March 31, 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-17990 - In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief.

Dear Ms. Felice:

Enclosed for electronic filing in the above-captioned case, please find **Consumers Energy Company's 2024 Year-End Report to the Michigan Public Service Commission Regarding Smart Grid Metrics.**

This is a paperless filing and is therefore being filed only in a PDF format. I have also included a Proof of Service showing electronic service upon the parties.

Sincerely,

Digitally signed by Gary A. Gensch, Jr.
Date: 2025.03.31 09:28:58 -04'00'

Gary A. Gensch Jr.
Phone: 517-788-0698
Email: gary.genschjr@cmsenergy.com

cc: Parties per Attachment 1 to Proof of Service

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 generation and distribution of electricity and for other relief.	))))))	Case No. U-17990

CONSUMERS ENERGY COMPANY'S 2024 YEAR-END REPORT TO THE MICHIGAN PUBLIC SERVICE COMMISSION REGARDING SMART GRID METRICS

Pursuant to the Michigan Public Service Commission's ("MPSC" or the "Commission") February 28, 2017 and November 21, 2017 orders issued in Case No. U-17990, Consumers Energy Company ("Consumers Energy" or the "Company") filed its 2016 Smart Grid Metrics report on August 1, 2017 and its 2017 Smart Grid Metrics report on March 1, 2018 in Case No. U-17990. In Case No. U-18322, MPSC Staff ("Staff") clarified that it intended the Smart Grid Metrics report to be a standalone annual report instead of being included in the five-year distribution investment and maintenance plan. Staff also agreed with the Company's request that Consumers Energy file the report by March 31 each year. The Proposal for Decision ("PFD") in Case No. U-18322 acknowledged the parties' agreement. Case No. U-18322, PFD, page 286.

Following is the Company's Smart Grid Metrics Annual Report, which provides information on the reporting and metrics identified in Exhibit S-10.3 in Case No. U-17990 for the reporting period of calendar year 2024.

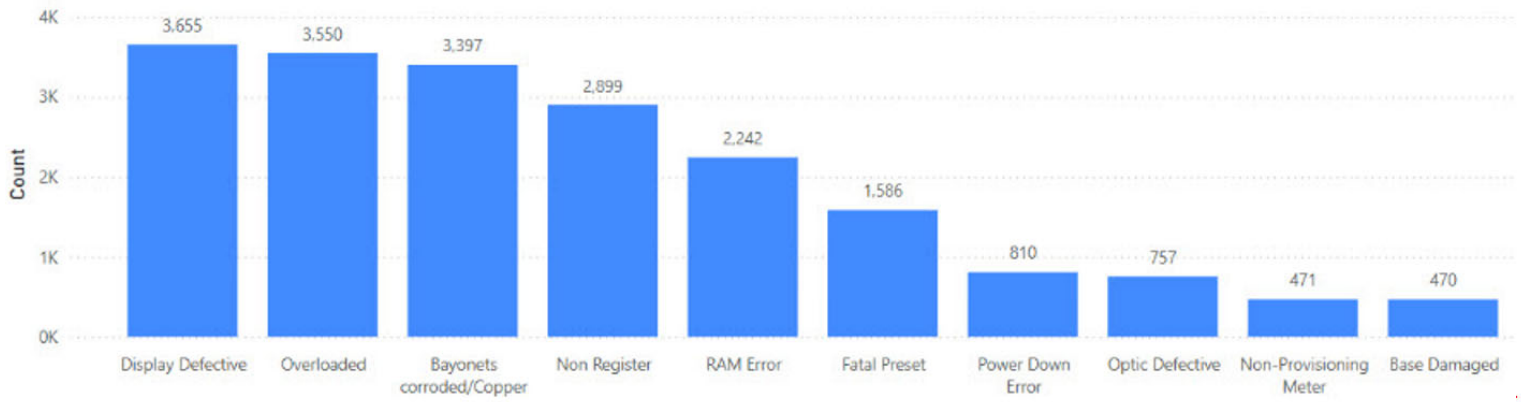
Respectfully submitted,

Dated: March 31, 2025 CONSUMERS ENERGY COMPANY

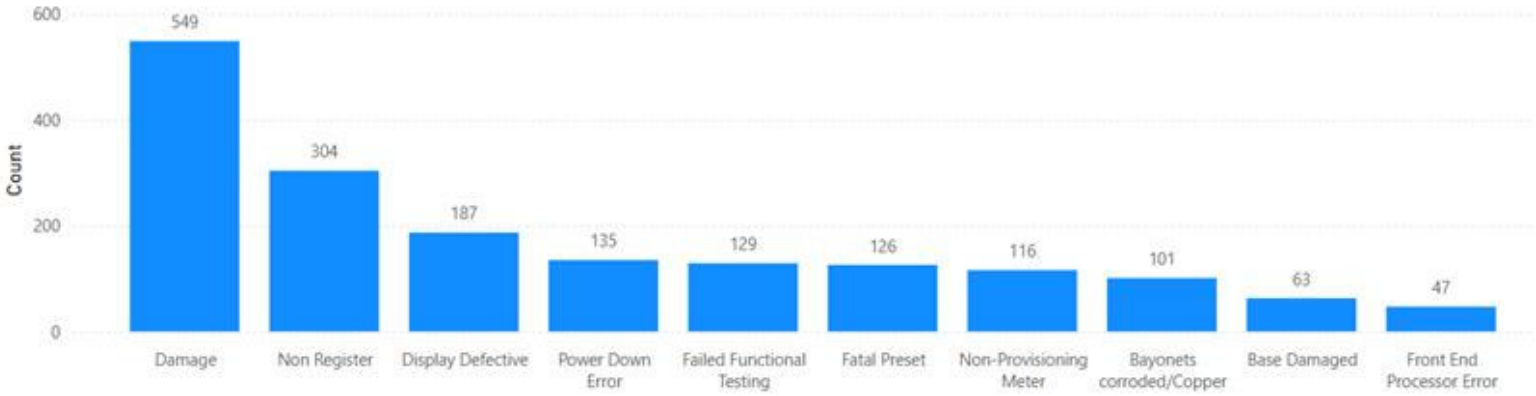
Q1 Number of Electric AMI meter failures

Consumers Energy's Advanced Metering Infrastructure ("AMI") electric meters include 1,893,579 AMI meters deployed throughout the state. A meter failure is discovered through an inability to communicate with the meter remotely, a customer complaint, routine exchange of meter for regulatory testing, or upon removal and testing for other cause. In 2024, 21,364 single phase meters saw failures, some of which had multiple modes present, and 1,893 polyphase meters saw failures, again, with multiple failure modes present.

2024 Single Phase Meter Failure Reasons



2024 Poly Phase Meter Failure Reasons



Q2 Number of Gas AMI module failures

Consumers Energy has 676,711 AMI gas modules deployed throughout the state. Gas module removal is driven by the inability to program the module in the field at installation, inability of headend system to acquire read data from the module via connection through an electric AMI meter, or module is visually damaged. A majority of modules were retired due to the removal of obsolete meter types through routine meter exchange or other for-cause exchange reasons. As the meters are obsolete and modules are meter manufacturer and model specific, there is no opportunity to re-use the modules on another meter.

Retirement Reason	AMI
#N/A	485
Obsolete	11,932
Non-Repairable	6
Corrosion	42
Rusted	13
Unecon to Repair	5,937
Grand Total	**18,415**

Q3 Number of AMR module failures

Consumers Energy has 1,163,918 AMR ("Automated Meter Reading") gas modules deployed throughout the state. Gas module removal is driven by the inability to program the module in the field at installation, inability of headend system to acquire read data from the module via a mobile collector, or module is visually damaged. A majority of modules were retired due to the removal of obsolete meter types through routine meter exchange or other for-cause exchange reasons. As the meters are obsolete and modules are meter manufacturer and model specific, there is no opportunity to re-use the modules on another meter.

Retirement Reason	AMR
#N/A	375
Obsolete	18,080
Non-Repairable	8
Corrosion	70
Rusted	7
Unecon to Repair	8,735
Fire	3
Grand Total	**27,278**

Q4 (A/B) Electric AMI meter read rate Single-phase and Polyphase

The electric AMI meter read rate is a daily communication rate for all AMI electric meters, regardless of their billing day (i.e., AMI meter read rate is not the Billing Rate or Meter Reading Factor).

The Company calculates this twice each day. The "first-in" read rate consists of the number of reads received during the Company's normal midnight interrogation window. Part of the daily Smart Energy Operations Center process is to reinterrogate those meters that did not provide reads during the midnight interrogation. After those meters are reinterrogated, the "end-of-day" read rate is the actual potential impact to customers.

Every month of 2024 was the highest single-phase end-of-day read rate in Company history, since using this method to track read rate in 2017.

	First-In Meter Read Rate Midnight Interrogation		End-of-Day Meter Read Rate After Daily Reinterrogations	
2024	Electric AMI Single Phase	Electric AMI PolyPhase	Electric AMI Single Phase	Electric AMI PolyPhase
Jan	92.46%	86.63%	99.42%	97.86%
Feb	96.74%	89.13%	99.64%	97.88%
Mar	96.18%	89.91%	99.66%	97.83%
Apr	97.57%	89.79%	99.65%	98.01%
May	94.36%	84.71%	99.61%	97.82%
Jun	95.40%	86.06%	99.55%	97.92%
Jul	94.88%	85.69%	99.52%	98.00%
Aug	94.77%	84.53%	99.52%	98.11%
Sep	95.89%	86.90%	99.23%	98.08%
Oct	95.14%	85.51%	99.68%	98.21%
Nov	94.77%	85.85%	99.70%	98.30%
Dec	96.48%	86.46%	99.91%	98.34%
Annual	**95.37%**	**86.74%**	**99.59%**	**98.03%**

Q5 Gas AMI meter read rate

The gas AMI meter read rate consists of two separate metrics. The "first-in" meter read rate consists of the number of reads received during the Company's normal midnight interrogation window, with a timestamp from that day. The "3-day" meter read rate is a look at the same day, 3 days later.

	First-in Meter Read Rate Midnight Interrogation	3-Day Meter Read Rate After Daily Reinterrogations
2024	Gas AMI	Gas AMI
Jan	95.29%	98.78%
Feb	96.99%	98.92%
Mar	96.53%	98.87%
Apr	97.48%	98.97%
May	96.30%	99.34%
Jun	96.91%	99.07%
Jul	96.70%	98.73%
Aug	96.98%	99.14%
Sep	97.45%	99.14%
Oct	96.93%	99.20%
Nov	97.03%	99.09%
Dec	97.19%	99.03%
Annual	**96.81%**	**99.02%**

Q6 Gas AMR meter read rate

The gas AMR meter read rate is a billing rate (i.e., billing factor) based on the billing read collected within the billing window.

	Meter Read Rate
2024	Gas AMR
Jan	99.92%
Feb	99.94%
Mar	99.94%
Apr	99.94%
May	99.93%
Jun	99.93%
Jul	99.94%
Aug	99.91%
Sep	99.94%
Oct	99.92%
Nov	99.95%
Dec	99.96%
Annual	**99.93%**

Q7 Number of meters replaced before the end of their useful life

This item was removed based on a 6/26/2017 conversation with Staff, as it is a duplicate of Metric 1, which reflects all smart meter retirements – not necessarily just those caused by troubled smart meters.

Q8 (A/B) Actual theft benefit due to AMI meter installations

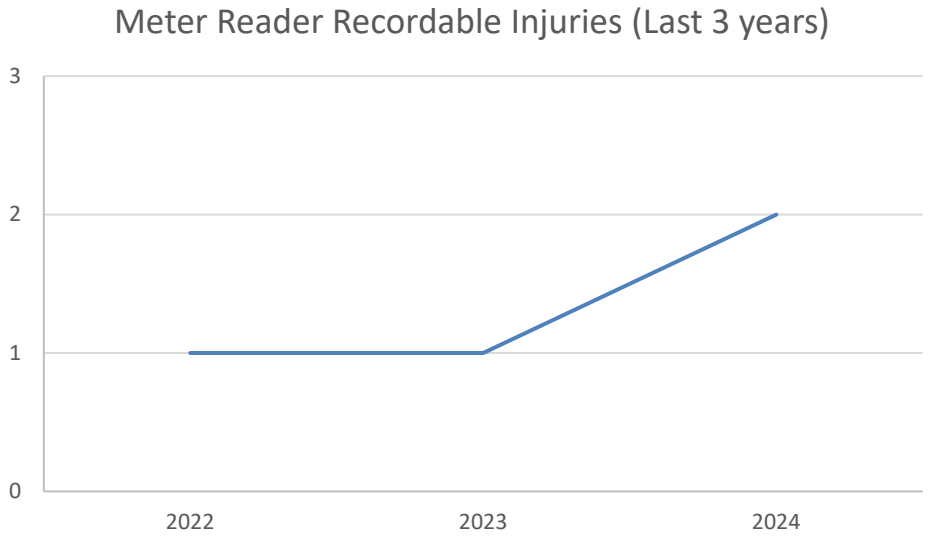
Cumulative theft benefit due to AMI Meters	
Electric	$50,417,205
Gas	$2,856,384

Q9 (A/B) Number of theft incidents identified through AMI

Number of theft incidents identified through AMI	
Electric	
Project Deployment	1992
Confirmed tips from AMI meter events	1335
Gas	
Project Deployment	0
Confirmed tips from AMI meter events	448
Total	**3,775**

Q10 Meter Reader OSHA recordable injuries (3-year trend)

The trend (3 year) of Occupational Safety and Health Administration ("OSHA") recordable injuries for meter readers is shown below.



Q11 Number of customers requesting to opt out of AMI

For AMI, the Company considers a request and actual opt out to be the same. This was removed based on a June 26, 2017 conversation with Staff, as this duplicated Item 12.

Q12 Number of customers actually opting out of AMI

There were 8,895 customers that opted out of AMI as of December 31, 2024. This is a decrease of 119 customers from the prior year.

Q13 Number of customers requesting to opt out of AMR gas

For AMR, the Company considers a request and actual opt out to be the same. This was removed in order to be documented consistently with AMI, as this duplicated Item 14.

Q14 Number of customers actually opting out of AMR

There were 2,279 customers that opted out of AMR as of December 31, 2024. This is a decrease of 74 from the prior year.

Q15 (A-E) Number of customers enrolled in dynamic peak pricing (DPP)/time varying rates (TVR)

	Residential Summer On-Peak	Residential Smart Hours	Residential Nighttime Hours	General Service Time of Use	General Primary Time of Use	Energy Intensive Primary	CPP, PTR, STP	AC Peak Cycling	Interruptible - GI, GI2, GSI
Jan	1,603,902	22,680	6,954	1,848	1,396	16	198,304	90,916	15
Feb	1,604,233	22,988	7,165	1,869	1,402	16	200,438	90,535	15
Mar	1,607,032	23,274	7,358	1,864	1,407	16	209,207	90,133	15
Apr	1,607,311	23,421	7,583	1,911	1,419	16	206,953	93,050	15
May	1,605,125	23,510	7,751	1,917	1,421	16	210,428	92,175	15
Jun	1,608,927	23,839	7,990	1,929	1,434	16	214,150	91,965	22
Jul	1,604,668	23,881	8,167	1,965	1,448	16	217,165	94,196	22
Aug	1,603,909	24,125	8,368	1,998	1,427	16	221,813	93,522	22
Sep	1,604,417	25,012	8,645	2,063	1,459	16	225,139	93,010	22
Oct	1,605,008	25,910	8,919	2,206	1,478	16	229,059	92,407	22
Nov	1,602,394	26,464	9,151	2,244	1,483	16	232,143	93,883	22
Dec	1,605,903	27,081	9,385	2,253	1,474	16	234,943	95,555	22

Q16 (A/B) Estimated load reduction enabled by DPP and TVR

	Load Reduction by DPP & TVR	
	Energy Intensive Primary Rate (EIP)[1]	Peak Time Rewards (PTR), Critical Peak Pricing (CPP), Air Conditioning Peak Cycling (ACPC) and Smart Thermostat Program (STP)
Jan	NA	134.6
Feb	NA	135.1
Mar	NA	136.8
Apr	NA	138.3
May	NA	138.9
Jun	NA	140.5
Jul	NA	142.9
Aug	NA	143.9
Sep	NA	144.6
Oct	NA	145.6
Nov	NA	147.5
Dec	NA	149.4

[1] EIP is no longer considered a Load Reduction resource

Q17 Frequency and dates of DPP Events – See table below

Q18 Average load reduction per customer during each DPP and TVR events – See table below

Q19 Actual load reductions per event due to DPP and TVR events – See table below

Q21B Estimated peak reductions due to interruptible load programs – See table below

Q22 Actual peak reductions due to interruptible load programs

Q23 Frequency, dates, and weather data of interruptible load program events – See table below

Q24 Average load reduction per customer during each interruptible load event – See table below

Frequency and Dates **(Q17 & Q23)**	Hour	Event Type	DR Program	Actual Load Reduction per Event (MW) **(Q19 & Q22)**	Estimated Peak Reduction (MW) **(Q21B)**	Average Load Reduction per Customer (kW) **(Q18 & Q24)**	Daily Max Temp **(Q23)**	Daily Min Temp **(Q23)**	Daily Avg Temp **(Q23)**	Avg Event Temp **(Q23)**
7/31/2024	1500-1900 EDT	Economic	ACPC	41	44	0.445	88	66	77	88
7/31/2024	1500-1900 EDT	Economic	STP	38.4	42	0.761	88	66	77	88
8/27/2024	1500-1700 EDT	Economic	ACPC	36.3	44	0.396	92	69	77	92
8/27/2024	1500-1700 EDT	Economic	STP	46	42	0.842	92	69	77	92

Q20 (A/B) Number of customers enrolled in interruptible load programs

During 2024, Consumers Energy continued to offer three residential demand response ("DR") programs known as Device Cycling (previously referred to as Air Conditioning ("AC") Peak Cycling ("ACPC")), Smart Thermostat ("STP"), and Dynamic Peak Pricing ("DPP"). The DPP Program comprises both the Peak Time Rewards ("PTR") and Critical Peak Pricing ("CPP") programs. Total program enrollment as of December 31, 2024 was 95,555 for Device Cycling, 58,917 for STP, and 176,026 for DPP.

The Company also operated a Commercial and Industrial ("C&I") emergency DR program in 2024. The C&I emergency DR program had 249.0 MW under contract and included 1,402 customers.

For interruptible load programs, the Company offers the following interruptible service provisions for its customers in 2024: Interruptible Service Provision (GI), Interruptible Service Provision - Market Option (GI2), and General Service Secondary Interruptible Service Provision (GSI). In 2024, 22 customers were on this rate, with 209.5 MW of load designated as interruptible.

	Customers enrolled in interruptible load programs			
	Interruptible Service Provision (GI), Interruptible Service Provision - Market Option (GI2), and General Service Interruptible Service Provision (GSI)	Commercial & Small Business Demand Response[1]	PTR, CPP, and ACPC	STP
Jan	15	263.5	236,589	52,631
Feb	15	263.5	237,843	53,130
Mar	15	263.5	246,018	53,322
Apr	15	263.5	246,383	53,620
May	15	263.5	248,252	54,351
Jun	22	250.7	250,407	55,708
Jul	22	249.0	254,960	56,401
Aug	22	249.0	258,306	57,029
Sep	22	249.0	260,903	57,246
Oct	22	249.0	263,440	58,026
Nov	22	249.0	267,426	58,600
Dec	22	249.0	271,581	58,917

[1] Measured in MW

Q21A Estimated peak reductions due to interruptible load programs

In 2024, there was 598.5 MW of available capacity in emergency reserves for the summer DR season (June through September) and 209.5 MW of available capacity for the non-summer months.

Q25 Number of AMI net metering customers

There are currently 11,525 AMI Net Metering/DG customers.

Q26 Number of customers enrolled in pay as you go programs

The Company completed the Pay My Way Pilot Program close out on June 30, 2020 with all participants transitioned to post-pay billing, and filed the final Pay My Way Annual Report in Case No. U-18060 on July 31, 2020.

Q27 Amount of arrearages reduced as a result of pay as you go programs

No estimated reduction in customer bill arrearages relating to participation occurred since the pilot closed in 2020.

Q28 Percentage of distribution lines using sensing information to perform volt var controls

46.0%. 1,052 circuits VVO-enabled out of 2,287 circuits statewide.

Q29 Percentage of distribution lines that are monitored (DSCADA)

86.4%. 700 out of 810 distribution subs are monitored with DSCADA.

Q30 Percentage of distribution lines that are automated

14.9%. 342 out of 2,287 distribution circuits have Automatic Transfer Reclosers ("ATRs").

Q31 Percentage of capacitor bank controllers installed

100%. All switched capacitor banks across the state have two-way communication.

Q32 Percentage of substations capable of automatic looping

14.9%. The percentage of substations capable of automatic looping is measured by the number of circuits that have ATRs, which results in the same value as Metric 30.

Q33 (A/B) Customers experiencing long interruption duration (CELIDx)

Customer Experiencing Long Interruption Duration (CELIDx)	
8 hour	393,080
60 hour duration	8,635

Q34 (A-K) Customers experiencing multiple interruptions (CEMIx)

Customers Experiencing Multiple Interruptions X (CEMIx)	
0	1,889,301
1	1,201,658
2	687,212
3	371,254
4	205,781
5	115,564
6	64,108
7	36,863
8	21,568
9	13,487
10+	8,371

Q35 (A/B) System average interruption duration index (SAIDI)

System Average Interruption Duration Index (SAIDI)	
Excluding major event days	154.97
Including major event days	502.55

Q36 (A/B) System average interruption frequency index (SAIFI)

System Average Interruption Frequency Index (SAIFI)	
Excluding major event days	0.877
Including major event days	1.323

Q37 (A-F) Outage minutes avoided due to AMI meters.

Outage minutes avoided due to AMI meters	
CAIDI excluding major event days for AMI notification only	119
CAIDI excluding major event days for customer notification only	179
CAIDI excluding major event days for AMI and customer notification	172
CAIDI including major event days for AMI notification only	137
CAIDI including major event days for customer notification only	397
CAIDI including major event days for AMI and customer notification	348

Q38 Number of outage minutes avoided due to automated switches

21,958,395 customer outage minutes avoided due to automated switches in 2024.

Q39 Number of customer outages avoided due to automated switches

77,007 customer outages avoided due to automated switches in 2024.

Q40 Meter reader headcount

	Meter Reading Headcount
Jan	33
Feb	33
Mar	33
Apr	34
May	34
Jun	34
Jul	33
Aug	33
Sep	32
Oct	32
Nov	32
Dec	31

Q41 (A-D) Number of estimated bills by month

	Electric		Gas		
Month	Smart Meter	Legacy Meter	AMI Meter	AMR Meter	Legacy Meter
	(41A)	**(41B)**	**(41C)**	**(41D)**	**(41E)**
January	3,014	777	2,038	1,314	906
February	2,953	552	1,440	1,357	679
March	2,785	442	1,371	1,370	695
April	2,949	595	1,234	1,373	731
May	3,150	590	1,504	1,474	750
June	2,996	480	1,497	1,599	748
July	3,553	498	1,603	1,554	777
August	2,816	456	1,575	1,803	815
September	3,062	482	1,342	1,422	677
October	2,457	426	1,182	1,613	640
November	2,196	479	1,070	1,114	648
December	1,721	502	919	783	711
Total	**33,652**	**6,279**	**16,775**	**16,776**	**8,777**

Q42 Number of customers that have downloaded their data

In 2024, the Residential and Non-Residential Energy Dashboards had 18,361 combined total Green Button Downloads and 112 combined Green Button Connect Authorizations. Please note that while this represents the most accurate information available, it is possible that cookie and privacy barriers or other complexities may hinder complete download tracking. In addition, the combined Green Button Connect Authorizations in 2023 should be corrected from 1,133 to 96. Consumers Energy has addressed the issues that caused this discrepancy going forward.

Q43 R460.3203 Rule 203(j) Solid State Meter Annual Report

Information the meter infrastructure is capable of collecting:

- Voltage and Current Measurement
- Watt-hour (Wh) Measurement
- Volt-Ampere-hour (VAh) Measurement
- Registers
- TOU Registers
- Load Profile
- Voltage Monitoring
- Power Outage Notification (PON) and Restoration (PRN)
- Transient Voltage Notifications Management (TVNM)
- Multiple Self Reads
- Event (History) Log

Information the electric utility is collecting from the meter infrastructure:

Single Phase	Polyphase
Voltage and Current Measurement	
Voltage Interval	Voltage Phase a
Maximum Voltage Interval	Voltage Phase b
Minimum Voltage Interval	Voltage Phase c
Watt-hour (Wh) Measurement	
Wh Delivered Register	Wh Delivered Register
Wh Received Register	Wh Received Register
Wh Delivered Interval	Wh Delivered Interval
Wh Received Interval	Wh Received Interval
Volt-Ampere-hour (VAh) Measurement	
Varh Delivered Register	VARh Delivered Register

Varh Received Register	VARh Received Register
	VAh Delivered Interval
Varh Delivered Interval	VARh Delivered Interval
Varh Received Interval	VARh Received Interval

Registers	
Cumulative Demand Register	Cumulative Demand Delivered
	Cumulative Demand Received
	Max Demand Delivered Register
Maximum Demand Register	Max Demand Received Register
	VAh Delivered Register

Event (History) Log	
Meter Event	Meter Event

A description of the electric utility's current use of the information collected:

- Billing
- Outage management
- Theft investigations
- Overloading conditions
- Load profiles
- Voltage conditions to identify failing equipment, network modeling
- Meter events for reliability index (“MAFI”)
- Intervals for time of use
- Market settlements

A description of the electric utility’s future plans for information collection and use:

- Refine current processes
- Conservation Voltage Reduction (“CVR”)

Glossary of Metrics

Category	Metric Number		Metric
Meter Data	1		Number of electric AMI meter failures
Meter Data	2		Number of gas AMI module failures
Meter Data	3		Number of AMR module failures
Meter Data	4	-	Electric AMI meter read rate
Meter Data	4	A	Singlephase
Meter Data	4	B	Polyphase
Meter Data	5		Gas AMI meter read rate
Meter Data	6		AMR meter read rate
Meter Data	7		~~Number of meters replaced before the end of their useful life~~
Meter Data	8	-	Actual theft benefit due to AMI meter installations
Meter Data	8	A	Electric
Meter Data	8	B	Gas
Meter Data	9	-	Number of theft incidences identified through AMI
Meter Data	9	A	Electric
Meter Data	9	A.1	Project Deployment (Electric)
Meter Data	9	A.2	Confirmed tips from AMI (Electric)
Meter Data	9	B	Gas
Meter Data	9	B.1	Project Deployment (Gas)
Meter Data	9	B.2	Confirmed tips from AMI (Gas)
Meter Data	10		Meter Reader OSHA recordable injuries (3-year trend)
Meter Data	11		~~Number of customers requesting to opt out of AMI~~
Meter Data	12		Number of customers actually opting out of AMI
Meter Data	13		~~Number of customers requesting to opt out of AMR~~
Meter Data	14		Number of customers actually opting out of AMR
Customer Programs	15	-	Number of customers enrolled in dynamic peak pricing (DPP)/time varying rates (TVR)
Customer Programs	15	A	Residential Summer On-Peak Basic (RSP)
Customer Programs	15	B	Residential Smart Hours (RSM)
Customer Programs	15	C	Residential Time of Day (RT)
Customer Programs	15	D	Residential Nighttime Hours (RPM)
Customer Programs	15	E	Experimental Residential Plug-in Electric Vehicle Charging Program (REV-1 & REV-2)
Customer Programs	15	F	General Service Time of Use (GSTU)
Customer Programs	15	G	General Primary Time of Use (GPTU)
Customer Programs	15	H	Energy Intensive Primary (EIP)
Customer Programs	15	I	Critical Peak Pricing (CPP), Peak Time Rewards (PTR), and Smart Thermostat Program (STP)
Customer Programs	15	J	Air Condition Peak Cycling (ACPC)
Customer Programs	16	-	Estimated load reductions enabled by DPP and TVR
Customer Programs	16	A	Energy Intensive Primary (EIP)
Customer Programs	16	B	Peak Time Rewards (PTR), Critical Peak Pricing (CPP), Air Condition Peak Cycling (ACPC), and Smart Thermostat Program (STP)
Customer Programs	17		Frequency and dates of DPP events called
Customer Programs	18		Average load reduction per customer during each DPP, and TVR events

Customer Programs	19		Actual load reductions per event due to DPP and TVR events
Customer Programs	20	-	Number of customers enrolled in interruptible load programs
Customer Programs	20	A	Interruptible Service Provision (GI), Interruptible Service Provision – Market Option (GI2), and General Service Secondary Interruptible Provision (GSI)
Customer Programs	20	B	Commercial C&I Emergency Demand Response
Customer Programs	20	C	Peak Time Rewards (PTR), Critical Peak Pricing (CPP), and Air Condition Peak Cycling (ACPC),
Customer Programs	20	D	Smart Thermostat Program (STP)
Customer Programs	21		Estimated peak reductions due to interruptible load programs
Customer Programs	22		Actual peak reductions due to interruptible load programs
Customer Programs	23		Frequency , dates, and weather data of interruptible load programs events called
Customer Programs	24		Average load reduction per customer during each interruptible load events
Customer Programs	25		Number of AMI net metering customers
Customer Programs	26		Number of customers enrolled in pay as you go programs
Customer Programs	27		Amount of arrearages reduced as a result of pay as you go programs
Smart Grid Dist	28		Percentage of distribution lines using sensing information to perform volt var controls
Smart Grid Dist	29		Percentage of distribution lines that are monitored (DSCADA)
Smart Grid Dist	30		Percentage of distribution lines that are automated
Smart Grid Dist	31		Percentage of capacitor bank controllers installed
Smart Grid Dist	32		Percentage of substations capable of automatic looping
Smart Grid Dist	33	-	Customers Experiencing Long Interruption Duration (CELIDx)
Smart Grid Dist	33	A	8 hour
Smart Grid Dist	33	B	60 hr duration
Smart Grid Dist	34	-	Customers Experiencing Multiple Interruptions X (CEMIx)
Smart Grid Dist	34	A	0
Smart Grid Dist	34	B	1
Smart Grid Dist	34	C	2
Smart Grid Dist	34	D	3
Smart Grid Dist	34	E	4
Smart Grid Dist	34	F	5
Smart Grid Dist	34	G	6
Smart Grid Dist	34	H	7
Smart Grid Dist	34	I	8
Smart Grid Dist	34	J	9
Smart Grid Dist	34	K	10+
Smart Grid Dist	35	-	System Average Interruption Duration Index (SAIDI)
Smart Grid Dist	35	A	Excluding major event days
Smart Grid Dist	35	B	Including major event days
Smart Grid Dist	36	-	System Average Interruption Frequency Index (SAIFI)
Smart Grid Dist	36	A	Excluding major event days
Smart Grid Dist	36	B	Including major event days
Smart Grid Dist	37	-	Outage minutes avoided due to AMI meters
Smart Grid Dist	37	A	CAIDI excluding major event days for AMI notification only
Smart Grid Dist	37	B	CAIDI excluding major event days for customer notification only
Smart Grid Dist	37	C	CAIDI excluding major event days for AMI and customer notification
Smart Grid Dist	37	D	CAIDI including major event days for AMI notification only
Smart Grid Dist	37	E	CAIDI including major event days for customer notification only
Smart Grid Dist	37	F	CAIDI including major event days for AMI and customer notification
Smart Grid Dist	38		Number of outage minutes avoided due to automated switches
Smart Grid Dist	39		Number of customer outages avoided due to automated switches

Meter Data	40		Meter reader headcount
Meter Data	41	-	Number of estimated bills by month
Meter Data	41	A	Electric Smart Meter
Meter Data	41	B	Electric Manual Meter
Meter Data	41	C	Gas AMI Meter
Meter Data	41	D	Gas AMR Meter
Meter Data	41	E	Gas manual meter
Customer Programs	42		Number of customers that have downloaded their data

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 generation and distribution of electricity and for other relief.	))))))	Case No. U-17990

PROOF OF SERVICE

STATE OF MICHIGAN)
) SS
COUNTY OF JACKSON)

Crystal L. Chacon, being first duly sworn, deposes and says that she is employed in the Legal Department of Consumers Energy Company; that on March 31, 2025, she served an electronic copy of **Consumers Energy Company's 2024 Year-End Report to the Michigan Public Service Commission Regarding Smart Grid Metrics** upon the persons listed in Attachment 1 hereto, at the e-mail addresses listed therein.

Crystal L. Chacon

Crystal L. Chacon

Subscribed and sworn to before me this 31st day of March, 2025.

Melissa K. Harris

Melissa K. Harris, Notary Public
State of Michigan, County of Jackson
My Commission Expires: 06/11/2027
Acting in the County of Hillsdale

ATTACHMENT 1 TO CASE NO. U-17990

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