12 Mile & Greenfield (Rebuild – Southfield)

- Miller & Parkdale (Rebuild – Rochester)
- Augusta (Rebuild – Augusta)
- Dow Corning (Rebuild – Midland)
- Pitcher & Lovell (Rebuild – Kalamazoo)
- Central Odorant Operations Hub (Odorant storage facility – Mid-Michigan).

2027

- Corunna Ave. Regulator St. (Rebuild – Corunna)
- Fisher & Kiesel (Rebuild – Bay City)
- Hotchkiss & Mackinaw (Rebuild – Bay City)
- Mt Hope & Bedford (Rebuild – Lansing)
- Vernon (Rebuild – Vernon)
- Prospect & Ballenger (Rebuild – Flint)
- Unadilla & Mann (Rebuild – Pinckney)
- Jolly & Logan (Rebuild – Lansing)
- Shiawassee St (Rebuild – Owosso)
- Beaver & Old Kawkawlin (Rebuild – Kawkawlin)
- Maple Dale VS (Odorizer - Jackson)
- Hickory Corners (Rebuild – Hickory)
- Liberty & Summit (Rebuild - Muir)
- Eaton & M50 (Rebuild - Lake Odessa)
- Hwy 81 & Graf (Rebuild - Caro)

E. T&S CITY GATES

Q. Please further describe the T&S City Gate investments.

A. City gate stations are the delineation point between the transmission and distribution systems. Gas pressure is reduced to distribution pressure, often 400 psig or less, through pressure regulation. Over-pressure protection, including relief valves, monitor regulators, or emergency shutdown valves ("ESD") are installed at these locations to ensure a safe limit to pressure in the distribution system exists. Odorizer stations are often installed at city gates; although these are distribution assets, they are co-located due to federal code requirements (49 CFR 192.625) to odorize distribution systems. Odorizers are funded in the Regulator Station Program unless they are installed as part of a complete city gate rebuild. Exhibit A-75 (MPG-5), line 6, identifies the total capital expenditures for the T&S City Gate Program. The capital expenditures for this program were $52,695,000 in 2024, and are projected to be $45,293,000 in 2025, $51,913,000 for the 10 months ending October 31, 2026, and $48,534,000 for the 12 months ending October 31, 2027. The scope of the city gate program allows for the rebuilding or other improvements to existing city gate facilities to ensure system reliability and in response to increased customer load demands. City gate stations allow for certain system safety controls during critical system incidents. City gates can have set pressures lowered or increased to restrict flow into the distribution system, allowing for a greater degree of security, redundancy, and resiliency. Valves, including installation of over pressure protection such as an ESD, can also be closed to restrict delivery as a mitigation if serious situations develop and to prevent an MAOP exceedance. The Company has developed a city gate work plan as outlined in Section IV.C.2 of the Company's NGDP, Exhibit A-30 (TMB-1). As identified in the NGDP, many city gates are 40 to 50 years old. This makes it challenging to acquire parts

and rebuild material for the critical equipment located within the city gate. These projects are selected based on discussions with subject matter experts and major stakeholders, which include Operations and Engineering, but are also based on asset performance and age of the facility. This program also includes expenditures for heater and separator reliability projects. Additionally, this program funds remote terminal units ("RTU") and electrical improvements at transmission sites, which include replacing or updating RTUs, safety measures associated with lighting, gas detection, or security, and other modernization electrical and instrumentation efforts. Obsolete programming logic controllers also require replacement due to being unsupported and reaching the end of their manufactured recommended life. Many of the city gates contain this legacy equipment which will need to be updated to modern equipment to prevent downtime in the event of a failure. As emergent projects arise, priority is given to the most important to help ensure safety and reliability, which can result in deferring a planned project. The major city gate projects in this filing include:

2024

- Excelsior City Gate (Pipe install and City Gate Retirement - Excelsior)
- Orion City Gate (Rebuild - Lake Orion)
- Leonard-Lakeville City Gate (Rebuild – Leonard)
- Blissfield Panhandle Eastern Pipeline ("PEPL") City Gate (Rebuild - Blissfield)
- Dorr City Gate (Partial Rebuild & Modernization - Dorr)
- Jackson Park Rd City Gate (ESD Installation & Electrical Upgrade) - Jackson)
- Laingsburg City Gate (ESD Installation & Electrical Upgrade - Laingsburg)

- Galesburg City Gate (Rebuild – Galesburg)

2025

- Bancroft City Gate (Rebuild - Morrice)
- Lahser City Gate (ESD Installation & Electrical Upgrade - Beverly Hills)
- Flint Torrey City Gate (Rebuild - Flint)
- Macomb City Gate (ESD Installation & Electrical Upgrade - Macomb)
- Hanover Horton City Gate (Rebuild)
- Jackson Hart PEPL City Gate (Rebuild)
- Highland City Gate and odorizer (Rebuild)
- Overisel Compression (Electrical Upgrade)

2026

- Novi-Wixom City Gate (ESD Installation and modernization)
- Spring Arbor PEPL City Gate (Rebuild)
- Flint CG Irish Rd City Gate
- Dixie Waterford (ESD Installation & Electrical Upgrade)
- Climax City Gate (Rebuild)
- South Lyon – Whitmore Lake City Gate (Rebuild)
- Mendon Leonidas City Gate (Rebuild)
- Northville Compression (Electrical Upgrade)

2027

- Charlotte City Gate (ESD Installation and modernization)
- Shepherd City Gate (Rebuild)
- Schoolcraft City Gate (Rebuild)

- Middleville-Caldeonia City Gate (ESD Installation and modernization)
- Rose Center City Gate (ESD Installation and modernization)
- Newburg City Gate (ESD Installation and modernization)
- Sheldon Rd. City Gate (ESD Installation and modernization)
- Muskegon River Compressor Station (Electrical Upgrade)

F. MISCELLANEOUS TRANSMISSION AND COMPRESSION

Q. Please explain the Miscellaneous Transmission and Compression Expenditures shown on line 2 of Exhibit A-75 (MPG-5).

A. This line represents legacy expenditures in programs no longer used, and final settlement costs for projects as they are closed out. In 2024 and 2025, the expenditures are for legacy program costs related to measurement and regulation projects.

Q. Are there contingency costs included in these capital expenditures?

A. No. Although it is a common and prudent practice to include project contingency costs for these types of projects, and is recognized as an accepted Project Management practice, especially when contingency covers the expansion of work approved, contingency costs have not been included in these projections. While contingency costs are a real item in a project estimate, like any other cost, and should be included in estimates of major projects, due to past Commission orders concerning the inclusion of project contingency, the Company has not included those costs in this filing.

Q. Please describe Exhibit A-76 (MPG-6).

A. Exhibit A-76 (MPG-6) shows the historical actual capital expenditures for each program that I am sponsoring for the years 2020 through 2024.

Q. Please describe Exhibit A-77 (MPG-7).

A. Exhibit A-77 (MPG-7), in accordance with Attachment 11 to the filing requirements prescribed in Case No. U-18238, provides the variances in the capital program amounts for the distribution and transmission programs, which I sponsored in the Company's most recent general gas rate case, Case No. U-21806.

Q. Can you explain why columns (d), (e), and (f) of Exhibit A-77 (MPG-7), do not contain any data?

A. Yes, the information for column (d), the "Actual Spending in the Test Year," cannot be completed as the test year in Case No. U-21806, which was the 12 months ending October 31, 2026, is a time period that has yet to transpire as of the filing of this case. Since there is no data to display in column (d), the information for columns (e) and (f), which seek information concerning the variances from (c) and (d), cannot be completed at this time.

IV. FLEET EXPANSION PURCHASES

Q. Is the Company planning fleet purchases that support the maintenance of a safe, reliable, and affordable distribution and transmission system for its customers?

A. Yes. Company witness Joshua J. Judy includes in his direct testimony and exhibits a number of fleet expansion purchases that are critically important in supporting the gas functions within the Company. The expenditures for these purchases are contained within the exhibits sponsored by Mr. Judy. The expansion purchases for the areas which I am sponsoring are described below:

Sandblast Truck and Skid –

- The Company has been performing and plans to continue recoating its transmission pipelines as part of its corrosion control program. Pipelines are required to have coating applied at installation, however as they age, the

coatings can fail and additional cathodic protection will likely be necessary in order to protect the pipeline steel from corrosion. In isolated areas where coatings have failed, excavating the pipeline and repairing the coating is often the most cost effective way to improve the corrosion control on the pipe. In order to properly inspect the pipeline and apply new coating, sand blasting the pipe surface is necessary in order to clean the pipe and provide a sufficient surface for the coating to adhere.

- The Transmission and Storage Southwest Area Pipeline group has been performing recoat work for the Company the past two years on Line 1200. In doing so they have been borrowing a sandblast truck from the Macomb Distribution group. The amount of work where the sandblast truck is used will continue for the next several years, increasing the need to add this vehicle to the fleet. Not having a sandblast truck in this area has limited the amount of work the Southwest area pipeline group can do in-house. Company crews have histroically been able to do this work $30-$50/foot cheaper than contract crews. This equipment is used not only for recoating of pipe, but also in the inspection of ILI excavations as well as during installation of new pipe. Procurement of this vehicle and equipment will allow the company to do more work in-house and continue to reduce costs while increasing the safety and reliability of the system.

- Additionally, the Company plans to configure the sandblasting equipment in a skid which can be placed on a flatbed truck, allowing the skid to be removed when not needed, increasing equipment flexibility. This will allow the truck to serve multiple purposes such as sandblasing and coating, site restoration or transportation of materials needed for maintenance of the pipeline.

Welding Vehicles –

- The Company has been increasing and plans to continue increasing the amount of welding performed by certified welders within the Company. The use of internal welders positions the Company to perform construction and maintenance with qualified welders that know the system, internal processes and procedures, and that are best positioned to perform quality, and timely work, and at lower costs compared to contracted support.

- Certified welding requires skill, talent, and abilities. Recognizing the current and future state of the certified welding workforce, the procurement of six additional welding vehicles will allow the company to develop succession planning to certify and skill additional welders without reducing the capacity to perform work internally and continue to reduce costs while increasing the safety and reliability of the system

Q. Can you summarize your direct testimony?

A. Yes. The three programs described in my direct testimony span the major areas of Gas Transmission and Distribution operations. These programs eliminate depth of cover issues and physical conflicts with other utilities to ensure continued safe operation, ensure MAOP verification and remediation of the Company's transmission pipelines, and address needed increases in transmission pipeline capacity, all of which help to ensure adequate capacity and deliverability throughout the system. These investments will help the Company meet its objectives of supplying safe, reliable, affordable, and clean energy to customers as described in the NGDP.

Q. Does this complete your direct testimony?

A. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of natural gas and for other relief.	)))))	Case No. U-21981

EXHIBITS

OF

MICHAEL P. GRIFFIN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Regulatory Compliance O&M Expenses
($000)

Case No.: U-21981
Exhibit No.: A-72 (MPG-1)
Page: 1 of 3
Witness: MPGriffin
Date: December 2025

Line No.		(a) Description	(b) Actual 12-Mos Ended 12/31/2024	(c) Projected 12-Mos Ending 10/31/2027
1		**MAOP Transmission**	**$ 3,025**	**$ 2,654**
	11%	Labor	324	284
	4%	Material	125	109
	85%	Contractor	2,568	2,252
	1%	Non-Labor Overheads	33	29
	-1%	Non-Labor Other	(25)	(21)
2		**Corrosion Control - Transmission**	**1,169**	**2,261**
	13%	Labor	156	301
	5%	Material	54	105
	76%	Contractor	891	1,724
	3%	Non-Labor Overheads	36	70
	3%	Non-Labor Other	32	61
3		**Pipeline Integrity - TOD**	**889**	**913**
	7%	Labor	63	65
	9%	Material	80	82
	81%	Contractor	718	737
	2%	Non-Labor Overheads	18	19
	1%	Non-Labor Other	10	10
4		**Pipeline Integrity - Transmission**	**18,444**	**26,351**
	5%	Labor	867	1,239
	6%	Material	1,016	1,452
	86%	Contractor	15,897	22,711
	3%	Non-Labor Overheads	546	781
	1%	Non-Labor Other	118	169
5		**Total**	**$ 23,527**	**$ 32,179**
		Labor	1,409	1,888
		Material	1,275	1,748
		Contractor	20,073	27,425
		Non-Labor Overheads	634	899
		Non-Labor Other	135	219

Notes: % breakdown for cost elements is based on 2024 actual
Test Year is based on 2026 and 2027 monthly cashflow

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
Regulatory Compliance O&M Expenses
($000)

Case No.: U-21981
Exhibit No.: A-72 (MPG-1)
Page: 2 of 3
Witness: MPGriffin
Date: December 2025

Line No.	(a) Description	(b) Actual 12 Mos Ended 12/31/2024	(c) Inflation Impacts on Historical Costs Test Year (b) * Compounded Inflation Rate	(d) Scope/ Cost Increases Net of Productivity Gains	(e) Projected O&M 12 Mos Ending 10/31/2027 (b) + (c) + (d)
1	MAOP Transmission	$ 3,025	$ 220	$ (592)	$ 2,654
2	Corrosion Control - Transmission	1,169	85	1,007	2,261
3	Pipeline Integrity - TOD	889	65	(41)	913
4	Pipeline Integrity - Transmission	18,444	1,344	6,563	26,351
5	**Total**	**$ 23,527**	**$ 1,714**	**$ 6,938**	**$ 32,179**

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Historical Actual Regulatory Compliance Expenses
($000)

Case No.: U-21981
Exhibit No.: A-72 (MPG-1)
Page: 3 of 3
Witness: MPGriffin
Date: December 2025

Line No.	(a) Description	(b) 2020 Actual	(c) 2021 Actual	(d) 2022 Actual	(e) 2023 Actual	(f) 2024 Actual
1	**MAOP Transmission**	**455**	**1,004**	**1,311**	**1,187**	**3,025**
	Labor	7	133	118	130	324
	Material	-	853	288	58	125
	Contractor	410	6	432	977	2,568
	Non-Labor Overheads	3	11	4	18	33
	Non-Labor Other	35	(0)	469	4	(25)
2	**Corrosion Control - Transmission**	**638**	**1,076**	**1,978**	**947**	**1,169**
	Labor	12	77	117	235	156
	Material	249	4	14	26	54
	Contractor	375	969	1,674	615	891
	Non-Labor Overheads	2	23	36	71	36
	Non-Labor Other	-	4	137	0	32
3	**Pipeline Integrity - TOD**	**2,980**	**839**	**973**	**812**	**889**
	Labor	93	26	28	58	63
	Material	211	53	51	62	80
	Contractor	2,651	753	886	671	718
	Non-Labor Overheads	17	4	4	8	18
	Non-Labor Other	8	2	3	13	10
4	**Pipeline Integrity - Transmission**	**21,344**	**26,894**	**19,370**	**17,089**	**18,444**
	Labor	1,242	1,682	1,084	1,950	867
	Material	821	347	550	245	1,016
	Contractor	18,891	24,400	14,969	14,178	15,897
	Non-Labor Overheads	300	489	404	614	546
	Non-Labor Other	90	(25)	2,363	101	118
5	**Total Regulatory Compliance O&M Expenses**	**$ 25,416**	**$ 29,812**	**$ 23,631**	**$ 20,034**	**$ 23,527**
	Labor	1,353	1,919	1,348	2,373	1,409
	Material	1,281	1,256	902	391	1,275
	Contractor	22,327	26,129	17,960	16,440	20,073
	Non-Labor Overheads	322	528	449	712	634
	Non-Labor Other	133	(20)	2,972	118	135

Schedule: B-5.3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures Transmission & Distribution Plant
($000)

Case No.: U-21981
Exhibit No.: A-12 (MPG-2)
Schedule: B-5.3
Page: 1 of 1
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	Projected Bridge Period			Projected Test Year
Line No	Description	12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
1	Asset Relocation	17,019	24,867	24,656	49,523	9,690
2	Regulatory Compliance	33,968	29,561	22,609	52,170	46,471
3	Capacity/Deliverability	266,547	144,184	138,386	282,570	170,902
4	Total Capital	317,534	198,611	185,651	384,262	227,064

		Projected			
		10 Mos Ending 10/31/2025	12 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	34 Mos Ending 10/31/2027
5	Asset Relocation	19,065	30,458	9,690	59,213
6	Regulatory Compliance	28,772	23,398	46,471	98,641
7	Capacity/Deliverability	133,630	148,940	170,902	453,472
8	Total Capital	181,467	202,795	227,064	611,326

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Gas Transmission Capital Expenditures
Asset Relocation Transmission Program
($000)

Case No.: U-21981
Exhibit No.: A-73 (MPG-3)
Page: 1 of 1
Witness: MPGriffin
Date: December 2025

Line No	Description	Historical Year 12 Mos Ended 12/31/2024	Projected Bridge Year 12 Mos Ending 12/31/2025	Projected Bridge Year 10 Mos Ending 10/31/2026	Projected Bridge Year 22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027	Source
	(a)	(b)	(c)	(d)	(e)	(f)	
1	**Asset Relocation**	**17,019**	**24,867**	**24,656**	**49,523**	**9,690**	WP-MPG-1
	Labor	286	422	418	840	164	
	Capitalized E&S	4,071	5,898	5,848	11,746	2,298	
	Materials	1,599	2,837	2,813	5,650	1,105	
	Contractor	9,347	13,217	13,105	26,322	5,150	
	Non-Labor Overhead	39	53	52	105	21	
	Non-Labor Other	1,676	2,441	2,420	4,860	951	
	Contingency		0	0	0	0	
2	**Total Capital**	**17,019**	**24,867**	**24,656**	**49,523**	**9,690**	
	Labor	286	422	418	840	164	
	Capitalized E&S	4,071	5,898	5,848	11,746	2,298	
	Materials	1,599	2,837	2,813	5,650	1,105	
	Contractor	9,347	13,217	13,105	26,322	5,150	
	Non-Labor Overhead	39	53	52	105	21	
	Non-Labor Other	1,676	2,441	2,420	4,860	951	
	Contingency	0	0	0	0	0	

		Projected 10 Mos Ending 10/31/2025	Projected 12 Mos Ending 10/31/2026	Projected 12 Mos Ending 10/31/2027	Projected 34 Mos Ending 10/31/2027
3	**Asset Relocation**	**19,065**	**30,458**	**9,690**	**59,213**
	Labor	323	517	164	1,004
	Capitalized E&S	4,522	7,224	2,298	14,044
	Materials	2,175	3,475	1,105	6,755
	Contractor	10,133	16,189	5,150	31,472
	Non-Labor Overhead	40	65	21	126
	Non-Labor Other	1,871	2,989	951	5,811
	Contingency	0	0	0	0
4	**Total Capital**	**19,065**	**30,458**	**9,690**	**59,213**
	Labor	323	517	164	1,004
	Capitalized E&S	4,522	7,224	2,298	14,044
	Materials	2,175	3,475	1,105	6,755
	Contractor	10,133	16,189	5,150	31,472
	Non-Labor Overhead	40	65	21	126
	Non-Labor Other	1,871	2,989	951	5,811
	Contingency	0	0	0	0

Unless noted otherwise, capital "other" costs include expenses such as AFUDC, fleet transportation, pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits,

This exhibit demonstrates the projected break down for each program into the cost components shown above. The 2024 amounts are the actual amounts. The cost component projections for 2025 and beyond are based upon the 2024-2025 18 month (Jan 2024 - Jun 2025) average actual percentage of the breakdown of these components in these programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes. Cost confidence levels were not used to develop these cost projections.

Consumers Energy Company
Actual and Projected Gas Transmission Capital Expenditures
Asset Relocation Transmission Program
($000)

Case No.: U-21981
Exhibit No.: A-73 (MPG-3)
Page: 2 of 2
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Year**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2024**	**12 Mos Ending 12/31/2025**	**10 Mos Ending 10/31/2026**	**22 Mos Ending 10/31/2026**	**12 Mos Ending 10/31/2027**
					[Col. (c) + (d)]	
	Projects Over $5 Million (with spend in test year)					
1	KZO-1200A Wetland BR017 Ln Lwrng	25	29	6,922	6,951	637
2	KZO-1200A Townline Rd Ln Lwrng	14	43	9,753	9,796	839
3	OVS-1100 Rabbit River Ln Lwrng	93	5,442	141	5,584	10
4	STC-Line 1700 Clinton River Line Lowe	231	10,444	2,297	12,741	164
	Projects Under $5 Million					
5	Asset Relocation	16,657	8,908	5,543	14,451	8,039
6	**Total Capital**	**17,019**	**24,867**	**24,656**	**49,523**	**9,690**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Gas Transmission Capital Expenditures
Regulatory Compliance Program
($000)

Case No.: U-21981
Exhibit No.: A-74 (MPG-4)
Page: 1 of 3
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	
		Historical Year	Projected Bridge Year			Projected Test Year	
Line No	Description	12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	Source
1	**Pipeline Integrity - (Transmission)**	**21,978**	**14,611**	**7,753**	**22,364**	**23,247**	WP-MPG-10, 12, 14, 16
	Labor	1,932	1,111	590	1,701	1,768	
	Capitalized E&S	4,883	3,063	1,625	4,688	4,873	
	Materials	400	596	316	912	948	
	Contractor	12,277	8,311	4,410	12,721	13,223	
	Non-Labor Overhead	220	133	71	204	212	
	Non-Labor Other	2,266	1,397	741	2,139	2,223	
	Contingency				0		
2	**Pipeline Integrity- Transmission Operated by Distribution (TOD)**	**5,904**	**6,624**	**8,506**	**15,130**	**15,944**	WP-MPG-9, 11,13, 15
	Labor	498	555	713	1,268	1,336	
	Capitalized E&S	1,352	1,497	1,923	3,420	3,604	
	Materials	907	1,009	1,296	2,305	2,429	
	Contractor	2,088	2,368	3,041	5,409	5,700	
	Non-Labor Overhead	36	37	47	84	89	
	Non-Labor Other	1,023	1,157	1,486	2,643	2,785	
	Contingency				0		
3	**Cathodic Compression, Storage & Pipeline**	**5,983**	**6,813**	**5,964**	**12,777**	**6,539**	WP-MPG-8
	Labor	217	251	220	471	241	
	Capitalized E&S	1,258	1,503	1,316	2,819	1,442	
	Materials	183	156	137	293	150	
	Contractor	3,723	4,174	3,654	7,828	4,006	
	Non-Labor Overhead	16	19	16	35	18	
	Non-Labor Other	587	710	621	1,331	681	
	Contingency				0		
4	**MAOP Compliance Pipeline**	**104**	**1,513**	**386**	**1,898**	**741**	WP-MPG-2
	Labor	(7)	68	13	82	32	
	Capitalized E&S	62	334	84	419	164	
	Materials	(125)	85	93	178	172	
	Contractor	109	891	146	1,037	271	
	Non-Labor Overhead	(7)	5	0	5	6	
	Non-Labor Other	72	129	49	178	96	
	Contingency				0		
5	**Total Capital**	**33,968**	**29,561**	**22,609**	**52,170**	**46,471**	
	Labor	2,640	1,986	1,536	3,521	3,377	
	Capitalized E&S	7,553	6,398	4,948	11,346	10,085	
	Materials	1,366	1,847	1,842	3,689	3,700	
	Contractor	18,197	15,745	11,251	26,996	23,201	
	Non-Labor Overhead	264	193	134	328	324	
	Non-Labor Other	3,948	3,393	2,897	6,290	5,785	
	Contingency	0	0	0	0	0	

Unless noted otherwise, capital "other" costs include expenses such as AFUDC, fleet transportation, pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, and

This exhibit demonstrates the projected break down for each program into the cost components shown above. The 2024 amounts are the actual amounts. The cost component projections for 2025 and beyond are based upon the 2024-2025 18 month (Jan 2024 - Jun 2025) average actual percentage of the breakdown of these components in these programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes. Cost confidence levels were not used to develop these cost projections.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Gas Transmission Capital Expenditures
Regulatory Compliance Program
($000)

Case No.: U-21981
Exhibit No.: A-74 (MPG-4)
Page: 2 of 3
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)
		Projected			
		10 Mos Ending 10/31/2025	12 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	34 Mos Ending 10/31/2027
6	**Pipeline Integrity - (Transmission)**	**14,597**	**7,768**	**23,247**	**45,611**
	Labor	1,110	591	1,768	3,469
	Capitalized E&S	3,060	1,628	4,873	9,562
	Materials	595	317	948	1,860
	Contractor	8,303	4,418	13,223	25,945
	Non-Labor Overhead	133	71	212	415
	Non-Labor Other	1,396	743	2,223	4,362
	Contingency	0	0	0	0
7	**Pipeline Integrity- Transmission Operated by I**	**6,201**	**8,930**	**15,944**	**31,075**
	Labor	520	748	1,336	2,604
	Capitalized E&S	1,402	2,019	3,604	7,025
	Materials	945	1,361	2,429	4,735
	Contractor	2,217	3,192	5,700	11,109
	Non-Labor Overhead	35	50	89	173
	Non-Labor Other	1,083	1,560	2,785	5,429
	Contingency	0	0	0	0
8	**Cathodic Compression, Storage & Pipeline**	**6,462**	**6,314**	**6,539**	**19,315**
	Labor	238	233	241	711
	Capitalized E&S	1,426	1,393	1,442	4,261
	Materials	148	145	150	443
	Contractor	3,960	3,869	4,006	11,835
	Non-Labor Overhead	18	17	18	53
	Non-Labor Other	673	658	681	2,012
	Contingency	0	0	0	0
9	**MAOP Compliance Pipeline**	**1,513**	**386**	**741**	**2,640**
	Labor	68	13	32	114
	Capitalized E&S	334	84	164	583
	Materials	85	93	172	351
	Contractor	891	146	271	1,308
	Non-Labor Overhead	5	0	6	10
	Non-Labor Other	129	49	96	273
	Contingency				0
10	**Total Capital**	**28,772**	**23,398**	**46,471**	**98,641**
	Labor	1,936	1,585	3,377	6,898
	Capitalized E&S	6,222	5,124	10,085	21,430
	Materials	1,773	1,915	3,700	7,388
	Contractor	15,370	11,626	23,201	50,197
	Non-Labor Overhead	190	138	324	652
	Non-Labor Other	3,281	3,009	5,785	12,075
	Contingency	0	0	0	0

This exhibit demonstrates the projected break down for each program into the cost components shown above. The 2024 amounts are the actual amounts. The cost component projections for 2025 and beyond are based upon the 2024-2025 18 month (Jan 2024 - Jun 2025) average actual percentage of the breakdown of these components in these programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes. Cost confidence levels were not used to develop these cost projections.

Consumers Energy Company
Actual and Projected Gas Transmission Capital Expenditures
Regulatory Compliance Program
($000)

Case No.: U-21981
Exhibit No.: A-74 (MPG-4)
Page: 3 of 3
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	Projected Bridge Year			Projected Test Year
Line No	Description	12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
					[Col. (c) + (d)]	
	Projects Over $5 Million (with spend in test year)					
1	**Pipeline Integrity - (Transmission)**					
2	1200A-3 Pipe segment replacement 12	-	-	-	-	5,043
3	1700-1 Pipe segment replacement 1700-1					5,043
4	**Pipeline Integrity- Transmission Operated by Distribution (TOD)**					
5	None identified	-	-	-	-	-
6	**Cathodic Compression, Storage & Pipeline**					
7	None identified	-	-	-	-	-
8	**MAOP Compliance Pipeline**					
9	None identified	-	-	-	-	-
	Projects Under $5 Million					
10	Pipeline Integrity - (Transmission)	21,978	14,611	7,753	22,364	13,162
11	Pipeline Integrity- Transmission Operat	5,904	6,624	8,506	15,130	15,944
12	Cathodic Compression, Storage & Pipe	5,983	6,813	5,964	12,777	6,539
13	MAOP Compliance Pipeline	104	1,513	386	1,898	741
14	**Total Capital**	**33,968**	**29,561**	**22,609**	**52,170**	**46,471**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas Transmission and Distribution Capital Expenditures
Capacity/Deliverability Program
($000)

Case No.: U-21981
Exhibit No.: A-75 (MPG-5)
Page: 1 of 3
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	
		Historical Year	Projected Bridge Year			Projected Test Year	
Line No	Description	12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	Source
1	**Transmission Enhancements for Deliverability & Integrity ("TED-I")**	**138,767**	**17,626**	**13,436**	**31,062**	**24,753**	WP-MPG-7
	Labor	3,483	853	753	1,606	1,302	
	Capitalized E&S	1,138	2,204	2,781	4,984	5,224	
	Materials	2,857	1,133	481	1,615	894	
	Contractor	120,795	11,045	7,407	18,452	13,357	
	Non-Labor Overhead	487	129	18	147	34	
	Non-Labor Other	10,006	2,262	1,996	4,257	3,942	
	Contingency				0		
2	**Misc Transmission & Compression**	**23**	**7**	**0**	**7**	**0**	
	Labor	6	1	0	1	0	
	Capitalized E&S	6	1	0	1	0	
	Materials	(2)	(1)	0	(1)	0	
	Contractor	11	3	0	3	0	
	Non-Labor Overhead	(0)	(0)	0	(0)	0	
	Non-Labor Other	3	2	0	2	0	
	Contingency		0	0	0	0	
3	**Deliverability Base Field Measurement**	**5,704**	**9,150**	**9,846**	**18,997**	**25,371**	WP-MPG-3
	Labor	180	351	88	438	231	
	Capitalized E&S	1,523	2,546	2,141	4,686	5,652	
	Materials	2,240	2,750	3,389	6,139	8,265	
	Contractor	1,941	5,141	3,012	8,153	8,202	
	Non-Labor Overhead	32	27	0	27	0	
	Non-Labor Other	(212)	(1,664)	1,218	(446)	3,021	
	Contingency				0		
4	**Deliverability Base Pipeline**	**18,844**	**22,843**	**19,841**	**42,684**	**24,649**	WP-MPG-4
	Labor	1,269	1,459	1,267	2,726	1,574	
	Capitalized E&S	4,846	5,697	4,948	10,645	6,147	
	Materials	2,700	4,099	3,560	7,659	4,423	
	Contractor	7,427	8,648	7,512	16,160	9,332	
	Non-Labor Overhead	245	271	235	506	292	
	Non-Labor Other	2,357	2,669	2,318	4,987	2,880	
	Contingency		0	0	0	0	
5	**Regulator Stations - Distribution**	**50,514**	**49,264**	**43,351**	**92,615**	**47,595**	WP-MPG-5
	Labor	5,157	5,205	4,580	9,785	5,029	
	Capitalized E&S	11,479	10,915	9,604	20,519	10,545	
	Materials	5,062	5,818	5,120	10,938	5,621	
	Contractor	18,768	17,461	15,365	32,825	16,869	
	Non-Labor Overhead	456	445	392	837	430	
	Non-Labor Other	9,592	9,420	8,290	17,710	9,101	
	Contingency		0	0	0	0	
6	**T&S City Gates**	**52,695**	**45,293**	**51,913**	**97,206**	**48,534**	WP-MPG-6
	Labor	3,410	3,161	3,623	6,784	3,387	
	Capitalized E&S	12,471	10,761	12,334	23,096	11,531	
	Materials	8,242	6,955	7,972	14,927	7,453	
	Contractor	19,254	17,050	19,541	36,591	18,269	
	Non-Labor Overhead	546	510	585	1,095	547	
	Non-Labor Other	8,771	6,855	7,857	14,712	7,346	
	Contingency		0	0	0	0	
7	**Total Capacity/Deliverability Capital**	**266,547**	**144,184**	**138,386**	**282,570**	**170,902**	
	Labor	13,506	11,030	10,311	21,341	11,524	
	Capitalized E&S	31,462	32,124	31,808	63,932	39,099	
	Materials	21,099	20,756	20,522	41,277	26,656	
	Contractor	168,195	59,348	52,836	112,184	66,030	
	Non-Labor Overhead	1,766	1,382	1,230	2,612	1,303	
	Non-Labor Other	30,517	19,545	21,678	41,223	26,290	
	Contingency	0	0	0	0	0	

Unless noted otherwise, capital "other" costs include expenses such as AFUDC, fleet transportation, pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits,
This exhibit demonstrates the projected break down for each program into the cost components shown above. The 2024 amounts are the actual amounts. The cost component projections for 2025 and beyond are based upon the 2024-2025 18 month (Jan 2024 - Jun 2025) average actual percentage of the breakdown of these components in these programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes. Cost confidence levels were not used to develop these cost projections.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas Transmission and Distribution Capital Expenditures
Capacity/Deliverability Program
($000)

Case No.: U-21981
Exhibit No.: A-75 (MPG-5)
Page: 2 of 3
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)
		Projected			
		10 Mos Ending 10/31/2025	12 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027	34 Mos Ending 10/31/2027
8	**Transmission Enhancements for Deliverabilit**	**16,816**	**14,245**	**24,753**	**55,815**
	Labor	811	795	1,302	2,908
	Capitalized E&S	2,175	2,809	5,224	10,209
	Materials	1,125	489	894	2,509
	Contractor	10,390	8,062	13,357	31,809
	Non-Labor Overhead	128	19	34	181
	Non-Labor Other	2,186	2,071	3,942	8,199
	Contingency				0
9	**Misc Transmission & Compression**	**7**	**0**	**0**	**7**
	Labor	1	0	0	1
	Capitalized E&S	1	0	0	1
	Materials	(1)	0	0	(1)
	Contractor	3	0	0	3
	Non-Labor Overhead	(0)	0	0	(0)
	Non-Labor Other	2	0	0	2
	Contingency	0	0	0	0
10	**Deliverability Base Field Measurement**	**9,323**	**9,674**	**25,371**	**44,368**
	Labor	333	105	231	670
	Capitalized E&S	2,478	2,208	5,652	10,338
	Materials	2,645	3,494	8,265	14,404
	Contractor	5,064	3,088	8,202	16,355
	Non-Labor Overhead	26	1	0	27
	Non-Labor Other	(1,223)	777	3,021	2,575
	Contingency				0
11	**Deliverability Base Pipeline**	**22,707**	**19,977**	**24,649**	**67,333**
	Labor	1,450	1,276	1,574	4,300
	Capitalized E&S	5,663	4,982	6,147	16,793
	Materials	4,074	3,585	4,423	12,082
	Contractor	8,597	7,563	9,332	25,492
	Non-Labor Overhead	269	237	292	798
	Non-Labor Other	2,653	2,334	2,880	7,868
	Contingency	0	0	0	0
12	**Regulator Stations - Distribution**	**45,643**	**46,972**	**47,595**	**140,210**
	Labor	4,822	4,963	5,029	14,814
	Capitalized E&S	10,112	10,407	10,545	31,064
	Materials	5,391	5,548	5,621	16,560
	Contractor	16,177	16,648	16,869	49,694
	Non-Labor Overhead	412	424	430	1,267
	Non-Labor Other	8,728	8,982	9,101	26,811
	Contingency	0	0	0	0
13	**T&S City Gates**	**39,135**	**58,071**	**48,534**	**145,740**
	Labor	2,731	4,053	3,387	10,172
	Capitalized E&S	9,298	13,798	11,531	34,627
	Materials	6,010	8,917	7,453	22,380
	Contractor	14,731	21,860	18,269	54,860
	Non-Labor Overhead	441	654	547	1,642
	Non-Labor Other	5,923	8,789	7,346	22,058
	Contingency	0	0	0	0
14	**Total Capacity/Deliverability Capital**	**133,630**	**148,940**	**170,902**	**453,472**
	Labor	10,149	11,192	11,524	32,865
	Capitalized E&S	29,728	34,204	39,099	103,032
	Materials	19,244	22,033	26,656	67,934
	Contractor	54,962	57,221	66,030	178,213
	Non-Labor Overhead	1,277	1,335	1,303	3,915
	Non-Labor Other	18,270	22,954	26,290	67,513
	Contingency	0	0	0	0

This exhibit demonstrates the projected break down for each program into the cost components shown above. The 2024 amounts are the actual amounts. The cost component projections for 2025 and beyond are based upon the 2024-2025 18 month (Jan 2024 - Jun 2025) average actual percentage of the breakdown of these components in these programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes. Cost confidence levels were not used to develop these cost projections.

Consumers Energy Company
Actual & Projected Gas Transmission and Distribution Capital Expenditures
Capacity/Deliverability Program
($000)

Case No.: U-21981
Exhibit No.: A-75 (MPG-5)
Page: 3 of 3
Witness: MPGriffin
Date: December 2025

Line No	(a) Description	(b) Historical Year 12 Mos Ended 12/31/2024	(c) Projected Bridge Year 12 Mos Ending 12/31/2025	(d) Projected Bridge Year 10 Mos Ending 10/31/2026	(e) Projected Bridge Year 22 Mos Ending 10/31/2026 [Col. (c) + (d)]	(f) Projected Test Year 12 Mos Ending 10/31/2027
	Projects Over $5 Million (with spend in test year)					
1	**Transmission Enhancements for Deliverability & Integrity ("TED-I")**					
2	TED-I 100A Ovid to Will Pipe Repl	123,405	5,735	311	6,046	191
3	SAG-300 Reroute and Retire	-	241	1,054	1,295	10,647
4	**Misc Transmission & Compression**					
5	None Identified	-	-	-	-	-
6	**Deliverability Base Field Measurement**					
7	Williamston Transmission Meter Proving Station	-	-	-	-	11,304
8	**Deliverability Base Pipeline**					
9	None identified	-	-	-	-	-
10	**Regulator Stations - Distribution**					
11	None identified	-	-	-	-	-
12	**T&S City Gates**					
13	2026 Novi Wixom CG ESD Valve & BMS	-	-	6,261	6,261	1,075
14	2027 Schoolcraft CG & Odorizer	-	-	686	686	8,689
15	2027 Shepherd & Odorizer	-	-	706	706	8,693
16	Charlotte City Gate Rebuild	-	-	184	184	7,186
17	JXN-Jxn Hart Rd CG Rbld	1,615	5,923	262	6,185	38
18	2026 South Lyon - Whitmore Lake CG & Odorizer (GM-01102)	16	1,339	6,677	8,016	1,169
19	2026 Mendon Leonidas & Odorizer (GM-01103)	1	1,004	6,344	7,347	1,111
20	2026 Climax CG - PEPL (GM-01104)	-	863	7,489	8,352	1,311
21	2026 Flint CG Irish & Odorizer (GM-01122)	-	1,149	7,331	8,481	1,284
22	2026 Spring Arbor CG - PEPL & Odorizer (GM-01123)	-	524	6,858	7,383	1,201
	Projects Under $5 Million					
23	Transmission Enhancements for Deliverability & Integrity ("TED-I")	15,362	11,650	12,070	23,720	13,915
24	Misc Transmission & Compression	23	7	-	7	-
25	Deliverability Base Field Measurement	5,704	9,150	9,846	18,997	14,067
26	Deliverability Base Pipeline	18,844	22,843	19,841	42,684	24,649
27	Regulator Stations - Distribution	50,514	49,264	43,351	92,615	47,595
28	T&S City Gates	51,063	34,490	9,115	43,605	16,778
29	**Total Capital**	**266,547**	**144,184**	**138,386**	**282,570**	**170,902**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Historical Capital Expenditures 2020 to 2024
Transmission & Distribution Plant
($000)

Case No.: U-21981
Exhibit No.: A-76 (MPG-6)
Page: 1 of 1
Witness: MPGriffin
Date: December 2025

Line No	(a) Description	(b) 2020 Actual	(c) 2021 Actual	(d) 2022 Actual	(e) 2023 Actual	(f) 2024 Actual
1	Asset Relocation	4,314	12,887	7,901	6,168	17,019
2	Pipeline Integrity - (Transmission)	15,887	7,346	9,798	16,148	21,978
3	Pipeline Integrity- Transmission Operated by Distribution (TOD)	7,436	12,911	21,736	9,274	5,904
4	Cathodic Compression, Storage & Pipeline	2,618	6,235	6,814	5,931	5,983
5	MAOP Compliance Pipeline	1,028	1,284	612	4,786	104
6	Transmission Enhancements for Deliverability & Integrity (“TED-I”)	186,583	120,554	82,475	216,361	138,767
7	Misc Transmission & Compression	627	(1,476)	(321)	257	23
8	Deliverability Base Field Measurement	6,159	10,359	3,503	5,319	5,704
9	Deliverability Base Pipeline	12,089	12,479	31,712	18,757	18,844
10	Regulator Stations - Distribution	24,636	52,504	43,064	36,262	50,514
11	T&S City Gates	18,923	32,635	51,629	31,320	52,695
12	Total Capital	280,300	267,718	258,925	350,582	317,534

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Projected Capital Expenditures
Transmission & Distribution Plant
Summary of Actual & Projected Gas Capital Expenditures
($000)

Case No.: U-21981
Exhibit No.: A-77 (MPG-7)
Page: 1 of 1
Witness: MPGriffin
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
				Capital Expenditures			
Line No.	**Program Description**	**Historic Test Year 2024 Actual**	**Last Rate Case Approved Spending Plan Case No. U-21806 12 mos. Ending 10/31/2026**	**Last Rate Case Actual Spending Case No. U-21806 12 mos. Ending 10/31/2026 (1)**	**Variation Percentage (1)**	**Location of Testimony Regarding Significant Var (1) (>10%)**	**Current Case Projection 12 mos. Ending 10/31/2027**
1	Asset Relocation	17,019	24,726	n/a	n/a	n/a	9,690
2	Regulatory Compliance	33,968	17,290	n/a	n/a	n/a	46,471
3	Capacity/Deliverability	266,547	128,293	n/a	n/a	n/a	170,902
4	**Total Capital**	317,534	170,309				227,064

Footnote:

[1] The projected test year in Case No. U-21806 has not transpired as of the date of this filing

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of gas and for other relief.	))))))	Case No. U-21981

DIRECT TESTIMONY

OF

KENDRA K. GROB

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Q. Please state your name and business address.

A. My name is Kendra K. Grob, and my business address is One Energy Plaza, Jackson, Michigan 49201.

Q. By whom are you employed?

A. I am employed by Consumers Energy Company ("Consumers Energy" or the "Company").

Q. What is your current position with Consumers Energy?

A. I am currently the Senior Manager, Benefits.

Q. What are your responsibilities as Senior Manager, Benefits?

A. I am responsible for the design, implementation, and administration of the Company's retirement and health care plans, and our department oversees the benefit plans for employees and retirees. In the retirement benefits area, the Company contributes to the cost of the Pension Plans, the Defined Company Contribution Plan ("DCCP"), and the 401(k) Employees' Savings Plan ("ESP"). My responsibilities include designing, reviewing, and administering competitive, cost-effective, quality plans that attract and retain qualified employees to serve customers. These plans aim to provide a portion of an employee's retirement income, along with social security benefits and personal savings.

In the benefits area, the Company contributes to the cost of health care plans (medical, prescription drug, dental, including Health Savings Accounts ("HSAs") and Health Care Flexible Spending Accounts ("HCFSAs")), life insurance, and Long-Term Disability ("LTD") insurance. Our department also designs, reviews, and administers these health care and other benefit plans to ensure they are competitive, cost-effective, and of high quality for employees and retirees, helping to attract and retain qualified employees to serve customers. Additionally, the Company offers several benefit plans at group

discounted rates, requiring employees to pay the full cost of the coverage elected. These voluntary plans include accidental death and dismemberment insurance, health care and dependent care flexible spending accounts, vision insurance, and dependent term life insurance. In 2024, the Company added hospital indemnity, critical illness, and accident benefits. These insurance plans help attract and retain qualified employees by protecting them and their families from significant financial loss in various areas. Our team is also responsible for Absence Management, Workers' Compensation, and Occupational Health programs, as well as the total well-being program, Live Well 365, which motivates employees to manage their overall well-being.

Q. What is your formal educational experience?

A. In 1998, I graduated from Siena Heights University in Adrian, Michigan with a Bachelor of Business Administration degree. I hold a Professional certification in Human Resources from HR Certificate Institute ("HRCI") and the Society of Human Resource Management ("SHRM").

Q. Would you please describe your previous work experience?

A. In 1995, I began my career focused on human resources at Health Care Solutions, Inc. as a Human Resources Manager ("HR"). In this role, I was responsible for the HR Management of the corporate office in Ann Arbor, MI. Also, I had leadership responsibility over all field HR Managers. In addition to this responsibility, I managed all health care and retirement plans for the company. It was my sole responsibility to ensure employees were enrolled in the correct plans and provide any administration to the plan. This also included plan audits and decision making in determining the best vendors.

In 2007, I began working for Amcor Rigid Packaging as a Senior Benefits Specialist. My area of responsibility was retirement plans, disability, and life insurance plans. In this role, I was responsible for the relationship with vendors and the administration of plans for our employees. I was the primary vendor contact for these areas and was heavily involved in all Request for Proposal processes in choosing vendors. While in this position, I sat on the Retirement Committee as the Secretary and took part in plan design and fund selections for both the pension and the savings plan.

In 2020, I joined Consumers Energy as Manager, Retirement Plans. My responsibilities included complete oversight for the Company pension and savings plans (401k). In this role, I ensured the Company provides retirement benefits to active and retired employees while maintaining accurate legal compliance with the Internal Revenue Service.

In March 2024, I was promoted to Senior Manager, Benefits. In this role I continued complete oversight for the Company pension and savings plans (401k) with the addition of assuming responsibility for health and welfare benefits.

Q. Are you a member of any professional societies or trade associations?

A. I am professionally certified as a HR Professional through both SHRM and HRCI.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide support for the Company's costs related to the gas business portion of retirement, health care, life insurance, LTD plans, and other benefits provided to its employees and retirees. In Part I of my direct testimony, I will address the retirement benefits plans. In Part II of my direct testimony, I will address health

care, life insurance, LTD plans, and other benefits, which include absence management and educational assistance programs.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit A-78 (KKG-1)	Summary of Actual and Projected Benefits O&M Expenses for the Year 2024 and Test Year Twelve Months Ending October 31, 2027;
Exhibit A-79 (KKG-2)	CMS Energy – Pension Plans A and B - ASC 715 Pension Expense Estimates ($ millions);
Exhibit A-80 (KKG-3)	CMS Energy - ASC 715 OPEB Expense Estimates ($ millions); and
Confidential Exhibit A-81 (KKG-4)	CMS Energy – Actuarial Letter of Support for 2025 Year Projections.

Q. Were these exhibits prepared by you or under your supervision?

A. Yes.

Q. Please describe Exhibit A-78 (KKG-1).

A. Exhibit A-78 (KKG-1), page 1, summarizes 2024 actual expenses through the 12 months ending October 31, 2027, projected gas Operating and Maintenance ("O&M") expenses for the Company's retirement and insurance benefit plans offered to employees and retirees. On this exhibit, column (a) provides a program description of the O&M expense category. Column (b) provides the actual expense in 2024 for each plan. Column (c) provides the projected expense for the 12 months ending October 31, 2027. Page 2 provides information on inflation factor projections and adjustments using the methods discussed in this testimony and included in column (d). Column (e) is the projected test year O&M expense and is the sum of columns (b) + (c) + (d).

Q. Please describe Exhibits A-79 (KKG-2), A-80 (KKG-3), and Confidential Exhibit A-81 (KKG-4).

A. Exhibits A-79 (KKG-2) and A-80 (KKG-3) provide the Aon actuarial projections for Pension and Other Post Employment Benefit ("OPEB") expenses for the years identified. Both the Pension and OPEB projections in these exhibits provided by the Aon actuaries are from the year-end 2024 measurement of the Pension and OPEB plans and with current market conditions as of December 31, 2024. A letter from the actuary regarding the accuracy and completeness of the projections, including several key assumptions used in the projections, is included in Confidential Exhibit A-81 (KKG-4).

I. RETIREMENT BENEFITS PLANS

Q. Which retirement benefits are you addressing in this section of your direct testimony?

A. I am addressing the Pension Plans, DCCP, and ESP. These expenses are shown on Exhibit A-78 (KKG-1), page 1, lines 1 through 3.

Q. How are the Pension Plans, DCCP, and ESP expenses that are common to electric and gas operations allocated to the gas portion of the business?

A. Expenses common to both the electric and gas operations associated with the Pension Plans, DCCP, and ESP are allocated based on the relationship of employee labor dollars charged to gas operations compared to the labor dollars charged to both electric and gas operations. These allocations studies are performed by the Accounting Department. The gas portion of the O&M expense for these plans is shown on Exhibit A-78 (KKG-1), page 1.

Pension Plans

Q. Would you please explain your Exhibit A-78 (KKG-1), line 1, which begins with ($33,955,000) in 2024?

A. Exhibit A-78 (KKG-1), page 1, line 1, shows the actual 2024 pension expense and the projected expense for 12 months ending October 31, 2027, attributable to the gas portion of the utility operations.

Q. How does the Company determine its expense for the Pension Plans?

A. The pension expense is determined using actuarial analysis that is performed in accordance with Accounting Standards Codification ("ASC") 715, formerly known as Financial Accounting Standards ("FAS") 106. Consumers Energy follows Generally Accepted Accounting Principles ("GAAP") for its financial statements. Under the provisions of GAAP, ASC 715 describes the methodology and assumptions required to properly calculate and account for pension expense which includes evaluation of market conditions at each of the Pension Plan's measurement dates. In addition, the Company's auditor rigorously reviews the process to ensure compliance with GAAP and ASC 715.

ASC 715 requires an annual determination of pension expense. Pension expense is determined based on actuarially reviewed employee census data, plan provisions, plan assets, and certain other assumptions. Year-end disclosure information is also produced, based on these accounting standards, to show a reconciliation of plan assets and liabilities at the end of the Company's fiscal year. For this gas rate case, the Pension Plans were measured in January for year-end December 31, 2024.

Q. What are the components of the annual pension expense under ASC 715?

A. There are four components of the annual pension expense: (i) service cost; (ii) interest cost; (iii) expected return on plan assets; and (iv) amortization of gains or losses, prior service costs or credits, and any transitional amounts. The plan's service cost represents the value of the benefits earned during the year. This is determined individually for each participant based on their specific employee demographics. The interest cost represents interest on the plan's liabilities due to the passage of time. There is also an assumption made for the expected return on plan assets. The expected return on plan assets each year reduces the plan's annual expense. The expected return assumption is reviewed periodically by the plan's actuary, the plan's investment advisor, and the Company, and is intended to be a long-term assumption based on the best estimate of the long-term expected investment earnings of the plan assets. The last component of plan expense is amortization of various plan experiences that were not anticipated by the plan's actuarial assumptions. For example, plan experience gains or losses and plan design changes that would be amortized are included as a part of this component of plan expense. The amortization can be either credits or costs.

To calculate the plan's total pension benefit obligation and annual ASC 715 expense, the actuary uses several assumptions including discount rate, mortality table, salary change, expected return on plan assets, and expected future contributions needed to avoid benefit restrictions under the Pension Protection Act. The methods used to set assumptions are generally unchanged annually, while the values of each assumption are determined by the Company each year and reviewed by the Company's auditors and actuary.

Q. Please describe how the discount rate is set each year.

A. The Company relies on its actuary's discount rate setting model. The model uses current high-quality bonds to match the Pension Plan's cash flows using statistical techniques that create a yield curve that determines the effective discount rate for all maturities of pension payments. The model itself does not change annually, but the discount rate typically will be updated based on the most current market conditions.

Q. Please describe how the expected return on plan assets is set each year.

A. The Company uses future expected capital market assumptions, asset allocation information, and other resources provided by its consultants, which may include survey data and analysis of the Pension Plan's asset allocation. The expected return assumption is based on long-term expectations and not short-term returns. The Company uses all this information to establish an expected return on plan assets assumption that best estimates its expectation. While this assumption is reviewed for each plan measurement, it may or may not be updated annually depending on the information that is presented.

Q. Does the Company apply Accounting Standard Update ("ASU") No. 2017-07 Improving the Presentation of Net Periodic Pension/OPEB Costs Standard in this case?

A. Yes, the Company adopted the ASU No. 2017-07 standard as of January 1, 2017, and has applied the Standard in this case for both Pension and OPEB. This ASU No. 2017-07 standard allows only the service cost component of each expense to be recorded as an operating expense and all other benefit-cost components are to be recorded outside operating income. The Standard also allows only service costs to be capitalized, while all other cost components are recorded to net income immediately.

Q. Please describe the development of the Pension Plans' expense shown on Exhibit A-78 (KKG-1), page 1, line 1, which begins with ($33,955,000) for 2024.

A. The annual pension expense shown on Exhibit A-78 (KKG-1), page 1, line 1, for the gas utility is based upon Aon's actuarial determination of each plan's total expense for that year in accordance with ASC 715 and includes plan administration fees, aggregated for total pension expense. The Consumers Energy pension expense determined by Aon plus administration fees are allocated to the electric and gas portions of the utility using the Accounting Department methodology described earlier. This allocation resulted in the actual gas utility O&M expense for Pension of ($33,955,000) in 2024, and projected expense of ($27,356000) for the 12 months ending October 31, 2027. Exhibit A-78 (KKG-1), page 2, line 1, column (e), compares Aon's projected test year expense with the 2024 actual expense to calculate other adjustments.

Q. Have there been any significant plan design changes to the Pension Plan in recent years?

A. Yes. The Company split its Pension Plan into two plans as of January 1, 2018. Generally, all participants who were employees of the Company on August 1, 2017, were included in Pension Plan A. All other participants, including any Cash Balance participants, were assigned to Pension Plan B. No changes to participant benefits occurred because of this change. The Company decided to make this change to help manage expenses of the Pension Plans by extending the amortization period for the inactive group and enabling the mitigation of Pension Benefit Guarantee Corporation premium variability.

Q. Did the Company make any cash contributions to the Pension Plans in 2024?

A. No, the Company did not contribute to either plan in 2024.

Q. Will the Company make any cash contributions to the Pension Plans in 2025?

A. No cash Pension Plan contributions are required in 2025 to avoid benefit restrictions. Any contributions the Company elects to make during these periods of time will depend upon future decisions of the Company regarding funding policy, the future value of plan assets and liabilities, and any potential legislative guidance or changes.

Q. Why did the pension expense increase for the projected test year from 2024?

A. The Pension expense increased due to lower-than-expected asset returns in 2024.

Q. Have any changes recently been made to the Pension Plans' benefits?

A. Effective November 1, 2020, the Company changed the unreduced early retirement age from 62 to 61 for the Company's pension union eligible employees. This benefit enhancement allows for the Company to continue to retain current union pension eligible employees since they can now retire one year earlier but not lose any percentage of their pension benefit and was very well received. The additional changes in the projected pension expense estimates from 2024 to the 12 months ending October 31, 2027, are primarily the result of economic conditions external to the Pension Plans over which the Company has no control.

DB Pension/OPEB Volatility Mechanism

Q. Please describe the DB Pension/OPEB Volatility Mechanism ("VM") that the Company is proposing.

A. The Company requests the ability to continue its implementation of a DB Pension/OPEB VM, previously authorized by the Michigan Pubic Service Commission (the "Commission" or "MPSC") in Case Nos. U-21490 and U-21806. The sensitivity of DB Pension/OPEB VM expenses to changes in asset returns or other assumptions creates a

significant potential for large variability in future expenses. Customers benefit from a mechanism that eliminates the risk of future volatility in expense. Without a mechanism, there could be substantial, unanticipated swings in the DB Pension/OPEB expense. The proposed mechanism, which mirrors the mechanism that has existed since 2023, would protect customers from this volatility by allowing the Company to defer annually the difference between the DB Pension/OPEB expense included in rates versus the actual annual DB Pension/OPEB expense recorded by the Company pursuant to ASC 715.

Q. Is the mechanism symmetrical?

A. Yes. Under the mechanism, if the actual annual DB Pension/OPEB expense is less than the expense approved in rates, the difference would be recognized as a regulatory liability and amortized over 10 years starting the following January. Similarly, if actual annual DB Pension/OPEB expense is greater than the expense approved in rates, the difference would be recognized as a regulatory asset and amortized in the same manner. Any amortization of these regulatory assets or liabilities would be included in future general rate cases. The mechanism is not only fair but similar mechanisms have been approved by the Commission for other utilities in contested cases. See, e.g., MPSC Case No. U-21297, December 1, 2023 Order, pages 222-224; MPSC Case No. U-21291, November 7, 2024 Order, page 161.

Q. Please describe the Pension VM Deferral on Exhibit A-78 (KKG-1), page 1, line 7, column (b), which begins with $4,400,000 for 2024.

A. Per the Settlement Agreement in Case No. U-21308, the Company was authorized to defer actual DB Pension expense different than the approved annual amount of ($29,547,000) starting October 1, 2023. In the Settlement Agreement in Case No. U-21490, the Company was again authorized to defer the actual DB Pension expense different than the approved

annual amount of ($29,581,000) starting in October 2024. In 2024, the actual DB Pension expense of ($33,955,000), as shown on Exhibit A-78 (KKG-1), page 1, line 1, column (b), was lower than approved amounts for 2024. The Company calculated the authorized amount for nine months of 2024, totaling ($22,160,000), by taking the annual authorized amount in Case No. U-21308 of ($29,547,000), dividing it by 12, and multiplying by nine months for January to September 2024. For the months of October to December 2024, the Company calculated three months of authorized expenses totaling ($7,395,000). This was calculated by taking the 12 months authorized amount in Case No. U-21490 ($29,581,000), dividing it by 12, and multiplying by three months. Adding the nine-month authorized amount of ($22,160,000) to the three-month amount of ($7,395,000) results in a total authorized amount for 2024 of ($29,555,000). The Company recorded the difference between the actual DB Pension expense of ($33,955,000) and the approved rate expense of ($29,555,000) as the Pension VM deferral for the year 2024. This Pension VM deferral of $4,400,000 resulted in an increased expense for 2024, and the Company consequently recorded a Pension VM regulatory liability of $4,400,000.

Q. Please describe the Pension VM Amortization on Exhibit A-78 (KKG-1), page 1, line 9, column (c), which begins with ($86,000) for 12 months ending October 31, 2027.

A. The Pension VM amortization includes deferred amounts being amortized from 2023 to 2026. These deferred Pension VM amounts are being amortized over a 10-year period, consistent with the approach used in Case Nos. U-21308, U-21490, and U-21806.

Q. Please describe the OPEB VM Deferral on Exhibit A-78 (KKG-1), page 1, line 8, column (b), which begins with $7,772,000 for 2024.

A. Per the Settlement Agreement in Case No. U-21308 the Company was authorized to defer actual OPEB expense different than the approved annual amount of ($31,142,000) starting October 1, 2023. In the Settlement Agreement in Case No. U-21490 Order, the Company was authorized to defer actual DB Pension expense different than the approved annual amount of ($32,654,000) starting in October 2024. In 2024, the actual OPEB expense of ($39,292,000), as shown on Exhibit A-78 (KKG-1), page 1, line 5, column (b), was lower than the approved amounts for 2024. The Company calculated nine months authorized of ($23,357,000) by taking the authorized amount in Case No. U-21308 of ($31,142,000), dividing by 12, and multiplying by nine months for January to September 2024. For the months October to December 2024, the Company compared three months of authorized ($8,163,000) by taking the 12-month authorized amount in Case No. U-21409 of ($32,654,000), dividing by 12, and multiplying by three months. Summing ($23,357,000) and ($8,163,000) gives the total authorized amount for 2024 of ($31,520,000). The Company recorded the difference between the actual OPEB expense of ($39,292,000) and the approved rate expense of ($31,520,000) as the OPEB VM deferral for the year 2024. This OPEB VM deferral of 7,772,000 resulted in an increase expense for 2024, and the Company consequently recorded an OPEB VM regulatory liability for $7,772,000.

Q. Please describe the OPEB VM Amortization on Exhibit A-78 (KKG-1), page 1, line 10, column (c), which begins with $(1,208,000) for 12 months ending October 31, 2027?

A. The OPEB VM amortization includes the deferred amounts being amortized for the years 2023 to 2026. The deferred OPEB VM is being amortized over 10 years which is consistent with how the VM in Case Nos. U-21308, U-21490, and U-21806 operated.

DCCP

Q. Does the Company provide an alternative qualified benefit plan to the closed Pension Plans for employees hired on and after September 1, 2005?

A. To stay competitive by offering a benefits package that attracts and retains qualified and talented employees for the benefit of the customer, the Company replaced the Final Average Pay and Cash Balance versions of the qualified DB Pension Plan with the qualified DCCP. This change applied to all existing Cash Balance participants and newly hired employees starting from September 1, 2005.

Q. Are there any employees included in the DCCP that were hired before September 1, 2005?

A. Employees hired between July 1, 2003, and August 31, 2005, who were covered under the Cash Balance version of the defined benefit DB Pension Plan, became participants in the DCCP as of September 1, 2005. Concurrently, additional pay credits under the Cash Balance version of the defined benefit DB Pension Plan were discontinued for this specific group of employees.

Q. Will the Cash Balance version of the DB Pension Plan accept any new employees as participants?

A. Similar to the Final Average Pay DB Pension Plan, the Cash Balance version of the DB Pension Plan now has a limited group of participants. Over time, this group will gradually decrease until there are no longer any employees or retirees covered under this plan.

Q. Please provide a general description of the DCCP.

A. The DCCP currently provides an employer funded cash contribution as a percentage of an employee's base pay to the ESP—the percentages vary with years of service as described below. No employee contribution is required to receive the employer contribution. All existing Cash Balance Plan employee participants and employees hired on and after September 1, 2005, participate in the DCCP as part of their retirement benefit package.

Q. Have any recent changes been made to the DCCP?

A. No changes have been made to the DCCP since 2021. Effective January 2021, for the Company's union employees, the DCCP provides an 8% to 10% (previously 5% to 7%) employer funded cash contribution based upon the union employee's service time with the Company. New union hires receive an 8% contribution, which increases to 9% when they have six years of service with the Company. When union employees reach 12 years of service, they receive a 10% employer contribution. This service-based contribution approach for the DCCP serves as a talent retention mechanism. The increase in the union DCCP contributions was needed for the Company to remain competitive to attract qualified employees and retain talent that maximizes the efficiency of the Company's labor force and reduces costly turnover. Retaining trained, experienced, and motivated employees provides better service for customers.

The Company's exempt and non-exempt employees will continue to receive the DCCP which was effective in January 2016. The DCCP provides a 5% to 7% (previously 6%) employer funded cash contribution based upon the employee's service time with the Company. New hires receive a 5% contribution, which increases to 6% when they have six years of service with the Company. Employees receiving a 6% contribution before January 1, 2016, continue to receive their 6% employer contribution. When employees reach 12 years of service, they receive a 7% employer contribution. This service-based contribution approach for the DCCP serves as a talent retention mechanism and helps contain the cost of the DCCP for the benefit of the customer as all new hires starting in 2016 began receiving a 5% (previously 6% for new hires) employer contribution.

Q. Would you please explain your Exhibit A-78 (KKG-1), page 1, line 2, which begins with $7,838,000 in 2024?

A. Exhibit A-78 (KKG-1), page 1, line 2, represents the gas operations O&M expense related to the DCCP. The actual gas operations expense for this plan in 2024 was $7,838,000 as shown in column (b). Column (c) shows the projected gas DCCP expense of $7,708,000 for the 12 months ending October 31, 2027. DCCP costs are projected to increase using merit salary rate factors of 3.2% for 2024 through the 12 months ending October 31, 2027 If a DB Pension individual retires, the new person hired to replace their role is entered into the DCCP plan. For the projected years 2025 through the 12 months ending October 31, 2027, costs were split using 62% electric and 38% gas, with 64% capital on gas expenses.

Q. As a result of the revised eligibility requirements for participation in the Final Average Pay DB Pension Plan or the Cash Balance version of the DB Pension Plan, is it correct to say that all new hire employees who started on September 1, 2005, and after will receive their retirement benefits through plans that are referred to as defined contribution type plans?

A. Yes. The primary plans that will provide monetary benefits to this group of employees upon retirement are the DCCP and the ESP.

ESP

Q. Please explain briefly the ESP.

A. The ESP is a defined contribution retirement savings program funded by employee and employer contributions. A portion of employee contributions is matched by Consumers Energy. Prior to January 2022, the Company matched 100% of the employees' first 3% in contributions and 50% of the employees' next 2% in contributions to the ESP. Employee contributions beyond 4% were not matched by the Company. Consumers Energy's expense includes the Company's matching contributions, and the payments made to Fidelity Investments for administration of the program.

Q. Have any recent changes been made to the ESP?

A. Effective in January 2022, the Company match design has changed only for Salaried (exempt and non-exempt) employees to 100% of employee contributions up to 6% of the employee's salary. Employee contributions beyond 6% will not be matched by the Company. This change will help to keep the ESP cost and talent retention competitive in the market for the benefit of customers. Effective August 5, 2024, the Dearborn Industrial Generation Plant Union employees began receiving matching contributions of 100% for

employee contributions of up to 6% of the employees' salary per their negotiated contract. Effective June 1, 2025, union employees covered by the Operating Maintenance & Construction ("OM&C") contract began receiving matching contributions of 100% for employee contributions of up to 5%. Similarly, effective August 1, 2025, Virtual Call Center ("VCC") union employees began receiving matching contributions of 100% for employee contributions of up to 5% and effective October 1, 2025, union employees in the Zeeland Generation Plant began receiving matching contributions of 100% for employee contributions of up to 5%. All changes to the union match were tied to their respective contract renewal dates.

Q. Would you please explain your Exhibit A-78 (KKG-1), page 1, line 3, which begins with $6,055,000 in 2024?

A. Exhibit A-78 (KKG-1), page 1, line 3, represents the Company's gas operations expense related to the ESP. In 2024, the actual gas utility O&M expense for the ESP was $6,055,000. The gas utility's ESP O&M expense projected for the test year is 6,531,000. Savings Plan costs are projected to increase using merit salary rate type increase of 3.2% for 2024 through the 12 months ending October 31, 2027. For the projected years 2025 through the 12 months ending October 31, 2027, costs were split using 62% electric and 38% gas, with 64% capital on gas expenses.

Q. Is the ESP employer matching program important to attracting and retaining employees?

A. Yes. The ESP with a match is commonly available from Michigan employers as well as from other utility company employers that Consumers Energy competes with for employee talent. It is necessary to continue providing this highly visible, competitive benefit to

employees of Consumers Energy to continue attracting and retaining competent employees needed by the Company, particularly considering the large number of retirement-eligible employees at the Company. Attracting qualified employees and retaining this talent maximizes the efficiency of the Company's labor force and reduces costly turnover. Safe, reliable, and affordable gas service begins and ends with the Company's people. Investing in and retaining trained, experienced, and motivated employees benefits customers as much as, or more than, any investment in infrastructure.

Q. Is the ESP employer match discretionary?

A. It is not discretionary for union employees. A provision in the Working Agreement ratified in 2005 with OM&C and VCC union employees assured these employees that the match would not be suspended during their five-year contract. This provision has remained in effect for all following contracts up to and including the most recent five-year contract negotiated in 2025.

With respect to non-union employees, there is not a similar contractual prohibition against suspension. However, the ESP employer match is part of an overall competitive benefits package and employees depend upon its continuation so they can accumulate savings for retirement. This is a benefit that helps the Company attract and retain qualified and talented employees. From a practical standpoint, the Company views the employer match as non-discretionary.

II. HEALTH CARE, LIFE INSURANCE, LTD PLANS, AND OTHER BENEFITS

Q. Which health care and insurance benefits are you addressing?

A. I am addressing active employee health care (including HSAs and HCFSAs), life insurance, LTD plans, and other benefits of absence management and educational assistance, as well

as retiree health care and life insurance plans. These expenses are shown on Exhibit A-78 (KKG-1), page 1, lines 4 through 6.

Q. Are the expenses for active employee health care (including HSAs and HCFSAs), life insurance, and LTD benefits determined in the same way as expenses for retiree health care and life insurance benefits?

A. No. The expenses for active employees are based upon the actual costs for these benefits that are expected to be incurred. The expenses for retirees are determined using actuarial analysis, which is performed by the Company's actuary, in accordance with ASC 715, formerly known as FAS 106.

Q. How were the portions of active employee and retiree health care (including HSAs and HCFSAs), life insurance, LTD, and other benefits costs allocated to gas O&M expense determined?

A. The portion of the Company's total program expenses attributable to the gas utility was allocated based upon an annual study by the Accounting Department of the relationship of the number of employees in the gas utility to the total number of employees in both the electric and gas utility. The amount allocated to the gas utility is allocated between O&M expense and capital expense based upon the Accounting Department's formula. For the projected years 2025 through the 12 months ending October 31, 2027, costs were split using 56% electric and 44% gas, with 64% capital on gas expenses.

Active Health Care (Including HSAs and HCFSAs), Life Insurance, LTD, and Other Benefits

Q. Please describe the development of the active health care (including HSAs and HCFSAs), life insurance, and LTD expense levels that are shown on Exhibit A-78 (KKG-1), page 1, line 4, which begins with $19,846,000.

A. Exhibit A-78 (KKG-1), page 1, line 4, contains gas operations O&M expenses for the Company-funded benefit plans for active employees' health care (including HSAs and HCFSAs), life insurance, and LTD. The primary component of this expense is health care. Life insurance and LTD make up a much smaller portion of the expense. In 2024, the Company incurred an actual combined expense of $19,846,000 for health care, life insurance, and LTD for gas operations. The projected gas operation expense for these benefits for the projected test year is $20,282,000.

Q. What factors did you consider when projecting the test year's expenses for health care, life insurance, and LTD?

A. In projecting the test year's health care expenses, a number of factors were considered. The primary factors included current review of 2024 and 2025 national health trends/costs survey information provided by Willis Towers Watson ("WTW") actuarial consulting. Additional factors considered were the Company's medical and prescription drug carrier's health cost and claims experience expectations, the continuing rapid rise in availability and price of specialty prescription drugs, the current employee headcount, and the continuing cost increase impacts of national health care reform.

Q. Please explain how these factors were used to determine the Company's expected health care costs.

A. The Company has determined that using the health care trend rate factors in this case will keep in line with expected costs. Exhibit A-78 (KKG-1), page 2, line 4, column (e), compares the projected test-year expense with the 2024 actual expense, adjusted for 2025, 2026, and 2027 health care trend rate, to calculate other adjustments. The amount shown in Exhibit A-78 (KKG-1), page 2, line 4, column (e) reflects the electric and gas split and capital percentage discussed above.

To further understand projected health care trends and costs, the Company and WTW reviewed expected health care trends and costs survey information from several large consulting firms. The Company and WTW also reviewed the Company's actual health care claims experience for employees and retirees in its health plans - Blue Cross/Blue Shield of Michigan ("BC/BS") and Express Scripts. This analysis of the Company's health plans revealed that the Company's workforce is older than the average age of the population insured by the BC/BS and Express Scripts plans, and as a result, the Company's health plans have a higher expected utilization rate that is associated with an older covered population. Of the Company's current workforce, as of December 31, 2024, 47% of employees are over age 45; 32% are over age 50; and 18% are over age 55. The Company understands the older age of its workforce is expected to lead to a higher health care expense (primarily due to utilization of services).

To project future health care expenses, the Company and WTW also considered all the plan changes and programs that the Company has already implemented. These changes include sharing expected health care expense increases with employees through plan design

changes like increased deductibles, copayments, and out-of-pocket maximums; increasing employee premium contributions for coverage; adding telehealth benefits to medical plans to lower expense; educating employees regarding the prudent and informed use of health care benefits; promoting use of preventive benefit services; promoting well-being through Live Well 365, which is integrated into all medical plan designs, that encourages and rewards plan participants for taking steps toward healthier lifestyles; securing favorable pricing on prescription drugs obtained through a large employer prescription drug collaborative; negotiating lower administrative fees with health plans and promoting enrollment into the Consumer Directed Health Plan, a high deductible health plan which currently provides a Company contribution to the participant's HSA.

The Company and WTW also considered the specific changes to the union employees' health care plan benefits as negotiated in its 2020 through 2025 contracts, as well as changes made to the employees' health care benefit plans in 2024 described in detail later in this direct testimony. While there are very tangible savings in future health expenses to the Company and its customers as a result of these changes to employee health care benefit plans, the Company believes a portion of these savings will be offset by increased health expenses incurred under national health care reform requirements (like Patient Centered Outcomes Research Institute fees, employer mandate shared responsibility administrative/reporting requirements, and potential penalties) as well as increased prescription expenses due to the availability of new and expensive specialty prescription drugs in the market. In addition, while the Company has taken numerous steps to control the rising expense of health care, many of these changes are one-time events that

lower a plan's expense in that year to establish a new baseline moving forward, but future health care expenses then continue to increase from the new baseline expense.

Q. What are some of the reasons that health care costs are increasing at a level higher than general inflation?

A. There are a number of factors causing a higher rate of health care inflation than is reflected in the general Consumer Price Indexes ("CPIs"). Health care costs are expected to continue rising during the next several years due to an aging population living longer, additional utilization of services, price increases for services, new medical technology, cost shifts from government plans, mandated benefits coverage, rising provider malpractice premiums, new taxes on health claims, and rapidly escalating prescription drug prices including high prices for new, expensive specialty drugs. In addition, national health care reform will increase Company health care costs in the near term because of eligibility expansions (e.g. adult children to age 26), mandated benefits, removal of annual dollar limits, additional taxes, fees, penalties, new compliance/reporting requirements, and more government shifting of costs through Medicare and Medicaid expansion. These factors are all outside the control of Consumers Energy. Even with all the employee and retiree health plan design and premium contribution changes made annually by the Company over a number of years, including the move to Live Well 365 program incentives, health care costs for the Company are still expected to continue increasing annually at a rate two to three times that of general CPI inflation. The assumption that healthcare costs will only increase at the general rate of inflation has not been the actual experience for many years and is not expected in the foreseeable future.

Q. Are increases in health care costs being experienced both locally and nationally?

A. Yes. While increases in health costs have moderated, both local and national health care costs continue to increase at rates greater than general CPI inflation.

Q. Are the significant increases in health care costs limited to active employees?

A. No. Health care costs are also increasing at a rate higher than the general CPI inflation for retirees for the same reasons cited earlier. In fact, retiree expenses are generally increasing at higher rates because of retirees' older ages and the resulting increases in utilization, particularly in the use of prescription drugs, including higher-priced specialty prescription drugs. The projected increases for active employee health care, like projected increases for retiree health care, are substantial, expected to occur, and largely beyond the control of the Company.

Q. Please describe the development of the expense levels for active employee life insurance and LTD costs included in Exhibit A-78 (KKG-1), page 1, line 4.

A. For 2025, the Company used inflation factors of 2.8%. In 2026, the Company used 2.4%, and for 2027, 2.3% was used. These expense estimates are reasonable as both life insurance and LTD premium costs are based on wage and salary levels and changes to this coverage throughout the year. The 2.8%, 2.4%, and 2.3% annual increases represent the normal, expected merit increases in salaries/wages, increases due to salary adjustments made for job changes and promotions throughout the year, any upward movement in Company-paid life insurance coverage in each annual enrollment period, and increases in premium rates due to plan experience.

Q. What has the Company done to control the increase in active employee and retiree health care, life insurance, and LTD expenses?

A. The Company aggressively manages these benefit costs by analyzing costs and plan designs on an annual basis with our third-party vendor, WTW. An example of recent changes made to manage the cost of the Company's health care plans offered to employees and retirees follows:

- Negotiated administrative fees and insured plan premium rates annually;
- Implemented health and disease management programs and added case management;
- Effective January 1, 2024, the Company made a plan design change in the Salaried Active Medical plans so the out-of-pocket limits for both Union and Salaried employees are now the same. In addition, changes were made to decrease premiums in the Salaried Active Community Blue Medical for active employees;
- Eliminated eligibility for Salaried Retiree Life – Employer Paid for those who retired on/after January 1, 2024. They may still participate in Retiree Life, but at their own cost; and
- Effective January 1, 2025 current Salaried and Retirees (Exempt/Non-Exempt) who are under age 65 as of 1/1/2025 and Spouses, and Survivors under age 65 were moved to the Via Benefits Health Insurance Marketplace (also known as the Individual and Family Plan Marketplace) and will no longer be eligible for coverage in the Blue Cross Blue Shield of Michigan/Express Scripts and Delta Dental retiree group healthcare plans. Dependents under the age of 26 and disabled dependents will remain on current active coverage with BCBS of Michigan.

Retiree Health Care and Life Insurance

Q. Would you please explain your Exhibit A-78 (KKG-1), page 1, line 5, for retiree health care and life insurance, which begins with ($39,292,000) in 2024?

A. Exhibit A-78 (KKG-1), page 1, line 5, reflects the actual 2024 and projected 12-month period ending October 31, 2027, gas utility retiree health care and life insurance expenses under ASC 715 (formerly known as FAS 106 expense). Each of the annual expense levels

shown on line 5 is the total of two separate items which make up the total expense. Each year's expense contains an ASC 715 expense calculation and an actuarial services expense.

Q. How does the Company determine its ASC 715 expense for retiree health care and life insurance?

A. The expense is determined by using actuarial analysis that is performed in accordance with ASC 715. Consumers Energy follows GAAP for its financial statements. Under the provisions of GAAP, ASC 715 describes the methodologies and assumptions required to properly calculate and account for retiree health care and life insurance expense which includes evaluation of market conditions at each of the plan's measurement dates. The calculations required by the accounting standards are performed at least annually by the plan's actuary, Aon, using information specific to the Company's OPEB plan. In addition, the Company's auditor rigorously reviews the process to ensure compliance with GAAP and ASC 715.

ASC 715 requires an annual determination of retiree health care and life insurance expense (OPEB expense or formerly FAS 106 expense). The expense is determined based on actuarially reviewed employee census data, the plan provisions, plan assets, and certain other actuarial assumptions. Year-end disclosure information is also produced, based on these accounting standards, to provide a reconciliation of plan assets and liabilities at the end of the Company's fiscal year. For this gas rate case, OPEB was measured in January for the year-end 2024.

Q. What are the components of the annual ASC 715 retiree health care and life insurance expense?

A. There are four components of the annual ASC 715 retiree health care and life insurance expense: (i) service cost; (ii) interest cost; (iii) expected earnings on plan assets; and (iv) amortization of gains and losses, prior service costs or credits, and any transitional amounts. Service cost represents one year's expected benefits earned by active covered employees. Interest cost represents interest on the plan's benefit obligation (its liabilities) due to the passage of time. There is also an assumption made for the expected rate of return on plan assets. This rate of return assumption is intended to be a long-term assumption based upon the best estimate of long-term expected investment earnings of the plan assets. The last component represents amortization of various plan experiences that were not anticipated by the actuarial assumptions.

In order to calculate the plan's total benefit obligation and annual ASC 715 retiree health care and life insurance expense, the actuary uses a number of assumptions including health care inflation trend rates, mortality table, the rate of employee retirements from the Company, the actual retiree health care and life insurance claims of the Company, a discount rate, and the expected contributions to the plan. The methods used to set assumptions are generally consistent, while the values of each assumption are determined by the Company each year and reviewed by the Company's auditors and actuary. The method used to set the discount rate and expected return on plan assets is the same as the method used for the pension plans, as discussed above.

Q. Are actuarial and administrative expenses included in Exhibit A-78 (KKG-1), page 1, line 5?

A. Yes. An annual expense for the actuarial and administrative services provided for the retiree health care and life insurance plans is included in Exhibit A-78 (KKG-1), page 1, line 5.

Q. What changes were made to the 2024 retiree health care plans?

A. In 2024, changes were made to decrease premiums in the Aetna Traditional Medical Plan for Retirees.

Q. What changes were made to the 2025 retiree health care plans?

A. Effective January 1, 2025, current Salaried and Retirees (Exempt/Non-Exempt who are under age 65 as of January 1, 2025 and Spouses, Dependents and Survivors under age 65 were moved to the Via Benefits Health Insurance Marketplace (also known as the Individual and Family Plan Marketplace) and will no longer be eligible for coverage in the Blue Cross Blue Shield of Michigan/Express Scripts and Delta Dental retiree group healthcare plans.

Q. Do the calculations for the retiree health care and life insurance expense follow the prescribed methodology of ASC 715?

A. Yes. The amounts are projected based on ASC 715 using information specific to the Company's retiree health care and life insurance plans. For this gas rate case, the OPEB Plan was measured in January 2025 for year-end.

Q. Has the Company applied the ASU No. 2017-07 Improving the Presentation of Net Periodic Pension/OPEB Costs Standard in this case for OPEB?

A. Yes, the Company adopted the ASU No. 2017-07 as of January 1, 2017, and has applied the Standard in this case for both Pension and OPEB.

Q. Please describe the development of the retiree health care and life insurance expense levels that are shown on Exhibit A-78 (KKG-1), line 5, which begins with ($39,292,000) in 2024.

A. The retiree health care and life insurance O&M expense level shown on line 5 for the gas utility is based upon Aon's actuarial determination of the plan's expense for that period in accordance with ASC 715 plus the cost for actuarial and administrative services related to these plans. Due to the retiree medical plan changes described earlier, the actual 2024 retiree health care and life insurance O&M expense for the gas utility was ($39,292,000). The projected gas O&M retiree health care and life insurance expense is ($36,586,000) for the test year. Exhibit A-78 (KKG-1), page 2, line 5, column (e), compares the Aon actual calculation of expense with the 2024 actual expense to calculate other adjustments.

Q. Why is the retiree health care and life insurance expense higher in 2024 and decreasing in the test year?

A. 2024 had lower-than-expected asset returns, which caused the lower projected expense, offset decrease in expense by the plan change benefit of moving current salaried and retirees (Exempt/Non-Exempt) in the OPEB plan to VIA benefits in the test year. The retiree health care and life insurance expense was higher in 2024 primarily because lower-than-expected asset returns increased costs for that year. The projected test year expense is lower due to the anticipated savings from moving salaried employees and retirees

(Exempt/Non-Exempt) in the OPEB plan to the VIA Benefits marketplace.

Q. Would you please explain your Exhibit A-78 (KKG-1), page 1, line 6, for Other Benefits, which begins with $2,128,000 in 2024?

A. Exhibit A-78 (KKG-1), line 6, reflects the actual 2024 and projected 12-month period ending October 31, 2027 expenses for the gas utility benefits labor, the absence management program, the educational assistance program, and the employee assistance program. The adjustment in Exhibit A-78 (KKG-1), page 2, line 6, column (e), compares the projected test-year expense with the 2024 actual expense, adjusted for 2025, 2026, and 2027 inflation.

Q. Please explain why the absence management program is important to attract and retain employees.

A. Paid sick leave is needed to attract and retain employees. In 2014, the Company retained Reed Group, now known as Alight, as an external consultant to manage the Company's absence process. Since the relationship's inception, Alight has been able to improve the absence rate and provide a higher level of standardization, controls, and overall best practices to mitigate risk. Additionally, this streamlined approach ensures a procedure for all employees who need a leave of absence for any purpose.

Q. Please explain why the educational assistance program is important to attract and retain employees.

A. Educational assistance programs are widely available from Michigan employers as well as from other utility company employers that Consumers Energy competes with for employee talent. The Company offers partial tuition reimbursement to all employees. It is necessary to continue providing this highly visible, competitive benefit to employees of Consumers

Energy to continue attracting and retaining competent employees needed by the Company, particularly considering the large number of retirement-eligible employees at the Company. Attracting qualified employees and retaining this talent maximizes the efficiency of the Company's labor force and reduces costly turnover. Safe, reliable, and affordable gas service begins and ends with the Company's people. Investing in and retaining trained, experienced, and motivated employees benefits customers as much as, or more than, any investment in infrastructure. Educational assistance is just such an investment. It provides the opportunity for employees to continue their education, which further improves their skills to serve the customers of the Company.

Q. Please explain why the employee assistance program is important to attract and retain employees.

A. The Company offers employees, retirees, and dependents access to an assistance program which provides support to help resolve or manage problems that interfere with the ability to perform at work or in life. The employee assistance program provides a variety of on-line tools, face-to-face interactions, and telephone support. The program is designed to aid with any type of need, distraction, concern, or crisis. The employee assistance program provides legal support, financial information, work-life solutions, online services, and confidential counseling. The goal of the program is to improve the overall total well-being for all the Company's employees and retirees.

Q. Does this conclude your direct testimony?

A. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the distribution of gas and for other relief.	))))))	Case No. U-21981

REDACTED EXHIBITS

OF

KENDRA K. GROB

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Employee Benefits O&M Expenses
For the Years 2024 and Test Year 12 Months ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-78 (KKG-1)
Page: 1 of 2
Witness: KKGrob
Date: December 2025

Line No.	(a) Description	(b) Actual 12 mos. ended 12/31/2024	(c) Projected 12 mos. Ending 10/31/2027
1	Pension Plans A/B	**($33,955)**	**($27,356)**
2	Defined Company Contribution Plan	**7,838**	**7,708**
3	401 (k) Employees' Savings Plan	**6,055**	**6,531**
4	Active Health Care/Life Insurance/LTD	**19,846**	**20,282**
5	Retiree Health Care and Life Insurance	**(39,292)**	**(36,586)**
6	Other Benefits	**2,128**	**2,232**
7	Pension Volatility Mechanism Deferral	**4,400**	**0**
8	OPEB Volatility Mechanism Deferral	**7,772**	**0**
9	Pension Volatility Mechanism Amortization	**27**	**(86)**
10	OPEB Volatility Mechanism Amortization	**(66)**	**(1,208)**
11	**Total Expense**	**($25,247)**	**($28,483)**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of O&M Expenses to Inflation
For the Years 2024 and Test Year 12 Months ending October 31, 2027
($000)

Case No.: U-21981
Exhibit No.: A-78 (KKG-1)
Page: 2 of 2
Witness: KKGrob
Date: December 2025

Line No.	Description	2024 Actual	Inflation Impacts on Historical Costs Test Year	Other Adjustments	Projected O&M 12 Mos Ending 10/31/2027
		(a)	(b)	(c)	(d)	(e)*
			(b) * Compounded Inflation Rate		(b) + (c) + (d)
1	**Pension Plans A/B**	**$ (33,955)**	**$ -**	**$6,599**	**$ (27,356)**
2	**Defined Company Contribution Plan**	**7,838**	**-**	**(130)**	**7,708**
3	**401 (k) Employees' Savings Plan**	**6,055**	**-**	**476**	**6,531**
4	**Active Health Care/Life Insurance/LTD**	**19,846**	**-**	**436**	**20,282**
5	**Retiree Health Care and Life Insurance**	**(39,292)**	**-**	**2,706**	**(36,586)**
6	**Other Benefits**	**2,128**	**155**	**(51)**	**2,232**
	Other Benefits non labor	**1,403**	**102**	**(34)**	**1,471**
	Other Benefits labor	**725**	**53**	**(17)**	**761**
7	**Pension Volatility Mechanism Deferral**	**4,400**	**-**	**(4,400)**	**-**
8	**OPEB Volatility Mechanism Deferral**	**7,772**	**-**	**(7,772)**	**-**
9	**Pension Volatility Mechanism Amortization**	**27**	**-**	**(113)**	**(86)**
10	**OPEB Volatility Mechanism Amortization**	**(66)**	**-**	**(1,142)**	**(1,208)**
11	**Total Employee Benefits O&M Expenses**	**$ (25,247)**	**$ 155**	**$ (3,391)**	**$ (28,483)**
	Nonlabor	**(25,972)**	**102**	**(3,374)**	**(29,244)**
	Labor	**725**	**53**	**(17)**	**761**

Notes

* Column (e) Projected O&M see WP-1 KKG

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded Inflation Rate
Annual inflation rates per Company witness Rayl	2.8%	2.4%	2.3%	7.7%
Number of months in the period	12	12	10	
Pro-rated inflation rate	2.8%	2.4%	1.9%	7.3%

CMS Energy

Prepared on January 17, 2025

ASC 715 (Formerly FAS 87) Pension Expense Estimates ($ millions)
HATFA Minimum Required Contributions - Baseline Scenario

	2024	2025	2026	2027
Contribution by Plan Year				
Utility	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Nonutility	0.0	0.0	0.0	0.0
Total	$ 0.0	$ 0.0	$ 0.0	$ 0.0
At-Risk?	No	No	No	No
Benefit Restrictions?	No	No	No	No
Participant Count	2,770	2,729	2,649	2,580
PBGC Liability	$ 1,158.1	$ 1,080.7	$ 1,094.1	$ 1,120.9
Market Value of Assets	$ 1,758.4	$ 1,741.4	$ 1,781.1	$ 1,822.6
PBGC Flat Rate Premium	$ 0.3	$ 0.3	$ 0.3	$ 0.3
PBGC Variable Rate Premium	0.0	0.0	0.0	0.0
Total PBGC Premium	$ 0.3	$ 0.3	$ 0.3	$ 0.3
Projected Benefit Obligation	$ 1,280.9	$ 1,250.7	$ 1,258.6	$ 1,263.9
Market Value of Assets	1,758.4	1,741.4	1,781.1	1,822.6
Funded Status	$ (477.5)	$ (490.7)	$ (522.5)	$ (558.7)
ASC 715 Funded %	137.3%	139.2%	141.5%	144.2%
ASC 715 Accounting Expense				
Utility	$ (42.4)	$ (39.3)	$ (41.4)	$ (40.7)
Nonutility	(1.2)	(1.1)	(1.2)	(1.1)
Total ASC 715 Accounting Expense	$ (43.6)	$ (40.4)	$ (42.6)	$ (41.8)
2020 Settlement Accounting Utility Amortization[1]	5.3	5.3	5.3	5.3
2021 Settlement Accounting Utility Amortization[2]	2.6	2.6	2.6	2.6
2022 Settlement Accounting Utility Amortization[3]	2.7	2.7	2.7	2.7
Total Expense	$ (33.0)	$ (29.8)	$ (32.0)	$ (31.2)
Components of Total Expense				
Service Cost	$ 26.1	$ 23.5	$ 21.8	$ 20.1
Interest Cost	61.3	65.7	66.0	66.2
Expected Return on Assets	(135.3)	(133.3)	(133.3)	(132.1)
Amortization of Outstanding Components	4.3	3.7	2.9	4.0
Total ASC 715 Accounting Expense	$ (43.6)	$ (40.4)	$ (42.6)	$ (41.8)
2020 Settlement Accounting Utility Amortization[1]	5.3	5.3	5.3	5.3
2021 Settlement Accounting Utility Amortization[2]	2.6	2.6	2.6	2.6
2022 Settlement Accounting Utility Amortization[3]	2.7	2.7	2.7	2.7
Total Expense	$ (33.0)	$ (29.8)	$ (32.0)	$ (31.2)
Market Related Value of Assets	$ 1,842.2	$ 1,867.1	$ 1,869.5	$ 1,853.1
Assumptions				
Discount Rate	5.05%	5.73%	5.73%	5.73%
Expected Return on Assets	7.50%	7.30%	7.30%	7.30%
Salary Increases	3.55%	3.70%	3.70%	3.70%

[1] The information related to the 2020 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortization was set up as a regulatory asset for the utility portion of the 2020 settlement loss of $35.5 million at August 31, 2020. As provided by CMS, the amortizations starts in September 2020 over service life of 8.55 years. Additionally, the settlement attributable to the utility portion on December 31, 2020 is $9.8 million, which is also amortized over service of 8.55 years beginning in January 2021. Nonutility portions of the settlement loss are $0.9 million and $0.3 million for August 31, 2020 and December 31, 2020 respectively.

[2] The information related to the 2021 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortization was set up as a regulatory asset for the utility portion of the 2021 settlement loss of $17.6 million at October 31, 2021. As provided by CMS, the amortizations starts in November 2021 over service life of 8.19 years. Additionally, the settlement attributable to the utility portion on December 31, 2021 is $3.3 million, which is also amortized over service of 8.19 years beginning in January 2022. Nonutility portions of the settlement loss are $0.5 million and $0.1 million for October 31, 2021 and December 31, 2021 respectively.

[3] The information related to the 2022 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortizations were set up as regulatory assets for the utility portions of the 2022 settlement losses. The settlements attributable to the utility portions are $3.9 million, $3.7 million, $11.5 million, and $2.5 million as of March 31, 2022, June 30, 2022, September 30, 2022, and December 31, 2022 respectively. As provided by CMS, the amortizations are amortized over service life of 8.11 years beginning in April 2022, July 2022, October 2022, and January 2023 respectively. Nonutility portions of the settlement loss are $0.1 million, $0.1 million, $0.3 million, and $0.1 million for March 31, 2022, June 30, 2022, September 30, 2022, and December 31, 2022 respectively.

CMS Energy

Prepared on January 17, 2025

ASC 715 (Formerly FAS 87) Pension Expense Estimates ($ millions)
HATFA Minimum Required Contributions - Baseline Scenario

	2024	2025	2026	2027
Contribution by Plan Year				
Utility	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Nonutility	0.0	0.0	0.0	0.0
Total	$ 0.0	$ 0.0	$ 0.0	$ 0.0
At-Risk?	No	No	No	No
Benefit Restrictions?	No	No	No	No
Participant Count	7,309	7,147	6,975	6,795
PBGC Liability	$ 953.2	$ 853.1	$ 819.5	$ 789.2
Market Value of Assets	$ 1,245.9	$ 1,222.8	$ 1,229.7	$ 1,238.3
PBGC Flat Rate Premium	$ 0.7	$ 0.7	$ 0.7	$ 0.7
PBGC Variable Rate Premium	0.0	0.0	0.0	0.0
Total PBGC Premium	$ 0.7	$ 0.7	$ 0.7	$ 0.7
Projected Benefit Obligation	$ 914.4	$ 843.8	$ 810.5	$ 776.9
Market Value of Assets	1,245.9	1,222.8	1,229.7	1,238.3
Funded Status	$ (331.5)	$ (379.0)	$ (419.2)	$ (461.4)
ASC 715 Funded %	136.3%	144.9%	151.7%	159.4%
ASC 715 Accounting Expense				
Utility	$ (38.9)	$ (36.0)	$ (32.7)	$ (27.3)
Nonutility	(4.1)	(3.9)	(3.6)	(3.0)
Total	$ (43.0)	$ (39.9)	$ (36.3)	$ (30.3)
Components of Total Expense				
Service Cost	$ 1.6	$ 1.7	$ 1.7	$ 1.7
Interest Cost	42.6	42.7	40.9	39.1
Expected Return on Assets	(98.6)	(95.1)	(92.6)	(88.8)
Amortization of Outstanding Components	11.4	10.8	13.7	17.7
Total Expense	$ (43.0)	$ (39.9)	$ (36.3)	$ (30.3)
Market Related Value of Assets	$ 1,354.1	$ 1,341.4	$ 1,307.4	$ 1,255.7
Assumptions				
Discount Rate	4.95%	5.59%	5.59%	5.59%
Expected Return on Assets	7.50%	7.30%	7.30%	7.30%
Salary Increases	3.65%	3.80%	3.80%	3.80%

2025-2027 projections reflect the following:

- January 1, 2024 census data.
- PBO discount rate of 5.73% (Plan A) and 5.59% (Plan B) in fiscal 2025+, based on Decebmer 31, 2024 yield curve anlaysis.
- Service Cost effective interest rate of 5.77% (Plan A) and 5.81% (Plan B) in fiscal 2025+, based on December 31, 2024 yield curve analysis.
- Interest Cost effective interest rate of 5.43% (Plan A) and 5.30% (Plan B) in fiscal 2025+, based on December 31, 2024 yield curve analysis.
- Expense is allocated to Utility/Non Utility based on PBO using the preliminary allocation percentages for 2025 expense.
- Contributions are allocated to Utility/Non Utility based on the most recent allocation percentages provided by CMS for the December 2020 contributions.
- December 31, 2024 market assets provided by CMS, with expected returns thereafter.
- Expected and actual asset returns of 7.30% in fiscal 2025+.
- The plans will waive Funding Balance when necessary, in order to maintain a Funded Percentage of at least 80%.
- Other provisions, assumptions and methods are the same as those used for the December 31, 2024 ASC 715 disclosures.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Case No.: U-21981
Exhibit No.: A-80 (KKG-3)
Page: 1 of 1
Witness: KKGrob
Date: December 2025

CMS Energy

Prepared on January 17, 2025

ASC 715 OPEB Expense Estimates ($ millions)

	2024	2025	2026	2027
Funded Status, January 1				
Accumulated Postretirement Benefit Obligation	$ (899.9)	$ (831.0)	$ (826.0)	$ (818.7)
Plan Assets at Fair Value	$ 1,558.9	$ 1,588.2	$ 1,640.8	$ 1,695.2
Funded Status	$ 659.0	$ 757.2	$ 814.8	$ 876.5
ASC 715 Accounting Expense				
Utility	$ (80.8)	$ (83.9)	$ (86.7)	$ (76.7)
Nonutility	$ (6.7)	$ (6.9)	$ (7.1)	$ (7.0)
Total	$ (87.5)	$ (90.8)	$ (93.8)	$ (83.7)
Components of Total Expense				
Service Cost	$ 11.3	$ 8.4	$ 8.2	$ 7.9
Interest Cost	$ 42.9	$ 43.2	$ 42.9	$ 42.5
Expected Return on Assets	$ (114.8)	$ (111.4)	$ (115.3)	$ (119.0)
Amortization of Net (Gain) or Loss	$ 3.9	$ 2.7	$ 2.2	$ 1.6
Amortization of Prior Service Cost	$ (30.8)	$ (33.7)	$ (31.8)	$ (16.7)
Total Expense	$ (87.5)	$ (90.8)	$ (93.8)	$ (83.7)
Assumptions				
APBO Discount Rate	5.02%	5.69%	5.69%	5.69%
Service Cost Effective Interest Rate	5.12%	5.85%	5.85%	5.85%
Interest Cost Effective Interest Rate	4.91%	5.39%	5.39%	5.39%
Expected Return on Assets	7.50%	7.15%	7.15%	7.15%
Trend Rate—Initial Pre-65	8.00%	8.50%	8.00%	7.50%
Trend Rate—Initial Post-65	8.50%	10.25%	9.75%	9.00%
Trend Rate—Ultimate	4.75%	4.75%	4.75%	4.75%
Trend Rate—Ultimate Year Pre-65	2032	2033	2033	2033
Trend Rate—Ultimate Year Post-65	2032	2033	2033	2033
Expected Contribution	$ 0.0	$ 0.0	$ 0.0	$ 0.0

2025-2027 expense projections reflect the following:

-January 1, 2024 census data.
-APBO discount rate of 5.69% in fiscal 2025+, based on December 31, 2024 yield curve.
-Service Cost effective interest rate of 5.85% in fiscal 2025+, based on December 31, 2024 yield curve.
-Interest Cost effective interest rate of 5.39% in fiscal 2025+, based on December 31, 2024 yield curve.
-December 31, 2024 market assets, provided by CMS
-Other provisions, assumptions and methods are the same as those used for December 31, 2024 ASC 715 disclosures.

EXHIBIT A-81 (KKG-4)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC