

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
JOSHUA J. JUDY
ON BEHALF OF
CONSUMERS ENERGY COMPANY

December 2025

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1 **Q. Please state your name and business address.**

2 A. My name is Joshua J. Judy, and my business address is One Energy Plaza, Jackson,
3 Michigan 49201.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
6 as the Director of Fleet Acquisition & Asset Disposition.

7 **Q. What is your formal educational experience?**

8 A. I hold a master’s degree in finance from the University of Michigan and a bachelor’s degree
9 in engineering from Michigan State University.

10 **Q. What are your responsibilities as Fleet Acquisition & Asset Disposition Director?**

11 A. I provide oversight to Fleet Acquisition supporting the Company’s current and long-term
12 capital replacement strategy, vehicle disposition, licensing, rentals, and internal electric
13 vehicle (“EV”) strategy. In addition, I provide oversight to the Company’s Investment
14 Recovery Center (“IRC”) function, which handles the disposition of surplus Company
15 assets.

16 **Q. Would you please describe your previous work experience?**

17 A. I have dedicated 16 years at Consumers Energy. Before being promoted to my current role
18 as Director of Fleet Acquisition & Asset Disposition in May 2025, I served five years as
19 the Manager of Supplier Quality. My previous roles at the Company include positions in
20 Electric Regulatory Strategy, Business Customer Service, Corporate Risk, and Smart
21 Energy. Outside of work, I serve in a volunteer capacity on the Board of Directors for the
22 Finance Committee at Eaton Community Health (ECH). My three-year term spans from
23 April 1, 2025 to March 31, 2027.

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1 **Q. Have you previously been a witness, or supported witnesses, in any proceedings before**
2 **the Michigan Public Service Commission (“MPSC” or the “Commission”)?**

3 A. Yes. I provided testimony in the Company’s 2018-2019 Gas Cost Recovery Plan, Case
4 No. U-18411.

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

6 A. The purpose of my direct testimony is to support the Company’s costs related to the gas
7 business portion of Fleet services. To that end, I will:

8 I. Describe the Company’s Fleet and how it is managed through Fleet
9 Operations;

10 II. Explain the Company’s Fleet Replacement Planning Process;

11 III. Explain the Company’s Gas Electrification Strategy; and

12 IV. Sponsor the Company’s Fleet capital spending projections.

13 **Q. Are you sponsoring any exhibits with your direct testimony?**

14 A. Yes. I am sponsoring the following exhibits:

15 Exhibit A-12 (JJJ-1) Schedule B-5.6 Summary of Actual & Projected
16 Capital Expenditures Fleet Services;

17 Exhibit A-102 (JJJ-2) Fleet Responsibility Costs;

18 Exhibit A-103 (JJJ-3) Detailed List of Projected Gas Capital
19 Expenditures Fleet Services for the
20 Years 2023, 2024, 2025 and test year
21 12 months ending October 31, 2027;

22 Exhibit A-104 (JJJ-4) Summary of Fleet Tooling Actual &
23 Projected Capital Expenditures;

24 Exhibit A-105 (JJJ-5) Fleet Vehicle Idling Analysis;

25 Exhibit A-106 (JJJ-6) Fleet Idling Dataset;

26 Exhibit A-107 (JJJ-7) Fleet EV Dataset; and

27 Exhibit A-108 (JJJ-8) Potential EV Savings Study.

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1 **Q. Were these exhibits prepared by you or under your direction and supervision?**

2 A. Yes.

3 **Q. Please briefly describe the exhibits that you are sponsoring.**

4 A. I am sponsoring Exhibit A-12 (JJJ-1), Schedule B-5.6, which is a Summary of Actual and
5 Projected Capital Expenditures for Fleet Services for the calendar year 2024, bridge period
6 (22 months ending October 31, 2026), and the projected test year 12 months ending
7 October 31, 2027; Exhibit A-102 (JJJ-2), which provides details of the Company's fleet
8 responsibility dollars; Exhibit A-103 (JJJ-3), which provides details of the Company's
9 Fleet acquisitions in the historical year 2024, bridge period (22 months ending October 31,
10 2026), and the projected test year 12 months ending October 31, 2027; and Exhibit A-104
11 (JJJ-4) which is a Summary of Actual and Projected Fleet Tool Capital Expenditures for
12 the historical year 2024, bridge period (22 months ending October 31, 2026), and the
13 projected test year 12 months ending October 31, 2027; and Exhibit A-105 (JJJ-5) which
14 is a Fleet Vehicle Idling Analysis; and Exhibit A-106 (JJJ-6) containing fleet idling dataset;
15 and Exhibit A-107 (JJJ-7) containing fleet EV dataset; and Exhibit A-108 (JJJ-8) which is
16 a study of potential EV savings study.

17 **I. FLEET SERVICES FUNCTION AND RESPONSIBILITIES**

18 **Q. What functions compose the Fleet Services organization?**

19 A. The Fleet Services organization consists of three departments which collaboratively work
20 together to provide value to Gas Operations in serving customers. The three departments
21 include Fleet Acquisition, Fleet Maintenance Operations, and Shared Services Governance
22 Performance and Technology.

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1 **Q. Are you addressing all support organizations related to Gas Operations Support in**
2 **your direct testimony and exhibits?**

3 A. No. I will be addressing Fleet Services only.

4 **Q. Please explain the responsibilities of Fleet Acquisition.**

5 A. Fleet Acquisition executes all functions related to the acquisition and disposition of
6 Company-owned and rented vehicles and related equipment. This includes management
7 of the Fleet capital purchase plan, vehicle specification design, licensing/title, registration,
8 and asset retirement.

9 **Q. Please explain the responsibilities of Fleet Maintenance Operations.**

10 A. Fleet Maintenance Operations is responsible for maintaining a safe, cost-effective,
11 and reliable fleet. This is accomplished through preventative maintenance, regulatory
12 inspections, parts inventory management, and maintenance scheduling across 36 garage
13 locations with approximately 110 mechanics. Maintenance Operations also oversees
14 mechanic contractor crews for preventative maintenance and repairs performed in the field.

15 **Q. Please explain the responsibilities of the Shared Services Governance Performance**
16 **and Technology department.**

17 A. Governance Performance and Technology provides fleet with support of data integrity,
18 Telematics data management, departmental metric visual management, process
19 automation, oversight of waste elimination initiatives, and evaluates benchmarking and
20 data analysis provided to the Company. This team is also responsible for meeting all
21 regulatory and compliance requirements with the American National Standards Institute,
22 Department of Transportation, Michigan Motor Vehicle Code, and Federal Motor Carrier
23 Safety Administration. Additional responsibilities include Fleet Operations Policies and

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Procedures, regulatory and technical support, and tooling for fleet mechanics and the Company's EV strategy. The department also provides oversight for quality inspection audits and safety requirements related to regulatory compliance.

Q. Please explain the Company's overall fleet structure.

A. The Company's fleet includes approximately 7,622 owned, leased, and rented units across 36 locations. These units include light duty vehicles (approximately 2,200 units), medium and heavy-duty trucks (approximately 2,100 units), various types of equipment (approximately 1,400 units), and trailers (approximately 1,900 units). Internally, the Company categorizes its fleet into several specifications ("spec(s)"), each of which is a given type, model, and description of a vehicle. Each spec has a defined intended use, acquisition cost, operating cost, and expected life in years and mileage or in the case of equipment, hours.

Q. How is the Company's fleet divided between the electric and natural gas businesses?

A. The Company divides its fleet between the electric and natural gas businesses by determining which business unit at a given location is using each vehicle. The needs of the business require the deployment of dedicated teams to safely complete work utilizing specific tools and processes – this extends to the vehicle supporting said work. These vehicles are ordered and upfitted to support specific work and are, therefore, specialized for the work they perform; however, the Company does seek ways that units can be shared across the business when possible. The fleet requirements for the location will vary based on the service provided to the customer (electric, gas, or both), crew counts, and region. Additionally, some Company fleet units serve both electric and gas functions and are referred to as "common" units, which are utilized by support organizations, such as

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Facilities, Fleet, and Supply Chain. Overall, the Company's fleet is 40% electric, 50% gas, and 10% common by number of vehicles.

Q. What is the purpose of Fleet Acquisition as it relates to the Company's gas business?

A. Specific to the Company's gas business, Fleet Acquisition purpose is to provide vehicles and equipment that enable Gas Operations to serve customers with safe, reliable, and affordable gas service. This is accomplished by ensuring that the Company's Fleet assets are properly specified, procured, and delivered to the Company's Field Operations. Once delivered, Field Operations ensures that the units are maintained and operational to execute the work plan and respond to emergencies in the most efficient, cost-effective, and safe manner when required.

Q. Does the Company's fleet incur both capital and operating and maintenance ("O&M") costs?

A. The Company makes direct capital investments into its fleet for vehicles, tools, and other equipment as provided in Exhibit A-12 (JJJ-1), Schedule B-5.6, and Exhibit A-103 (JJJ-3). The Company also incurs other costs related to its fleet that are treated as "fleet responsibility" dollars, which in this case are presented in Exhibit A-102 (JJJ-2). The Company does not have specific Fleet O&M expenses. Fleet operating costs are reported in responsibility dollars.

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1 **Q. In MPSC Case No. U-21806 The Commission directed the Company to “provide**
2 **historical and projected fleet responsibility costs by capital and O&M with more**
3 **detailed information on the types of work these dollars support and the value received**
4 **for these expenditures, by cost category and business unit.” Please explain.**

5 A. The majority of fleet expenses are used to support Electric and Gas transmission and
6 distribution work (“T&D”). The costs are separated by the operational areas they support
7 within T&D and accumulated at the Fleet clearing account. The Fleet clearing account
8 balance is subsequently allocated to distribution and transmission work orders via costing
9 sheets as a loading percentage on top of the OM&C labor charged to that work order. To
10 this end, fleet costs are treated like other corporate loadings to a degree.

11 Each fleet unit has defined work assignments that determine which functional areas
12 are allocated and the associated responsibility dollars for the unit. Until the work and area
13 of the business where the dollars are spent is known and executed and before the dollars
14 are recorded as capital or O&M, they are termed ‘responsibility’ dollars. Fleet
15 responsibility costs are allocated to both capital expenditures and O&M expenses based on
16 the work assignment performed.

17 Each department has their own cost centers, which have different capital and O&M
18 percentage splits depending on the type of work performed. Dollars collected will first hit
19 in ‘responsibility’ then settle to the using department’s cost center which is assigned as the
20 settlement receiver on the order (unit). These settlement relationships are structured using
21 primary and secondary cost elements. Primary cost elements are used to determine what
22 the cost is related to. When costs settle, they settle in the form of a secondary cost element,
23 and the primary cost element is no longer visible. Visibility to the detail is lost since each

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secondary cost element does not have a 1:1 relationship with a primary cost element. A secondary cost element could contain multiple primary cost elements. So, if a vehicle (unit) is transferred to a different using department, the settlement receiver is updated and the costs settle to the new cost center assigned. For example:

Fuel cost element 5104300 and Rents & Leases cost element 5600000 settle to the same secondary cost element S3500 as one total amount. The unit's order would need to be pulled to get the breakdown between fuel and rents & leases. The unit's settlement receiver would indicate which cost center would be charged back. If the unit is transferred to another using department, the settlement receiver (cost center) would change.

Because the secondary to primary cost element relationships can be severed over time because of units moving, and dollars being split and aggregated across multiple using groups and work orders, historical reporting lineage is challenging. Given these constraints the Company has provided a break down of fleet responsibility costs across historical and projected periods and categories by considering average fleet loading percentages as seen in Exhibit A-102 (JJJ-2)

II. FLEET REPLACEMENT PLANNING PROCESS

Q. What is the Company's overall Fleet Replacement Planning Process as it is being presented in this case?

A. As previously presented in Electric Rate Case Nos. U-20963, U-21224, U-21389, U-21585 and U-21870, and Gas Rate Case Nos. U-21148, U-21308, U-21490, and U-21806 the Company develops its Fleet Vehicle Capital Replacement Plan using the Fleet Replacement Planning Process, which is a process that incorporates three phases. In the first phase, the Company identifies vehicles that are at or near the end of their expected life and are eligible for replacement, using a tool called the Blended Factor that is described in more detail below. Next, in the second phase, the list of vehicles identified by Blended

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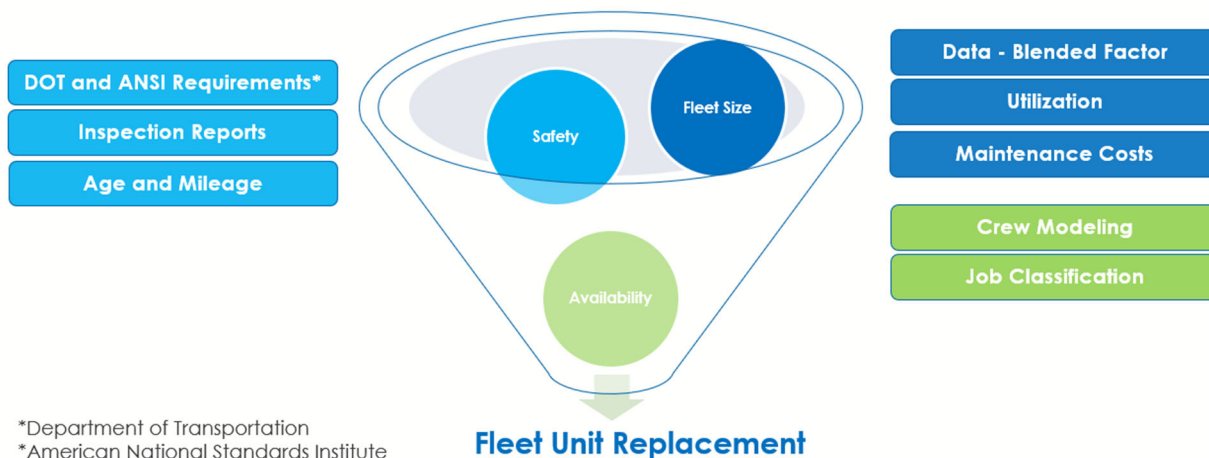
Factor Analysis for potential replacement is further developed by certain data tools, described below, particularly by fleet cost data, followed by crewing data, and, lastly, fleet utilization data. In this second phase, the Company's fleet leadership also works with Operations leadership and personnel in the field, which includes operators and mechanics, to identify which specific units should be replaced, incorporating qualitative inputs like maintenance reports and local area work needs. This second phase allows for further evaluation of the vehicles identified in the first phase to better determine which vehicles should be replaced. Thereafter, in the third phase, the list of vehicles identified for retirement is finalized based on the evaluations performed in the first two phases, and the ordering process begins. If an existing contract is already in place, orders are placed immediately with the manufacturer or vendor. For vehicles not covered by an existing contract, detailed specifications are written and requests for proposals are sent out to vendors (including minority-owned and Michigan-based businesses whenever possible). Once bids are received, they are evaluated and awarded based on cost, product support, and quality.

Q. Please further explain how the Company establishes its Fleet Replacement Planning Process.

A. The Company strives to replace assets at the optimal moment in the vehicle's service life by incorporating several factors in the decision-making process, particularly within phases 1 and 2. In doing so, the Company uses data gathered for each spec that is documented, monitored, and corroborated with detailed in-person inspections. Data is generated by the fleet through Telematics, including utilization rates, fleet age, and detailed inspections as a basis for determining future fleet purchases of specific capability and

utility. The Company's process for compiling and analyzing qualitative and quantitative inputs to develop its Fleet Vehicle Capital Replacement Plan is illustrated by the "filter" shown below.

Fleet Capital Replacement Plan Filter



Q. Please explain how the Fleet Capital Replacement Plan Filter works.

A. When the Company goes through its Fleet Replacement Planning Process, specifically within phases 1 and 2, certain data – such as the Blended Factor, utilization, operating cost, and crewing needs – is analyzed to determine if a given vehicle needs to be replaced. During the Fleet Replacement Planning Process, other qualitative inputs like vehicle inspection reports and the assessments of field employees provide further insight on replacement needs. The result of this process, specifically following the first and second phase, is a list of fleet units to be replaced.

Q. Can you describe, in further detail, the Blended Factor used in phase 1 and the Fleet Cost Tool, Crewing Model Tool, and Fleet Utilization Tool used in phase 2?

A. Yes. These are each described in the following sections.

A. **Blended Factor**

Q. **Please further explain the Blended Factor.**

A. The first step in the Company's process for establishing its Fleet Vehicle Capital Replacement Plan is informed by the Blended Factor. As previously mentioned, the Blended Factor takes age, usage, and mileage into consideration and establishes a replacement priority for units that are more economical to replace than continuing to maintain. The Blended Factor for any vehicle is calculated as shown in the illustrative example below:

Blended Factor Calculation

$$\text{Blended Factor Rating} = \left(\frac{[\text{Age Factor} + \text{Usage Factor}]}{2} \right)$$

$$\text{Age Factor} = \left(\frac{\text{Actual Age in Months}}{\text{Expected Life in Months}} \right) - 1$$

$$\text{Example: } \left(\frac{102}{84} \right) - 1 = .21$$

$$\text{Usage Factor} = \left(\frac{\text{Estimated Mileage}}{\text{Expected Life Mileage}} \right) - 1$$

$$\text{Example: } \left(\frac{223,180}{150,000} \right) - 1 = .488$$

$$\text{Blended Factor Example: } \left(\frac{[.21 + .488]}{2} \right) = .349$$

Equipment and engine operation hour
calculation: 1 hour = 25 miles

For equipment that does not have mileage (no odometer), the Blended Factor calculates usage from the engine hours. For medium and heavy-duty vehicles, the Blended Factor calculation also uses total engine hours, assuming that one hour of engine operation is equivalent to 25 miles of travel. Using this calculation, a Blended Factor result greater than 0.00% indicates that a vehicle is at or past its expected life and is therefore eligible for consideration for replacement. This indicator does not mean that a vehicle with a result

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greater than 0.00% is automatically selected for replacement; it is instead a *starting point* each year for the Company to use as a foundation in the selection of vehicles for replacement.

Q. Why is it important for the Company to consider the expected life in months and expected life in mileage for each of the respective specs?

A. The Blended Factor formula incorporates two key indicators of end of its expected life: (1) how old a vehicle is and (2) either how many miles it has traveled or total hours of operation. Expected Life in Months considers manufacturer inputs, reliability, operating conditions, and operating cost to determine the duration the Company expects a vehicle to operate safely and cost effectively. Expected life in mileage or hours is also based on similar considerations as an indicator of wear and tear. The Company makes these evaluations to set a foundational benchmark to assess potentially replaceable vehicles. The fleet has a diverse range of specs for specific operational needs, and not all specs have the same expected life. Even within the same spec, individual units can vary in condition depending on utilization and wear. Managing each spec to its appropriate expected life ensures that the Company always has the right type of vehicle available to serve the needs of customers in the safest, most reliable, and most efficient manner possible, while minimizing costs.

Q. Why is the use of the Blended Factor appropriate?

A. The Blended Factor is an internal data-based algorithm that incorporates unit age, utilization (in mileage or hours), and expected life, allowing the Company to prioritize, plan, and target specific vehicle(s) for replacement. As a key feature of the *first phase* of the replacement process, the vehicles denoted by the Blended Factor to be approaching the

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1 end of their expected life provide the basis for planning phases ahead. This process is
2 critical to assure that the Company can order a timely unit replacement, especially given
3 the supply chain challenges that have emerged in the last several years. While there has
4 been some improvement in the expected delivery dates for some products, planning around
5 potential delivery delays and availability is still a concern as demand for new medium and
6 heavy-duty equipment remains high. By using the Blended Factor, the Company can
7 strategize future spending for replacement units for specific years by consulting with
8 suppliers on current and future availability, thereby preparing the Company to order units
9 given current lead times to receive a unit once an order is placed.

10 **Q. What conclusions do you draw regarding the Blended Factor?**

11 A. The Blended Factor provides an objective standard that uses clear internal fleet data to
12 identify units for potential replacement and adds a level of predictability regarding which
13 units will need to be replaced to improve the cost-effectiveness of the replacement process.
14 Based on the above Blended Factor calculations, it is indicated that out of 7,622 units
15 currently in the fleet, there are approximately 1,900 units greater than 0.00%.

16 **B. Fleet Cost Tool**

17 **Q. Please explain the Company's fleet cost tool.**

18 A. As part of the second phase in its Fleet Replacement Planning Process, the Company is
19 utilizing a fleet cost tool, incorporating data analytical tools to support near- and long-term
20 cost-effective vehicle purchase plans. These analytical tools include tracking vehicles by
21 spec and the average age of each spec, fleet O&M costs, and geographical location.
22 Additionally, the fleet cost tool provides at-a-glance total and average per-vehicle
23 operating costs for each spec from various perspectives, including operating costs per mile,

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1 by age, and by specific vehicle. These tools provide data indicating vehicle count and
2 average age, broken out by spec. The purpose of these tools is to provide overall cost status
3 summaries of the fleet, as well as a platform to perform more detailed cost analyses of
4 individual vehicles. The following are descriptions of several tools the Company has
5 developed.

6 **Q. What are these tools that the Company has developed to support fleet cost analyses?**

7 A. For an overall summarization of fleet age and operating costs, the Company has developed
8 PowerBI reports called “YOY Fleet Dashboard” and “Monthly Fleet Dashboard” tools to
9 provide information regarding fleet operating costs correlated with age. The dashboard
10 provides data on operating costs including cost per mile, maintenance, fuel, and repairs.
11 This information can be filtered by vehicle year and spec and can assist in identifying trends
12 that will enable cost forecasting to support future purchasing decisions.

13 **Q. What are additional analytical tools related to fleet cost?**

14 A. The PowerBI report called Acquisition Purchase Plan identifies equipment count by spec
15 and is designed to highlight yearly fleet growth by spec, which helps identify trends, cost
16 and how the fleet’s makeup and size changes over time.

17 **Q. Are there any other analytical tools that are part of the fleet cost tool?**

18 A. The Acquisition Purchase Plan tool is designed to provide detailed cost information for a
19 specific unit, including total operating cost, as well as average costs over time for specific
20 specs. In this analysis, the Company evaluates equipment count, total operating cost,
21 average unit operating cost, median unit operating cost, and average unit age. Finally, the
22 PowerBI tools can report a particular territory, city, spec, equipment count, and total
23 operating cost for vehicles distributed throughout the Company’s service area. Current

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1 Month Unit Locations reports the units location, displayed on a map, with circle size
2 indicating high/low equipment counts and color indicating zone. Average Unit Age and
3 Total Operating Costs are summarized in cards at the top of the page. This page allows the
4 user to filter on Year, Usage Indicator, Rental Status, and Spec. The purpose of this tool
5 is to allow the user to use the filters to summarize equipment count, cost, and age by
6 location.

7 **Q. Why are these PowerBI tools appropriate for the Company to use?**

8 A. Using the Company's own data, the information these tools provide is used to help the
9 Company plan the cost-efficient replacement and acquisition of new vehicles. The Fleet
10 data provides information from several perspectives that help narrow the pool of vehicles
11 identified by the Blended Factor for replacement. For example, the Blended Factor may
12 identify many units within any given spec that are at or near the end of their expected life,
13 but a further examination using this tool can help inform how the unit is performing in
14 relation to other identical spec vehicles in the fleet from a cost perspective. If the unit has
15 become uneconomical to operate compared to other vehicles in the same spec, it may be
16 best to replace that vehicle for a more cost-effective solution sooner rather than later.
17 Conversely, a vehicle that has reached the Blended Factor end of expected life may still
18 have years of economical service possible based on operating cost reported by these tools.
19 This fleet cost tool also allows the Company's fleet management to understand how fleet
20 costs have changed year-over-year, including the ability to examine costs of specific units
21 to help inform if they are good candidates for replacement. The tool is intended to provide
22 an overview of past fleet metrics, and helps to identify relationships between unit age,
23 mileage, and operating costs. It also shows fleet age by spec which can be helpful when

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multiple units of the same spec were purchased in the same year. This is important information to consider when prioritizing the most appropriate vehicles to replace at any given point for the benefit of customers.

Q. What has the Company learned to date from using its fleet cost tool?

A. The fleet cost tool has allowed the Company to make informed decisions while reviewing units identified for replacement. This tool provides the Company with an at-a-glance total of overall costs of a particular unit. As the fleet team strategizes how and where to replace vehicles, the cost tool assists in framing how to best benefit the customer in the -decision-making process.

As noted, the Blended Factor calculation is a starting point in the decision-making process, with the expectation that the list can be modified as further analysis proceeds. The cost tool facilitates a review of repairs and improvement costs associated for each vehicle that can extend its service life. For example, feedback sought and received from field leaders on the overall condition and serviceability of a truck can show that it should be kept in service instead of being replaced. This includes investments like engine or transmission rebuilds, or body rust repairs. The PowerBI reports can identify which units require closer scrutiny when making purchasing decisions. This benefits the customer in that the Company gets as much service life out of units as is economically prudent.

C. Crewing Model Tool

Q. Please explain the Company's crewing model and crewing model tool.

A. As part of the second phase of its Fleet Replacement Planning Process, the Company's crewing model is used to calculate how many vehicles are needed based on the size of the workforce. This model incorporates all gas department vehicles and details about which

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employees are assigned to operate these vehicles. The gas departments include Gas Service, Gas Transmission, Gas Compression, Gas Construction, and Gas Distribution. These departments operate the following types of vehicles: dump trucks, digger derricks, vans, pickup trucks, and other support vehicles. The crewing model tool illustrates how many vehicles are needed and how many vehicles are available, giving visibility to gaps.

Q. What information does the tool show?

A. The tool lists Company locations and, for each location, shows the number of units at that location by workgroup, breaking down the number of employees and the number of different types of units located there. Based on this information, the tool provides the gap between the actual number of vehicles at the location and the number of vehicles needed.

Q. How was this crewing model developed?

A. The Company's Gas Operations Department's workforce's size and crewing influences the number and types of vehicles needed to serve customers. Crewing is determined by the work required and influenced by safety and policy procedures related to the work performed. In the crewing model, the Company uses standard crewing of the following truck-to-employee ratios:

- Gas crewing consists of one Gas Line Worker ("GLW") and/or one Trenching Machine Operator ("TMO") to make one crew. Each crew is assigned a Gas Service Truck (spec 44) and a support vehicle. The support vehicle could be a dump truck or a pickup. The crewing model calculates vehicle needs according to the following ratios:

Vehicle Type	Model Ratio
Gas Service Truck (spec 44)	1:1 TMO to Gas Service Truck
Digging Equipment	1:1 GLW/TMO to Digging Equipment
Pickup	1:1 GLW to Support Vehicle
Fillet Welder (Spec 28)	1:1 GLW to Fillet Welder

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- Employees in Gas Meter Operations, Customer and Field Services, usually operate as single workers, rather than in a crew, meaning they have a 1:1 vehicle ratio.

Q. Why is this crewing model appropriate for the Company to use?

A. The crewing model is based on industry best practices and Occupational Safety and Health Administration (“OSHA”) requirements.¹ To provide a safe, reliable, and cost-effective fleet, it is important that the Company’s fleet be adequate in size to complete the established work plan, work safely, and adhere to OSHA requirements.

Q. What conclusions can you draw from the data shown in the crewing model tool?

A. The model shows that the quantity of production units (gas service trucks, support vehicles, welders, and digging equipment) currently in the Company’s fleet will continue to be evaluated based on established work plans and employees needed to perform the work (more information on how utilization data is calculated is provided in the next section of this testimony). The model can help identify surplus or deficiency of assets in each specific area and units that are down for repairs or regular maintenance. This visibility allows the Company to reallocate surplus assets to areas with deficiencies to ensure each area is adequately supplied based on the model. Backup vehicles must be ready to meet the needs of the crews as daily schedules develop, meaning that some additional vehicles may be needed on short notice. The Crewing Model allows for backup vehicle availability for such circumstances to reduce the risk of gaps between crews and vehicles needed in the field.

The crewing model assumes the Company will onboard new workers or add replacement workers consistently and in a timely manner as work plans develop to drive the need for workers and as attrition rates affect the workforce. However, the Company

¹ [1926.651 - Specific Excavation Requirements. | Occupational Safety and Health Administration](#)

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1 does not always receive new vehicles at the same time new workers are onboarded. For
2 this reason, it is possible that new vehicles will be received and paid for before workers are
3 ready to use them, but those vehicles *will* be put into use once the planned hiring is
4 complete. Utilization rates for vehicles may at times reflect this reality.

5 **Q. What has the Company learned to date from using its Crewing Model?**

6 A. The Crewing Model offers the ability to find gaps in available units, and much like a
7 checklist, allows the Company to proactively prepare for any emerging vehicle needs based
8 on how new projects and employees are planned or deployed. In this manner, the Crewing
9 Model complements the other fleet tools the Company is developing by ensuring that units
10 are allocated as effectively as possible before and after any new units are purchased. The
11 customer benefits from this because the Company is constantly working to keep its fleet
12 right sized, with as little redundancies as possible.

13 **D. Fleet Utilization Tool**

14 **Q. Please explain how the Company captures utilization data for its fleet.**

15 A. All vehicles use a Telematics device that is directly wired to that asset's onboard computer
16 or switching. Each installed Telematic device communicates, via cellular signal in real
17 time, information about the asset status including the unit's exact Global Positioning
18 System ("GPS") location, date, time, mileage driven, and hours in operation. A vehicle is
19 considered in use for any given day when it has traveled five or more (5+) miles at any
20 time or equipment that is in operation for 30 or more (30+) minutes per day. This captured
21 data is then uploaded and compiled on a nightly basis into one tool that can then be used
22 to run reports as needed to manage the operation. This data is compiled into a fleet

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utilization tool that can provide fleet use by zone, vehicle type, or department and is used as part of the second phase in the Fleet Replacement Planning Process.

Q. How was this data process developed?

A. The electronic information captured by the Telematics system documents industry standard data points that are used to log key vehicle information. Since 1996, every vehicle manufactured in the United States has an On-Board Diagnostic (“OBD”) port/interface that can easily be made accessible to Telematics systems and their associated electronic data gathering capabilities. The OBD system provides access to a vehicle’s Electronic Control Unit, the main computer that controls vehicle engine, transmission, and other key vehicle functions. By connecting directly to the OBD of each vehicle, the Telematics system is able to collect the real-time information required to inform the Company to log the key data points required to document utilization.

Q. How is the Company’s utilization data tied to the crewing model?

A. As explained in the crewing model section, vehicles are assigned in response to the requirements of the daily work plan and the employees needed to complete the work. Some types of vehicles, like bucket trucks, are used frequently for common field operations, whereas there are other types of vehicles that are highly specialized and designed for specific tasks that are not always required on a given day/night to serve customers but are no less crucial to properly service customers throughout the state. The Company’s utilization data also accounts for the downtime that equipment must undergo when receiving inspections, maintenance and repair, or other ancillary equipment upgrades, and for the fact that some equipment must be available for on-call assignments and off-hour assignments.

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1 **Q. Why is this approach to utilization data appropriate for the Company to use?**

2 A. By capturing real-time telematic data from each asset and compiling it in one dataset, the
3 Company obtains the required raw data to detail the exact frequency, duration, and overall
4 use of each asset, and this data is then searchable for reporting utilization rate purposes.
5 Utilization data can illustrate where units may be underutilized. The customer benefits
6 from this approach because the Company ensures that all vehicles and assets are tracked,
7 monitored for maintenance and safety, and allows for the optimal cost-benefit relationship
8 and return on investment for its fleet. This approach supports the analysis of what assets
9 the Company needs to purchase to be sure that it is replacing vehicles at the end of their
10 lifecycles, and to be sure that the Company is serving customers with safe, capable, and
11 effective equipment.

12 **Q. What conclusions do you draw from the Company's fleet utilization data?**

13 A. The Company's utilization rate data informs us that a continual review of fleet equipment
14 for under-utilized vehicles, what areas of the business they serve, and how that may impact
15 the Company's ability to serve its customers, will be on an ongoing analysis. It is a key
16 tool in determining why and where vehicles may be down (or showing lower utilization
17 rates). For example, vehicles that are down for repair or waiting for parts are different from
18 vehicles that are available but are not being used to serve customers when evaluating
19 utilization rates. The Company analyzes its fleet utilization to determine if there are any
20 redundancies that can be dispositioned in the future, such as through attrition and
21 reallocating to raise utilization to more optimal levels.

1 **E. Benefits**

2 **Q. Please summarize the Company's Fleet Replacement Planning Process.**

3 A. The Company's fleet consists of 7,622 units of varying specs utilized for specific tasks to
4 serve customers, divided between the electric and gas sides of the business. Assets referred
5 to as "common units" are utilized by various other departments within the Company to
6 support business operations. The Company employs a Fleet Replacement Planning Process
7 (Replacement Filter, Blended Factor, PowerBI Data, and Crewing Models) to determine,
8 in the most cost-effective and efficient manner, which units to replace. The Blended Factor
9 identifies a pool of assets to consider replacing based on the mileage and age of each asset.
10 Fleet cost data helps refine the initial group of eligible vehicles by helping to identify units
11 that have become more costly than their value, or inefficient to maintain in the fleet. By
12 applying crew modeling and utilization analysis, the Company checks to ensure that crew
13 sizes support the potential number of vehicles replaced or added and confirms that
14 replacement assets are appropriate based on usage rates. The customers benefit from this
15 overall process because of the systematic efforts noted above attempt to replace and/or add
16 fleet assets at the most beneficial time possible. Each step in the process is designed to
17 specifically identify which assets to add or replace, and the rationale and timing.

18 **Q. What are the benefits of the Fleet Cost Tools for customers?**

19 A. The tools helps the Company make decisions about which units should be replaced or kept
20 by illustrating when the cost of maintaining the units outweighs the cost of a new unit, or
21 investments made in units to keep them in service, which ultimately supports decisions
22 made in the Company's Fleet Vehicle Capital Replacement Plan. The tools allow for
23 visibility in significant investments such as a new engine or transmission in a vehicle that

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1 could extend its service life. The customer benefits from this analysis because the
2 Company is using fleet dollars in the most economical way possible.

3 **Q. What are the benefits of the Crewing Model for customers?**

4 A. Having the ability to tie the workforce to the right vehicle by location enables the Company
5 to have visibility to align assets with the workplan by department and location. As the
6 Company strives to be a good steward of the fleet, the model helps validate if additional
7 units are needed to meet the Company's workplan or, alternatively, if the Company has
8 any surplus units that can be redeployed or retired. Crewing models are also critical in
9 complementing crew growth by adding needed vehicles and equipment as emergent work
10 is identified and planned. Absent this, the Company may end up lacking the appropriate
11 vehicles to complete work for the customers' benefit.

12 **Q. What benefits does fleet utilization data provide for customers?**

13 A. Peak utilization of all vehicles is a balance between fully utilizing purchased assets and
14 having the right asset in place and ready when needed at a moment's notice when
15 responding to outages, new business, or construction situations. Fleet assets other than
16 specialized equipment that are underutilized are not providing the maximum benefit to the
17 customer. As good stewards of its fleet, the Company must provide the most cost-effective
18 methods to assure that the fleet is a safe and effective part of the service it provides.

19 The Company's ability to serve its customers reliably, efficiently, and to a high
20 standard requires an equally capable fleet. By methodically incorporating utilization
21 processes that monitor fleet assets, the Company can maintain the fleet to manufacturers'
22 specifications, as well as addressing the periodic wear and tear that comes with operating
23 vehicles in often extreme conditions. Utilization data that monitors each type of vehicle

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1 can also assure that the Company is earning the best return on investment for the expected
2 environment said vehicle is designed to operate in. For example, the Company expects
3 that investing in a sedan should provide a life expectancy of seven years and approximately
4 150,000 miles under normal service. Utilization for a vehicle of this type may differ as
5 compared to a utility truck sent as needed to address concerns in the field or support
6 customers as the need arises. However, for both types of vehicles, regular monitoring of
7 utilization reports will help the Company plan for the replacement of each vehicle with
8 regular use over time. Additionally, analysis of any under-utilized vehicles will inform
9 decisions on how many future investments in that type of vehicle are made going forward.
10 Customers benefit when the Company is making best use of its fleet to deliver service.
11 Utilization data helps the Company right-size its fleet by identifying where additional units
12 are needed to accommodate the Company's workforce, if there are any surplus units, and
13 if existing units can be more effectively used by the Company, such as by moving units to
14 a new location or new department.

15 **Q. How does the Company's overall Fleet Vehicle Capital Replacement Plan benefit**
16 **customers?**

17 A. Overall, the Fleet Vehicle Capital Replacement Plan allows the Company to retire and
18 replace vehicles in a cost-effective way by using qualitative and quantitative inputs to
19 identify units for replacement, particularly by identifying those units with high
20 maintenance costs and exhausted expected useful lifespans. Retiring and replacing those
21 units in a systematic way is designed to keep maintenance costs down while ensuring that
22 vehicles are available when needed to serve customers. The replacement planning process
23 is a constantly self-evaluating cycle that relies on the data the fleet itself generates over

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time (mileage, age, and life cycle expectancy), inspections, maintenance and repair costs, and the local expertise to assist in prioritizing how the Company replaces units in the fleet. The customer benefits from this replacement planning process because the fleet is a crucial part of the overall service the Company provides. A replacement plan allows the Company to provide a safe, reliable, and cost-effective fleet to respond timely to utility outages, damaged utility service, utility service renewals, and new construction requests.

Q. Are there further benefits related to safety, quality, and the planet when determining the Fleet Vehicle Capital Replacement Plan?

A. Yes. By replacing vehicles in the fleet, newly introduced features from vehicle manufacturers are regularly incorporated into the Company's fleet, such as the following:

Safety-

- Backup sensors and rear-view cameras. This feature allows for safer backing, resulting in fewer rearward collisions, reducing vehicle and property damage, and increasing safety for the Company's customers and employees as well as collision avoidance and auto emergency braking, reducing collisions by advanced driver warning and applying brakes in advance of collision.
- Reduced stopping distance requirement from the Federal Motor Carrier vehicle safety standard for class 6-8 trucks. The standard distance required to stop a commercial vehicle was reduced, (National Highway Traffic Safety Administration 49 CFR Part 571, requiring a 30% reduction in stopping distance compared to currently required levels), which led to equipping trucks with larger braking systems to avoid collisions on buses and trucks manufactured on or after July 1, 2005.
- Light Emitting Diode ("LED") headlight technology. This allows a driver to see further down the road giving the driver more time to react to a situation. LED headlights also save money due to less frequent bulb changes, thereby reducing time under repair.

Quality-

- Materials to manufacture vehicles are continuously advancing. For example, the Ford F-150 body is now stamped out of military grade aluminum, making the truck lighter, which increases fuel economy. Another added benefit of

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aluminum bodies is corrosion resistance, meaning less time and money spent repairing corrosion problems.

- Over the last 10 years, diesel engine exhaust gas recirculation coolers have improved, eliminating the need to replace them as frequently. This saves approximately \$4,000 per replacement, where such replacements were occurring about every two years.

Planet—

- To align with National Highway Traffic Safety Administration’s corporate average fuel economy standards, new vehicles are becoming more fuel efficient to align with their regulations. When replacing units within an appropriate lifecycle, the Company has an opportunity to purchase more -fuel-efficient vehicles, including fully electric and plug-in hybrid vehicles where appropriate, ultimately reducing the Company’s carbon footprint.
- Fossil fuel powered vehicles may be replaced with an EV if data supports electrification in that instance and could be a more -fuel-efficient mode of transportation.

III. FLEET ELECTRIFICATION STRATEGY

Q. Does the Company plan to continue purchasing EVs for its internal fleet?

A. Yes, as part of the Company’s continued commitment to sustainability and operational efficiency, the Company is evolving its internal fleet electrification strategy. While the original goal targeted 30% fleet electrification by 2030, and electrifying all light duty units thereafter, the Company is now shifting toward a more pragmatic, market availability driven approach. Moving forward, the Company will prioritize and target 1-for-1 electric vehicle (EV and Plug-In Hybrid Electric Vehicle - PHEV) replacements where a clear business case supports the transition from an internal combustion engine (“ICE”) vehicle. This strategy allows fleet to focus on electrifying vehicles that deliver measurable value, whether through reduced emissions, lower operating costs, or improved performance—while maintaining flexibility across our diverse fleet needs. The previous approach would have required purchasing EV units at a rate higher than the 1:1 purchase plan allowed.

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1 **Q. How many EVs does the Company have in its internal fleet currently?**

2 A. The Company's fleet currently operates 283 EVs, representing approximately 5% of
3 powered units in the overall fleet.

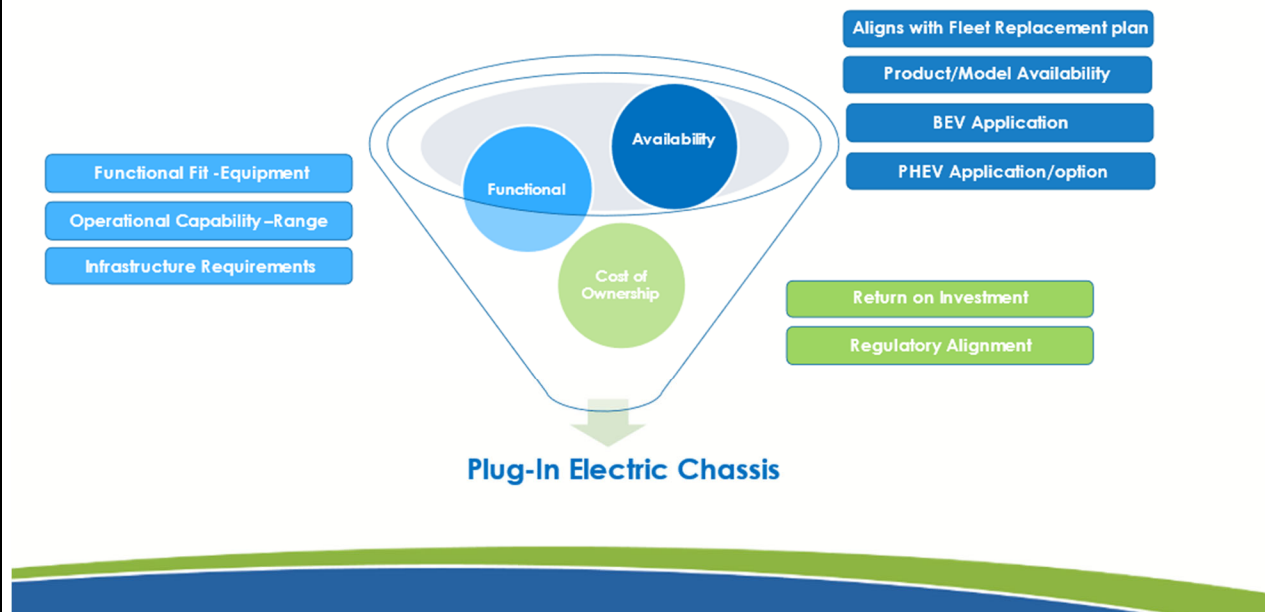
4 **Q. How does the Company determine opportunities to replace ICE vehicles with EVs?**

5 A. The same replacement process, as discussed earlier in my testimony, is used to determine
6 opportunities to replace ICE vehicles with EVs, including the use of the Blended Factor,
7 unit age, and overall condition analysis for each unit that has reached its end of life. Under
8 this process, as a unit is targeted for replacement and reviewed according to the
9 Replacement Plan, the unit is also considered for replacement with an EV. The Company
10 also uses how many miles an ICE unit the EV might replace to determine if there could be
11 any range challenges were an EV to be used instead. As the Electrification Filter shown
12 below shows, consideration for electrification includes assessing a suitable replacement
13 that is available in market, would have a functional role within the fleet, and similar or
14 lower cost of ownership. If the ICE under consideration for replacement meets the criteria
15 required to pass through the filter, the unit is considered as an opportunity for replacement
16 with an EV.

17 **Q. Does the Company use telematics data to help determine which ICE vehicles are most**
18 **appropriate to replace with an EV?**

19 A. Yes, the Company uses data captured by telematics devices on ICE vehicles to help forecast
20 mileage range requirements where an EV is being considered as a replacement for an ICE
21 vehicle.

Fleet Electrification Filter



1 **Q. Why does the Company consider mileage range concerns with EVs?**

2 A. Mileage range is a critical consideration in determining how the Company integrates EVs
3 into the fleet. It is important to understand how current vehicles operate (such as how many
4 miles we place on ICE vehicles and where they travel while serving customers and the
5 business) to determine potential EV replacement options, as well as public and Company
6 infrastructure preparedness.

7 **Q. In what ways are EVs more beneficial than ICE vehicles?**

8 A. Most of the benefits gained from utilizing EVs or battery-assisted systems arises from the
9 changeover to electricity as the main source of energy, instead of gasoline or diesel fuels
10 and petroleum-based maintenance materials. Electric motors require much less powertrain
11 maintenance and repair, resulting in reduced maintenance costs, which is one of the key
12 benefits of electrifying fleet units. Generally, a fully EV (battery) powered vehicle can
13 also have up to 80% fewer parts than its ICE counterpart. With fewer internal parts, electric

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1 motors operate with less friction and more efficient use of energy. Many ICE vehicle parts
2 require frequent and costly maintenance routines. Further, up to 65% of the heat energy
3 produced by an ICE is wasted, requiring cooling systems which are prone to wear and
4 eventual failure.

5 **Q. Has the Company undergone a concierge cost benefit analysis to help plan for internal**
6 **EVs?**

7 A. Per Case No. U-20963, the Company has partnered with CALSTART, a national non-profit
8 with over 30 years' experience in the private and public sectors with a proven track record
9 working with over 280 member companies and agencies to build business cases for clean
10 transportation technology adoption. CALSTART is a nationally respected team of fleet
11 electrification experts who were selected by the Company via a competitive Request for
12 Proposal. CALSTART has completed numerous fleet electrification assessments for
13 external customers, in addition to the Company's. The assessments analyzed the
14 Company's light duty fleet vehicles, by location, and daily miles driven to provide
15 approximate load demand by location. EV location determination helps in understanding
16 potential carbon emission avoidance and cost benefit analysis.

17 **Q. What other research has the Company performed for vehicle electrification and fleet**
18 **vehicle idling?**

19 A. As requested in the order for Gas Rate Case No. U-21806, the Company has performed an
20 assessment and analysis of fleet vehicle idling characteristics and a specific study of
21 expected savings of electrifying fleet assets. The idling assessment can be found in
22 Exhibits A-105 (JJJ-5) and A-106 (JJJ-6). The EV study and findings can be found in
23 Exhibits A-107 (JJJ-7) and A-108 (JJJ-8).

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1 **Q. What conclusions do you draw from the study of expected savings of electrifying**
2 **internal Company fleet vehicles?**

3 A. The study suggests that the Company may have an opportunity to lower the operating and
4 fuel costs associated with the vehicles identified in the study based on the reduced fuel
5 costs, and overall wear and tear EVs should experience under normal operating conditions.
6 There is also the opportunity to reduce the (mileage equivalent) wear and tear associated
7 with idling on ICE components. The Company already has full EV pick-up trucks that
8 were deployed in late 2024 and is monitoring operating and fueling costs to build data to
9 compare to ICE vehicles.

10 For year-to-date 2025, the average cost per mile for a sample of seventeen 2024
11 model year ICE pick-up trucks is approximately \$0.36 cents per mile, and \$0.32 cents per
12 mile for a similar sample of EV pick-up trucks. This equates to approximately 11% lower
13 operating cost trend year to date over a similar ICE pick-up at this time. While this is only
14 the first full year for full EV pick-up truck deployments, it may be possible for the
15 Company to reduce its cost recovery in the next gas rate case for the reduced operating
16 costs associated with operating these EV pick-up trucks.

17 **Q. What conclusions do you draw from the analysis of Company fleet vehicle idling data?**

18 A. The idling data suggests that there may be potential opportunities to reduce idling for some
19 of the Company's fleet internal vehicles. The Company plans to share this data with
20 specific teams, especially those with the highest idling statistics, to discuss the best idling
21 practices and potential solutions to reduce idling where possible without compromising the
22 work requirements, safety, or customer service.

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1 **Q. Are there other associated projects being planned to support vehicle electrification**
2 **efforts?**

3 A. Yes. The Company must plan for charger installations, and the increased electric load
4 demands at service centers to charge the EVs.

5 **Q. What EV units does the Company plan to purchase for the Test Year?**

6 A. The Company is planning to retire seven ICE pick-up trucks and purchase seven electric
7 EV pick-up trucks. This 1:1 replacement provides the opportunity to electrify units that
8 are currently powered by fossil fuel.

9 **Q. What associated infrastructure support will the EVs planned for the Test Year**
10 **require?**

11 A. The EV units will require chargers installed at their planned respective headquarters to
12 support their charging requirements.

13 **Q. How could EVs in the Company's fleet benefit the customer?**

14 A. EVs are generally less complicated than combustion-powered vehicles, utilizing less parts
15 and fluids. Less moving parts contribute to increased reliability and fewer maintenance
16 items over ICE counterparts because there are fewer moving parts to wear out including
17 transmissions, pistons, and valves. Parts associated with an ICE (belts, hoses, oils and
18 fluids etc.) require regular maintenance) and are potential failure points that require
19 downtime. The Company seeks to lower Fleet's overall operating costs by reducing its
20 reliance on fossil fuels, which will bring lowered maintenance costs for reasons mentioned
21 earlier in this testimony. By shifting some of the cost of refueling an ICE unit from gasoline
22 or diesel to overnight charging, the Company could save money on fuel wherever mileage
23 powered by fossil fuels can be shifted to lower cost charging overnight rates. The Company

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1 seeks to leverage the relative stability and lower cost electricity offers over the more
2 volatile cost of petroleum-based fuels and lubricants over the lifetime of these vehicles.

3 The Company seeks to lower its overall carbon dioxide emissions from Fleet's
4 operations. EVs have reduced or zero tailpipe emissions and, where applicable, hybrid
5 vehicles and other technologies (like idle shut off or mitigating ePTO systems) also offer
6 carbon reductions as well. The Company's customers can benefit from the efforts to
7 mitigate pollution, reduce greenhouse gas emissions, and lower its overall operating costs
8 related to operating its internal fleet.

9 **IV. FLEET SERVICES CAPITAL SPENDING PROJECTIONS**

10 **Q. Please describe the capital expenditures related to Fleet Services as shown on Exhibit**
11 **A-12 (JJJ-1), Schedule B-5.6.**

12 A. Exhibit A-12 (JJJ-1), Schedule B-5.6, provides gas Fleet Services capital spending, broken
13 down into four capital spending categories: (i) Fleet Vehicle Capital Replacement; (ii) Fleet
14 Vehicle Electrification; (iii) Fleet Business Partner Funded; and (iv) Fleet Tools - Garage.
15 Exhibit A-12 (JJJ-1), Schedule B-5.6, provides these capital expenditures with actuals for
16 the 12 months ended December 31, 2024; projections for the 12 months ending
17 December 31, 2025; 10 months ending October 31, 2026; 22 months ending October 31,
18 2026; and projections for the 12 months ending October 31, 2027, which is the test year in
19 this case. For the historical year, 12 months ended December 31, 2024, the Company
20 incurred Fleet Services capital expenditures in the amount of \$9.446 million. The
21 Company is projecting gas Fleet Services capital expenditures to be \$9.837 million for the
22 12 months ending December 31, 2025; \$9.187 million for the 10 months ending
23 October 31, 2026; \$19.023 million for the 22 months ending October 31, 2026; and \$9.759

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million in the projected test year ending October 31, 2027, as set forth in Exhibit A-12 (JJJ-1), Schedule B-5.6, line 5, columns (b) through (f), respectively.

Q. Are there any contingency costs included in the Company's projected Gas Fleet Services capital expenditures?

A. No.

Q. What types of expenditures are included in Fleet Vehicle Capital Replacement Plan and Fleet Vehicle Electrification capital spending?

A. Details of the Fleet Vehicle Capital Replacement Plan are included in Exhibit A-103 (JJJ-3). Fleet Vehicle Electrification expenditures include the additional cost of seven EV pickup trucks.

Q. What types of expenditures are included in Fleet Business Partner Funded?

A. Fleet Business Partner Funded expenditures include additional units purchased to support the Company's Advanced Methane Detection ("AMD") Systems, and one fully electric pick-up truck supporting PowerMIFleet education and outreach initiatives, both are described in detail later in my direct testimony.

Q. What types of expenditures are included in Fleet Tools?

A. Fleet tool purchases include the following: diagnostic equipment, tool sets, ergonomic tooling, and specialty equipment to properly and safely service and repair fleet vehicles, equipment, and trailers. This is described in detail later in my direct testimony.

Q. How did you determine the appropriate distribution of capital costs among the cost categories shown on Exhibit A-12 (JJJ-1), Schedule B-5.6?

A. As required in the Commission's filing requirements, the Company itemized the capital investments for Transportation Equipment by using the following cost categories:

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contractor, labor, materials, business expenses, and other. The Company breaks out these cost categories by calculating a five-year historical average of each of the Commission's prescribed cost categories from years 2020 and 2024 as a percentage of total Transportation Equipment investment over that same period. The five-year historical average for each cost category was then applied to the Transportation Equipment Program's projected capital spending for the bridge year and the test year to arrive at estimates for each cost category (i.e., contractor, labor, materials, business expenses, and other). This method is consistent for the projected test year presented in Exhibit A-12 (JJJ-1), Schedule B-5.6.

A. Fleet Vehicle Capital Replacement Plan

Q. What level of Fleet Vehicle Capital Replacement Plan spending is proposed in this case?

A. As shown in Exhibit A-12 (JJJ-1), Schedule B-5.6, the Company is proposing to spend \$9.593 million in the 2025 bridge year; \$8.619 million for the 10 months ending October 31, 2026; \$18.212 million for the 22 months ending October 31, 2026; and \$8.030 million in the 12 months ending October 31, 2027 test year on Fleet Vehicle Capital Replacement Plan spending.

Q. How did the Company determine its 2024 through 2027 Fleet Vehicle Capital Replacement Plan for the instant case, including the appropriate level of investment?

A. The Company is keeping Fleet Vehicle Capital Replacement Plan spending in 2024 through 2027 at historical spending levels, adjusted for inflation, based on what the Commission has previously approved for "lifecycle replacement spending." By remaining at this level for 2024 through 2027, the Company is demonstrating its commitment to

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1 keeping costs affordable for customers. This set of vehicles was described earlier in my
2 testimony, as shown in Exhibit A-103 (JJJ-3).

3 **Q How did the Company develop the list of vehicles that is projected to be purchased in**
4 **years 2024 through 2027 of this case?**

5 A. The specific units that the Company plans to purchase 2024 through 2027 are also shown
6 in Exhibit A-103 (JJJ-3). The Company produced an initial list of vehicles for replacement
7 using the Blended Factor algorithm described earlier in my testimony, with a spreadsheet
8 showing a Blended Factor percentage for each vehicle in the Company's fleet. This list
9 was prioritized by the Blended Factor percentage to highlight vehicles that generate a
10 positive (above 0.0%) percentage (the mathematical result of the Blended Factor
11 calculation), which indicates that a vehicle has reached its expected life. Following the
12 Blended Factor Analysis, as described previously in this testimony, the Replacement Plan
13 filter included a review of market availability. By reviewing market availability, the
14 Company can determine which replacement specifications can be expected for delivery
15 through 2027. Vehicles that are likely not available for delivery in 2025 were not
16 considered for replacement. To further refine the list of vehicles, standard crewing models
17 were assessed. Though the Company will be continuing an analysis on right-sizing,
18 standard modeling to help guide the decision-making process.

19 **Q. Was there additional analysis in determining the Fleet Vehicle Capital Replacement**
20 **Plan for 2026 and 2027?**

21 A. Yes. The list was further reviewed from a cost and utilization perspective. By assessing
22 how often vehicles are used, the Company selected vehicles with a higher utilization rate
23 when compared to similar specifications. The Company further narrowed the initial

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1 Blended Factor-based list based on fleet stakeholders' input on condition. In this step,
2 vehicles were assessed by age, mileage, and overall condition, and associated operating
3 costs and mechanical improvements, such as a newly installed engine. Vehicles that
4 received recent substantial investments (new engines, for example) are removed from the
5 potential replacement list because their expected life is generally extended following such
6 investments.

7 **Q. Does the Company anticipate variances in future fleet spending?**

8 A. While the Company attempts to be as precise as possible in the Fleet Replacement Plan,
9 there is the potential for variances slightly above or below projected budget due to the
10 nature of the fleet business that includes supply chain challenges. However, the Company
11 continues to be good stewards of the fleet by working to meet all projected expenditures as
12 close to targeted goals as possible.

13 **B. Fleet Vehicle Electrification**

14 **Q. In the projected test year, 12 months ending October 31, 2027, the Company is**
15 **projecting an investment of \$180,000 for EVs. What is included in this amount?**

16 A. As shown in Exhibit A-12 (JJJ-1), Schedule B-5.6, the Company is proposing to spend
17 \$180,000 in the 12 months ending October 31, 2027, test year on Fleet Vehicle
18 Electrification.

19 **Q. What kind of purchases are included in Fleet Vehicle Electrification?**

20 A. As shown in Exhibit A-103 (JJJ-3), line 3, column (i), Fleet Vehicle Electrification
21 purchases include seven EV pickup trucks.

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1 **Q. Why are the expenditures presented for Fleet electrification appropriate?**

2 A. Fleet expenditures requested will be used to bridge the price gap difference between a
3 standard ICE pickup truck and a plug-in EV pickup truck of similar function. The proposed
4 spending would fund the purchase price difference between a standard ICE pickup truck
5 and its EV equivalent. The expected purchase price difference between an ICE pickup
6 truck chassis and an EV pick-up truck chassis is approximately \$40,000, totaling
7 approximately \$180,000 for seven EV pick-up trucks serving gas and common business.
8 The addition of these EVs will further the Company's efforts to reduce fuel and
9 maintenance costs, as well as its overall carbon footprint.

10 **Q. Why is the Company requesting only the purchase price difference between an ICE**
11 **vehicle and an EV in this case?**

12 A. Due to these vehicles being part of the replacement plan process, the funding to replace an
13 ICE chassis is already being requested as part of the capital replacement plan. Therefore,
14 the Company is only requesting to add the purchase price difference between a standard
15 ICE chassis and the electrification cost of its replacement unit.

16 **Q. How do these capital expenditures benefit customers?**

17 A. The expenditures in vehicle electrification will benefit the customer in several ways. EVs
18 and plug-in hybrids are expected to lower the Company's overall fuel and maintenance
19 costs as compared to ICE powered vehicles. The EVs proposed also offer significant
20 potential reductions in greenhouse gas emissions, increasing the Company's carbon
21 avoidance efforts, while providing service to customers with less pollution at lower cost.
22 Lastly, the units proposed for the Test Year will further the Company's continuing learning
23 on EV best practices, planning, and deployment as it increases fleet electrification.

C. Fleet Business Partner Funded

Q. In the 12 months ended December 31, 2024, the Company funded a partner-funded investment of \$153,000. What is included in this amount?

A. As shown in Exhibit A-12 (JJJ-1), Schedule B-5.6, line 4, column (b), the Company invested approximately \$153,000 to fund one fully electric pick-up truck supporting PoweMIFleet education and outreach initiatives funded by that pilot, and three SUVs with AMD Systems for the Gas Strategy department within Gas Engineering and Supply.

Q. How did you determine the needed level of spending for the partner-funded equipment?

A. A low-cost electric truck configuration from a Michigan-based manufacturer was selected that would have sufficient range for engaging at customer outreach events and discussions on electrification with fleets considering electrification. The vehicles purchased for AMD are suitable for advanced leak surveying requirements to provide vehicles that are capable of safely and efficiently transporting the driver and sensitive methane diagnostic and detection measuring equipment.

Q. How do these capital expenditures benefit the customers?

A. EVs are a technology change for almost all fleet customers. Given this, being able to see and experience an EV is important for customer education regarding infrastructure and charging requirements. Furthermore, by Consumers Energy modeling electric fleet adoption, customers have more confidence in the information being received from PowerMIFleet.

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1 **Q. Has the Commission previously approved spending for this partner-funded**
2 **equipment?**

3 A. Yes. The Commission approved spending for PowerMIFleet administration and customer
4 outreach in its Order in Case No. U-20697.

5 **Q. What concerns does Fleet Services have if the proposed capital expenditure amounts**
6 **for expansion are not approved?**

7 A. Presently, Consumers Energy has two smaller sedan EVs (i.e. Chevy Bolts) that are utilized
8 for customer events and educational outreach. With a limited light duty fleet, the Company
9 loses the ability to expand its education internally as well as externally. Continued
10 learnings from expanding into a larger class vehicle educates the Company about return-
11 on-investment potential and the ability to serve during normal and critical operations.

12 In addition, the state-of-the-art methane detection equipment used for AMD
13 requires a reliable, robust platform to function optimally. The vehicles selected to be used
14 in conjunction with this equipment provide the appropriate space to operate the equipment
15 but also allows for the room required to service and repair the mobile lab the units must
16 carry to perform the task. If investments are not made to purchase the units supporting the
17 AMD Systems, the Company will not be able to implement and take advantage of the
18 AMD's benefits.

D. Fleet Expansion

Q. Exhibit A-12 (JJJ-1), Schedule B-5.6 contains a line item related to Fleet Expansion expenditures for Transmission and Storage and Gas Construction. Please explain what this is.

A. The Company intends to make investments of \$1.2 million for six additional spec 41 welding vehicles and \$95,000 for a spec 43 sandblast truck as explained in Company witness Michael P. Griffin's direct testimony on pages 49 and 50.

E. Fleet Tools

Q. What kind of purchases are included in Fleet Tools?

A. Fleet tool purchases include the following: diagnostic equipment, tool sets, ergonomic tooling, and specialty equipment required to properly service and repair fleet vehicles, equipment, and trailers.

Q. What level of expenditures is included in this rate case for Fleet Tools?

A. As shown in Exhibit A-12 (JJJ-1), Schedule B-5.6, the Company is proposing to spend \$244,000 in the 2025 bridge year; \$208,000 for the 10 months ending October 31, 2026; \$452,000 for the 22 months ending October 31, 2026; and \$254,000 in the 12 months ending October 31, 2027 test year on Fleet Garage Tools. A further breakdown of this tooling type per year can found on Exhibit A-104 (JJJ-4).

Q. Why are the expenditures presented for Fleet Tools appropriate?

A. To properly repair vehicles in a compliant, safe, and efficient manner, it is necessary to have the right tool for the task at hand. The tooling can be anything from diagnostic tooling, electronic service information, tool sets, or a new air conditioning recovery/recycle/recharge machine required to properly service R1234yf refrigerant.

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1 Diagnostic tooling is necessary for the repair of most vehicle systems such as the engine,
2 transmission, air bag, lighting, and anti-lock brakes. This tooling requires updates to
3 maintain access to new vehicle models. Electronic service information is required to
4 diagnose vehicle concerns and to follow the manufacturer's recommended repair
5 procedures. Additional tooling such as hydraulic torque wrenches are critical in ensuring
6 that high torque fasteners requiring very high torque applications are properly set and
7 adjusted to manufacturer torque specifications to ensure safe repairs and inspections.
8 Maintenance equipment, such as an R1234yf air conditioning machine, are required to
9 meet Environmental Protection Agency standards for safely recovering and recharging air
10 conditioning systems on newer model year vehicles.

11 **Q. What benefits does this level of Fleet Tools spending provide to customers?**

12 A. Across the state, the Company has 36 locations where Fleet mechanics are permanently
13 stationed to perform their daily work. The Company also has remote sites, training
14 facilities, and jobsite reporting locations where repairs to vehicles and equipment are also
15 performed. The projected Fleet Tools for 2026 spending is approximately \$506,000 for
16 the entire Company, or approximately \$14,000 for each of the 36 locations where
17 mechanics are stationed. The gas allocation of this total is approximately \$249,000. Each
18 year, the Company replaces, and updates outdated or unrepairable shop equipment such as
19 floor jacks, diagnostic equipment, tire machines, and welders. The benefit to customers of
20 having tools in good order is less downtime for vehicles and reduced maintenance expenses
21 because the Company is not solely reliant on outside repair shops to complete work needed
22 to keep vehicles active. Most repair and maintenance items are performed by the

JOSHUA J. JUDY
U-21981 DIRECT TESTIMONY

1 Company's in-house mechanics; therefore, it is imperative that the Company maintain a
2 complete and updated inventory of tools to complete the work required.

3 **Q. Does this conclude your direct testimony in this proceeding?**

4 **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
JOSHUA J. JUDY
ON BEHALF OF
CONSUMERS ENERGY COMPANY

December 2025

Schedule: B-5.6

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual and Projected Capital Expenditures

Fleet Services

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (JJJ-1)

Schedule: B-5.6

Page: 1 of 3

Witness: JJJudy

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year	Projected Bridge Period			Projected Test Year
		12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
1	Fleet Vehicle Capital Replacement	9,125	9,593	8,619	18,212	8,030
2	Fleet Vehicle Electrification	0	0	360	360	180
3	Fleet Expansion	0	0	0	0	1,295
3	Fleet Business Partner Funded	153	0	0	0	0
4	Fleet Tools - Garage	169	244	208	452	254
5	Total Fleet Services Capital	9,446	9,837	9,187	19,023	9,759
		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	Fleet Vehicle Capital Replacement	5,754	12,502	8,030	26,286	
7	Fleet Vehicle Electrification	0	360	180	540	
8	Fleet Expansion	0	0	1,295	1,295	
8	Fleet Business Partner Funded	0	0	0	0	
9	Fleet Tools - Garage	200	208	254	661	
10	Total Fleet Services Capital	5,954	13,069	9,759	28,782	

Schedule: B-5.6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Actual and Projected Capital Expenditures
 Fleet Services
 (\$000)

Case No.: U-21981
 Exhibit No.: A-12 (JJJ-1)
 Schedule: B-5.6
 Page: 2 of 3
 Witness: JJJudy
 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
1	Fleet Vehicle Capital Replacement	9,125	9,593	8,619	18,212	8,030
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	7,446	8,016	7,203	15,219	6,711
	Contractor	1,250	1,433	1,288	2,721	1,200
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	429	143	128	271	120
	Contingency	0	0	0	0	0
2	Fleet Vehicle Electrification	0	0	360	360	180
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	0	0	360	360	180
	Contractor	0	0	0	0	0
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	0	0	0	0	0
	Contingency	0	0	0	0	0
3	Fleet Expansion	0	0	0	0	1,295
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	0	0	0	0	1,082
	Contractor	0	0	0	0	193
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	0	0	0	0	19
	Contingency	0	0	0	0	0
4	Fleet Business Partner Funded	153	0	0	0	0
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	125	0	0	0	0
	Contractor	21	0	0	0	0
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	7	0	0	0	0
	Contingency	0	0	0	0	0
5	Fleet Tools - Garage	169	244	208	452	254
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	169	244	208	452	254
	Contractor	0	0	0	0	0
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	0	0	0	0	0
	Contingency	0	0	0	0	0
6	Total Fleet Services Capital	9,446	9,837	9,187	19,023	9,759
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	7,739	8,260	7,770	16,031	8,227
	Contractor	1,271	1,433	1,288	2,721	1,393
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	436	143	128	271	139
	Contingency	0	0	0	0	0

*The Company fully plans to perform the projects included in these cost projections, but the projections do not incorporate a specific confidence level.

**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 business expenses (e.g., travel, meals, etc.).

Schedule: B-5.6

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Actual and Projected Capital Expenditures

Fleet Services

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (JJJ-1)

Schedule: B-5.6

Page: 3 of 3

Witness: JJJudy

Date: December 2025

Line No	(a) Description	(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
7	Fleet Vehicle Capital Replacement	5,754	12,502	8,030	26,286
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	4,808	10,448	6,711	21,967
	Contractor	860	1,868	1,200	3,927
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	86	186	120	392
	Contingency	0	0	0	0
8	Fleet Vehicle Electrification	0	360	180	540
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	0	360	180	540
	Contractor	0	0	0	0
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	0	0	0	0
	Contingency	0	0	0	0
9	Fleet Expansion	0	0	1,295	1,295
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	0	0	1,082	1,082
	Contractor	0	0	193	193
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	0	0	19	19
	Contingency	0	0	0	0
9	Fleet Business Partner Funded	0	0	0	0
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	0	0	0	0
	Contractor	0	0	0	0
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	0	0	0	0
	Contingency	0	0	0	0
10	Fleet Tools - Garage	200	208	254	661
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	200	208	254	661
	Contractor	0	0	0	0
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	0	0	0	0
	Contingency	0	0	0	0
11	Total Fleet Services Capital	5,954	13,069	9,759	28,782
	Labor	0	0	0	0
	Capitalized E&S	0	0	0	0
	Materials	5,008	11,015	8,227	24,250
	Contractor	860	1,868	1,393	4,121
	Non-Labor Overhead	0	0	0	0
	Non-Labor Other	86	186	139	411
	Contingency	0	0	0	0

*The Company fully plans to perform the projects included in these cost projections, but the projections do not incorporate a specific confidence level.

**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 business expenses (e.g., travel, meals, etc.).

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Responsibility \$'s by Cost Category	Historical	Historical	Historical	Historical	Historical	Projected	Projected	Projected
	Categories	2020	2021	2022	2023	2024	2025	2026	12 Mos Ending 10/31/2027
1	Licensing	2,738,753	2,840,343	3,145,786	3,192,336	3,039,700	3,318,639	3,108,740	3,108,740
2	Technician	16,878,522	18,902,790	19,788,278	19,585,618	20,577,927	21,988,737	21,253,815	21,443,969
3	Parts	10,656,308	11,649,547	14,557,200	14,755,428	14,803,380	17,587,222	15,382,195	15,382,195
4	Outside Vendor	12,809,528	12,801,491	14,875,779	14,242,537	17,803,960	21,437,101	16,675,875	16,675,875
5	Fuel	12,808,774	17,865,478	25,105,355	20,322,235	19,459,697	19,131,467	16,958,059	16,958,059
6	Support Labor	5,096,942	5,034,713	5,031,440	4,790,586	4,055,665	4,446,835	4,641,942	4,705,931
7	Support Other	3,141,164	3,480,793	4,205,239	3,174,534	4,077,349	4,453,002	4,258,461	4,258,461
8	Total Cost	64,129,991	72,575,154	86,709,077	80,063,275	83,817,677	92,363,002	82,279,088	82,533,230

Estimated Cost Allocation to Business Unit (%)

Business Unit	2020	2021	2022	2023	2024	2025	2026	10/31/2027
9 BUSTRAN	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
10 CORP	0.5%	0.5%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%
11 CUSEXGR	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%
12 ELIDISTR	3.0%	3.0%	3.2%	3.1%	3.8%	2.1%	2.1%	2.1%
13 ELSUPPLY	2.1%	2.1%	2.0%	1.9%	2.0%	1.7%	1.7%	1.7%
14 GASDELV	4.9%	4.9%	5.1%	4.1%	3.7%	3.6%	3.6%	3.6%
15 OPSPLAN	85.8%	85.8%	85.8%	87.2%	87.1%	89.4%	89.4%	89.4%
16 OPSWRKMGMT	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
17 SHAREDVCS	2.9%	2.9%	2.8%	2.6%	2.4%	2.4%	2.4%	2.4%

Estimated Cost Allocation to Business Unit (\$)

Business Unit	2020	2021	2022	2023	2024	2025	2026	10/31/2027
18 BUSTRAN	121,258	137,226	151,384	121,985	107,112	117,547	104,713	105,037
19 CORP	337,821	382,308	359,526	302,451	301,536	283,010	252,112	252,891
20 CUSEXGR	187,415	212,095	262,151	239,621	230,507	151,293	134,775	135,192
21 ELIDISTR	1,936,147	2,191,115	2,805,312	2,477,398	3,146,860	1,908,445	1,700,086	1,705,338
22 ELSUPPLY	1,338,064	1,514,272	1,719,626	1,491,829	1,676,711	1,571,125	1,399,595	1,403,918
23 GASDELV	3,128,783	3,540,807	4,419,231	3,253,719	3,101,830	3,304,579	2,943,795	2,952,888
24 OPSPLAN	54,995,121	62,237,329	74,356,047	69,834,345	72,998,615	82,559,590	73,545,983	73,773,151
25 OPSWRKMGMT	243,656	275,743	247,665	234,574	233,020	246,493	219,582	220,260
26 SHAREDVCS	1,841,725	2,084,259	2,388,137	2,107,352	2,021,487	2,220,920	1,978,446	1,984,557
27 Total	64,129,991	72,575,154	86,709,077	80,063,275	83,817,677	92,363,002	82,279,088	82,533,230

Estimated O&M & Capital %

	OM	Capital
28 BUSTRAN	50%	50%
29 CORP	50%	50%
30 CUSEXGR	50%	50%
31 ELIDISTR	10%	90%
32 ELSUPPLY	10%	90%
33 GASDELV	70%	30%
34 OPSPLAN	24%	76%
35 OPSWRKMGMT	16%	84%
36 SHAREDVCS	25%	75%

Estimated O&M (\$) by Business Unit

OM	2020	2021	2022	2023	2024	2025	2026	10/31/2027
37 BUSTRAN	60,629	68,613	75,692	60,993	53,556	58,773	52,357	52,518
38 CORP	168,911	191,154	179,763	151,225	150,768	141,505	126,056	126,445
39 CUSEXGR	93,707	106,048	131,075	119,811	115,253	75,647	67,388	67,596
40 ELIDISTR	193,615	219,111	280,531	247,740	314,686	190,844	170,009	170,534
41 ELSUPPLY	133,806	151,427	171,963	149,183	167,671	157,113	139,959	140,392
42 GASDELV	2,190,148	2,478,565	3,093,462	2,277,603	2,171,281	2,313,205	2,060,656	2,067,021
43 OPSPLAN	13,198,829	14,936,959	17,845,451	16,760,243	17,519,668	19,814,302	17,651,036	17,705,556
44 OPSWRKMGMT	38,985	44,119	39,626	37,532	37,283	39,439	35,133	35,242
45 SHAREDVCS	460,431	521,065	597,034	526,838	505,372	555,230	494,612	496,139
46 Total	16,539,062	18,717,061	22,414,597	20,331,167	21,035,538	23,346,058	20,797,205	20,861,444

Estimated Capital (\$) by Business Unit

Capital	2020	2021	2022	2023	2024	2025	2026	10/31/2027
47 BUSTRAN	60,629	68,613	75,692	60,993	53,556	58,773	52,357	52,518
48 CORP	168,911	191,154	179,763	151,225	150,768	141,505	126,056	126,445
49 CUSEXGR	93,707	106,048	131,075	119,811	115,253	75,647	67,388	67,596
50 ELIDISTR	1,742,532	1,972,003	2,524,780	2,229,658	2,832,174	1,717,600	1,530,078	1,534,804
51 ELSUPPLY	1,204,258	1,362,845	1,547,663	1,342,646	1,509,040	1,414,013	1,259,635	1,263,526
52 GASDELV	938,635	1,062,242	1,325,769	976,116	930,549	991,374	883,138	885,866
53 OPSPLAN	41,796,292	47,300,370	56,510,595	53,074,102	55,478,948	62,745,289	55,894,947	56,067,594
54 OPSWRKMGMT	204,671	231,624	208,038	197,042	195,737	207,054	184,449	185,018
55 SHAREDVCS	1,381,294	1,563,194	1,791,102	1,580,514	1,516,115	1,665,690	1,483,835	1,488,418
56 Total	47,590,929	53,858,093	64,294,479	59,732,108	62,782,140	69,016,944	61,481,882	61,671,786

Estimated O&M & Capital \$

	2020	2021	2022	2023	2024	2025	2026	10/31/2027
57 Total	64,129,991	72,575,154	86,709,077	80,063,275	83,817,677	92,363,002	82,279,088	82,533,230
58 OM	26%	26%	26%	25%	25%	25%	25%	25%
59 Capital	74%	74%	74%	75%	75%	75%	75%	75%

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Corporation

Detailed List of Projected Gas Capital Expenditures

Fleet Services

For the Years 2024, 2025, 2026, and test year 12 months ending 10/31/2027

(\$000)

Case No.: U-21981

Exhibit No.: A-103 (JJJ-3)

Page: 1 of 2

Witness: JJJudy

Date: December 2025

Test Year												
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
Line No.			12 months ending 12/31/2024	12 months ending 12/31/2024	12 months ending 12/31/2025	12 months ending 12/31/2025	12 months ending 12/31/2026	12 months ending 12/31/2026	12 months ending 12/31/2027	12 months ending 12/31/2027	12 months ending 10/31/2027	12 months ending 10/31/2027
			Historical Spend**	Historical Unit Count*	Projected Spend**	Projected Unit Count *	Projected Spend**	Projected Unit Count *	Projected Spend**	Projected Unit Count *	Projected Spend**	Projected Unit Count *
1	Fleet Vehicle Capital Replacement Plan		(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)
	Vehicle Spec	Description	9,125	115	9,593	62	10,167	105	10,401	83	8,030	67
07		SEDAN MID SIZE 4DR	-	-	-	-	-	-	42	1	42	1
22		1/2 TON PICKUP	1,037	20	-	-	660	9	439	6	336	6
23		VAN CARGO	1,641	18	2,459	12	1,302	30	3,427	37	3,908	42
26		1 TON PICKUP WITH SERVICE BODY SHORT CAB	293	3	139	4	-	-	-	-	-	-
27		TRUCK SVC 4WD	784	9	2,925	20	1,114	17	356	3	356	3
28		3/4 TON PICKUP	597	6	451	9	176	7	465	6	432	6
41		WELDER TRUCK	198	-	262	3	658	2	154	1	198	-
42		TRUCK SVC 1T	-	-	390	3	116	1	-	-	-	-
44		TRUCK LINE ENC BODY W/PTO COMP	1,561	2	2,862	11	5,161	24	3,367	13	2,243	6
45		MECHANIC SERVICE TRUCK	562	4	105	-	-	-	230	1	233	1
59		STAKE RACK TRUCK	-	-	-	-	104	1	199	2	200	2
68		WALK IN SERVICE BODY VAN LD	-	-	-	-	-	-	822	6	-	-
85		TANDUM AXLE TRACTOR WITH FIFTH WHEEL HITCH	252	3	-	-	-	-	89	-	82	-
	EQUIPMENT	EQUIPMENT	1,428	12	-	-	497	5	671	5	-	-
	TRAILERS	TRAILERS	640	14	-	-	239	4	140	2	-	-
	Lease Buyout	Lease Buyout	131	24	-	-	140	5	-	-	-	-
2	Fleet Vehicle Electrification		(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)
	Vehicle Spec	Description	-	-	-	-	360	11	180	4	180	4
22		Electric Vehicle Investment	-	-	-	-	360	11	180	4	180	4
3	Fleet Expansion		(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)
	Vehicle Spec	Description	-	-	-	-	-	-	1,295	7	1,295	7
41		WELDER TRUCK	-	-	-	-	-	-	1,200	6	1,200	6
43		SAND BLASTING TRUCK	-	-	-	-	-	-	95	1	95	1
4	Fleet Business Partner Funded		(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)	(\$000)	(units)
	Vehicle Spec	Description	153	4	-	-	-	-	-	-	-	-
07		SEDAN MID SIZE 4DR	153	4	-	-	-	-	-	-	-	-
5	Totals:		9,277	119	9,593	62	10,527	116	11,876	94	9,505	78

*Where there are dollars and no unit counts, this is the chassis portion only. We are only counting a full unit when we receive the unit and it is in use. Common unit costs are divided between Gas and Electric

**The Company fully plans to perform the projects included in these cost projections, but the projections do not incorporate a specific confidence level.

Line No.	(a)	(b)	(c)	(d)
	Project Name	Internal Approval	Has a Business Case	Explanation
1				
2	Fleet Vehicle Capital Replacement Plan	YES	NO	Internal funding approval. There is no formal business case, spending level is at historical plus inflation.
3	Fleet Vehicle Electrification	YES	NO	Internal funding approval. There is no formal business case, spending level supports the Fleet Vehicle Capital Replacement plan plus the additional cost for EV units.
4	Fleet Expansion	YES	NO	A business case was not conducted for these purchases. Please see the direct testimony of Company witness Michael P. Griffin
5	Fleet Business Partner Funded	YES	NO	Internal funding approval. There is no formal business case but there are internal support documents for individual unit need.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Corporation
Summary of Fleet Tooling Actual & Projected Capital Expenditures
Fleet Services
For the Years 2024, 2025, 2026 and test year 12 months ending 10/31/2027
(\$000)

Case No.: U-21981
Exhibit No.: A-104 (JJJ-4)
Page: 1 of 1
Witness: JJJudy
Date: December 2025

Line No.	(a)	(b)	(c)	(d)	Test Year (e)	
		12 months ending 12/31/2024	12 months ending 12/31/2025	12 months ending 12/31/2026	12 months ending 10/31/2027	
		Historical	Projected Spend	Projected Spend	Projected Spend	
1	Fleet Tools - Garage					
	<u>Tool Description</u>					
	Shop Equipment	\$ 90	\$ 208	\$ 169	\$	169
	Shop Tools	\$ 47	\$ 22	\$ 51	\$	51
	Diagnostic Tools	\$ 32	\$ 13	\$ 29	\$	34
2	Fleet Tools Totals:	\$ 169	\$ 244	\$ 249	\$	254

*The Company fully plans to perform the projects included in these cost projections, but the projections do not incorporate a specific confidence level.

Consumers Energy Fleet Vehicle Idling Analysis

Summary

The following paper presents an analysis of Consumers Energy’s internal fleet vehicle idling data as captured by telematics devices installed fleet vehicles for the period between 2023 through September 2025.

Definitions

- Idle: Event where a vehicle’s engine is on and it has not exceeded 1 MPH for 3 minutes.
 - Idle Excluding Power Take Off (“PTO”): Time where the vehicle was idling without any auxiliary equipment usage.
 - Percentage Idle Excluding PTO: Total Idle Excluding PTO Hours divided by Total Engine Hours.
 - PTO: Mechanical gearbox that is attached to a vehicle’s transmission, used to transfer engine power to auxiliary components such as hydraulic pumps or compressors.
-

Introduction

As requested in the September 30, 2025 Order for MPSC Case No. U-21806, this paper is an analysis of Consumer Energy’s internal fleet vehicle idling. The data presented is for the period between January 2023 and September 2025. The idling data was captured using Geotab devices installed on approximately 89% of active units (as of May 2025) and includes engine hours for vehicles that are equipped with and without PTO units. Consumers Energy has partnered with Geotab and Utilimarc to compile these telemetric data to build reports for vehicle idling information and analysis. Utilimarc also helps with peer industry benchmarking, as well as expertise in research and industry’s best practices.

Purpose

The purpose of this paper is to discuss the following regarding the Company's internal fleet vehicle idling characteristics as requested:

1. An assessment of, 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.
 4. An estimate of the tons of carbon dioxide released during waste and necessary idling, by vehicle type, based on research and best practices.
-

1.

Utilimarc's compilation of idle time is reported as a percentage of engine hour running time split into two categories: total idle excluding PTO and total engine hours.

The data presented here includes engine hours that are used to support work by engaging PTO units (such as powering booms on bucket trucks for example). Engine hours recorded for PTO purposes are considered productive because the engine must be running to provide power. As shown in the page labeled "Fleet Idle Trend by Year," the percentage called "Idle Excluding PTO" is expressed as the percentage of engine hours considered "unproductive" because there is no apparent reason for the engine to run. Utilimarc's benchmark for what appears to be "unproductive" idling is 25% of an engine's idle time or lower, therefore an engine that idles less than this threshold is considered within the acceptable idle range.

However, it should be noted that the data does not consider other reasons, or context, for idling above the 25% benchmark threshold, such as powering safety lighting, climate control, powering computers, handheld power tools, etc., in the field. Depending on the duration of deployment, a vehicle may have to idle for the safety of the crew and to reduce the probability of depleted batteries (both in the 12-volt vehicle

battery and/or portable batteries). Telemetry data does not capture this information, making feedback from the field important in determining the context for idling.

Identifying exactly when a vehicle is “waste” idling can be difficult to define because context, as noted above, is critical in understanding *why* any unit is idling over the 25% benchmark threshold. This should be considered while reviewing idling data.

For example, storm responses may have an effect on fleet vehicle idling because crews preparing, staging and responding to adverse weather conditions that can bring down wires (high wind conditions, snow, ice etc.) deploy crews to make themselves ready to restore services for customers quickly and safely. The data suggests (see page “*Storm Response Analysis*”) that there may be a correlation between Company storm declarations and vehicle idling. As adverse weather conditions increase and Company storm responses increase in response; the data suggests an associated increase in what is reported as what may be construed as “unproductive” idling. In many instances, storm response occurs over the course of 12-16 hours and can last several days, with most units acting as mobile offices or command centers for the crews deployed. The weather conditions, locations, and requirements for deployment in storm response likely require idling, to some extent, to support the crews and teams engaged in restoring services. Further study is required to learn more about how storm restoration has an impact on idling characteristics, and potential solutions.

The Company has recently started tracking vehicle idling while at a Company service center (see *Idle @ Service Centers* page). For these purposes, this data attempts to narrow idling recorded while a unit is within the confines of a Company service center or office. Tracking this data began in mid-2025. The data suggests that, in this context, there may be opportunities to improve (lower) overall idling at a Company service center because vehicles at service centers are not directly engaged in servicing customers. There may be scenarios that require a unit to idle for small periods such as checking equipment, maintenance that require short idling periods etc. However, in this circumstance, idling at a service center over certain amount of time could be considered waste and an opportunity to target reduction in those scenarios. The Company will continue monitoring this data to learn more about what causes idling in this context and how to reduce fleet idling while at service centers going forward.

2.

Exhibit A-106 (JJJ-6) contains three pages, “2023 Idle and Cost,” “2024 Idle and Cost,” and “2025 Idle and Cost”. The data calculations estimate for idle hour costs for the years 2023, 2024 and 2025 through September by vehicle spec. Approximate costs for fleet vehicle idling costs are calculated by year and vehicle type and shown on page “Idle Costs by Year” and in pages “2023 Idle and Costs,” “2024 Idle and Cost,” and “2025 Idle and Cost.”

There is variation in the rates that vehicles consume fuel during idling, depending on vehicle model, conditions like temperature, and engine load for example. These fuel cost calculations use generally accepted average gallon/hour estimates for engine types in the specs listed. For example, passenger vehicles are estimated to consume approximately .2 to .5 gallons per hour¹ and vehicles with higher displacement engines like work trucks are estimated to idle at higher rates, approaching .8 to 1 gallon per hour. These calculations use .5 gallons per hour rate for spec 06 and 07 (which are generally sedans and light duty SUVs), and .8 gallons per hour for all others to arrive at the estimates shown. The cost of fuel is a composite using the average of the Company’s cost of gasoline and diesel per year.

3.

Idling a vehicle for one hour adds the equivalent of approximately 25-30 miles of wear and tear² to an engine. By this measure, for example, a vehicle idling for four hours will add the equivalent of approximately 100 miles to the engine and exhaust components.

The spreadsheets provided as Exhibit A-106 (JJJ-6) contains pages for each spec beginning with the page labeled “Spec 06” that includes a calculation that estimates the additional wear and tear in terms of equivalent miles driven for each spec shown on the column labeled “Idle Time Equivalent Approximate Miles Driven for the period between 2023 through September 2025 for each spec from 06 through Spec 96.

¹ [which is greener.pdf](#)

² [Measuring Hours vs. Miles in Medium-Duty Truck Performance - Maintenance - Work Truck Online](#)

4.

Exhibit A-106 (JJJ-6) contains three pages reporting emissions during idle estimates for 2023, 2024 and 2025 through September in pages labeled “2023 Idle Emissions”, “2024 Idle Emissions” and “2025 Idle Emissions Jan - Sept” as reported by Utilimarc by vehicle spec.

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1	2012 Chevrolet Volt	SEDAN	44.2	153.6	28.8%
2	2014 Ford Fusion Energi	SEDAN	277.3	775.0	35.8%
3	2012 Chevrolet Impala	SEDAN	365.3	1,320.7	27.7%
4	2019 Chevrolet Volt	SEDAN	286.8	762.8	37.6%
5	2015 Chevrolet Malibu	SEDAN	263.2	748.2	35.2%
6	2015 Chevrolet Impala	SEDAN	177.2	495.6	35.8%
7	2009 Chevrolet Impala	SEDAN	168.1	575.5	29.2%
8	2011 Ford Fusion	SEDAN	80.0	289.2	27.7%
9	2013 Chevrolet Volt	SEDAN	300.1	477.1	62.9%
10	2014 Chevrolet Malibu	SEDAN	269.6	790.9	34.1%
11	2009 Chevrolet Impala	SEDAN	152.3	394.7	38.6%
12	2007 Chevrolet Impala	SEDAN	302.5	548.3	55.2%
13	2019 Chevrolet Volt	SEDAN	96.0	242.4	39.6%
14	2011 Chevrolet Volt	SEDAN	203.3	601.5	33.8%
15	2013 Chevrolet Impala	SEDAN	469.4	957.5	49.0%
16	2012 Chevrolet Impala	SEDAN	171.4	412.4	41.6%
17	2015 Chevrolet Malibu	SEDAN	125.7	477.8	26.3%
18	2013 Chevrolet Impala	SEDAN	253.1	774.7	32.7%
19	2009 Chevrolet Impala	SEDAN	152.1	415.9	36.6%
20	2011 Chevrolet Volt	SEDAN	45.9	162.0	28.3%
21	2015 Chevrolet Malibu	SEDAN	89.4	350.2	25.5%
22	2019 Chevrolet Volt	SEDAN	92.9	368.2	25.2%
23	2011 Chevrolet Impala	SEDAN	584.3	873.5	66.9%
24	2013 Chevrolet Impala	SEDAN	148.9	551.4	27.0%
25	2014 Chevrolet Malibu	SEDAN	81.0	312.7	25.9%
26	2019 Chevrolet Volt	SEDAN	287.2	637.0	45.1%
27	2012 Chevrolet Impala	SEDAN	259.2	971.5	26.7%
28	2012 Chevrolet Impala	SEDAN	73.9	248.0	29.8%
29	2012 Chevrolet Impala	SEDAN	543.9	1,642.2	33.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
30	2013 Chevrolet Impala	SEDAN	534.6	944.3	56.6%
31	2013 Chevrolet Impala	SEDAN	161.4	645.1	25.0%
32	2019 Chevrolet Volt	SEDAN	293.6	694.6	42.3%
33	2013 Chevrolet Impala	SEDAN	23.2	92.0	25.2%
34	2013 Chevrolet Impala	SEDAN	281.8	1,078.4	26.1%
35	2019 Chevrolet Volt	SEDAN	118.2	379.0	31.2%
36	2019 Chevrolet Volt	SEDAN	272.7	928.9	29.4%
37	2019 Chevrolet Volt	SEDAN	139.4	367.0	38.0%
38	2022 Ford Edge	SUV	524.7	1,634.1	32.1%
39	2014 Chevrolet Captiva Sport	SUV	32.8	71.8	45.7%
40	2019 Ford Edge	SUV	565.9	1,331.5	42.5%
41	2021 Chevrolet Equinox	SUV	618.0	2,064.1	29.9%
42	2022 Ford Edge	SUV	672.9	2,326.0	28.9%
43	2013 Chevrolet Captiva Sport	SUV	453.8	1,633.8	27.8%
44	2018 Ford Edge	SUV	97.5	371.2	26.3%
45	2021 Chevrolet Equinox	SUV	1,034.8	1,565.6	66.1%
46	2022 Ford Edge	SUV	368.6	999.3	36.9%
47	2023 Ford Edge	SUV	131.7	349.0	37.7%
48	2021 Chevrolet Equinox	SUV	197.5	593.9	33.3%
49	2022 Ford Edge	SUV	485.5	1,797.7	27.0%
50	2021 Chevrolet Equinox	SUV	3,051.3	4,409.5	69.2%
51	2013 Chevrolet Captiva Sport	SUV	115.8	434.1	26.7%
52	2018 Ford Edge	SUV	177.7	659.1	27.0%
53	2013 Chevrolet Captiva Sport	SUV	387.2	566.9	68.3%
54	2023 Ford Edge	SUV	97.4	343.9	28.3%
55	2018 Ford Edge	SUV	166.0	649.5	25.6%
56	2020 Ford Edge	SUV	399.7	1,195.4	33.4%
57	2021 Chevrolet Equinox	SUV	526.7	1,627.3	32.4%
58	2023 Ford Edge	SUV	69.2	245.1	28.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
59	2021 Chevrolet Equinox	SUV	1,291.5	4,463.0	28.9%
60	2018 Ford Edge	SUV	1,247.3	2,313.2	53.9%
61	2020 Ford Edge	SUV	1,358.7	4,146.4	32.8%
62	2023 Ford Edge	SUV	1,598.0	4,705.2	34.0%
63	2020 Ford Edge	SUV	452.6	1,426.6	31.7%
64	2020 Ford Edge	SUV	471.9	1,710.8	27.6%
65	2019 Chevrolet Equinox	SUV	262.5	997.4	26.3%
66	2021 Ford Edge	SUV	854.3	1,597.8	53.5%
67	2020 Ford Edge	SUV	1,654.1	2,420.5	68.3%
68	2021 Ford Edge	SUV	292.4	835.8	35.0%
69	2018 Ford Edge	SUV	363.7	1,207.5	30.1%
70	2020 Ford Edge	SUV	631.1	2,180.9	28.9%
71	2020 Ford Edge	SUV	375.3	1,484.8	25.3%
72	2018 Ford Edge	SUV	363.0	1,048.4	34.6%
73	2018 Ford Edge	SUV	1,105.2	1,625.6	68.0%
74	2019 Chevrolet Equinox	SUV	713.2	1,437.8	49.6%
75	2020 Ford Edge	SUV	542.3	1,163.6	46.6%
76	2018 Ford Edge	SUV	1,352.6	1,870.3	72.3%
77	2019 Ford Edge	SUV	1,801.2	2,558.2	70.4%
78	2020 Ford Edge	SUV	196.8	767.1	25.7%
79	2018 Ford Edge	SUV	476.9	1,588.1	30.0%
80	2019 Ford Edge	SUV	1,350.4	1,777.6	76.0%
81	2020 Ford Edge	SUV	1,852.0	3,773.6	49.1%
82	2019 Ford Edge	SUV	1,072.5	1,683.5	63.7%
83	2019 Ford Edge	SUV	1,782.6	2,483.2	71.8%
84	2020 Ford Edge	SUV	684.5	2,238.4	30.6%
85	2018 Ford Edge	SUV	415.4	791.8	52.5%
86	2019 Ford Edge	SUV	1,105.8	1,809.0	61.1%
87	2020 Ford Edge	SUV	419.1	1,377.2	30.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
88	2018 Ford Edge	SUV	465.1	1,380.7	33.7%
89	2020 Ford Edge	SUV	319.7	1,146.8	27.9%
90	2018 Ford Edge	SUV	1,180.2	2,331.7	50.6%
91	2020 Ford Edge	SUV	336.7	1,141.6	29.5%
92	2018 Ford Edge	SUV	2,023.9	2,834.0	71.4%
93	2019 Ford Edge	SUV	731.7	1,227.7	59.6%
94	2020 Ford Edge	SUV	497.4	1,060.1	46.9%
95	2020 Ford Edge	SUV	884.4	3,464.9	25.5%
96	2019 Ford Edge	SUV	3.3	11.0	30.3%
97	2018 Ford Edge	SUV	919.7	1,819.1	50.6%
98	2019 Ford Edge	SUV	926.9	1,957.5	47.4%
99	2020 Ford Edge	SUV	727.1	2,066.6	35.2%
100	2018 Ford Edge	SUV	497.4	1,881.7	26.4%
101	2020 Ford Edge	SUV	962.9	2,016.5	47.7%
102	2019 Ford Edge	SUV	401.8	1,206.0	33.3%
103	2020 Ford Edge	SUV	652.1	2,283.2	28.6%
104	2020 Ford Edge	SUV	1,247.9	3,987.9	31.3%
105	2020 Ford Edge	SUV	1,095.2	3,720.7	29.4%
106	2019 Ford Edge	SUV	587.2	1,744.9	33.7%
107	2019 Ford Edge	SUV	545.6	1,780.6	30.6%
108	2019 Ford Edge	SUV	711.5	2,175.3	32.7%
109	2019 Ford Edge	SUV	968.7	2,899.0	33.4%
110	2019 Ford Edge	SUV	729.1	1,427.9	51.1%
111	2020 Ford Edge	SUV	2,872.7	5,226.9	55.0%
112	2019 Ford Edge	SUV	803.7	1,862.1	43.2%
113	2020 Ford Edge	SUV	570.1	1,232.3	46.3%
114	2020 Ford Edge	SUV	1,813.1	5,174.0	35.0%
115	2019 Ford Edge	SUV	464.8	1,788.8	26.0%
116	2020 Ford Edge	SUV	1,043.5	2,935.2	35.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
117	2020 Ford Edge	SUV	379.6	1,373.0	27.6%
118	2019 Ford Edge	SUV	367.7	1,352.9	27.2%
119	2020 Ford Edge	SUV	1,283.7	4,348.4	29.5%
120	2020 Ford Edge	SUV	390.5	1,277.3	30.6%
121	2020 Ford Edge	SUV	1,262.3	4,558.4	27.7%
122	2019 Ford Edge	SUV	611.3	1,543.5	39.6%
123	2020 Ford Edge	SUV	1,885.8	2,660.3	70.9%
124	2019 Ford Edge	SUV	838.4	2,827.1	29.7%
125	2020 Ford Edge	SUV	929.4	2,579.4	36.0%
126	2020 Ford Edge	SUV	750.7	2,245.0	33.4%
127	2020 Ford Edge	SUV	828.2	2,343.7	35.3%
128	2020 Ford Edge	SUV	2,011.3	2,720.8	73.9%
129	2020 Ford Edge	SUV	1,411.4	2,580.7	54.7%
130	2020 Ford Edge	SUV	1,050.6	3,932.7	26.7%
131	2020 Ford Edge	SUV	237.7	644.5	36.9%
132	2020 Ford Edge	SUV	434.2	1,546.4	28.1%
133	2020 Ford Edge	SUV	612.3	1,928.4	31.8%
134	2020 Ford Edge	SUV	825.5	2,141.3	38.6%
135	2020 Ford Edge	SUV	652.4	2,105.7	31.0%
136	2020 Ford Edge	SUV	348.0	1,254.8	27.7%
137	2020 Ford Edge	SUV	612.9	2,145.2	28.6%
138	2020 Ford Edge	SUV	345.2	1,282.1	26.9%
139	2020 Ford Ranger	PICKUP	344.4	1,128.8	30.5%
140	2019 Ford Ranger	PICKUP	1,138.5	2,133.8	53.4%
141	2019 Ford F-550	SUV	207.8	480.6	43.2%
142	2009 Chevrolet Cobalt	SUV	22.4	61.6	36.3%
143	2009 Chevrolet Cobalt	SUV	17.1	47.8	35.7%
144	2011 GMC Sierra	PICKUP	177.6	595.3	29.8%
145	2013 GMC Sierra	PICKUP	416.2	1,189.0	35.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
146	2014 GMC Sierra	PICKUP	291.9	915.0	31.9%
147	2015 GMC Sierra	PICKUP	344.8	818.7	42.1%
148	2015 GMC Sierra	PICKUP	593.2	1,708.7	34.7%
149	2013 GMC Sierra	PICKUP	451.7	994.1	45.4%
150	2013 GMC Sierra	PICKUP	409.4	1,109.9	36.9%
151	2013 GMC Sierra	PICKUP	830.8	1,570.8	52.9%
152	2013 GMC Sierra	PICKUP	669.8	1,568.6	42.7%
153	2013 GMC Sierra	PICKUP	147.5	569.9	25.9%
154	2013 Ford F-150	PICKUP	2,999.5	4,024.2	74.5%
155	2013 Ford F-150	PICKUP	308.5	761.7	40.5%
156	2013 GMC Sierra	PICKUP	1,542.9	3,024.5	51.0%
157	2014 Ford F-150	PICKUP	360.8	686.8	52.5%
158	2015 GMC Sierra	PICKUP	825.8	1,929.7	42.8%
159	2016 Ford F-150	PICKUP	2,016.1	2,802.8	71.9%
160	2018 Ford F-150	PICKUP	639.7	2,221.7	28.8%
161	2009 Chevrolet Silverado	PICKUP	465.4	1,162.1	40.0%
162	2010 Chevrolet Silverado	PICKUP	83.6	307.3	27.2%
163	2012 Chevrolet Silverado	PICKUP	321.9	884.1	36.4%
164	2023 Ford F-150	PICKUP	146.7	504.0	29.1%
165	2014 Ford F-150	PICKUP	1,066.2	2,452.0	43.5%
166	2015 GMC Sierra	PICKUP	582.3	1,468.2	39.7%
167	2017 Ford F-150	PICKUP	888.9	1,862.6	47.7%
168	2011 Chevrolet Silverado	PICKUP	109.8	424.7	25.8%
169	2012 Chevrolet Silverado	PICKUP	81.4	181.1	45.0%
170	2023 Ford F-150	PICKUP	194.0	614.4	31.6%
171	2014 Ford F-150	PICKUP	861.9	1,222.7	70.5%
172	2015 GMC Sierra	PICKUP	287.5	896.0	32.1%
173	2017 Ford F-150	PICKUP	204.0	799.6	25.5%
174	2010 Ford F-150	PICKUP	128.4	322.2	39.9%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
175	2011 Chevrolet Silverado	PICKUP	422.9	1,077.8	39.2%
176	2024 Chevrolet Silverado EV	PICKUP	60.2	212.4	28.3%
177	2017 Ford F-150	PICKUP	446.7	1,359.2	32.9%
178	2023 Ford F-150	PICKUP	695.8	1,069.5	65.1%
179	2017 Ford F-150	PICKUP	676.0	1,963.8	34.4%
180	2023 Ford F-150	PICKUP	490.4	1,413.3	34.7%
181	2018 Ford F-150	PICKUP	974.7	2,135.2	45.7%
182	2011 Chevrolet Silverado	PICKUP	241.2	789.3	30.6%
183	2012 GMC Sierra	PICKUP	232.8	871.7	26.7%
184	2015 GMC Sierra	PICKUP	3,200.6	4,005.2	79.9%
185	2018 Ford F-150	PICKUP	439.3	1,165.8	37.7%
186	2011 Chevrolet Silverado	PICKUP	86.3	291.0	29.7%
187	2013 GMC Sierra	PICKUP	1,257.2	2,090.8	60.1%
188	2010 Ford F-150	PICKUP	291.4	966.7	30.1%
189	2021 Chevrolet Silverado	PICKUP	360.2	967.5	37.2%
190	2022 Ford F-150	PICKUP	916.5	2,344.1	39.1%
191	2015 GMC Sierra	PICKUP	1,370.1	2,583.2	53.0%
192	2024 Chevrolet Silverado EV	PICKUP	22.9	79.4	28.8%
193	2019 Ford F-150	PICKUP	782.1	2,216.1	35.3%
194	2022 Ford F-150	PICKUP	92.4	340.2	27.1%
195	2015 GMC Sierra	PICKUP	142.9	324.1	44.1%
196	2013 GMC Sierra	PICKUP	230.7	765.5	30.1%
197	2024 Chevrolet Silverado EV	PICKUP	37.9	124.5	30.5%
198	2011 Chevrolet Silverado	PICKUP	370.6	1,101.7	33.6%
199	2013 GMC Sierra	PICKUP	553.1	1,258.1	44.0%
200	2014 GMC Sierra	PICKUP	2,655.9	3,219.4	82.5%
201	2020 Chevrolet Silverado	PICKUP	321.7	805.2	39.9%
202	2014 GMC Sierra	PICKUP	2,500.5	3,815.1	65.5%
203	2011 Chevrolet Silverado	PICKUP	227.4	634.6	35.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
204	2022 Ford F-150	PICKUP	607.2	1,972.2	30.8%
205	2014 GMC Sierra	PICKUP	1,367.9	1,780.6	76.8%
206	2020 Chevrolet Silverado	PICKUP	857.9	1,899.3	45.2%
207	2014 GMC Sierra	PICKUP	980.1	2,256.2	43.4%
208	2020 Chevrolet Silverado	PICKUP	406.2	1,071.5	37.9%
209	2011 Chevrolet Silverado	PICKUP	275.6	927.2	29.7%
210	2022 Ford F-150	PICKUP	196.9	658.8	29.9%
211	2013 GMC Sierra	PICKUP	255.7	752.0	34.0%
212	2014 GMC Sierra	PICKUP	992.4	2,232.4	44.5%
213	2015 GMC Sierra	PICKUP	1,043.0	1,526.9	68.3%
214	2020 Chevrolet Silverado	PICKUP	227.2	698.8	32.5%
215	2014 GMC Sierra	PICKUP	1,237.8	2,552.6	48.5%
216	2015 GMC Sierra	PICKUP	2,826.4	3,766.1	75.0%
217	2019 Ford F-150	PICKUP	768.9	1,631.8	47.1%
218	2020 Chevrolet Silverado	PICKUP	276.5	684.7	40.4%
219	2011 Chevrolet Silverado	PICKUP	221.1	747.3	29.6%
220	2022 Ford F-150	PICKUP	186.5	702.7	26.5%
221	2014 GMC Sierra	PICKUP	641.9	1,811.5	35.4%
222	2015 GMC Sierra	PICKUP	206.2	757.1	27.2%
223	2022 Ford F-150	PICKUP	1,956.1	3,465.2	56.5%
224	2014 GMC Sierra	PICKUP	948.3	1,876.0	50.6%
225	2015 GMC Sierra	PICKUP	151.7	573.7	26.5%
226	2011 Chevrolet Silverado	PICKUP	99.8	344.0	29.0%
227	2012 GMC Sierra	PICKUP	141.4	433.6	32.6%
228	2014 GMC Sierra	PICKUP	444.3	1,609.6	27.6%
229	2020 Chevrolet Silverado	PICKUP	95.2	354.9	26.8%
230	2013 GMC Sierra	PICKUP	196.9	594.5	33.1%
231	2014 Ford F-150	PICKUP	256.4	323.4	79.3%
232	2015 GMC Sierra	PICKUP	359.3	738.3	48.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
233	2012 GMC Sierra	PICKUP	680.5	1,778.4	38.3%
234	2013 GMC Sierra	PICKUP	460.9	1,339.6	34.4%
235	2024 Ford F-150	PICKUP	110.5	331.4	33.4%
236	2014 Ford F-150	PICKUP	69.6	254.4	27.4%
237	2015 GMC Sierra	PICKUP	1,000.5	1,438.5	69.6%
238	2020 Chevrolet Silverado	PICKUP	298.8	1,082.0	27.6%
239	2011 Chevrolet Silverado	PICKUP	211.6	686.9	30.8%
240	2023 Ford F-150	PICKUP	87.1	260.1	33.5%
241	2014 Ford F-150	PICKUP	750.2	1,454.3	51.6%
242	2015 GMC Sierra	PICKUP	836.9	1,193.9	70.1%
243	2020 Chevrolet Silverado	PICKUP	230.2	854.9	26.9%
244	2012 GMC Sierra	PICKUP	201.4	414.5	48.6%
245	2014 Ford F-150	PICKUP	626.6	2,202.9	28.4%
246	2017 Ford F-150	PICKUP	559.3	1,212.3	46.1%
247	2009 Chevrolet Silverado	PICKUP	1,377.1	1,884.8	73.1%
248	2012 GMC Sierra	PICKUP	329.0	1,163.0	28.3%
249	2023 Ford F-150	PICKUP	234.9	833.6	28.2%
250	2014 Ford F-150	PICKUP	968.3	2,153.3	45.0%
251	2017 Ford F-150	PICKUP	838.8	2,605.5	32.2%
252	2018 Ford F-150	PICKUP	697.0	1,755.8	39.7%
253	2020 Chevrolet Silverado	PICKUP	353.7	782.9	45.2%
254	2012 GMC Sierra	PICKUP	200.5	762.1	26.3%
255	2013 Ford F-150	PICKUP	1,527.9	2,331.9	65.5%
256	2014 Ford F-150	PICKUP	532.1	1,947.3	27.3%
257	2015 GMC Sierra	PICKUP	519.3	1,651.2	31.5%
258	2020 Ford F-150	PICKUP	1,694.8	3,972.9	42.7%
259	2012 GMC Sierra	PICKUP	176.8	552.6	32.0%
260	2013 Ford F-150	PICKUP	276.3	673.4	41.0%
261	2014 Ford F-150	PICKUP	1,133.8	1,431.9	79.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
262	2015 GMC Sierra	PICKUP	1,165.4	2,799.0	41.6%
263	2017 Ford F-150	PICKUP	2,319.3	3,663.8	63.3%
264	2019 Ford F-150	PICKUP	481.5	1,060.6	45.4%
265	2014 Ford F-150	PICKUP	133.9	443.5	30.2%
266	2015 GMC Sierra	PICKUP	777.4	1,387.4	56.0%
267	2018 Ford F-150	PICKUP	987.6	2,300.8	42.9%
268	2020 Ford F-150	PICKUP	336.5	1,318.3	25.5%
269	2013 Ford F-150	PICKUP	1,373.0	2,609.7	52.6%
270	2014 Ford F-150	PICKUP	702.7	1,774.5	39.6%
271	2015 GMC Sierra	PICKUP	874.2	1,913.2	45.7%
272	2017 Ford F-150	PICKUP	311.8	1,053.5	29.6%
273	2008 Chevrolet Silverado	PICKUP	313.8	800.3	39.2%
274	2020 Ford F-150	PICKUP	328.1	1,121.8	29.2%
275	2011 Chevrolet Silverado	PICKUP	256.0	611.9	41.8%
276	2013 Ford F-150	PICKUP	307.8	961.6	32.0%
277	2017 Ford F-150	PICKUP	443.3	1,556.3	28.5%
278	2020 Ford F-150	PICKUP	934.8	2,357.3	39.7%
279	2022 Ford F-150	PICKUP	758.6	1,244.2	61.0%
280	2013 Ford F-150	PICKUP	1,275.5	1,841.1	69.3%
281	2014 Ford F-150	PICKUP	1,375.0	2,685.3	51.2%
282	2023 Ford F-150	PICKUP	123.8	375.0	33.0%
283	2015 GMC Sierra	PICKUP	364.0	1,268.5	28.7%
284	2013 Ford F-150	PICKUP	1,086.8	1,949.7	55.7%
285	2014 Ford F-150	PICKUP	2,917.3	4,656.2	62.7%
286	2015 GMC Sierra	PICKUP	560.9	1,516.7	37.0%
287	2020 Ford F-150	PICKUP	440.7	1,508.5	29.2%
288	2013 Ford F-150	PICKUP	328.9	1,301.8	25.3%
289	2015 GMC Sierra	PICKUP	663.7	1,578.4	42.0%
290	2012 GMC Sierra	PICKUP	307.1	625.6	49.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
291	2013 Ford F-150	PICKUP	2,241.7	2,788.6	80.4%
292	2015 GMC Sierra	PICKUP	566.9	2,003.9	28.3%
293	2011 Chevrolet Silverado	PICKUP	117.5	464.8	25.3%
294	2013 Ford F-150	PICKUP	94.1	345.3	27.3%
295	2015 GMC Sierra	PICKUP	914.9	1,939.8	47.2%
296	2018 Ford F-150	PICKUP	580.7	944.4	61.5%
297	2019 Ford F-150	PICKUP	790.8	2,514.0	31.5%
298	2012 GMC Sierra	PICKUP	500.3	1,337.9	37.4%
299	2015 GMC Sierra	PICKUP	889.8	1,503.5	59.2%
300	2018 Ford F-150	PICKUP	1,486.8	2,420.8	61.4%
301	2011 Chevrolet Silverado	PICKUP	230.7	419.3	55.0%
302	2022 Ford F-150	PICKUP	1,158.8	2,298.9	50.4%
303	2023 Ford F-150 Lightning	PICKUP	125.6	416.9	30.1%
304	2014 Ford F-150	PICKUP	714.4	1,265.8	56.4%
305	2015 GMC Sierra	PICKUP	687.9	2,492.5	27.6%
306	2006 Chevrolet Silverado	PICKUP	93.0	358.5	25.9%
307	2023 Ford F-150	PICKUP	270.9	955.0	28.4%
308	2011 Chevrolet Silverado	PICKUP	1,037.1	1,466.9	70.7%
309	2021 Chevrolet Silverado	PICKUP	312.4	853.7	36.6%
310	2022 Ford F-150	PICKUP	197.8	656.3	30.1%
311	2019 Ford F-150	PICKUP	7,364.8	9,249.2	79.6%
312	2022 Ford F-150	PICKUP	536.0	1,959.7	27.4%
313	2018 Ford F-150	PICKUP	386.0	1,530.9	25.2%
314	2011 Chevrolet Silverado	PICKUP	772.8	1,554.5	49.7%
315	2019 Ford F-150	PICKUP	602.8	1,286.4	46.9%
316	2021 Chevrolet Silverado	PICKUP	1,642.7	3,882.3	42.3%
317	2024 Ford F-150	PICKUP	172.0	502.0	34.3%
318	2019 Ford F-150	PICKUP	992.1	2,475.6	40.1%
319	2024 Ford F-150	PICKUP	413.2	1,075.6	38.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
320	2024 Ford F-150	PICKUP	87.4	321.3	27.2%
321	2021 Chevrolet Silverado	PICKUP	156.2	508.4	30.7%
322	2012 GMC Sierra	PICKUP	223.5	652.8	34.2%
323	2024 Ford F-150	PICKUP	199.7	660.1	30.3%
324	2024 Ford F-150	PICKUP	89.1	223.8	39.8%
325	2012 GMC Sierra	PICKUP	4,404.9	6,574.4	67.0%
326	2024 Ford F-150	PICKUP	276.5	692.3	39.9%
327	2006 Chevrolet Silverado	PICKUP	75.1	265.8	28.3%
328	2021 Chevrolet Silverado	PICKUP	303.0	739.3	41.0%
329	2022 Ford F-150	PICKUP	20.3	55.7	36.3%
330	2024 Ford F-150	PICKUP	243.4	833.7	29.2%
331	2006 Chevrolet Silverado	PICKUP	33.6	72.2	46.5%
332	2024 Ford F-150	PICKUP	388.3	822.7	47.2%
333	2007 Chevrolet Silverado	PICKUP	4,178.2	5,047.9	82.8%
334	2022 Ford F-150	PICKUP	1,399.1	2,540.8	55.1%
335	2024 Ford F-150	PICKUP	293.4	705.2	41.6%
336	2011 Chevrolet Silverado	PICKUP	171.7	372.8	46.1%
337	2022 Ford F-150	PICKUP	1,792.3	4,141.5	43.3%
338	2024 Ford F-150	PICKUP	4.1	15.0	27.4%
339	2021 Chevrolet Silverado	PICKUP	232.2	686.5	33.8%
340	2024 Ford F-150	PICKUP	152.4	447.7	34.1%
341	2018 Ford F-150	PICKUP	677.2	1,605.3	42.2%
342	2018 Ford F-150	PICKUP	723.6	2,227.3	32.5%
343	2021 Chevrolet Silverado	PICKUP	224.8	864.4	26.0%
344	2024 Ford F-150	PICKUP	26.8	89.4	30.0%
345	2024 Ford F-150	PICKUP	732.7	1,494.8	49.0%
346	2012 GMC Sierra	PICKUP	135.2	497.1	27.2%
347	2024 Ford F-150	PICKUP	472.9	1,058.9	44.7%
348	2008 Chevrolet Silverado	PICKUP	188.2	506.2	37.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
349	2021 Ford F-150	PICKUP	575.4	1,660.0	34.7%
350	2021 Ford F-150	PICKUP	865.8	1,588.8	54.5%
351	2012 GMC Sierra	PICKUP	456.7	1,183.1	38.6%
352	2021 Ford F-150	PICKUP	616.1	1,261.2	48.8%
353	2006 Chevrolet Silverado	PICKUP	327.9	636.4	51.5%
354	2008 Chevrolet Silverado	PICKUP	499.4	819.0	61.0%
355	2021 Ford F-150	PICKUP	413.9	983.3	42.1%
356	2018 Ford F-150	PICKUP	841.0	2,520.0	33.4%
357	2019 Ford F-150	PICKUP	372.7	1,355.7	27.5%
358	2012 GMC Sierra	PICKUP	1,906.4	2,690.8	70.8%
359	2006 Chevrolet Silverado	PICKUP	69.6	136.1	51.1%
360	2021 Ford F-150	PICKUP	459.4	1,223.3	37.6%
361	2019 Ford F-150	PICKUP	515.9	1,670.0	30.9%
362	2021 Ford F-150	PICKUP	201.2	627.1	32.1%
363	2008 Chevrolet Silverado	PICKUP	577.0	1,876.7	30.7%
364	2012 GMC Sierra	PICKUP	350.0	870.4	40.2%
365	2018 Ford F-150	PICKUP	300.2	1,047.3	28.7%
366	2019 Ford F-150	PICKUP	974.5	3,110.0	31.3%
367	2021 Ford F-150	PICKUP	255.2	834.9	30.6%
368	2019 Ford F-150	PICKUP	1,051.4	2,244.4	46.8%
369	2018 Ford F-150	PICKUP	356.5	1,298.5	27.5%
370	2019 Ford F-150	PICKUP	964.9	2,641.8	36.5%
371	2018 Ford F-150	PICKUP	582.2	1,753.1	33.2%
372	2018 Ford F-150	PICKUP	901.8	2,519.5	35.8%
373	2019 Ford F-150	PICKUP	1,150.2	3,560.9	32.3%
374	2018 Ford F-150	PICKUP	1,376.8	2,482.9	55.5%
375	2019 Ford F-150	PICKUP	526.9	1,866.8	28.2%
376	2018 Ford F-150	PICKUP	584.4	1,736.6	33.7%
377	2019 Ford F-150	PICKUP	682.5	2,029.4	33.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
378	2020 Ford F-150	PICKUP	434.0	1,403.0	30.9%
379	2021 Chevrolet Silverado	PICKUP	7.3	12.9	56.8%
380	2022 Ford F-150	PICKUP	34.4	115.5	29.8%
381	2019 Ford F-150	PICKUP	747.2	2,237.0	33.4%
382	2019 Ford F-150	PICKUP	1,261.3	2,868.7	44.0%
383	2019 Ford F-150	PICKUP	1,258.4	3,317.4	37.9%
384	2019 Ford F-150	PICKUP	705.1	1,972.2	35.7%
385	2020 Ford Transit Van	VAN	1,996.8	3,333.9	59.9%
386	2021 Ford Transit Van	VAN	3,388.4	4,647.2	72.9%
387	2013 GMC Savana	VAN	293.2	513.5	57.1%
388	2024 Ford Transit Van	VAN	615.8	949.6	64.9%
389	2025 Ford Transit Van	VAN	185.7	270.8	68.6%
390	2019 Ford Transit Van	VAN	2,761.4	4,261.4	64.8%
391	2020 Ford Transit Van	VAN	2,522.8	3,468.3	72.7%
392	2021 Ford Transit Van	VAN	4,458.5	5,987.1	74.5%
393	2013 GMC Savana	VAN	2,911.8	4,355.5	66.9%
394	2024 Ford Transit Van	VAN	521.4	1,026.9	50.8%
395	2025 Ford Transit Van	VAN	310.2	466.4	66.5%
396	2017 Ford Transit Van	VAN	2,862.2	4,569.8	62.6%
397	2019 Ford Transit Van	VAN	3,319.7	4,597.3	72.2%
398	2020 Ford Transit Van	VAN	1,818.0	2,577.7	70.5%
399	2021 Ford Transit Van	VAN	2,612.6	3,918.5	66.7%
400	2013 GMC Savana	VAN	1,461.4	2,410.0	60.6%
401	2014 GMC Savana	VAN	2,650.5	4,130.8	64.2%
402	2025 Ford Transit Van	VAN	425.1	617.7	68.8%
403	2017 Ford Transit Van	VAN	2,214.5	2,874.7	77.0%
404	2019 Ford Transit Van	VAN	4,417.6	6,107.1	72.3%
405	2021 Ford Transit Van	VAN	1,952.6	3,702.2	52.7%
406	2013 GMC Savana	VAN	1,927.4	2,853.4	67.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
407	2024 Ford Transit Van	VAN	192.9	369.3	52.2%
408	2015 GMC Savana	VAN	2,006.9	2,877.8	69.7%
409	2017 Ford Transit Van	VAN	2,836.9	4,041.6	70.2%
410	2019 Ford Transit Van	VAN	3,141.0	4,412.3	71.2%
411	2020 Ford Transit Van	VAN	4,201.3	5,919.6	71.0%
412	2021 Ford Transit Van	VAN	1,305.8	2,922.3	44.7%
413	2013 GMC Savana	VAN	2,917.7	4,051.4	72.0%
414	2024 Ford Transit Van	VAN	1,590.3	2,032.6	78.2%
415	2025 Ford Transit Van	VAN	507.5	734.3	69.1%
416	2017 Ford Transit Van	VAN	1,893.7	3,419.4	55.4%
417	2019 Ford Transit Wagon	VAN	96.1	210.2	45.7%
418	2020 Ford Transit Van	VAN	1,340.9	3,049.1	44.0%
419	2021 Ford Transit Van	VAN	2,025.3	3,904.6	51.9%
420	2024 Ford Transit Van	VAN	448.3	689.0	65.1%
421	2025 Ford Transit Van	VAN	369.8	517.0	71.5%
422	2017 Ford Transit Van	VAN	1,880.9	3,553.4	52.9%
423	2008 Chevrolet Express	VAN	1,582.8	2,286.8	69.2%
424	2009 Chevrolet Express	VAN	416.6	617.7	67.4%
425	2020 Ford Transit Wagon	VAN	131.2	380.4	34.5%
426	2021 Ford Transit Van	VAN	3,124.6	5,190.2	60.2%
427	2012 GMC Savana	VAN	3,779.8	5,232.9	72.2%
428	2024 Ford Transit Van	VAN	950.2	1,563.4	60.8%
429	2025 Ford Transit Van	VAN	60.9	138.6	44.0%
430	2017 Ford Transit Van	VAN	2,323.1	3,578.9	64.9%
431	2020 Ford Transit Van	VAN	2,438.7	4,014.4	60.7%
432	2021 Ford Transit Van	VAN	3,104.8	4,492.2	69.1%
433	2023 Ford Transit Van	VAN	1,865.1	3,022.4	61.7%
434	2024 Ford Transit Van	VAN	1,101.5	1,478.2	74.5%
435	2015 GMC Savana	VAN	2,206.9	2,851.9	77.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
436	2017 Ford Transit Van	VAN	2,266.0	3,231.8	70.1%
437	2020 Ford Transit Van	VAN	2,812.3	4,336.4	64.9%
438		VAN	2.3	2.8	84.9%
439	2021 Ford Transit Van	VAN	1,565.6	2,000.4	78.3%
440	2023 Ram 5500 Chassis	VAN	2,138.3	2,988.5	71.6%
441	2014 GMC Savana	VAN	2,131.5	3,501.5	60.9%
442	2025 Ford Transit Van	VAN	134.0	235.3	56.9%
443	2017 Ford Transit Van	VAN	2,425.1	3,853.8	62.9%
444	2019 Ford Transit Van	VAN	2,691.8	4,313.6	62.4%
445	2020 Ford Transit Van	VAN	3,995.0	5,150.1	77.6%
446	2013 GMC Savana	VAN	1,402.9	2,067.0	67.9%
447	2014 GMC Savana	VAN	1,349.1	2,681.2	50.3%
448	2015 Ford Transit Van	VAN	3,706.7	5,232.4	70.8%
449	2017 Ford Transit Van	VAN	2,336.4	3,388.8	68.9%
450	2019 Ford Transit Van	VAN	3,681.4	5,142.6	71.6%
451	2020 Ford Transit Van	VAN	3,344.0	4,606.8	72.6%
452	2021 Ford Transit Van	VAN	2,211.6	3,582.1	61.7%
453	2012 GMC Savana	VAN	1,389.1	2,275.0	61.1%
454	2013 GMC Savana	VAN	2,018.4	3,397.6	59.4%
455	2024 Ford Transit Van	VAN	695.2	1,029.1	67.6%
456	2025 Ford Transit Van	VAN	357.7	547.9	65.3%
457	2017 Ford Transit Van	VAN	1,886.2	2,824.0	66.8%
458	2019 Ford Transit Van	VAN	2,571.9	4,006.5	64.2%
459	2020 Ford Transit Van	VAN	1,804.6	2,600.6	69.4%
460	2021 Ford Transit Van	VAN	602.2	754.5	79.8%
461	2013 GMC Savana	VAN	3,884.2	5,551.0	70.0%
462	2014 GMC Savana	VAN	3,427.1	4,657.5	73.6%
463	2015 Ford Transit Van	VAN	2,928.1	4,457.2	65.7%
464	2017 Ford Transit Van	VAN	3,411.2	4,634.1	73.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
465	2019 Ford Transit Van	VAN	2,772.7	3,853.7	71.9%
466	2020 Ford Transit Van	VAN	2,806.4	4,012.3	69.9%
467	2021 Ford Transit Van	VAN	3,176.7	5,410.1	58.7%
468	2012 GMC Savana	VAN	2,767.6	4,317.2	64.1%
469	2013 GMC Savana	VAN	3,808.0	5,078.3	75.0%
470	2014 GMC Savana	VAN	2,353.3	3,252.9	72.3%
471	2015 Ford Transit Van	VAN	1,179.4	1,821.7	64.7%
472	2017 Ford Transit Van	VAN	2,187.2	3,610.5	60.6%
473	2019 Ford Transit Van	VAN	3,784.7	5,849.4	64.7%
474	2020 Ford Transit Van	VAN	629.5	1,060.1	59.4%
475	2021 Ford Transit Van	VAN	4,711.9	7,386.0	63.8%
476	2012 GMC Savana	VAN	1,471.6	2,330.2	63.2%
477	2013 GMC Savana	VAN	3,406.1	4,317.1	78.9%
478	2014 GMC Savana	VAN	1,705.8	2,758.6	61.8%
479	2015 Ford Transit Van	VAN	2,179.5	3,481.4	62.6%
480	2017 Ford Transit Van	VAN	1,368.4	3,013.8	45.4%
481	2020 Ford Transit Van	VAN	1,998.0	3,623.0	55.1%
482	2021 Ford Transit Van	VAN	2,326.5	3,787.7	61.4%
483	2013 GMC Savana	VAN	1,687.3	2,628.8	64.2%
484	2014 GMC Savana	VAN	3,436.9	4,853.5	70.8%
485	2015 Ford Transit Van	VAN	1,546.8	3,132.4	49.4%
486	2017 Ford Transit Van	VAN	4,013.8	6,010.5	66.8%
487	2020 Ford Transit Van	VAN	708.8	1,205.6	58.8%
488	2021 Ford Transit Van	VAN	2,905.9	4,429.4	65.6%
489	2012 GMC Savana	VAN	432.2	733.0	59.0%
490	2013 GMC Savana	VAN	1,067.3	1,660.7	64.3%
491	2014 GMC Savana	VAN	2,200.7	3,264.3	67.4%
492	2017 Ford Transit Van	VAN	1,302.2	2,069.7	62.9%
493	2009 Chevrolet Express	VAN	347.1	542.7	64.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
494	2020 Ford Transit Van	VAN	1,980.4	3,595.9	55.1%
495	2021 Ford Transit Van	VAN	2,599.1	4,778.2	54.4%
496	2013 GMC Savana	VAN	2,207.5	3,220.6	68.5%
497	2014 GMC Savana	VAN	1,482.3	2,559.8	57.9%
498	2015 Ford Transit Van	VAN	2,579.9	3,572.3	72.2%
499	2017 Ford Transit Van	VAN	1,626.8	2,587.0	62.9%
500	2019 Ford Transit Van	VAN	3,353.1	4,840.7	69.3%
501	2021 Ford Transit Van	VAN	2,080.9	3,746.6	55.5%
502	2013 GMC Savana	VAN	1,006.8	1,499.7	67.1%
503	2015 Ford Transit Van	VAN	849.2	1,901.2	44.7%
504	2017 Ford Transit Van	VAN	2,928.2	4,461.4	65.6%
505	2019 Ford Transit Van	VAN	3,654.9	5,150.6	71.0%
506	2020 Ford Transit Van	VAN	2,091.5	3,839.1	54.5%
507	2021 Ford Transit Van	VAN	2,472.8	4,082.3	60.6%
508	2012 GMC Savana	VAN	1,209.3	1,824.2	66.3%
509	2013 GMC Savana	VAN	889.1	1,295.0	68.7%
510	2014 GMC Savana	VAN	3,639.7	4,782.6	76.1%
511	2015 Ford Transit Van	VAN	2,324.2	3,892.7	59.7%
512	2017 Ford Transit Van	VAN	2,122.6	3,288.3	64.6%
513	2009 Chevrolet Express	VAN	207.1	293.8	70.5%
514	2020 Ford Transit Van	VAN	242.6	527.9	46.0%
515	2021 Ford Transit Van	VAN	3,330.1	5,109.5	65.2%
516	2013 GMC Savana	VAN	1,521.4	2,425.5	62.7%
517	2014 GMC Savana	VAN	1,889.8	2,614.6	72.3%
518	2015 Ford Transit Van	VAN	2,040.8	2,911.9	70.1%
519	2017 Ford Transit Van	VAN	3,919.5	5,902.5	66.4%
520	2020 Ford Transit Van	VAN	2,437.8	3,483.5	70.0%
521	2021 Ford Transit Van	VAN	2,547.5	3,782.3	67.4%
522	2014 GMC Savana	VAN	968.0	1,445.4	67.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
523	2015 Ford Transit Van	VAN	1,304.9	2,196.0	59.4%
524	2017 Ford Transit Van	VAN	1,937.9	2,746.3	70.6%
525	2019 Ford Transit Van	VAN	3,177.0	4,313.1	73.7%
526	2020 Ford Transit Van	VAN	3,601.0	4,963.6	72.5%
527	2021 Ford Transit Van	VAN	2,718.9	3,918.6	69.4%
528	2013 GMC Savana	VAN	1,467.7	2,048.4	71.7%
529	2014 GMC Savana	VAN	2,995.7	3,907.1	76.7%
530	2015 Ford Transit Van	VAN	576.3	1,508.0	38.2%
531	2017 Ford Transit Van	VAN	3,565.9	5,435.2	65.6%
532	2019 Ford Transit Van	VAN	1,595.1	2,667.5	59.8%
533	2020 Ford Transit Van	VAN	2,373.3	3,745.2	63.4%
534	2021 Ford Transit Van	VAN	3,313.9	4,392.2	75.4%
535	2023 Ford Transit Van	VAN	637.1	1,430.7	44.5%
536	2014 GMC Savana	VAN	33.8	56.0	60.3%
537	2017 Ford Transit Van	VAN	502.0	734.5	68.3%
538	2020 Ford Transit Van	VAN	1,632.4	2,776.9	58.8%
539	2021 Ford Transit Van	VAN	2,772.6	3,996.3	69.4%
540	2013 GMC Savana	VAN	1,602.0	2,567.7	62.4%
541	2014 GMC Savana	VAN	2,439.9	3,366.4	72.5%
542	2015 Ford Transit Van	VAN	5,058.6	7,614.6	66.4%
543	2017 Ford Transit Van	VAN	2,420.5	3,435.2	70.5%
544	2020 Ford Transit Van	VAN	1,085.4	2,071.6	52.4%
545	2021 Ford Transit Van	VAN	1,735.5	2,828.8	61.4%
546	2013 GMC Savana	VAN	1,530.0	2,286.3	66.9%
547	2014 GMC Savana	VAN	3,017.9	4,314.2	70.0%
548	2015 Ford Transit Van	VAN	3,207.7	4,473.7	71.7%
549	2017 Ford Transit Van	VAN	3,767.9	4,872.2	77.3%
550	2019 Ford Transit Van	VAN	1,954.9	3,401.2	57.5%
551	2020 Ford Transit Van	VAN	2,869.2	4,373.2	65.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
552	2021 Ford Transit Van	VAN	3,074.7	5,368.8	57.3%
553	2013 GMC Savana	VAN	3,928.3	5,253.8	74.8%
554	2014 GMC Savana	VAN	1,903.8	3,262.8	58.3%
555	2015 Ford Transit Van	VAN	1,949.4	3,571.7	54.6%
556	2017 Ford Transit Van	VAN	3,597.5	4,567.1	78.8%
557	2019 Ford Transit Van	VAN	2,813.1	3,566.6	78.9%
558	2020 Ford Transit Van	VAN	823.8	2,199.6	37.5%
559	2021 Ford Transit Van	VAN	4,191.2	5,665.5	74.0%
560	2013 GMC Savana	VAN	2,822.9	4,130.9	68.3%
561	2024 Ford Transit Van	VAN	698.4	1,164.3	60.0%
562	2015 Ford Transit Van	VAN	2,964.3	4,286.2	69.2%
563	2017 Ford Transit Van	VAN	1,847.0	3,205.4	57.6%
564	2020 Ford Transit Van	VAN	2,149.6	3,208.5	67.0%
565	2021 Ford Transit Van	VAN	4,391.0	5,744.2	76.4%
566	2013 GMC Savana	VAN	1,529.7	2,121.4	72.1%
567	2014 GMC Savana	VAN	1,436.3	2,301.9	62.4%
568	2015 Ford Transit Van	VAN	1,610.3	2,716.7	59.3%
569	2017 Ford Transit Van	VAN	3,670.2	4,953.5	74.1%
570	2019 Ford Transit Van	VAN	3,329.8	4,995.7	66.7%
571	2020 Ford Transit Van	VAN	3,794.0	5,061.2	75.0%
572	2021 Ford Transit Van	VAN	2,373.7	3,480.7	68.2%
573	2013 GMC Savana	VAN	3,025.4	3,867.7	78.2%
574	2014 GMC Savana	VAN	1,294.8	2,108.6	61.4%
575	2015 Ford Transit Van	VAN	1,321.1	2,330.5	56.7%
576	2017 Ford Transit Van	VAN	2,809.1	4,218.0	66.6%
577	2019 Ford Transit Van	VAN	1,993.7	2,981.8	66.9%
578	2020 Ford Transit Van	VAN	1,795.9	3,072.6	58.4%
579	2021 Ford Transit Van	VAN	2,978.1	4,409.6	67.5%
580	2013 GMC Savana	VAN	3,314.6	4,807.6	68.9%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
581	2014 GMC Savana	VAN	4,030.4	5,417.9	74.4%
582	2015 Ford Transit Van	VAN	1,129.2	2,148.6	52.6%
583	2017 Ford Transit Van	VAN	1,968.8	3,199.0	61.5%
584	2020 Ford Transit Van	VAN	2,501.1	3,627.7	68.9%
585	2021 Ford Transit Van	VAN	2,230.9	2,600.9	85.8%
586	2013 GMC Savana	VAN	2,772.3	3,977.2	69.7%
587	2014 GMC Savana	VAN	2,492.1	3,484.6	71.5%
588	2015 Ford Transit Van	VAN	2,262.3	3,508.8	64.5%
589	2017 Ford Transit Van	VAN	1,708.2	3,385.6	50.5%
590	2009 Chevrolet Express	VAN	304.4	487.8	62.4%
591	2020 Ford Transit Van	VAN	1,483.5	3,540.3	41.9%
592	2021 Ford Transit Van	VAN	1,948.9	2,298.1	84.8%
593	2013 GMC Savana	VAN	1,565.3	2,515.6	62.2%
594	2014 GMC Savana	VAN	1,808.8	2,114.5	85.5%
595	2015 Ford Transit Van	VAN	1,817.5	3,264.8	55.7%
596	2017 Ford Transit Van	VAN	1,944.2	3,312.0	58.7%
597	2009 Chevrolet Express	VAN	300.5	503.8	59.6%
598	2020 Ford Transit Van	VAN	3,567.7	5,025.1	71.0%
599	2021 Ford Transit Van	VAN	2,851.0	3,511.8	81.2%
600	2013 GMC Savana	VAN	1,185.9	2,272.8	52.2%
601	2014 GMC Savana	VAN	2,126.9	3,021.0	70.4%
602	2015 Ford Transit Van	VAN	1,985.5	3,036.6	65.4%
603	2017 Ford Transit Van	VAN	2,309.9	3,523.0	65.6%
604	2020 Ford Transit Van	VAN	1,611.3	3,440.9	46.8%
605	2021 Ford Transit Van	VAN	1,756.4	2,222.4	79.0%
606	2013 GMC Savana	VAN	2,733.5	4,630.2	59.0%
607	2014 GMC Savana	VAN	220.5	397.6	55.5%
608	2015 Ford Transit Van	VAN	1,500.0	2,487.8	60.3%
609	2017 Ford Transit Van	VAN	1,685.2	2,794.0	60.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
610	2019 Ford Transit Van	VAN	3,793.1	4,797.8	79.1%
611	2020 Ford Transit Van	VAN	4,431.9	6,323.7	70.1%
612	2013 GMC Savana	VAN	1,924.5	2,796.7	68.8%
613	2014 GMC Savana	VAN	2,295.8	3,185.1	72.1%
614	2015 Ford Transit Van	VAN	3,225.3	4,102.3	78.6%
615	2017 Ford Transit Van	VAN	2,517.4	3,848.3	65.4%
616	2019 Ford Transit Van	VAN	3,767.5	5,532.7	68.1%
617	2020 Ford Transit Van	VAN	2,083.3	3,194.8	65.2%
618	2021 Ford Transit Van	VAN	893.4	2,391.1	37.4%
619	2013 GMC Savana	VAN	3,126.8	3,993.0	78.3%
620	2014 GMC Savana	VAN	1,393.4	2,396.9	58.1%
621	2015 Ford Transit Van	VAN	3,460.4	5,139.1	67.3%
622	2017 Ford Transit Van	VAN	3,965.8	5,365.7	73.9%
623	2019 Ford Transit Van	VAN	3,149.9	4,968.2	63.4%
624	2021 Ford Transit Van	VAN	1,173.8	2,559.5	45.9%
625	2013 GMC Savana	VAN	892.5	1,505.3	59.3%
626	2014 GMC Savana	VAN	728.9	1,981.8	36.8%
627	2015 Ford Transit Van	VAN	3,488.4	5,515.2	63.3%
628	2017 Ford Transit Van	VAN	2,258.0	3,423.3	66.0%
629	2009 Chevrolet Express	VAN	375.8	520.2	72.2%
630	2020 Ford Transit Van	VAN	3,279.4	5,270.4	62.2%
631	2021 Ford Transit Van	VAN	939.3	2,727.7	34.4%
632	2014 GMC Savana	VAN	1,139.9	2,454.9	46.4%
633	2015 Ford Transit Van	VAN	3,210.4	4,489.3	71.5%
634	2017 Ford Transit Van	VAN	1,876.0	3,257.4	57.6%
635	2020 Ford Transit Van	VAN	1,400.1	2,628.8	53.3%
636	2021 Ford Transit Van	VAN	576.4	2,124.0	27.1%
637	2013 GMC Savana	VAN	2,851.4	3,865.5	73.8%
638	2014 GMC Savana	VAN	2,825.2	3,758.0	75.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
639	2015 Ford Transit Van	VAN	3,866.2	5,207.3	74.2%
640	2017 Ford Transit Van	VAN	2,918.9	4,122.5	70.8%
641	2019 Ford Transit Van	VAN	3,203.9	4,490.7	71.3%
642	2021 Ford Transit Van	VAN	1,001.5	2,508.1	39.9%
643	2013 GMC Savana	VAN	924.4	1,813.3	51.0%
644	2014 GMC Savana	VAN	1,300.1	2,145.4	60.6%
645	2025 Ford Transit Van	VAN	278.1	395.0	70.4%
646	2017 Ford Transit Van	VAN	1,618.1	2,461.0	65.7%
647	2019 Ford Transit Van	VAN	3,185.5	5,029.1	63.3%
648	2020 Ford Transit Van	VAN	2,770.5	4,915.9	56.4%
649	2021 Ford Transit Van	VAN	1,597.4	3,199.5	49.9%
650	2023 Ford Transit Van	VAN	1,020.5	2,311.9	44.1%
651	2014 GMC Savana	VAN	1,694.1	2,614.9	64.8%
652	2015 Ford Transit Van	VAN	2,294.4	3,429.2	66.9%
653	2017 Ford Transit Van	VAN	754.1	1,102.7	68.4%
654	2019 Ford Transit Van	VAN	3,045.6	4,290.3	71.0%
655	2020 Ford Transit Van	VAN	1,798.7	3,215.2	55.9%
656	2022 Ford Transit Van	VAN	1,373.2	3,179.2	43.2%
657	2013 GMC Savana	VAN	1,412.2	2,350.9	60.1%
658	2014 GMC Savana	VAN	2,231.7	3,649.0	61.2%
659	2015 Ford Transit Van	VAN	848.7	2,367.7	35.8%
660	2017 Ford Transit Van	VAN	1,805.5	3,051.0	59.2%
661	2019 Ford Transit Van	VAN	1,971.9	4,115.5	47.9%
662	2013 GMC Savana	VAN	1,832.7	2,880.4	63.6%
663	2014 GMC Savana	VAN	2,826.0	4,009.3	70.5%
664	2015 Ford Transit Van	VAN	1,313.2	2,105.0	62.4%
665	2017 Ford Transit Van	VAN	1,826.0	3,423.9	53.3%
666	2019 Ford Transit Van	VAN	3,830.7	5,921.5	64.7%
667	2022 Ford Transit Van	VAN	1,132.0	3,103.1	36.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
668	2013 GMC Savana	VAN	1,965.5	2,884.1	68.2%
669	2014 GMC Savana	VAN	1,495.4	1,974.9	75.7%
670	2015 Ford Transit Van	VAN	1,640.2	3,275.1	50.1%
671	2017 Ford Transit Van	VAN	2,868.7	4,140.5	69.3%
672	2019 Ford Transit Van	VAN	2,705.4	4,018.6	67.3%
673	2022 Ford Transit Van	VAN	949.0	2,173.1	43.7%
674	2013 GMC Savana	VAN	1,208.6	2,241.1	53.9%
675	2014 GMC Savana	VAN	910.1	1,308.9	69.5%
676	2015 Ford Transit Van	VAN	3,988.5	5,941.4	67.1%
677	2017 Ford Transit Van	VAN	1,987.4	3,159.8	62.9%
678	2019 Ford Transit Van	VAN	2,507.4	3,827.3	65.5%
679	2022 Ford Transit Van	VAN	956.1	2,161.4	44.2%
680	2014 GMC Savana	VAN	3,080.3	4,673.8	65.9%
681	2015 Ford Transit Van	VAN	2,891.3	4,517.6	64.0%
682	2017 Ford Transit Van	VAN	3,008.6	4,225.5	71.2%
683	2019 Ford Transit Van	VAN	3,050.5	4,572.0	66.7%
684	2020 Ford Transit Van	VAN	3,093.1	3,817.9	81.0%
685	2022 Ford Transit Van	VAN	424.7	1,543.9	27.5%
686	2013 GMC Savana	VAN	2,252.9	3,334.7	67.6%
687	2024 Ford Transit Van	VAN	707.3	929.1	76.1%
688	2015 Ford Transit Van	VAN	2,588.7	3,564.2	72.6%
689	2017 Ford Transit Van	VAN	2,363.3	3,172.2	74.5%
690	2019 Ford Transit Van	VAN	2,318.2	4,622.0	50.2%
691	2020 Ford Transit Van	VAN	4,438.2	6,060.1	73.2%
692	2013 GMC Savana	VAN	2,236.6	3,450.7	64.8%
693	2014 GMC Savana	VAN	4,152.7	6,908.7	60.1%
694	2017 Ford Transit Van	VAN	1,957.7	2,924.2	66.9%
695	2019 Ford Transit Van	VAN	2,581.9	4,167.6	62.0%
696	2020 Ford Transit Van	VAN	3,662.0	5,102.4	71.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
697	2013 GMC Savana	VAN	2,888.8	4,218.5	68.5%
698	2014 GMC Savana	VAN	1,152.0	1,730.7	66.6%
699	2015 Ford Transit Van	VAN	2,972.3	4,083.5	72.8%
700	2017 Ford Transit Van	VAN	2,706.9	4,645.3	58.3%
701	2019 Ford Transit Van	VAN	2,448.8	3,380.7	72.4%
702	2013 GMC Savana	VAN	3,641.8	4,845.0	75.2%
703	2014 GMC Savana	VAN	2,870.2	3,793.9	75.7%
704	2015 Ford Transit Van	VAN	1,468.5	2,336.1	62.9%
705	2017 Ford Transit Van	VAN	1,138.0	2,414.3	47.1%
706	2019 Ford Transit Van	VAN	1,781.2	2,975.0	59.9%
707	2020 Ford Transit Van	VAN	814.3	2,734.0	29.8%
708	2022 Ford Transit Van	VAN	1,326.2	2,650.2	50.0%
709	2013 GMC Savana	VAN	2,937.8	4,627.9	63.5%
710	2014 GMC Savana	VAN	1,611.3	2,481.4	64.9%
711	2015 Ford Transit Van	VAN	1,865.0	3,120.2	59.8%
712	2017 Ford Transit Van	VAN	2,107.5	3,517.0	59.9%
713	2022 Ford Transit Van	VAN	1,087.7	2,279.0	47.7%
714	2013 GMC Savana	VAN	448.0	901.0	49.7%
715	2014 GMC Savana	VAN	1,720.2	2,767.7	62.2%
716	2015 Ford Transit Van	VAN	1,867.5	2,653.8	70.4%
717	2017 Ford Transit Van	VAN	2,234.2	2,956.5	75.6%
718	2019 Ford Transit Van	VAN	2,956.0	4,358.0	67.8%
719	2022 Ford Transit Van	VAN	2,099.5	3,606.4	58.2%
720	2013 GMC Savana	VAN	1,418.7	2,390.1	59.4%
721	2014 GMC Savana	VAN	1,408.7	2,132.9	66.0%
722	2015 Ford Transit Van	VAN	4,067.7	5,638.5	72.1%
723	2017 Ford Transit Van	VAN	3,239.1	5,524.4	58.6%
724	2019 Ford Transit Van	VAN	1,226.5	2,951.5	41.6%
725	2022 Ford Transit Van	VAN	1,064.4	2,743.1	38.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
726	2013 GMC Savana	VAN	3,238.1	4,720.7	68.6%
727	2014 GMC Savana	VAN	2,562.5	3,573.3	71.7%
728	2015 Ford Transit Van	VAN	1,124.2	1,740.2	64.6%
729	2017 Ford Transit Van	VAN	1,864.2	3,112.3	59.9%
730	2019 Ford Transit Van	VAN	1,696.7	2,927.5	58.0%
731	2013 GMC Savana	VAN	3,561.1	4,829.2	73.7%
732	2014 GMC Savana	VAN	2,601.1	3,639.1	71.5%
733	2015 Ford Transit Van	VAN	2,141.8	4,042.0	53.0%
734	2017 Ford Transit Van	VAN	1,194.1	1,954.6	61.1%
735	2019 Ford Transit Van	VAN	2,245.0	3,986.0	56.3%
736	2013 GMC Savana	VAN	1,349.1	2,404.3	56.1%
737	2014 GMC Savana	VAN	2,784.4	3,606.2	77.2%
738	2015 Ford Transit Van	VAN	3,491.9	4,655.8	75.0%
739	2017 Ford Transit Van	VAN	2,224.7	3,347.5	66.5%
740	2019 Ford Transit Van	VAN	2,503.9	3,770.5	66.4%
741	2013 GMC Savana	VAN	1,178.9	2,059.4	57.2%
742	2014 GMC Savana	VAN	354.4	527.7	67.2%
743	2015 Ford Transit Van	VAN	1,938.4	2,830.1	68.5%
744	2017 Ford Transit Van	VAN	2,511.1	4,274.9	58.7%
745	2019 Ford Transit Van	VAN	2,527.4	2,856.7	88.5%
746	2013 GMC Savana	VAN	1,250.5	1,649.1	75.8%
747	2014 GMC Savana	VAN	1,608.3	2,368.9	67.9%
748	2025 Ford Transit Van	VAN	344.7	521.0	66.2%
749	2017 Ford Transit Van	VAN	3,339.0	4,599.7	72.6%
750	2019 Ford Transit Van	VAN	3,735.8	5,458.6	68.4%
751	2021 Ford F-250	VAN	901.1	2,059.4	43.8%
752	2014 GMC Savana	VAN	3,324.8	4,390.1	75.7%
753	2025 Ford Transit Van	VAN	534.2	714.8	74.7%
754	2017 Ford Transit Van	VAN	2,877.4	4,151.8	69.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
755	2019 Ford Transit Van	VAN	3,624.8	5,161.9	70.2%
756	2014 GMC Savana	VAN	688.5	1,239.4	55.5%
757	2025 Ford Transit Van	VAN	198.0	385.4	51.4%
758	2017 Ford Transit Van	VAN	1,520.1	2,385.7	63.7%
759	2019 Ford Transit Van	VAN	3,598.4	5,179.8	69.5%
760	2013 GMC Savana	VAN	1,013.8	1,598.4	63.4%
761	2014 GMC Savana	VAN	2,765.0	3,920.9	70.5%
762	2025 Ford Transit Van	VAN	43.9	66.9	65.5%
763	2017 Ford Transit Van	VAN	1,073.2	2,159.5	49.7%
764	2019 Ford Transit Van	VAN	2,042.8	3,878.0	52.7%
765	2013 GMC Savana	VAN	1,062.8	1,845.9	57.6%
766	2014 GMC Savana	VAN	1,251.5	2,372.9	52.7%
767	2017 Ford Transit Van	VAN	3,182.5	4,329.6	73.5%
768	2019 Ford Transit Van	VAN	3,906.2	5,718.4	68.3%
769	2013 GMC Savana	VAN	1,280.8	1,972.2	64.9%
770	2014 GMC Savana	VAN	425.5	1,259.8	33.8%
771	2017 Ford Transit Van	VAN	3,081.6	4,467.9	69.0%
772	2009 Chevrolet Express	VAN	14.3	32.3	44.1%
773	2013 GMC Savana	VAN	4,129.8	5,328.8	77.5%
774	2014 GMC Savana	VAN	816.1	1,121.5	72.8%
775	2017 Ford Transit Van	VAN	2,357.9	3,567.6	66.1%
776	2019 Ford Transit Van	VAN	2,455.0	3,982.3	61.6%
777	2014 GMC Savana	VAN	1,960.6	2,622.7	74.8%
778	2017 Ford Transit Van	VAN	2,369.5	3,264.5	72.6%
779	2019 Ford Transit Van	VAN	1,303.3	1,903.7	68.5%
780	2021 Ram ProMaster 2500	VAN	16.1	47.7	33.7%
781	2013 GMC Savana	VAN	3,108.4	4,421.4	70.3%
782	2014 GMC Savana	VAN	2,640.9	3,677.8	71.8%
783	2017 Ford Transit Van	VAN	967.7	1,473.6	65.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
784	2019 Ford Transit Van	VAN	3,387.9	4,444.0	76.2%
785	2014 GMC Savana	VAN	2,764.5	4,422.9	62.5%
786	2017 Ford Transit Van	VAN	2,058.1	3,261.0	63.1%
787	2019 Ford Transit Van	VAN	186.3	720.6	25.9%
788	2013 GMC Savana	VAN	772.5	1,343.3	57.5%
789	2014 GMC Savana	VAN	1,431.2	2,158.2	66.3%
790	2017 Ford Transit Van	VAN	2,344.8	3,359.3	69.8%
791	2013 GMC Savana	VAN	1,841.7	3,183.8	57.8%
792	2014 GMC Savana	VAN	1,290.8	2,178.5	59.3%
793	2013 GMC Savana	VAN	1,050.2	1,439.2	73.0%
794	2014 GMC Savana	VAN	1,936.9	2,841.1	68.2%
795	2017 Ford Transit Van	VAN	3,100.9	4,370.1	71.0%
796	2013 GMC Savana	VAN	3,314.4	4,686.9	70.7%
797	2017 Ford Transit Van	VAN	1,129.8	1,783.1	63.4%
798	2023 Ford Transit Van	VAN	610.6	1,244.8	49.1%
799	2014 GMC Savana	VAN	51.6	86.0	60.0%
800	2017 Ford Transit Van	VAN	2,793.8	4,186.5	66.7%
801	2023 Ford Transit Van	VAN	1,191.2	2,419.0	49.2%
802	2014 GMC Savana	VAN	2,599.1	3,844.6	67.6%
803	2017 Ford Transit Van	VAN	2,574.2	3,439.8	74.8%
804	2014 GMC Savana	VAN	940.2	1,754.1	53.6%
805	2017 Ford Transit Van	VAN	3,964.2	5,957.7	66.5%
806	2023 Ford Transit Van	VAN	1,185.9	2,426.7	48.9%
807	2014 GMC Savana	VAN	1,991.6	2,777.6	71.7%
808	2017 Ford Transit Van	VAN	2,375.1	3,321.6	71.5%
809	2023 Ford Transit Van	VAN	1,057.0	2,534.7	41.7%
810	2014 GMC Savana	VAN	4,876.5	6,308.9	77.3%
811	2014 GMC Savana	VAN	1,874.2	3,009.8	62.3%
812	2023 Ford Transit Van	VAN	357.5	1,030.3	34.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
813	2014 GMC Savana	VAN	1,214.1	1,811.1	67.0%
814	2023 Ford Transit Van	VAN	994.7	1,977.2	50.3%
815	2014 GMC Savana	VAN	1,556.4	2,155.2	72.2%
816	2014 GMC Savana	VAN	2,979.1	4,534.1	65.7%
817	2014 GMC Savana	VAN	3,059.9	4,791.6	63.9%
818	2014 GMC Savana	VAN	954.9	1,330.4	71.8%
819	2024 Ford Transit Van	VAN	411.2	1,359.6	30.2%
820	2013 Ford Econoline Wagon	VAN	233.5	565.5	41.3%
821	2024 Ford Transit Van	VAN	384.8	894.8	43.0%
822	2024 Ford Transit Van	VAN	262.1	512.6	51.1%
823	2024 Ford Transit Van	VAN	347.1	737.2	47.1%
824	2023 Ford Transit Van	VAN	2,717.0	3,961.4	68.6%
825	2024 Ford Transit Van	VAN	303.1	637.6	47.5%
826	2023 Ford Transit Van	VAN	291.5	988.4	29.5%
827	2024 Ford Transit Van	VAN	104.0	232.9	44.6%
828	2019 Ford Transit Wagon	VAN	173.4	426.0	40.7%
829	2024 Ford Transit Van	VAN	480.9	856.7	56.1%
830	2019 Chevrolet Express	VAN	384.9	507.2	75.9%
831	2024 Ford Transit Van	VAN	300.2	912.2	32.9%
832	2024 Ford Transit Van	VAN	290.1	1,007.4	28.8%
833	2020 Chevrolet Express	VAN	59.9	118.5	50.5%
834	2024 Ford Transit Van	VAN	687.1	1,065.9	64.5%
835	2024 Ford Transit Van	VAN	734.0	1,208.0	60.8%
836	2024 Ford Transit Van	VAN	1,241.7	1,729.3	71.8%
837	2014 Ford Transit Connect	VAN	748.5	1,372.8	54.5%
838	2016 Ford Transit Connect	VAN	1,261.9	1,896.6	66.5%
839	2016 Ford Transit Connect	VAN	771.4	1,141.2	67.6%
840	2016 Ford Transit Connect	VAN	1,348.9	1,877.2	71.9%
841	2014 Ford Transit Connect	VAN	306.0	422.6	72.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
842	2016 Ford Transit Connect	VAN	784.7	1,271.0	61.7%
843	2014 Ford Transit Connect	VAN	1,645.5	2,400.1	68.6%
844	2016 Ford Transit Connect	VAN	1,263.7	1,803.4	70.1%
845	2014 Ford Transit Connect	VAN	608.0	1,282.3	47.4%
846	2014 Ford Transit Connect	VAN	1,025.9	1,533.3	66.9%
847	2010 Chevrolet Express	VAN	821.4	1,428.8	57.5%
848	2010 Chevrolet Express	VAN	295.2	1,081.7	27.3%
849	2010 Chevrolet Express	VAN	628.2	1,451.8	43.3%
850	2011 Chevrolet Express	VAN	430.9	1,142.5	37.7%
851	2008 Chevrolet Express	VAN	185.4	522.9	35.4%
852	2020 Ford F-350	PICKUP	2,718.9	3,360.1	80.9%
853	2021 Ford F-350	PICKUP	481.6	916.8	52.5%
854	2022 Ford F-350	PICKUP	218.3	583.6	37.4%
855	2023 Ford F-350	PICKUP	482.9	585.9	82.4%
856	2024 Ford F-350	PICKUP	3.3	9.3	35.6%
857	2016 Ford F-350	PICKUP	1,930.4	3,679.1	52.5%
858	2017 Ford F-350	PICKUP	3,264.1	4,698.0	69.5%
859	2019 Ford F-350	PICKUP	2,884.0	4,301.0	67.1%
860	2020 Ford F-350	PICKUP	2,124.0	2,713.8	78.3%
861	2021 Ford F-350	PICKUP	2,363.8	3,905.3	60.5%
862	2022 Ford F-350	PICKUP	3,192.4	4,987.4	64.0%
863	2023 Ford F-350	PICKUP	580.7	1,479.6	39.2%
864	2016 Ford F-350	PICKUP	1,782.3	2,602.4	68.5%
865	2019 Ford F-350	PICKUP	1,167.0	1,990.3	58.6%
866	2020 Ford F-350	PICKUP	4,138.3	5,254.8	78.8%
867	2022 Ford F-350	PICKUP	2,171.4	3,953.0	54.9%
868	2023 Ford F-350	PICKUP	1,088.2	1,301.5	83.6%
869	2024 Ford F-350	PICKUP	0.2	0.7	25.6%
870	2016 Ford F-350	PICKUP	2,909.3	4,230.7	68.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
871	2019 Ford F-350	PICKUP	1,438.4	2,383.2	60.4%
872	2021 Ford F-350	PICKUP	548.2	1,108.7	49.4%
873	2022 Ford F-350	PICKUP	3,499.3	5,257.3	66.6%
874	2023 Ford F-350	PICKUP	1,489.2	2,278.9	65.4%
875	2024 Ford F-350	PICKUP	97.5	158.2	61.6%
876	2016 Ford F-350	PICKUP	3,027.0	4,269.2	70.9%
877	2020 Ford F-350	PICKUP	631.0	1,032.8	61.1%
878	2021 Ford F-350	PICKUP	1,937.2	3,225.2	60.1%
879	2022 Ford F-350	PICKUP	2,574.7	4,078.1	63.1%
880	2023 Ford F-350	PICKUP	183.3	348.0	52.7%
881	2024 Ford F-350	PICKUP	1.5	4.0	38.4%
882	2020 Ford F-350	PICKUP	46.7	140.3	33.3%
883	2021 Ford F-350	PICKUP	1,128.4	2,109.1	53.5%
884	2022 Ford F-350	PICKUP	3,363.1	5,290.6	63.6%
885	2020 Ford F-350	PICKUP	1,254.5	1,744.9	71.9%
886	2021 Ford F-350	PICKUP	1,536.1	2,829.2	54.3%
887	2022 Ford F-350	PICKUP	1,754.8	3,339.6	52.5%
888	2020 Ford F-350	PICKUP	3,027.4	5,456.1	55.5%
889	2021 Ford F-350	PICKUP	2,115.5	3,318.1	63.8%
890	2022 Ford F-350	PICKUP	1,996.4	3,700.6	53.9%
891	2024 Ford F-350	PICKUP	14.3	35.7	40.0%
892	2020 Ford F-350	PICKUP	399.4	1,213.4	32.9%
893	2021 Ford F-350	PICKUP	76.2	143.7	53.0%
894	2022 Ford F-350	PICKUP	1,725.2	2,392.1	72.1%
895	2024 Ford F-350	PICKUP	0.6	1.7	32.4%
896	2021 Ford F-350	PICKUP	31.6	48.8	64.8%
897	2022 Ford F-350	PICKUP	3,951.0	5,830.8	67.8%
898	2024 Ford F-350	PICKUP	30.0	37.4	80.4%
899	2020 Ford F-350	PICKUP	1,221.2	1,772.0	68.9%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
900	2022 Ford F-350	PICKUP	3,143.3	5,125.8	61.3%
901	2020 Ford F-350	PICKUP	3,660.7	4,854.7	75.4%
902	2022 Ford F-350	PICKUP	2,091.1	4,195.5	49.8%
903	2020 Ford F-350	PICKUP	2,577.6	4,133.9	62.4%
904	2020 Ford F-350	PICKUP	1,810.6	3,718.0	48.7%
905	2020 Ford F-350	PICKUP	3,507.4	5,633.6	62.3%
906	2017 Ford F-250	PICKUP	1,385.0	2,087.3	66.4%
907	2017 Ford F-250	PICKUP	3,257.3	4,254.4	76.6%
908	2010 Chevrolet Silverado	PICKUP	1,467.2	2,298.4	63.8%
909	2021 Ford F-350	PICKUP	3,227.4	4,582.5	70.4%
910	2012 GMC Sierra	PICKUP	3,420.4	4,386.3	78.0%
911	2013 GMC Sierra	PICKUP	1,512.4	3,132.7	48.3%
912	2024 Ford F-450	PICKUP	1,376.9	2,284.1	60.3%
913	2015 GMC Sierra	PICKUP	2,419.0	3,257.1	74.3%
914	2017 Ford F-350	PICKUP	1,663.9	2,645.8	62.9%
915	2009 Chevrolet Silverado	PICKUP	584.7	1,234.9	47.3%
916	2020 Ford F-350	PICKUP	3,243.8	5,062.8	64.1%
917	2012 GMC Sierra	PICKUP	2,002.8	2,835.2	70.6%
918	2013 GMC Sierra	PICKUP	1,530.6	2,576.4	59.4%
919	2004 GMC Sierra	PICKUP	826.8	1,222.6	67.6%
920	2015 GMC Sierra	PICKUP	2,001.0	3,025.5	66.1%
921	2017 Ford F-350	PICKUP	1,009.7	2,214.7	45.6%
922	2019 Ford F-350	PICKUP	2,068.7	3,387.8	61.1%
923	2020 Ford F-350	PICKUP	1,287.2	1,597.3	80.6%
924	2021 Ford F-350	PICKUP	2,119.6	3,460.7	61.2%
925	2013 GMC Sierra	PICKUP	1,504.6	3,632.8	41.4%
926	2015 GMC Sierra	PICKUP	2,776.7	3,780.4	73.4%
927	2017 Ford F-350	PICKUP	3,105.4	4,235.1	73.3%
928	2019 Ford F-350	PICKUP	2,226.0	3,881.8	57.3%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
929	2020 Ford F-350	PICKUP	351.7	473.1	74.3%
930	2011 Chevrolet Silverado	PICKUP	1,254.8	1,985.1	63.2%
931	2012 GMC Sierra	PICKUP	1,230.6	2,237.5	55.0%
932	2013 GMC Sierra	PICKUP	914.4	3,051.2	30.0%
933	2015 GMC Sierra	PICKUP	2,577.4	3,994.0	64.5%
934	2017 Ford F-350	PICKUP	566.1	881.3	64.2%
935	2019 Ford F-350	PICKUP	1,004.9	2,730.0	36.8%
936	2010 Chevrolet Silverado	PICKUP	1,039.3	1,587.3	65.5%
937	2011 Chevrolet Silverado	PICKUP	1,808.3	2,668.6	67.8%
938	2012 GMC Sierra	PICKUP	1,663.9	2,468.8	67.4%
939	2013 GMC Sierra	PICKUP	284.0	406.8	69.8%
940	2024 Ford F-450	PICKUP	1,034.7	1,520.9	68.0%
941	2015 GMC Sierra	PICKUP	2,905.8	3,763.4	77.2%
942	2017 Ford F-350	PICKUP	2,587.3	4,198.7	61.6%
943	2019 Ford F-350	PICKUP	2,303.4	4,009.3	57.5%
944	2021 Ford F-450	PICKUP	2,292.4	3,472.9	66.0%
945	2012 GMC Sierra	PICKUP	2,007.4	2,925.9	68.6%
946	2013 GMC Sierra	PICKUP	2,346.5	3,442.7	68.2%
947	2024 Ford F-450	PICKUP	942.4	1,613.0	58.4%
948	2015 GMC Sierra	PICKUP	2,747.7	4,430.4	62.0%
949	2017 Ford F-350	PICKUP	2,176.7	3,792.1	57.4%
950	2019 Ford F-350	PICKUP	1,373.9	2,654.4	51.8%
951	2023 Ford F-350	PICKUP	1,195.2	2,124.6	56.3%
952	2024 Ford F-450	PICKUP	138.2	218.0	63.4%
953	2015 GMC Sierra	PICKUP	2,140.6	2,919.2	73.3%
954	2021 Ford F-450	PICKUP	1,270.3	2,081.7	61.0%
955	2023 Ford F-350	PICKUP	1,604.4	2,450.9	65.5%
956	2024 Ford F-450	PICKUP	259.8	598.7	43.4%
957	2015 GMC Sierra	PICKUP	3,727.7	5,106.7	73.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
958	2017 Ford F-350	PICKUP	3,837.0	5,323.3	72.1%
959	2023 Ford F-350	PICKUP	2,189.5	2,715.8	80.6%
960	2024 Ford F-450	PICKUP	952.0	1,262.6	75.4%
961	2015 GMC Sierra	PICKUP	1,246.7	2,185.3	57.0%
962	2010 Chevrolet Silverado	PICKUP	1,679.8	2,088.1	80.4%
963	2021 Ford F-450	PICKUP	2,903.4	4,231.0	68.6%
964	2023 Ford F-450	PICKUP	698.2	1,384.2	50.4%
965	2015 GMC Sierra	PICKUP	3,021.0	4,709.5	64.1%
966	2017 Ford F-350	PICKUP	1,319.5	2,005.9	65.8%
967	2009 Chevrolet Silverado	PICKUP	1,868.3	3,001.6	62.2%
968	2010 Chevrolet Silverado	PICKUP	3,609.1	5,074.5	71.1%
969	2021 Ford F-450	PICKUP	1,261.1	2,540.7	49.6%
970	2012 GMC Sierra	PICKUP	2,457.2	3,258.4	75.4%
971	2023 Ford F-450	PICKUP	920.2	1,417.3	64.9%
972	2015 GMC Sierra	PICKUP	3,462.3	4,800.1	72.1%
973	2017 Ford F-350	PICKUP	192.2	471.9	40.7%
974	2009 Chevrolet Silverado	PICKUP	300.4	615.0	48.8%
975	2010 Chevrolet Silverado	PICKUP	1,270.1	2,466.1	51.5%
976	2021 Ford F-450	PICKUP	3,224.4	4,336.8	74.4%
977	2012 GMC Sierra	PICKUP	688.3	1,636.9	42.0%
978	2015 GMC Sierra	PICKUP	2,101.1	3,522.9	59.6%
979	2010 Chevrolet Silverado	PICKUP	1,877.9	3,244.1	57.9%
980	2021 Ford F-450	PICKUP	1,115.0	1,521.1	73.3%
981	2012 GMC Sierra	PICKUP	2,940.5	3,941.1	74.6%
982	2015 GMC Sierra	PICKUP	1,934.3	2,925.4	66.1%
983	2020 Ford F-350	PICKUP	2,229.4	3,835.1	58.1%
984	2021 Ford F-450	PICKUP	2,766.5	3,746.1	73.9%
985	2012 GMC Sierra	PICKUP	2,742.9	4,759.3	57.6%
986	2015 GMC Sierra	PICKUP	1,164.4	2,240.3	52.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
987	2020 Ford F-350	PICKUP	2,362.9	3,572.4	66.1%
988	2021 Ford F-450	PICKUP	1,964.0	2,965.1	66.2%
989	2022 Ford F-450	PICKUP	2,393.8	3,448.1	69.4%
990	2015 GMC Sierra	PICKUP	2,717.0	4,085.9	66.5%
991	2019 Ford F-350	PICKUP	1,275.6	2,820.6	45.2%
992	2020 Ford F-350	PICKUP	1,531.8	2,321.0	66.0%
993	2021 Ford F-450	PICKUP	753.5	2,368.4	31.8%
994	2022 Ford F-450	PICKUP	1,916.4	2,803.8	68.4%
995	2015 GMC Sierra	PICKUP	390.4	603.5	64.7%
996	2009 Chevrolet Silverado	PICKUP	2,288.5	3,386.6	67.6%
997	2020 Ford F-350	PICKUP	1,684.2	2,439.5	69.0%
998	2021 Ford F-450	PICKUP	2,082.6	3,115.8	66.8%
999	2022 Ford F-450	PICKUP	2,424.7	3,692.3	65.7%
1000	2015 GMC Sierra	PICKUP	2,523.0	3,573.1	70.6%
1001	2020 Ford F-350	PICKUP	1,824.7	3,339.2	54.6%
1002	2021 Ford F-450	PICKUP	2,711.7	4,280.5	63.3%
1003	2022 Ford F-450	PICKUP	2,801.4	3,687.6	76.0%
1004	2015 GMC Sierra	PICKUP	1,425.6	2,750.1	51.8%
1005	2019 Ford F-350	PICKUP	1,451.4	2,785.1	52.1%
1006	2020 Ford F-350	PICKUP	2,160.0	3,509.2	61.6%
1007	2021 Ford F-450	PICKUP	1,698.3	2,440.4	69.6%
1008	2022 Ford F-450	PICKUP	2,953.8	4,248.8	69.5%
1009	2015 GMC Sierra	PICKUP	2,546.1	3,786.9	67.2%
1010	2020 Ford F-350	PICKUP	1,851.1	4,275.7	43.3%
1011	2021 Ford F-450	PICKUP	1,572.6	2,550.6	61.7%
1012	2022 Ford F-450	PICKUP	2,087.8	3,180.9	65.6%
1013	2015 GMC Sierra	PICKUP	3,224.6	4,923.2	65.5%
1014	2020 Ford F-350	PICKUP	948.3	1,744.6	54.4%
1015	2021 Ford F-450	PICKUP	2,266.2	3,516.0	64.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1016	2015 GMC Sierra	PICKUP	359.6	1,083.1	33.2%
1017	2009 Chevrolet Silverado	PICKUP	1,633.5	2,341.4	69.8%
1018	2020 Ford F-350	PICKUP	3,021.6	4,814.8	62.8%
1019	2021 Ford F-450	PICKUP	906.6	2,440.9	37.1%
1020	2015 GMC Sierra	PICKUP	2,334.5	4,139.6	56.4%
1021	2019 Ford F-350	PICKUP	1,071.9	2,669.4	40.2%
1022	2021 Ford F-450	PICKUP	3,490.1	4,732.7	73.7%
1023	2015 GMC Sierra	PICKUP	2,878.0	3,998.0	72.0%
1024	2019 Ford F-350	PICKUP	1,840.0	3,045.4	60.4%
1025	2020 Ford F-350	PICKUP	2,292.7	3,031.3	75.6%
1026	2021 Ford F-450	PICKUP	786.0	1,686.8	46.6%
1027	2015 GMC Sierra	PICKUP	3,086.3	4,162.7	74.1%
1028	2020 Ford F-350	PICKUP	1,923.4	3,173.9	60.6%
1029	2021 Ford F-450	PICKUP	2,850.1	4,479.4	63.6%
1030	2025 Ford F-450	PICKUP	1.6	3.6	46.0%
1031	2020 Ford F-350	PICKUP	2,324.7	3,424.5	67.9%
1032	2025 Ford F-450	PICKUP	0.4	1.0	41.4%
1033	2009 Chevrolet Silverado	PICKUP	1,121.7	1,362.1	82.3%
1034	2020 Ford F-350	PICKUP	1,227.5	2,803.0	43.8%
1035	2021 Ford F-450	PICKUP	3,859.8	5,055.3	76.4%
1036	2020 Ford F-350	PICKUP	1,591.1	2,412.4	66.0%
1037	2021 Ford F-350	PICKUP	1,060.7	2,746.5	38.6%
1038	2025 Ford F-450	PICKUP	0.3	0.7	46.6%
1039	2009 Chevrolet Silverado	PICKUP	1,048.3	1,725.1	60.8%
1040	2020 Ford F-350	PICKUP	3,094.3	4,187.0	73.9%
1041	2020 Ford F-350	PICKUP	3,180.8	4,646.0	68.5%
1042	2025 Ford F-450	PICKUP	393.4	712.1	55.2%
1043	2020 Ford F-350	PICKUP	4,408.6	6,073.1	72.6%
1044	2019 Ford F-350	PICKUP	2,452.8	4,168.9	58.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1045	2020 Ford F-350	PICKUP	3,298.8	4,956.0	66.6%
1046	2019 Ford F-350	PICKUP	2,330.1	4,015.2	58.0%
1047	2020 Ford F-350	PICKUP	1,435.7	2,048.6	70.1%
1048	2019 Ford F-350	PICKUP	2,499.4	4,851.0	51.5%
1049	2020 Ford F-350	PICKUP	3,673.1	6,003.4	61.2%
1050	2019 Ford F-350	PICKUP	1,097.7	1,958.1	56.1%
1051	2020 Ford F-350	PICKUP	3,868.6	6,419.9	60.3%
1052	2019 Ford F-350	PICKUP	2,312.5	3,216.8	71.9%
1053	2025 Ford F-450	PICKUP	9.9	20.1	49.0%
1054	2019 Ford F-350	PICKUP	2,263.5	3,700.6	61.2%
1055	2025 Ford F-450	PICKUP	23.9	37.6	63.7%
1056	2019 Ford F-350	PICKUP	3,118.1	4,307.5	72.4%
1057	2019 Ford F-350	PICKUP	1,492.1	2,196.6	67.9%
1058	2020 Ford Edge	PICKUP	375.7	900.5	41.7%
1059	2021 Chevrolet Silverado	PICKUP	186.0	235.8	78.9%
1060	2020 Ford F-250	PICKUP	236.0	286.8	82.3%
1061	2024 Ram 2500	SERVICE TRUCK	44.9	87.2	51.5%
1062	2024 Ram 2500	SERVICE TRUCK	16.3	23.3	70.0%
1063	2021 Chevrolet Silverado	PICKUP	443.4	599.2	74.0%
1064	2024 Ram 2500	PICKUP	1,216.5	1,767.4	68.8%
1065	2020 Chevrolet Silverado	PICKUP	157.6	198.4	79.4%
1066	2021 Chevrolet Silverado	PICKUP	747.0	1,005.5	74.3%
1067	2021 Chevrolet Silverado	PICKUP	547.9	1,037.5	52.8%
1068	2021 Chevrolet Silverado	PICKUP	504.3	1,031.1	48.9%
1069	2020 Chevrolet Silverado	PICKUP	123.0	248.5	49.5%
1070	2010 Chevrolet Silverado	PICKUP	220.1	336.6	65.4%
1071	2014 GMC Sierra	PICKUP	16.0	32.1	49.8%
1072	2015 GMC Sierra	PICKUP	2,148.3	3,160.9	68.0%
1073		PICKUP	79.0	98.6	80.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1074	2019 Ford F-250	PICKUP	4,043.5	5,343.8	75.7%
1075	2011 Chevrolet Silverado	PICKUP	693.7	1,507.2	46.0%
1076	2013 GMC Sierra	PICKUP	8.3	12.4	67.5%
1077	2014 Ford F-250	PICKUP	2,127.2	2,678.1	79.4%
1078	2007 GMC Sierra Classic	PICKUP	55.2	142.2	38.8%
1079	2008 Chevrolet Silverado	PICKUP	706.1	1,563.9	45.1%
1080	2020 Ford F-250	PICKUP	46.4	157.2	29.5%
1081	2013 GMC Sierra	PICKUP	396.4	1,007.6	39.3%
1082	2014 Ford F-250	PICKUP	3,806.7	4,278.2	89.0%
1083	2020 Ford F-250	PICKUP	470.7	1,388.3	33.9%
1084	2011 Chevrolet Silverado	PICKUP	106.3	356.6	29.8%
1085	2022 Ford F-250	PICKUP	1,332.2	2,733.9	48.7%
1086	2014 Ford F-250	PICKUP	3,113.8	3,650.6	85.3%
1087	2016 GMC Sierra	PICKUP	2,593.6	4,012.8	64.6%
1088	2019 Ford F-250	PICKUP	3,743.6	4,687.1	79.9%
1089	2020 Ford F-250	PICKUP	250.0	859.6	29.1%
1090	2011 Chevrolet Silverado	PICKUP	429.0	1,032.1	41.6%
1091	2012 Chevrolet Silverado	PICKUP	187.4	397.3	47.2%
1092	2014 Ford F-250	PICKUP	2,593.4	3,189.1	81.3%
1093	2015 GMC Sierra	PICKUP	4,287.9	5,633.4	76.1%
1094	2017 Ford F-250	PICKUP	2,128.7	3,405.0	62.5%
1095	2019 Ford F-250	PICKUP	538.5	1,073.1	50.2%
1096	2010 Chevrolet Silverado	PICKUP	21.3	62.4	34.1%
1097	2013 GMC Sierra	PICKUP	43.8	137.2	31.9%
1098	2014 Ford F-250	PICKUP	3,387.3	4,609.3	73.5%
1099	2005 GMC Sierra	PICKUP	414.4	851.9	48.6%
1100	2019 Ford F-250	PICKUP	1,008.9	1,862.3	54.2%
1101	2012 GMC Sierra	PICKUP	2,392.7	3,334.2	71.8%
1102	2013 GMC Sierra	PICKUP	48.0	132.9	36.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1103	2014 Ford F-250	PICKUP	2,677.9	3,161.9	84.7%
1104	2016 GMC Sierra	PICKUP	1,699.6	3,640.5	46.7%
1105	2017 Ford F-250	PICKUP	2,252.9	2,827.0	79.7%
1106	2014 Ford F-250	PICKUP	3,199.1	3,742.4	85.5%
1107	2017 Ford F-250	PICKUP	1,624.6	2,585.7	62.8%
1108	2018 Ford F-250	PICKUP	474.7	788.5	60.2%
1109	2022 Ford F-250	PICKUP	1,872.9	3,172.2	59.0%
1110	2014 Ford F-250	PICKUP	2,814.0	3,587.2	78.4%
1111	2016 GMC Sierra	PICKUP	2,212.2	3,600.1	61.4%
1112	2017 Ford F-250	PICKUP	232.9	903.2	25.8%
1113	2019 Ford F-250	PICKUP	2,656.7	3,854.2	68.9%
1114	2021 Ford F-250	PICKUP	2,213.0	3,133.3	70.6%
1115	2022 Ford F-250	PICKUP	2,100.5	3,493.3	60.1%
1116	2014 Ford F-250	PICKUP	3,560.0	4,140.5	86.0%
1117	2025 Ford F-250	PICKUP	20.6	35.7	57.7%
1118	2016 GMC Sierra	PICKUP	4,183.0	5,291.2	79.1%
1119	2017 Ford F-250	PICKUP	3,242.2	4,435.9	73.1%
1120	2008 Chevrolet Silverado	PICKUP	421.5	909.6	46.3%
1121	2011 Chevrolet Silverado	PICKUP	1,642.3	2,834.8	57.9%
1122	2022 Ford F-250	PICKUP	3,891.2	5,239.7	74.3%
1123	2014 Ford F-250	PICKUP	2,756.0	3,184.6	86.5%
1124	2015 GMC Sierra	PICKUP	393.8	634.5	62.1%
1125	2025 Ford F-250	PICKUP	12.3	25.2	48.8%
1126	2016 GMC Sierra	PICKUP	1,403.8	2,252.0	62.3%
1127	2017 Ford F-250	PICKUP	4,017.7	5,468.6	73.5%
1128	2020 Ford F-250	PICKUP	70.5	278.4	25.3%
1129	2011 Chevrolet Silverado	PICKUP	1,751.0	2,398.8	73.0%
1130	2022 Ford F-250	PICKUP	4,083.1	5,276.1	77.4%
1131	2014 Ford F-250	PICKUP	1,309.4	1,907.2	68.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1132	2015 GMC Sierra	PICKUP	1,918.3	3,242.0	59.2%
1133	2016 GMC Sierra	PICKUP	903.4	1,801.0	50.2%
1134	2017 Ford F-250	PICKUP	722.1	1,444.2	50.0%
1135	2019 Ford F-250	PICKUP	65.0	197.2	33.0%
1136	2020 Ford F-250	PICKUP	794.5	1,435.2	55.4%
1137	2013 GMC Sierra	PICKUP	1,868.9	2,301.4	81.2%
1138	2014 Ford F-250	PICKUP	1,043.4	2,167.4	48.1%
1139	2015 GMC Sierra	PICKUP	2,199.6	2,765.5	79.5%
1140	2016 GMC Sierra	PICKUP	816.7	1,909.8	42.8%
1141	2017 Ford F-250	PICKUP	2,480.9	3,400.0	73.0%
1142	2019 Ford F-250	PICKUP	2,998.1	5,524.2	54.3%
1143	2022 Ford F-250	PICKUP	1,164.7	1,884.0	61.8%
1144	2023 Ford F-250	PICKUP	95.3	158.0	60.3%
1145	2015 GMC Sierra	PICKUP	1,963.2	2,992.2	65.6%
1146	2016 Ford F-250	PICKUP	268.4	419.5	64.0%
1147	2017 Ford F-250	PICKUP	2,474.3	3,007.8	82.3%
1148	2019 Ford F-250	PICKUP	3,196.0	5,215.4	61.3%
1149	2010 Chevrolet Silverado	PICKUP	473.9	851.8	55.6%
1150	2022 Ford F-250	PICKUP	2,371.1	3,573.3	66.4%
1151	2023 Ford F-250	PICKUP	1,394.5	1,989.2	70.1%
1152	2024 Ford F-250	PICKUP	1,202.6	2,039.4	59.0%
1153	2015 GMC Sierra	PICKUP	1,659.6	2,280.5	72.8%
1154	2017 Ford F-250	PICKUP	1,278.6	1,748.7	73.1%
1155	2019 Ford F-250	PICKUP	1,912.0	2,623.7	72.9%
1156	2022 Ford F-250	PICKUP	2,351.1	3,514.4	66.9%
1157	2023 Ford F-250	PICKUP	717.9	1,539.8	46.6%
1158	2015 GMC Sierra	PICKUP	1,658.1	2,470.3	67.1%
1159	2017 Ford F-250	PICKUP	3,931.4	4,553.5	86.3%
1160	2020 Ford F-250	PICKUP	104.7	379.0	27.6%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
1161	2012 Chevrolet Silverado	PICKUP	381.5	603.7	63.2%
1162	2023 Ford F-250	PICKUP	1,316.8	2,425.0	54.3%
1163	2024 Ford F-250	PICKUP	352.7	768.1	45.9%
1164	2015 GMC Sierra	PICKUP	1,727.4	2,357.2	73.3%
1165	2017 Ford F-250	PICKUP	2,402.3	3,206.3	74.9%
1166	2021 Ford F-250	PICKUP	2,502.0	4,501.3	55.6%
1167	2022 Ford F-250	PICKUP	2,659.3	3,941.9	67.5%
1168	2023 Ford F-250	PICKUP	1,314.5	2,039.4	64.5%
1169	2024 Ford F-250	PICKUP	1,196.2	2,125.4	56.3%
1170	2015 GMC Sierra	PICKUP	3,061.1	3,987.9	76.8%
1171	2017 Ford F-250	PICKUP	1,933.7	2,423.5	79.8%
1172	2019 Ford F-250	PICKUP	2,718.6	3,711.0	73.3%
1173	2020 Ford F-250	PICKUP	176.8	469.1	37.7%
1174	2022 Ford F-250	PICKUP	1,839.8	3,392.9	54.2%
1175	2023 Ford F-250	PICKUP	1,057.7	1,939.3	54.5%
1176	2024 Ford F-250	PICKUP	1,197.6	1,955.5	61.2%
1177	2015 GMC Sierra	PICKUP	961.5	2,305.1	41.7%
1178	2017 Ford F-250	PICKUP	3,195.1	3,620.7	88.2%
1179	2019 Ford F-250	PICKUP	3,215.5	5,335.6	60.3%
1180	2020 Ford F-250	PICKUP	1,210.8	1,743.0	69.5%
1181	2011 Chevrolet Silverado	PICKUP	1,076.8	1,669.1	64.5%
1182	2022 Ford F-250	PICKUP	3,336.9	5,325.8	62.7%
1183	2023 Ford F-250	PICKUP	96.6	353.4	27.3%
1184	2024 Ford F-250	PICKUP	1,538.6	2,644.0	58.2%
1185	2015 GMC Sierra	PICKUP	2,370.4	3,287.2	72.1%
1186	2017 Ford F-250	PICKUP	2,768.3	3,492.4	79.3%
1187	2008 Chevrolet Silverado	PICKUP	213.4	615.3	34.7%
1188	2020 Ford F-250	PICKUP	2,603.6	4,507.5	57.8%
1189	2021 Ford F-250	PICKUP	2,471.6	3,858.2	64.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1190	2022 Ford F-250	PICKUP	3,005.2	4,626.7	65.0%
1191	2023 Ford F-250	PICKUP	586.8	1,111.9	52.8%
1192	2024 Ford F-250	PICKUP	153.8	257.4	59.8%
1193	2017 Ford F-250	PICKUP	3,148.0	3,689.5	85.3%
1194	2008 Chevrolet Silverado	PICKUP	217.5	752.2	28.9%
1195	2019 Ford F-250	PICKUP	2,462.6	3,551.3	69.3%
1196	2020 Ford F-250	PICKUP	1,559.1	3,147.5	49.5%
1197	2022 Ford F-250	PICKUP	925.3	2,214.2	41.8%
1198	2024 Ford F-250	PICKUP	1,821.1	2,463.9	73.9%
1199	2015 GMC Sierra	PICKUP	358.1	1,141.0	31.4%
1200	2017 Ford F-250	PICKUP	3,872.2	4,495.1	86.1%
1201	2008 Chevrolet Silverado	PICKUP	177.8	346.4	51.3%
1202	2019 Ford F-250	PICKUP	3,544.1	4,509.2	78.6%
1203	2020 Ford F-250	PICKUP	4,005.6	5,264.0	76.1%
1204	2022 Ford F-250	PICKUP	3,466.2	5,159.4	67.2%
1205	2023 Ford F-250	PICKUP	578.7	1,305.1	44.3%
1206	2024 Ford F-250	PICKUP	131.8	255.5	51.6%
1207	2015 GMC Sierra	PICKUP	1,108.6	1,505.8	73.6%
1208	2017 Ford F-250	PICKUP	2,962.0	3,495.2	84.7%
1209	2019 Ford F-250	PICKUP	2,898.3	4,259.2	68.0%
1210	2020 Ford F-250	PICKUP	2,738.5	4,194.4	65.3%
1211	2021 Ford F-250	PICKUP	1,335.5	1,753.3	76.2%
1212	2023 Ford F-250	PICKUP	1,592.7	2,720.5	58.5%
1213	2024 Ford F-250	PICKUP	1,004.7	1,432.4	70.1%
1214	2015 GMC Sierra	PICKUP	1,682.0	2,366.5	71.1%
1215	2017 Ford F-250	PICKUP	3,361.0	4,065.0	82.7%
1216	2019 Ford F-250	PICKUP	1,037.6	2,479.6	41.8%
1217	2020 Ford F-250	PICKUP	957.1	2,402.1	39.8%
1218	2022 Ford F-250	PICKUP	2,338.0	3,788.4	61.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1219	2024 Ford F-250	PICKUP	2,500.1	3,083.9	81.1%
1220	2015 GMC Sierra	PICKUP	186.6	666.5	28.0%
1221	2017 Ford F-250	PICKUP	458.1	1,106.1	41.4%
1222	2019 Ford F-250	PICKUP	2,254.5	3,059.5	73.7%
1223	2020 Ford F-250	PICKUP	216.1	416.3	51.9%
1224	2021 Ford F-250	PICKUP	3,530.4	5,437.2	64.9%
1225	2022 Ford F-250	PICKUP	1,602.2	3,273.8	48.9%
1226	2013 GMC Sierra	PICKUP	2,563.6	3,084.0	83.1%
1227	2024 Ford F-250	PICKUP	521.5	872.6	59.8%
1228	2015 GMC Sierra	PICKUP	1,871.6	2,879.4	65.0%
1229	2017 Ford F-250	PICKUP	126.0	254.8	49.5%
1230	2019 Ford F-250	PICKUP	3,681.1	4,400.3	83.7%
1231	2020 Ford F-250	PICKUP	912.4	1,315.8	69.3%
1232	2021 Ford F-250	PICKUP	1,303.4	2,228.0	58.5%
1233	2013 GMC Sierra	PICKUP	2,293.6	2,746.4	83.5%
1234	2015 GMC Sierra	PICKUP	3,673.3	4,751.3	77.3%
1235	2017 Ford F-250	PICKUP	2,964.7	3,914.1	75.7%
1236	2018 Ford F-250	PICKUP	538.2	812.0	66.3%
1237	2019 Ford F-250	PICKUP	172.6	622.2	27.7%
1238	2020 Ford F-250	PICKUP	153.4	612.6	25.0%
1239	2021 Ford F-250	PICKUP	956.7	2,551.2	37.5%
1240	2013 GMC Sierra	PICKUP	135.9	511.3	26.6%
1241	2017 Ford F-250	PICKUP	1,391.2	1,732.1	80.3%
1242	2021 Ford F-250	PICKUP	128.3	246.5	52.1%
1243	2013 GMC Sierra	PICKUP	2,717.2	3,168.8	85.8%
1244	2024 Ford F-250	PICKUP	1,378.7	2,348.8	58.7%
1245	2015 GMC Sierra	PICKUP	124.6	389.5	32.0%
1246	2017 Ford F-250	PICKUP	716.7	1,888.3	38.0%
1247	2020 Ford F-250	PICKUP	931.8	1,850.5	50.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1248	2021 Ford F-250	PICKUP	2,840.6	4,756.2	59.7%
1249	2022 Ford F-250	PICKUP	2,499.9	4,317.9	57.9%
1250	2013 GMC Sierra	PICKUP	2,950.1	3,470.0	85.0%
1251	2024 Ford F-250	PICKUP	208.2	362.2	57.5%
1252	2015 GMC Sierra	PICKUP	1,070.1	1,901.4	56.3%
1253	2017 Ford F-250	PICKUP	123.2	337.9	36.4%
1254	2019 Ford F-250	PICKUP	2,163.0	3,291.3	65.7%
1255	2020 Ford F-250	PICKUP	1,238.9	2,661.4	46.6%
1256	2021 Ford F-250	PICKUP	890.5	1,544.6	57.7%
1257	2022 Ford F-250	PICKUP	2,396.0	4,265.5	56.2%
1258	2013 GMC Sierra	PICKUP	2,893.8	3,389.1	85.4%
1259	2024 Ford F-250	PICKUP	648.1	894.9	72.4%
1260	2015 GMC Sierra	PICKUP	981.5	1,668.1	58.8%
1261	2017 Ford F-250	PICKUP	1,423.1	2,553.8	55.7%
1262	2019 Ford F-250	PICKUP	3,372.6	4,411.4	76.5%
1263	2021 Ford F-250	PICKUP	427.0	925.0	46.2%
1264	2022 Ford F-250	PICKUP	3,055.9	5,039.7	60.6%
1265	2013 GMC Sierra	PICKUP	2,881.0	3,451.3	83.5%
1266	2024 Ford F-250	PICKUP	209.4	573.3	36.5%
1267	2015 GMC Sierra	PICKUP	2,970.0	3,548.1	83.7%
1268	2017 Ford F-250	PICKUP	1,748.7	2,182.8	80.1%
1269	2019 Ford F-250	PICKUP	2,337.7	3,710.1	63.0%
1270	2020 Ford F-250	PICKUP	1,547.0	2,470.1	62.6%
1271	2021 Ford F-250	PICKUP	341.2	569.5	59.9%
1272	2022 Ford F-250	PICKUP	2,169.0	3,868.3	56.1%
1273	2013 GMC Sierra	PICKUP	2,670.2	3,279.1	81.4%
1274	2024 Ford F-250	PICKUP	317.8	409.0	77.7%
1275	2019 Ford F-250	PICKUP	2,726.4	3,861.7	70.6%
1276	2020 Ford F-250	PICKUP	1,633.9	2,269.3	72.0%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
1277	2022 Ford F-250	PICKUP	1,453.4	3,390.2	42.9%
1278	2013 GMC Sierra	PICKUP	2,504.3	3,011.0	83.2%
1279	2024 Ford F-250	PICKUP	430.8	606.7	71.0%
1280	2017 GMC Sierra	PICKUP	257.7	579.7	44.5%
1281	2019 Ford F-250	PICKUP	843.7	2,680.0	31.5%
1282	2020 Ford F-250	PICKUP	3,905.1	5,657.2	69.0%
1283	2022 Ford F-250	PICKUP	3,291.2	4,588.8	71.7%
1284	2013 GMC Sierra	PICKUP	2,629.9	2,946.9	89.2%
1285	2024 Ford F-250	PICKUP	756.8	984.6	76.9%
1286	2015 GMC Sierra	PICKUP	1,858.8	2,380.5	78.1%
1287	2019 Ford F-250	PICKUP	3,043.5	3,767.7	80.8%
1288	2020 Ford F-250	PICKUP	4,522.3	5,848.0	77.3%
1289	2013 GMC Sierra	PICKUP	1,399.8	1,856.9	75.4%
1290	2015 GMC Sierra	PICKUP	2,352.0	3,199.6	73.5%
1291	2017 Ford F-250	PICKUP	627.3	1,027.7	61.0%
1292	2019 Ford F-250	PICKUP	2,486.9	3,194.6	77.8%
1293	2020 Ford F-250	PICKUP	661.4	1,643.5	40.2%
1294	2022 Ford F-250	PICKUP	2,053.0	3,802.1	54.0%
1295	2013 GMC Sierra	PICKUP	1,044.4	1,543.3	67.7%
1296	2024 Ford F-250	PICKUP	597.9	846.8	70.6%
1297	2015 GMC Sierra	PICKUP	572.3	1,268.6	45.1%
1298	2017 Ford F-250	PICKUP	1,260.4	2,210.2	57.0%
1299	2019 Ford F-250	PICKUP	4,453.3	5,707.9	78.0%
1300	2020 Ford F-250	PICKUP	3,480.8	4,725.9	73.7%
1301	2021 Ford F-250	PICKUP	2,054.0	3,203.1	64.1%
1302	2022 Ford F-250	PICKUP	3,375.6	5,043.2	66.9%
1303	2013 GMC Sierra	PICKUP	2,730.3	3,849.7	70.9%
1304	2024 Ford F-250	PICKUP	184.3	362.3	50.9%
1305	2017 Ford F-250	PICKUP	2,869.5	3,872.0	74.1%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
1306	2008 Chevrolet Silverado	PICKUP	714.5	1,253.2	57.0%
1307	2019 Ford F-250	PICKUP	2,175.0	3,461.5	62.8%
1308	2021 Ford F-250	PICKUP	141.7	514.1	27.6%
1309	2013 GMC Sierra	PICKUP	541.5	804.0	67.4%
1310	2015 GMC Sierra	PICKUP	816.9	1,632.3	50.0%
1311	2017 Ford F-250	PICKUP	1,050.5	1,490.4	70.5%
1312	2019 Ford F-250	PICKUP	1,667.6	2,536.2	65.8%
1313	2020 Ford F-250	PICKUP	2,003.6	3,007.0	66.6%
1314	2021 Ford F-250	PICKUP	138.5	508.1	27.3%
1315	2013 GMC Sierra	PICKUP	319.6	894.3	35.7%
1316	2024 Ford F-250	PICKUP	227.4	443.4	51.3%
1317	2015 GMC Sierra	PICKUP	1,933.6	2,503.1	77.2%
1318	2017 Ford F-250	PICKUP	743.6	1,822.1	40.8%
1319	2008 Chevrolet Silverado	PICKUP	2,303.4	3,103.5	74.2%
1320	2021 Ford F-250	PICKUP	176.1	500.2	35.2%
1321	2022 Ford F-250	PICKUP	2,556.8	4,026.1	63.5%
1322	2013 GMC Sierra	PICKUP	3,300.9	4,527.8	72.9%
1323	2024 Ford F-250	PICKUP	37.4	104.0	35.9%
1324	2015 GMC Sierra	PICKUP	168.0	632.7	26.5%
1325	2018 Ford F-250	PICKUP	72.1	209.8	34.4%
1326	2019 Ford F-250	PICKUP	2,080.6	3,337.4	62.3%
1327	2020 Ford F-250	PICKUP	2,824.6	4,296.4	65.7%
1328	2022 Ford F-250	PICKUP	716.0	1,565.1	45.7%
1329	2013 GMC Sierra	PICKUP	2,123.1	3,190.2	66.5%
1330	2024 Ford F-250	PICKUP	179.4	388.4	46.2%
1331	2015 GMC Sierra	PICKUP	580.1	1,163.1	49.9%
1332	2019 Ford F-250	PICKUP	2,758.7	4,635.0	59.5%
1333	2020 Ford F-250	PICKUP	1,932.0	3,510.4	55.0%
1334	2024 Ford F-250	PICKUP	733.3	1,206.2	60.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1335	2015 GMC Sierra	PICKUP	3,634.0	4,784.4	76.0%
1336	2019 Ford F-250	PICKUP	646.2	1,118.2	57.8%
1337	2020 Ford F-250	PICKUP	1,884.2	3,434.0	54.9%
1338	2022 Ford F-250	PICKUP	4,860.8	6,369.7	76.3%
1339	2015 GMC Sierra	PICKUP	1,023.4	2,087.1	49.0%
1340	2020 Ford F-250	PICKUP	1,819.3	3,509.1	51.8%
1341	2013 GMC Sierra	PICKUP	430.7	666.4	64.6%
1342	2015 GMC Sierra	PICKUP	865.4	3,034.8	28.5%
1343	2017 Ford F-250	PICKUP	887.7	1,563.1	56.8%
1344	2019 Ford F-250	PICKUP	1,226.2	2,004.3	61.2%
1345	2020 Ford F-250	PICKUP	2,259.6	4,180.7	54.0%
1346	2022 Ford F-250	PICKUP	3,285.4	5,547.6	59.2%
1347	2013 GMC Sierra	PICKUP	231.4	390.0	59.3%
1348	2017 Ford F-250	PICKUP	2,832.3	3,480.5	81.4%
1349	2019 Ford F-250	PICKUP	1,883.2	2,638.7	71.4%
1350	2010 Chevrolet Silverado	PICKUP	470.1	993.9	47.3%
1351	2015 GMC Sierra	PICKUP	1,288.3	2,492.2	51.7%
1352	2017 Ford F-250	PICKUP	3,171.3	4,123.4	76.9%
1353	2008 Chevrolet Silverado	PICKUP	559.2	1,244.6	44.9%
1354	2019 Ford F-250	PICKUP	174.3	563.0	31.0%
1355	2020 Ford F-250	PICKUP	3,245.2	5,350.4	60.7%
1356	2022 Ford F-250	PICKUP	2,286.2	3,561.9	64.2%
1357	2013 GMC Sierra	PICKUP	1,016.6	1,387.1	73.3%
1358	2015 GMC Sierra	PICKUP	2,440.6	3,561.9	68.5%
1359	2017 Ford F-250	PICKUP	1,108.7	1,598.8	69.3%
1360	2008 Chevrolet Silverado	PICKUP	442.4	959.5	46.1%
1361	2019 Ford F-250	PICKUP	1,841.9	2,772.0	66.4%
1362	2010 Chevrolet Silverado	PICKUP	1,869.7	2,583.1	72.4%
1363	2022 Ford F-250	PICKUP	3,178.7	5,057.6	62.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1364	2013 GMC Sierra	PICKUP	1,641.4	2,465.7	66.6%
1365	2017 Ford F-250	PICKUP	493.3	1,330.2	37.1%
1366	2019 Ford F-250	PICKUP	2,607.8	4,155.8	62.8%
1367	2020 Ford F-250	PICKUP	3,167.5	4,991.7	63.5%
1368	2021 Ford F-250	PICKUP	2,968.9	4,613.6	64.4%
1369	2022 Ford F-250	PICKUP	2,714.7	4,703.2	57.7%
1370	2015 GMC Sierra	PICKUP	1,582.0	2,070.7	76.4%
1371	2017 Ford F-250	PICKUP	1,392.3	2,350.8	59.2%
1372	2008 Chevrolet Silverado	PICKUP	202.8	669.2	30.3%
1373	2019 Ford F-250	PICKUP	2,179.6	3,619.5	60.2%
1374	2020 Ford F-250	PICKUP	2,219.6	3,409.4	65.1%
1375	2021 Ford F-250	PICKUP	100.2	396.7	25.3%
1376	2013 GMC Sierra	PICKUP	708.4	1,356.6	52.2%
1377	2015 GMC Sierra	PICKUP	595.8	2,010.2	29.6%
1378	2017 Ford F-250	PICKUP	1,168.9	2,068.5	56.5%
1379	2008 Chevrolet Silverado	PICKUP	126.0	343.6	36.7%
1380	2019 Ford F-250	PICKUP	1,121.8	2,425.9	46.2%
1381	2011 Chevrolet Silverado	PICKUP	2,648.1	4,270.6	62.0%
1382	2013 GMC Sierra	PICKUP	2,779.3	3,626.7	76.6%
1383	2015 GMC Sierra	PICKUP	3,419.4	4,487.7	76.2%
1384	2017 Ford F-250	PICKUP	614.0	1,166.1	52.7%
1385	2019 Ford F-250	PICKUP	2,727.9	4,177.4	65.3%
1386	2020 Ford F-250	PICKUP	4,104.2	5,403.7	76.0%
1387	2022 Ford F-250	PICKUP	2,381.4	3,641.1	65.4%
1388	2013 GMC Sierra	PICKUP	3,596.8	4,112.1	87.5%
1389	2015 GMC Sierra	PICKUP	546.4	1,132.1	48.3%
1390	2019 Ford F-250	PICKUP	2,405.2	3,990.1	60.3%
1391	2020 Ford F-250	PICKUP	119.9	318.2	37.7%
1392	2022 Ford F-250	PICKUP	2,878.3	4,985.7	57.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1393	2015 GMC Sierra	PICKUP	82.6	319.2	25.9%
1394	2017 Ford F-250	PICKUP	889.9	1,469.9	60.5%
1395	2019 Ford F-250	PICKUP	3,400.4	4,952.0	68.7%
1396	2020 Ford F-250	PICKUP	173.6	300.3	57.8%
1397	2021 Ford F-250	PICKUP	51.4	169.7	30.3%
1398	2013 GMC Sierra	PICKUP	1,453.2	2,006.2	72.4%
1399	2015 GMC Sierra	PICKUP	1,150.5	2,237.9	51.4%
1400	2017 Ford F-250	PICKUP	578.3	1,177.5	49.1%
1401	2019 Ford F-250	PICKUP	1,763.8	3,362.1	52.5%
1402	2020 Ford F-250	PICKUP	2,264.9	3,073.0	73.7%
1403	2022 Ford F-250	PICKUP	3,045.0	5,213.2	58.4%
1404	2013 GMC Sierra	PICKUP	422.1	677.8	62.3%
1405	2015 GMC Sierra	PICKUP	957.0	1,838.5	52.1%
1406	2017 Ford F-250	PICKUP	3,249.2	4,915.1	66.1%
1407	2019 Ford F-250	PICKUP	3,982.4	5,286.3	75.3%
1408	2020 Ford F-250	PICKUP	3,065.4	4,576.5	67.0%
1409	2021 Ford F-250	PICKUP	412.7	883.6	46.7%
1410	2013 GMC Sierra	PICKUP	801.5	1,218.7	65.8%
1411	2015 GMC Sierra	PICKUP	2,179.0	3,937.3	55.3%
1412	2017 Ford F-250	PICKUP	2,218.6	3,710.7	59.8%
1413	2019 Ford F-250	PICKUP	2,721.2	3,997.2	68.1%
1414	2020 Ford F-250	PICKUP	2,876.9	5,011.5	57.4%
1415	2012 GMC Sierra	PICKUP	1,949.3	3,193.1	61.0%
1416	2013 GMC Sierra	PICKUP	2,451.3	3,246.8	75.5%
1417	2015 GMC Sierra	PICKUP	2,178.4	2,871.5	75.9%
1418	2017 Ford F-250	PICKUP	2,673.1	3,605.1	74.1%
1419	2019 Ford F-250	PICKUP	1,762.6	3,532.2	49.9%
1420	2020 Ford F-250	PICKUP	76.1	178.4	42.7%
1421	2022 Ford F-250	PICKUP	3,313.7	4,795.3	69.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1422	2013 GMC Sierra	PICKUP	3,563.2	4,550.4	78.3%
1423	2015 GMC Sierra	PICKUP	2,484.7	4,252.6	58.4%
1424	2017 Ford F-250	PICKUP	1,797.4	3,062.0	58.7%
1425	2019 Ford F-250	PICKUP	4,155.6	5,754.9	72.2%
1426	2013 GMC Sierra	PICKUP	1,397.3	2,433.4	57.4%
1427	2015 GMC Sierra	PICKUP	120.5	332.8	36.2%
1428	2017 Ford F-250	PICKUP	1,146.5	2,245.2	51.1%
1429	2019 Ford F-250	PICKUP	3,266.4	4,477.1	73.0%
1430	2020 Ford F-250	PICKUP	1,619.7	2,588.9	62.6%
1431	2022 Ford F-250	PICKUP	604.9	1,411.7	42.8%
1432	2013 GMC Sierra	PICKUP	2,859.9	3,710.7	77.1%
1433	2017 Ford F-250	PICKUP	190.8	565.4	33.7%
1434	2019 Ford F-250	PICKUP	1,643.1	3,122.0	52.6%
1435	2020 Ford F-250	PICKUP	821.6	2,155.5	38.1%
1436	2013 GMC Sierra	PICKUP	725.0	1,573.4	46.1%
1437	2015 GMC Sierra	PICKUP	2,043.7	3,144.3	65.0%
1438	2017 Ford F-250	PICKUP	647.5	1,069.8	60.5%
1439	2019 Ford F-250	PICKUP	2,603.2	3,873.5	67.2%
1440	2020 Ford F-250	PICKUP	674.4	1,025.5	65.8%
1441	2011 Chevrolet Silverado	PICKUP	1,014.2	1,477.4	68.6%
1442	2013 GMC Sierra	PICKUP	2,005.9	2,632.4	76.2%
1443	2015 GMC Sierra	PICKUP	1,238.6	1,921.7	64.5%
1444	2017 Ford F-250	PICKUP	2,207.0	3,135.5	70.4%
1445	2019 Ford F-250	PICKUP	2,821.5	4,582.7	61.6%
1446	2022 Ford F-250	PICKUP	3,826.7	4,966.7	77.0%
1447	2013 GMC Sierra	PICKUP	4,083.1	4,941.3	82.6%
1448	2015 GMC Sierra	PICKUP	1,248.2	2,307.5	54.1%
1449	2017 Ford F-250	PICKUP	3,776.9	5,035.9	75.0%
1450	2019 Ford F-250	PICKUP	2,156.0	3,892.1	55.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1451	2020 Ford F-250	PICKUP	1,754.6	3,455.0	50.8%
1452	2022 Ford F-250	PICKUP	2,774.8	4,684.6	59.2%
1453	2013 GMC Sierra	PICKUP	1,608.4	2,689.4	59.8%
1454	2015 GMC Sierra	PICKUP	2,762.0	3,576.7	77.2%
1455	2019 Ford F-250	PICKUP	2,705.4	3,956.7	68.4%
1456	2013 GMC Sierra	PICKUP	1,754.3	3,366.0	52.1%
1457	2015 GMC Sierra	PICKUP	1,567.7	2,482.4	63.2%
1458	2020 Ford F-250	PICKUP	439.2	905.0	48.5%
1459	2015 GMC Sierra	PICKUP	2,672.1	4,238.6	63.0%
1460	2017 Ford F-250	PICKUP	701.5	1,690.2	41.5%
1461	2019 Ford F-250	PICKUP	3,117.9	4,587.4	68.0%
1462	2002 GMC Sierra	PICKUP	1,549.0	2,151.2	72.0%
1463	2013 GMC Sierra	PICKUP	2,738.7	4,069.6	67.3%
1464	2015 GMC Sierra	PICKUP	110.9	245.8	45.1%
1465	2017 Ford F-250	PICKUP	393.2	910.5	43.2%
1466	2019 Ford F-250	PICKUP	1,998.3	3,529.8	56.6%
1467	2020 Ford F-250	PICKUP	3,476.0	5,727.0	60.7%
1468	2015 GMC Sierra	PICKUP	2,833.6	3,421.2	82.8%
1469	2017 Ford F-250	PICKUP	2,700.5	4,224.2	63.9%
1470	2019 Ford F-250	PICKUP	1,626.2	3,102.5	52.4%
1471	2020 Ford F-250	PICKUP	3,009.6	4,092.2	73.5%
1472	2022 Ford F-250	PICKUP	1,983.4	3,028.8	65.5%
1473	2015 GMC Sierra	PICKUP	276.8	914.3	30.3%
1474	2017 Ford F-250	PICKUP	1,016.4	1,434.0	70.9%
1475	2010 Chevrolet Silverado	PICKUP	3,217.8	4,082.6	78.8%
1476	2022 Ford F-250	PICKUP	3,191.8	4,767.3	67.0%
1477	2013 GMC Sierra	PICKUP	1,942.6	3,021.0	64.3%
1478	2015 GMC Sierra	PICKUP	2,675.6	3,639.6	73.5%
1479	2019 Ford F-250	PICKUP	1,117.7	1,917.5	58.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1480	2020 Ford F-250	PICKUP	2,871.1	4,168.8	68.9%
1481	2022 Ford F-250	PICKUP	2,351.6	3,496.6	67.3%
1482	2013 GMC Sierra	PICKUP	291.9	726.1	40.2%
1483	2015 GMC Sierra	PICKUP	2,590.2	3,106.5	83.4%
1484	2019 Ford F-250	PICKUP	2,005.7	3,127.7	64.1%
1485	2020 Ford F-250	PICKUP	2,537.7	3,965.8	64.0%
1486	2013 GMC Sierra	PICKUP	1,357.8	2,337.4	58.1%
1487	2015 GMC Sierra	PICKUP	2,708.2	3,795.3	71.4%
1488	2017 Ford F-250	PICKUP	1,190.8	2,084.0	57.1%
1489	2020 Ford F-250	PICKUP	4,098.8	5,675.6	72.2%
1490	2015 GMC Sierra	PICKUP	198.2	663.7	29.9%
1491	2017 Ford F-250	PICKUP	589.9	732.7	80.5%
1492	2019 Ford F-250	PICKUP	1,732.4	3,120.8	55.5%
1493	2020 Ford F-250	PICKUP	2,651.4	4,374.2	60.6%
1494	2015 GMC Sierra	PICKUP	362.3	1,145.5	31.6%
1495	2017 Ford F-250	PICKUP	907.4	1,196.4	75.8%
1496	2019 Ford F-250	PICKUP	1,204.0	2,076.1	58.0%
1497	2020 Ford F-250	PICKUP	556.7	960.8	57.9%
1498	2002 GMC Sierra	PICKUP	66.1	217.5	30.4%
1499	2015 GMC Sierra	PICKUP	3,510.8	4,252.1	82.6%
1500	2017 Ford F-250	PICKUP	224.4	323.4	69.4%
1501	2019 Ford F-250	PICKUP	3,783.7	5,608.9	67.5%
1502	2020 Ford F-250	PICKUP	529.6	1,256.0	42.2%
1503	2015 GMC Sierra	PICKUP	3,897.2	5,363.6	72.7%
1504	2008 Chevrolet Silverado	PICKUP	52.7	102.5	51.4%
1505	2019 Ford F-250	PICKUP	199.6	795.6	25.1%
1506	2010 Chevrolet Silverado	PICKUP	2,659.0	3,340.7	79.6%
1507	2012 GMC Sierra	PICKUP	470.5	934.1	50.4%
1508	2022 Ford F-250	PICKUP	2,744.5	4,606.6	59.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1509	2015 GMC Sierra	PICKUP	109.4	134.3	81.5%
1510	2022 Ford F-250	PICKUP	3,125.3	4,364.4	71.6%
1511	2015 GMC Sierra	PICKUP	3,217.4	4,472.4	71.9%
1512	2019 Ford F-250	PICKUP	2,484.6	3,639.9	68.3%
1513	2012 GMC Sierra	PICKUP	1,335.2	1,920.2	69.5%
1514	2019 Ford F-250	PICKUP	963.8	1,551.5	62.1%
1515	2008 Chevrolet Silverado	PICKUP	594.0	856.1	69.4%
1516	2017 Ford F-550	PICKUP	1,934.3	2,215.8	87.3%
1517	2019 Ford F-250	PICKUP	901.1	1,559.1	57.8%
1518	2020 Ford F-250	PICKUP	267.6	501.9	53.3%
1519	2022 Ram 2500	PICKUP	167.5	232.2	72.1%
1520	2018 Ford F-250	PICKUP	3,816.6	4,685.5	81.5%
1521	2020 Chevrolet Silverado	PICKUP	1,571.7	2,254.8	69.7%
1522	2022 Ford F-250	PICKUP	2,441.1	3,927.4	62.2%
1523	2008 Chevrolet Silverado	PICKUP	218.6	482.4	45.3%
1524	2020 Chevrolet Silverado	PICKUP	851.1	1,610.4	52.9%
1525	2022 Ford F-250	PICKUP	2,057.3	4,024.7	51.1%
1526	2011 Chevrolet Silverado	PICKUP	956.1	1,843.5	51.9%
1527	2022 Ford F-250	PICKUP	2,351.2	4,062.1	57.9%
1528	2020 Ford Edge	PICKUP	338.8	1,006.3	33.7%
1529	2021 Ford F-250	PICKUP	1,899.0	2,924.3	64.9%
1530	2022 Ford F-250	PICKUP	2,654.7	4,765.3	55.7%
1531	2015 GMC Sierra	PICKUP	708.9	1,838.9	38.5%
1532	2021 Ford F-250	PICKUP	1,460.3	2,445.1	59.7%
1533	2015 GMC Sierra	PICKUP	1,804.8	3,347.1	53.9%
1534	2021 Ford F-250	PICKUP	608.2	814.1	74.7%
1535	2022 Ford F-250	PICKUP	2,266.2	3,411.0	66.4%
1536	2015 GMC Sierra	PICKUP	2,971.4	4,695.6	63.3%
1537	2008 Chevrolet Silverado	PICKUP	176.4	406.3	43.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1538	2019 Chevrolet Silverado	PICKUP	107.2	161.9	66.2%
1539	2022 Ford F-250	PICKUP	3,000.4	4,866.2	61.7%
1540	2011 Chevrolet Silverado	PICKUP	1,950.3	2,952.9	66.0%
1541	2022 Ford F-250	PICKUP	2,614.1	4,565.9	57.3%
1542	2015 GMC Sierra	PICKUP	2,715.8	3,830.8	70.9%
1543	2019 Chevrolet Silverado	PICKUP	216.3	250.5	86.4%
1544	2021 Ford F-250	PICKUP	1,060.8	1,977.4	53.6%
1545	2022 Ford F-250	PICKUP	2,751.0	4,255.4	64.6%
1546	2015 GMC Sierra	PICKUP	2,684.3	3,636.6	73.8%
1547	2022 Ford F-250	PICKUP	3,069.8	5,725.5	53.6%
1548	2021 Ford F-250	PICKUP	541.3	832.7	65.0%
1549	2015 GMC Sierra	PICKUP	1,990.0	2,995.1	66.4%
1550	2019 Chevrolet Silverado	PICKUP	189.8	230.2	82.5%
1551	2021 Ford F-250	PICKUP	3,362.2	4,421.8	76.0%
1552	2022 Ford F-250	PICKUP	2,483.1	4,291.6	57.9%
1553	2015 GMC Sierra	PICKUP	3,822.2	4,724.9	80.9%
1554	2019 Chevrolet Silverado	PICKUP	675.2	1,045.0	64.6%
1555	2022 Ford F-250	PICKUP	2,275.2	3,832.1	59.4%
1556	2015 GMC Sierra	PICKUP	1,540.9	2,476.5	62.2%
1557	2021 Ford F-350	PICKUP	577.3	862.5	66.9%
1558	2014 Ford F-350	PICKUP	1,690.4	2,478.7	68.2%
1559	2019 Ford F-350	PICKUP	184.1	629.4	29.2%
1560	2019 Ford F-350	PICKUP	356.3	868.2	41.0%
1561	2017 Chevrolet Silverado	PICKUP	2,192.0	3,648.6	60.1%
1562	2017 Chevrolet Silverado	PICKUP	282.0	828.4	34.0%
1563	2017 Chevrolet Silverado	PICKUP	279.9	480.4	58.3%
1564	2019 Ford F-150	PICKUP	239.8	843.9	28.4%
1565	2019 Ford F-150	PICKUP	1,988.3	4,181.2	47.6%
1566	2019 Ford F-150	PICKUP	802.1	1,900.1	42.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1567	2019 Ford F-150	PICKUP	929.5	2,125.9	43.7%
1568	2019 Ford F-150	PICKUP	1,096.2	2,300.6	47.6%
1569	2019 Ford F-150	PICKUP	988.4	2,347.9	42.1%
1570	2019 Ford F-150	PICKUP	580.3	1,857.2	31.2%
1571	2019 Ford F-150	PICKUP	539.3	1,959.8	27.5%
1572	2019 Ford F-150	PICKUP	833.6	2,898.8	28.8%
1573	2019 Ford F-150	PICKUP	1,631.8	3,664.9	44.5%
1574	2019 Ford F-150	PICKUP	1,864.0	3,759.0	49.6%
1575	2019 Ford F-150	PICKUP	1,642.2	3,894.6	42.2%
1576	2019 Ford F-150	PICKUP	813.9	2,403.4	33.9%
1577	2019 Ford F-150	PICKUP	922.5	2,602.2	35.5%
1578	2019 Ford F-150	PICKUP	529.9	1,688.4	31.4%
1579	2019 Ford F-150	PICKUP	504.9	1,606.7	31.4%
1580	2019 Ford F-150	PICKUP	1,124.7	2,720.7	41.3%
1581	2019 Ford F-150	PICKUP	511.8	1,858.8	27.5%
1582	2019 Ford F-150	PICKUP	1,102.9	3,048.1	36.2%
1583	2019 Ford F-150	PICKUP	934.3	2,562.2	36.5%
1584	2019 Ford F-150	PICKUP	1,552.4	3,426.1	45.3%
1585	2019 Ford F-150	PICKUP	708.2	1,807.1	39.2%
1586	2019 Ford F-150	PICKUP	588.9	1,600.4	36.8%
1587	2019 Ford F-150	PICKUP	1,472.2	3,207.3	45.9%
1588	2019 Ford F-150	PICKUP	414.6	999.2	41.5%
1589	2019 Ford F-150	PICKUP	514.7	1,741.0	29.6%
1590	2019 Ford F-150	PICKUP	1,128.4	2,663.5	42.4%
1591	2019 Ford F-150	PICKUP	1,972.6	3,387.8	58.2%
1592	2019 Ford F-150	PICKUP	460.3	1,261.8	36.5%
1593	2019 Ford F-150	PICKUP	1,078.1	3,241.3	33.3%
1594	2019 Ford F-150	PICKUP	1,065.6	2,808.5	37.9%
1595	2019 Ford F-150	PICKUP	825.5	2,222.0	37.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1596	2019 Ford F-150	PICKUP	363.5	1,396.9	26.0%
1597	2019 Ford F-150	PICKUP	1,100.4	3,220.5	34.2%
1598	2019 Ford F-150	PICKUP	1,083.7	2,205.5	49.1%
1599	2019 Ford F-150	PICKUP	765.3	2,107.6	36.3%
1600	2019 Ford F-150	PICKUP	636.6	1,849.7	34.4%
1601	2019 Ford F-150	PICKUP	762.6	2,611.1	29.2%
1602	2019 Ford F-150	PICKUP	622.0	1,634.2	38.1%
1603	2019 Ford F-150	PICKUP	887.6	2,392.7	37.1%
1604	2019 Ford F-150	PICKUP	928.1	2,554.9	36.3%
1605	2019 Ford F-150	PICKUP	486.8	1,709.4	28.5%
1606	2019 Ford F-150	PICKUP	984.4	2,187.8	45.0%
1607	2019 Ford F-150	PICKUP	1,036.4	2,398.6	43.2%
1608	2019 Ford F-150	PICKUP	1,163.6	2,475.1	47.0%
1609	2019 Ford F-150	PICKUP	526.2	1,417.1	37.1%
1610	2019 Ford F-150	PICKUP	1,049.4	2,521.1	41.6%
1611	2019 Ford F-150	PICKUP	1,239.4	3,452.8	35.9%
1612	2019 Ford F-150	PICKUP	531.4	1,562.2	34.0%
1613	2019 Ford F-150	PICKUP	246.9	872.2	28.3%
1614	2019 Ford F-150	PICKUP	1,129.2	3,367.8	33.5%
1615	2019 Ford F-150	PICKUP	467.8	1,788.7	26.2%
1616	2019 Ford F-150	PICKUP	852.1	1,583.2	53.8%
1617	2019 Ford F-150	PICKUP	1,094.7	2,187.2	50.1%
1618	2019 Ford F-150	PICKUP	2,329.7	4,222.6	55.2%
1619	2019 Ford F-150	PICKUP	320.6	1,276.6	25.1%
1620	2019 Ford F-150	PICKUP	1,262.7	2,832.0	44.6%
1621	2019 Ford F-150	PICKUP	851.5	2,047.1	41.6%
1622	2019 Ford F-150	PICKUP	522.4	1,960.3	26.6%
1623	2019 Ford F-150	PICKUP	801.8	2,277.8	35.2%
1624	2019 Ford F-150	PICKUP	637.5	1,961.0	32.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1625	2019 Ford F-150	PICKUP	574.0	2,284.0	25.1%
1626	2019 Ford F-150	PICKUP	687.8	1,782.0	38.6%
1627	2019 Ford F-150	PICKUP	742.6	2,641.1	28.1%
1628	2019 Ford F-150	PICKUP	927.4	2,035.2	45.6%
1629	2019 Ford F-150	PICKUP	1,323.7	3,077.7	43.0%
1630	2019 Ford F-150	PICKUP	1,084.1	2,311.5	46.9%
1631	2014 Ford F-450	PICKUP	19.6	47.6	41.3%
1632	2019 Ford F-150	PICKUP	1,885.5	3,066.0	61.5%
1633	2019 Ford F-150	PICKUP	770.3	1,635.2	47.1%
1634	2019 Ford F-150	PICKUP	833.1	2,572.9	32.4%
1635	2019 Ford F-150	PICKUP	536.5	2,124.1	25.3%
1636	2019 Ford F-150	PICKUP	1,772.1	2,956.0	59.9%
1637	2019 Chevrolet Silverado	PICKUP	978.3	1,571.6	62.2%
1638	2019 Chevrolet Silverado	PICKUP	826.5	1,523.5	54.3%
1639	2019 Chevrolet Silverado	PICKUP	415.4	773.2	53.7%
1640	2019 Chevrolet Silverado	PICKUP	853.9	1,256.6	68.0%
1641	2019 Chevrolet Silverado	PICKUP	166.0	498.6	33.3%
1642	2019 Chevrolet Silverado	PICKUP	786.5	1,852.3	42.5%
1643	2019 Chevrolet Silverado	PICKUP	527.2	1,103.0	47.8%
1644	2018 Ford F-150	PICKUP	928.2	2,093.1	44.3%
1645	2019 Chevrolet Silverado	PICKUP	1,613.6	3,408.3	47.3%
1646	2018 Ford F-150	PICKUP	1,118.9	2,736.0	40.9%
1647	2018 Ford F-150	PICKUP	800.0	1,129.2	70.8%
1648	2018 Ford F-150	PICKUP	620.8	1,636.4	37.9%
1649	2019 Chevrolet Silverado	PICKUP	151.3	510.8	29.6%
1650	2018 Ford F-150	PICKUP	440.2	1,007.8	43.7%
1651	2017 Ford F-550	PICKUP	192.4	545.6	35.3%
1652	2018 Ford F-150	PICKUP	1,265.6	1,828.3	69.2%
1653	2019 Chevrolet Volt	PICKUP	229.8	455.9	50.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1654	2019 Chevrolet Silverado	PICKUP	171.4	462.8	37.0%
1655	2019 Chevrolet Silverado	PICKUP	1,015.3	2,409.2	42.1%
1656	2019 Ford Transit Van	PICKUP	86.3	115.2	74.9%
1657	2019 Chevrolet Silverado	PICKUP	679.9	1,599.2	42.5%
1658	2015 GMC Sierra	PICKUP	441.1	1,184.0	37.3%
1659	2019 Chevrolet Silverado	PICKUP	138.4	241.4	57.3%
1660	2019 Chevrolet Silverado	PICKUP	219.3	339.8	64.5%
1661	2019 Chevrolet Silverado	PICKUP	58.0	113.4	51.2%
1662	2019 Chevrolet Silverado	PICKUP	225.3	427.1	52.8%
1663	2019 Chevrolet Express	PICKUP	269.3	493.2	54.6%
1664	2015 Ford F-450	PICKUP	68.5	163.3	41.9%
1665	2019 Chevrolet Silverado	PICKUP	6.9	8.0	85.9%
1666	2019 Chevrolet Silverado	PICKUP	136.3	299.9	45.4%
1667	2019 Chevrolet Silverado	PICKUP	130.2	357.4	36.4%
1668	2019 Chevrolet Silverado	PICKUP	215.6	488.7	44.1%
1669	2017 Ford F-250	PICKUP	196.1	489.9	40.0%
1670	2019 Chevrolet Silverado	PICKUP	20.7	55.4	37.4%
1671	2019 Chevrolet Silverado	PICKUP	127.5	465.9	27.4%
1672	2019 Chevrolet Silverado	PICKUP	298.4	927.8	32.2%
1673	2019 Chevrolet Silverado	PICKUP	107.3	390.1	27.5%
1674	2019 Chevrolet Silverado	PICKUP	288.1	459.0	62.8%
1675	2019 Ford F-150	PICKUP	1,147.9	2,817.5	40.7%
1676	2019 Ford F-150	PICKUP	952.8	2,994.9	31.8%
1677	2019 Ford F-150	PICKUP	1,316.8	3,191.4	41.3%
1678	2019 Ford F-150	PICKUP	1,835.8	3,745.9	49.0%
1679	2019 Ford F-150	PICKUP	188.3	412.0	45.7%
1680	2019 Ford F-150	PICKUP	953.3	2,557.2	37.3%
1681	2019 Ford F-150	PICKUP	572.3	2,068.5	27.7%
1682	2019 Ford F-150	PICKUP	317.9	1,215.3	26.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1683	2019 Ford F-150	PICKUP	584.2	1,997.9	29.2%
1684	2019 Ford F-150	PICKUP	966.6	2,451.1	39.4%
1685	2019 Ford F-150	PICKUP	785.9	2,772.3	28.3%
1686	2019 Ford F-150	PICKUP	792.1	2,522.6	31.4%
1687	2019 Ford F-150	PICKUP	617.2	1,895.2	32.6%
1688	2019 Ford F-150	PICKUP	705.6	1,784.5	39.5%
1689	2019 Ford F-150	PICKUP	1,099.3	3,072.2	35.8%
1690	2019 Ford F-150	PICKUP	1,162.5	3,182.7	36.5%
1691	2019 Ford F-150	PICKUP	956.3	2,398.0	39.9%
1692	2019 Ford F-150	PICKUP	1,201.1	2,715.0	44.2%
1693	2019 Ford F-150	PICKUP	674.6	2,231.8	30.2%
1694	2019 Ford F-150	PICKUP	1,006.2	2,388.5	42.1%
1695	2020 Ford F-150	PICKUP	298.1	965.7	30.9%
1696	2017 Ford F-550	PICKUP	94.4	356.1	26.5%
1697	2019 Ford F-150	PICKUP	410.8	1,345.0	30.5%
1698	2019 Ford F-150	PICKUP	630.4	2,434.1	25.9%
1699	2019 Ford F-150	PICKUP	1,115.5	2,234.5	49.9%
1700	2019 Ford F-150	PICKUP	850.5	2,066.0	41.2%
1701	2019 Ford F-150	PICKUP	689.3	2,107.4	32.7%
1702	2019 Ford F-150	PICKUP	663.5	2,327.4	28.5%
1703	2019 Ford F-150	PICKUP	1,577.5	3,005.8	52.5%
1704	2019 Ford F-150	PICKUP	822.0	2,324.4	35.4%
1705	2019 Ford F-150	PICKUP	443.4	1,593.8	27.8%
1706	2019 Ford F-150	PICKUP	1,482.0	3,539.7	41.9%
1707	2019 Ford F-150	PICKUP	742.6	2,278.5	32.6%
1708	2019 Ford F-150	PICKUP	937.9	2,371.0	39.6%
1709	2019 Ford F-150	PICKUP	1,058.7	2,999.7	35.3%
1710	2019 Ford F-150	PICKUP	1,222.6	2,402.1	50.9%
1711	2024 Ford Transit Van	VAN	1,185.1	1,816.7	65.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1712	2024 Ford Transit Van	VAN	1,305.8	1,805.0	72.3%
1713	2024 Ford Transit Van	VAN	885.1	1,339.0	66.1%
1714	2024 Ford Transit Van	VAN	138.7	246.6	56.2%
1715	2024 Ford Transit Van	VAN	312.5	1,116.1	28.0%
1716	2008 Chevrolet Express	VAN	160.4	201.1	79.8%
1717	2008 Chevrolet Express	VAN	58.5	92.1	63.5%
1718	2008 Chevrolet Express	VAN	363.9	745.4	48.8%
1719	2018 Ford Transit Wagon	VAN	38.9	53.0	73.4%
1720	2010 Chevrolet Silverado	PICKUP	2,840.5	3,531.2	80.4%
1721	2012 GMC Sierra	PICKUP	127.9	239.7	53.4%
1722	2013 GMC Sierra	PICKUP	203.6	537.3	37.9%
1723	2024 Ford F-350	PICKUP	215.5	328.0	65.7%
1724	2015 GMC Sierra	PICKUP	1,174.0	2,124.8	55.3%
1725	2017 Ford F-350	PICKUP	2,395.4	3,796.0	63.1%
1726	2010 Chevrolet Silverado	PICKUP	8.8	14.4	60.6%
1727	2012 GMC Sierra	PICKUP	2,660.8	4,098.9	64.9%
1728	2013 GMC Sierra	PICKUP	419.2	890.2	47.1%
1729	2024 Ford F-350	PICKUP	73.1	162.0	45.1%
1730	2015 GMC Sierra	PICKUP	1,503.4	2,717.3	55.3%
1731	2017 Ford F-350	PICKUP	86.5	178.2	48.5%
1732	2019 Ford F-350	PICKUP	2,054.2	3,058.8	67.2%
1733	2010 Chevrolet Silverado	PICKUP	1,546.7	2,701.6	57.3%
1734	2013 GMC Sierra	PICKUP	1,686.6	2,880.0	58.6%
1735	2024 Ford F-350	PICKUP	113.9	225.4	50.5%
1736	2015 GMC Sierra	PICKUP	2,089.5	3,517.8	59.4%
1737	2017 Ford F-350	PICKUP	2,133.7	3,768.2	56.6%
1738	2019 Ford F-350	PICKUP	2,992.5	4,619.0	64.8%
1739	2013 GMC Sierra	PICKUP	419.4	899.1	46.6%
1740	2015 GMC Sierra	PICKUP	392.6	1,013.6	38.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1741	2017 Ford F-350	PICKUP	1,121.1	3,319.7	33.8%
1742	2019 Ford F-350	PICKUP	1,220.7	2,987.6	40.9%
1743	2010 Chevrolet Silverado	PICKUP	1,501.9	2,093.6	71.7%
1744	2013 GMC Sierra	PICKUP	434.4	846.7	51.3%
1745	2024 Ford F-350	PICKUP	228.0	403.0	56.6%
1746	2015 GMC Sierra	PICKUP	1,532.5	2,726.2	56.2%
1747	2024 Ford F-350	PICKUP	189.0	344.9	54.8%
1748	2015 GMC Sierra	PICKUP	1,545.2	2,752.1	56.1%
1749	2020 Ford F-350	PICKUP	816.6	1,614.9	50.6%
1750	2013 GMC Sierra	PICKUP	1,209.8	2,055.6	58.9%
1751	2015 GMC Sierra	PICKUP	1,898.5	3,220.0	59.0%
1752	2019 Ford F-350	PICKUP	1,487.2	3,408.0	43.6%
1753	2020 Ford F-350	PICKUP	567.2	1,829.7	31.0%
1754	2021 Ford F-350	PICKUP	1,564.6	3,255.2	48.1%
1755	2013 GMC Sierra	PICKUP	2,186.1	3,980.2	54.9%
1756	2024 Ford F-350	PICKUP	132.9	248.8	53.4%
1757	2019 Ford F-350	PICKUP	2,047.3	3,239.0	63.2%
1758	2020 Ford F-350	PICKUP	648.0	1,131.7	57.3%
1759	2021 Ford F-350	PICKUP	1,944.8	3,505.3	55.5%
1760	2013 GMC Sierra	PICKUP	125.7	234.8	53.6%
1761	2024 Ford F-350	PICKUP	94.1	166.5	56.5%
1762	2020 Ford F-350	PICKUP	1,584.8	3,238.6	48.9%
1763	2015 GMC Sierra	PICKUP	1,903.3	3,010.3	63.2%
1764	2020 Ford F-350	PICKUP	1,573.4	3,275.7	48.0%
1765	2011 Chevrolet Silverado	PICKUP	202.2	357.1	56.6%
1766	2019 Ford F-350	PICKUP	1,585.1	3,209.8	49.4%
1767	2020 Ford F-350	PICKUP	1,342.3	3,094.7	43.4%
1768	2011 Chevrolet Silverado	PICKUP	1,315.5	2,313.2	56.9%
1769	2023 Ford F-350	PICKUP	940.2	2,378.0	39.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1770	2020 Ford F-350	PICKUP	870.4	1,984.1	43.9%
1771	2021 Ford F-350	PICKUP	2,369.4	4,070.8	58.2%
1772	2012 GMC Sierra	PICKUP	391.6	708.7	55.3%
1773	2023 Ford F-350	PICKUP	1,013.3	1,975.1	51.3%
1774	2024 Ford F-350	PICKUP	0.3	0.4	73.0%
1775	2015 GMC Sierra	PICKUP	995.8	2,180.5	45.7%
1776	2019 Ford F-350	PICKUP	2,372.0	4,313.0	55.0%
1777	2020 Ford F-350	PICKUP	1,335.3	3,209.8	41.6%
1778	2021 Ford F-350	PICKUP	1,920.0	3,716.5	51.7%
1779	2023 Ford F-350	PICKUP	1,191.6	2,201.0	54.1%
1780	2015 GMC Sierra	PICKUP	115.6	332.7	34.8%
1781	2019 Ford F-350	PICKUP	2,605.8	4,268.7	61.0%
1782	2020 Ford F-350	PICKUP	1,837.6	3,458.8	53.1%
1783	2021 Ford F-350	PICKUP	1,690.3	3,906.1	43.3%
1784	2024 Ford F-350	PICKUP	0.1	0.2	49.9%
1785	2015 GMC Sierra	PICKUP	1,122.9	3,476.4	32.3%
1786	2020 Ford F-350	PICKUP	1,823.9	3,444.9	52.9%
1787	2021 Ford F-350	PICKUP	2,267.6	5,056.5	44.8%
1788	2015 GMC Sierra	PICKUP	372.0	784.8	47.4%
1789	2019 Ford F-350	PICKUP	2,363.3	4,055.6	58.3%
1790	2020 Ford F-350	PICKUP	2,569.2	4,676.8	54.9%
1791	2021 Ford F-350	PICKUP	1,506.0	2,868.5	52.5%
1792	2020 Ford F-350	PICKUP	2,449.7	4,046.4	60.5%
1793	2021 Ford F-350	PICKUP	2,475.9	4,606.7	53.7%
1794	2012 GMC Sierra	PICKUP	169.9	352.5	48.2%
1795	2020 Ford F-350	PICKUP	1,457.7	2,965.4	49.2%
1796	2021 Ford F-350	PICKUP	1,351.8	2,545.2	53.1%
1797	2012 GMC Sierra	PICKUP	617.5	1,289.6	47.9%
1798	2020 Ford F-350	PICKUP	2,664.6	4,915.6	54.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1799	2021 Ford F-350	PICKUP	1,731.7	3,232.0	53.6%
1800	2020 Ford F-350	PICKUP	2,012.4	3,355.7	60.0%
1801	2012 GMC Sierra	PICKUP	1,075.2	1,883.1	57.1%
1802	2019 Ford F-350	PICKUP	1,084.8	2,159.1	50.2%
1803	2020 Ford F-350	PICKUP	717.8	1,213.7	59.1%
1804	2012 GMC Sierra	PICKUP	15.3	21.0	72.6%
1805	2020 Ford F-350	PICKUP	977.0	2,096.7	46.6%
1806	2020 Ford F-350	PICKUP	925.7	2,294.6	40.3%
1807	2020 Ford F-350	PICKUP	1,250.7	2,949.6	42.4%
1808	2019 Ford F-350	PICKUP	731.2	1,716.3	42.6%
1809	2019 Ford F-350	PICKUP	1,133.4	2,050.7	55.3%
1810	2019 Ford F-350	PICKUP	1,832.7	4,006.5	45.7%
1811	2019 Ford F-350	PICKUP	826.5	2,494.0	33.1%
1812	2019 Ford F-350	PICKUP	2,775.8	4,641.1	59.8%
1813	2019 Ford F-350	PICKUP	1,970.0	4,077.1	48.3%
1814	2019 Ford F-350	PICKUP	2,028.4	3,802.8	53.3%
1815	2019 Ford F-350	PICKUP	1,674.0	3,013.4	55.6%
1816	2019 Ford F-350	PICKUP	2,803.7	4,796.2	58.5%
1817	2019 Ford F-350	PICKUP	1,743.9	3,164.2	55.1%
1818	2019 Ford F-350	PICKUP	2,290.4	3,821.6	59.9%
1819	2019 Ford F-350	PICKUP	1,258.1	2,499.3	50.3%
1820	2019 Ford F-350	PICKUP	1,557.1	3,818.9	40.8%
1821	2019 Ford F-350	PICKUP	1,493.8	3,092.6	48.3%
1822	2019 Ford F-350	PICKUP	2,249.9	3,761.4	59.8%
1823	2019 Ford F-350	PICKUP	2,125.3	4,159.1	51.1%
1824	2019 Ford F-350	PICKUP	1,043.5	2,455.0	42.5%
1825	2019 Ford F-350	PICKUP	1,441.4	2,556.4	56.4%
1826	2021 Ford F-450	SERVICE TRUCK	1,357.6	2,063.1	65.8%
1827	2014 Ford F-450	SERVICE TRUCK	3,311.5	3,793.8	87.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1828	2015 Ford F-450	SERVICE TRUCK	2,082.2	2,633.4	79.1%
1829	2016 Ford F-450	SERVICE TRUCK	2,537.0	3,113.0	81.5%
1830	2008 GMC Sierra	SERVICE TRUCK	1,273.9	1,651.3	77.1%
1831	2009 GMC Sierra	SERVICE TRUCK	204.7	272.8	75.0%
1832		SERVICE TRUCK	3,516.7	4,854.2	72.4%
1833	2014 Ford F-450	SERVICE TRUCK	3,352.7	3,829.6	87.5%
1834	2015 Ford F-450	SERVICE TRUCK	2,703.6	3,507.7	77.1%
1835	2016 Ford F-450	SERVICE TRUCK	3,955.6	4,600.6	86.0%
1836	2009 GMC Sierra	SERVICE TRUCK	624.9	1,144.1	54.6%
1837	2014 Ford F-450	SERVICE TRUCK	3,327.9	3,874.3	85.9%
1838	2015 Ford F-450	SERVICE TRUCK	2,116.4	2,674.6	79.1%
1839	2016 Ford F-450	SERVICE TRUCK	3,179.0	3,860.5	82.3%
1840	2009 GMC Sierra	SERVICE TRUCK	442.5	811.3	54.5%
1841	2015 Ford F-450	SERVICE TRUCK	4,329.4	4,852.9	89.2%
1842	2016 Ford F-450	SERVICE TRUCK	2,357.2	2,799.3	84.2%
1843	2014 Ford F-450	SERVICE TRUCK	2,978.8	3,537.8	84.2%
1844	2015 Ford F-450	SERVICE TRUCK	3,509.7	4,058.6	86.5%
1845	2008 Chevrolet Silverado	SERVICE TRUCK	265.1	367.9	72.1%
1846	2009 Chevrolet Silverado	SERVICE TRUCK	1,086.7	1,544.1	70.4%
1847	2014 Ford F-450	SERVICE TRUCK	2,440.6	3,001.3	81.3%
1848	2015 Ford F-450	SERVICE TRUCK	3,261.8	3,900.1	83.6%
1849	2014 Ford F-450	SERVICE TRUCK	3,155.3	3,696.8	85.4%
1850	2014 Ford F-450	SERVICE TRUCK	901.8	1,427.9	63.2%
1851	2014 Ford F-450	SERVICE TRUCK	2,332.0	2,981.8	78.2%
1852	2014 Ford F-450	SERVICE TRUCK	2,366.7	3,081.0	76.8%
1853	2014 Ford F-450	SERVICE TRUCK	3,081.7	3,438.6	89.6%
1854	2014 Ford F-450	SERVICE TRUCK	3,071.2	3,671.8	83.6%
1855	2014 Ford F-450	SERVICE TRUCK	3,208.4	3,622.5	88.6%
1856	2014 Ford F-450	SERVICE TRUCK	2,882.1	3,397.7	84.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1857	2014 Ford F-450	SERVICE TRUCK	2,279.0	2,714.8	83.9%
1858	2014 Ford F-450	SERVICE TRUCK	2,172.3	2,831.2	76.7%
1859	2014 Ford F-450	SERVICE TRUCK	1,510.6	2,449.3	61.7%
1860	2014 Ford F-450	SERVICE TRUCK	1,877.6	2,418.3	77.6%
1861	2014 Ford F-450	SERVICE TRUCK	3,424.2	4,464.1	76.7%
1862	2014 Ford F-450	SERVICE TRUCK	4,066.1	4,461.0	91.1%
1863	2014 Ford F-450	SERVICE TRUCK	3,485.4	3,979.3	87.6%
1864	2014 Ford F-450	SERVICE TRUCK	1,436.2	1,826.1	78.6%
1865	2015 Ford F-350	SERVICE TRUCK	335.4	509.0	65.9%
1866	2022 Ford F-250	PICKUP	2,021.8	4,033.7	50.1%
1867	2015 GMC Sierra	PICKUP	2,862.2	4,025.4	71.1%
1868	2019 Chevrolet Silverado	PICKUP	2,879.1	3,564.0	80.8%
1869	2002 GMC Sierra	PICKUP	3,562.3	4,452.7	80.0%
1870	2015 GMC Sierra	PICKUP	3,816.4	4,690.0	81.4%
1871	2022 Ford F-250	PICKUP	1,910.8	3,522.5	54.2%
1872	2015 GMC Sierra	PICKUP	1,843.6	2,708.9	68.1%
1873	2019 Chevrolet Silverado	PICKUP	2,269.7	3,240.5	70.0%
1874	2022 Ford F-250	PICKUP	2,485.3	4,442.3	55.9%
1875	2015 GMC Sierra	PICKUP	3,860.8	5,078.6	76.0%
1876	2019 Ford F-250	PICKUP	359.0	817.2	43.9%
1877	2011 Chevrolet Silverado	PICKUP	1,343.3	2,515.8	53.4%
1878	2022 Ford F-250	PICKUP	2,523.0	4,002.9	63.0%
1879	2015 GMC Sierra	PICKUP	2,436.0	3,427.2	71.1%
1880	2019 Ford F-250	PICKUP	213.0	395.5	53.9%
1881	2015 GMC Sierra	PICKUP	3,293.2	4,339.1	75.9%
1882	2019 Ford F-250	PICKUP	689.0	1,125.3	61.2%
1883	2022 Ford F-250	PICKUP	2,900.7	5,012.0	57.9%
1884	2019 Ford F-250	PICKUP	603.2	1,071.4	56.3%
1885	2015 GMC Sierra	PICKUP	1,721.4	2,722.6	63.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1886	2019 Ford F-250	PICKUP	520.3	822.6	63.3%
1887	2022 Ford F-250	PICKUP	2,927.9	4,412.9	66.3%
1888	2015 GMC Sierra	PICKUP	2,299.7	4,120.2	55.8%
1889	2019 Ford F-250	PICKUP	1,223.6	1,809.8	67.6%
1890	2022 Ford F-250	PICKUP	3,143.6	4,687.8	67.1%
1891	2015 GMC Sierra	PICKUP	1,891.7	3,494.8	54.1%
1892	2019 Ford F-250	PICKUP	805.3	1,130.7	71.2%
1893	2015 GMC Sierra	PICKUP	1,337.6	2,654.7	50.4%
1894	2019 Ford F-250	PICKUP	1,090.2	1,538.7	70.9%
1895	2022 Ford F-250	PICKUP	2,204.1	3,818.2	57.7%
1896	2015 GMC Sierra	PICKUP	2,400.2	3,454.6	69.5%
1897	2019 Ford F-250	PICKUP	1,805.4	2,275.1	79.4%
1898	2022 Ford F-250	PICKUP	2,997.8	5,166.5	58.0%
1899	2019 Ford F-250	PICKUP	469.3	866.8	54.1%
1900	2022 Ford F-250	PICKUP	2,715.3	4,793.1	56.7%
1901	2015 GMC Sierra	PICKUP	2,489.1	3,744.0	66.5%
1902	2019 Ford F-250	PICKUP	612.0	952.6	64.2%
1903	2015 GMC Sierra	PICKUP	142.9	537.5	26.6%
1904	2022 Ford F-250	PICKUP	2,605.6	4,310.5	60.4%
1905	2015 GMC Sierra	PICKUP	282.3	591.9	47.7%
1906	2022 Ford F-250	PICKUP	2,613.2	4,677.1	55.9%
1907	2015 GMC Sierra	PICKUP	310.6	859.1	36.2%
1908	2022 Ford F-250	PICKUP	2,922.7	4,593.3	63.6%
1909	2015 GMC Sierra	PICKUP	2,595.7	3,912.5	66.3%
1910	2022 Ford F-250	PICKUP	1,806.4	3,421.6	52.8%
1911	2022 Ford F-250	PICKUP	3,518.7	5,332.4	66.0%
1912	2015 GMC Sierra	PICKUP	373.2	679.2	54.9%
1913	2022 Ford F-250	PICKUP	3,398.1	4,753.6	71.5%
1914	2015 GMC Sierra	PICKUP	254.7	395.4	64.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1915	2012 GMC Sierra	PICKUP	114.1	314.5	36.3%
1916	2015 GMC Sierra	PICKUP	4,383.9	5,172.7	84.8%
1917	2008 Chevrolet Silverado	PICKUP	7,725.0	9,088.0	85.0%
1918	2015 GMC Sierra	PICKUP	2,361.5	3,275.2	72.1%
1919	2011 Chevrolet Silverado	PICKUP	1,453.6	2,135.3	68.1%
1920	2022 Ford F-250	PICKUP	2,028.5	3,600.6	56.3%
1921	2015 GMC Sierra	PICKUP	3,152.0	4,331.3	72.8%
1922	2022 Ford F-250	PICKUP	3,250.6	4,707.0	69.1%
1923	2015 GMC Sierra	PICKUP	3,406.1	4,495.6	75.8%
1924	2015 GMC Sierra	PICKUP	881.9	1,447.5	60.9%
1925	2022 Ford F-250	PICKUP	2,804.9	4,546.4	61.7%
1926	2015 GMC Sierra	PICKUP	3,451.3	5,100.8	67.7%
1927	2022 Ford F-250	PICKUP	2,219.1	4,022.6	55.2%
1928	2015 GMC Sierra	PICKUP	1,401.6	2,279.4	61.5%
1929	2011 Chevrolet Silverado	PICKUP	224.0	592.7	37.8%
1930	2022 Ford F-250	PICKUP	2,462.9	3,289.9	74.9%
1931	2015 GMC Sierra	PICKUP	2,679.8	4,530.7	59.1%
1932	2022 Ford F-250	PICKUP	2,670.8	4,168.5	64.1%
1933	2015 GMC Sierra	PICKUP	2,270.8	3,839.0	59.1%
1934	2015 GMC Sierra	PICKUP	227.7	755.6	30.1%
1935	2008 Chevrolet Silverado	PICKUP	1,156.5	2,008.1	57.6%
1936	2022 Ford F-250	PICKUP	1,504.2	2,721.8	55.3%
1937	2015 GMC Sierra	PICKUP	620.0	1,139.7	54.4%
1938	2022 Ford F-250	PICKUP	667.2	1,321.4	50.5%
1939	2015 GMC Sierra	PICKUP	2,123.1	3,408.3	62.3%
1940	2022 Ford F-250	PICKUP	2,135.2	3,181.2	67.1%
1941	2015 GMC Sierra	PICKUP	1,430.4	2,137.3	66.9%
1942	2012 GMC Sierra	PICKUP	127.7	469.6	27.2%
1943	2015 GMC Sierra	PICKUP	1,949.0	2,704.1	72.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1944	2015 GMC Sierra	PICKUP	2,138.9	3,221.9	66.4%
1945	2012 GMC Sierra	PICKUP	1,805.3	2,766.4	65.3%
1946	2015 GMC Sierra	PICKUP	4,581.3	5,863.9	78.1%
1947	2012 GMC Sierra	PICKUP	1,481.3	2,327.5	63.6%
1948	2015 GMC Sierra	PICKUP	965.9	1,306.6	73.9%
1949	2022 Ford F-250	PICKUP	1,081.5	1,485.6	72.8%
1950	2015 GMC Sierra	PICKUP	305.3	917.6	33.3%
1951	2012 GMC Sierra	PICKUP	1,147.7	2,025.9	56.7%
1952	2015 GMC Sierra	PICKUP	2,527.8	3,633.4	69.6%
1953	2015 GMC Sierra	PICKUP	2,317.7	3,208.6	72.2%
1954	2012 GMC Sierra	PICKUP	3,040.0	4,170.6	72.9%
1955	2012 GMC Sierra	PICKUP	2,109.8	4,057.7	52.0%
1956	2012 GMC Sierra	PICKUP	3,273.7	4,526.4	72.3%
1957	2012 GMC Sierra	PICKUP	92.6	328.3	28.2%
1958	2022 Ford F-250	PICKUP	2,990.5	3,931.0	76.1%
1959	2022 Ford F-250	PICKUP	1,880.1	2,677.9	70.2%
1960	2022 Ford F-250	PICKUP	3,165.8	4,610.9	68.7%
1961	2012 GMC Sierra	PICKUP	2,344.4	3,087.4	75.9%
1962	2012 GMC Sierra	PICKUP	2,488.6	3,284.0	75.8%
1963	2012 GMC Sierra	PICKUP	1,527.9	2,536.2	60.2%
1964	2012 GMC Sierra	PICKUP	262.0	502.0	52.2%
1965	2022 Ford F-250	PICKUP	1,343.0	1,802.1	74.5%
1966	2022 Ford F-250	PICKUP	2,388.3	3,676.7	65.0%
1967	2022 Ford F-250	PICKUP	2,784.8	3,922.0	71.0%
1968	2018 Chevrolet Silverado	PICKUP	1,613.9	2,329.9	69.3%
1969	2022 Ford F-250	PICKUP	1,730.4	2,478.8	69.8%
1970	2012 GMC Sierra	PICKUP	2,092.2	2,833.7	73.8%
1971	2022 Ford F-250	PICKUP	2,266.7	3,332.8	68.0%
1972	2022 Ford F-250	PICKUP	2,589.5	3,899.6	66.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
1973	2022 Ford F-250	PICKUP	1,966.2	2,776.2	70.8%
1974	2021 Ford F-250	PICKUP	814.3	1,260.3	64.6%
1975	2022 Ford F-250	PICKUP	1,568.4	2,192.5	71.5%
1976	2022 Ford F-250	PICKUP	2,124.8	3,439.2	61.8%
1977	2022 Ford F-250	PICKUP	1,521.8	2,208.4	68.9%
1978	2022 Ford F-250	PICKUP	166.0	257.3	64.5%
1979	2019 Chevrolet Silverado	PICKUP	2,318.9	3,436.2	67.5%
1980	2019 Chevrolet Silverado	PICKUP	3,419.1	4,639.3	73.7%
1981	2018 Chevrolet Silverado	PICKUP	316.5	733.0	43.2%
1982	2019 Chevrolet Silverado	PICKUP	3,681.3	5,092.5	72.3%
1983	2021 Ford F-250	PICKUP	234.2	397.4	58.9%
1984	2021 Ford F-250	PICKUP	1,565.5	2,545.6	61.5%
1985	2021 Ford F-250	PICKUP	1,966.5	2,993.8	65.7%
1986	2022 Ford F-250	PICKUP	971.4	2,897.7	33.5%
1987	2021 Chevrolet Silverado	PICKUP	1,288.4	2,059.5	62.6%
1988	2021 Ford F-250	PICKUP	4,170.5	5,325.4	78.3%
1989	2021 Ford F-250	PICKUP	441.7	632.0	69.9%
1990	2021 Ford F-250	PICKUP	519.6	779.6	66.6%
1991	2021 Ford F-250	PICKUP	2,488.9	3,300.7	75.4%
1992	2021 Ford F-250	PICKUP	1,179.6	1,924.9	61.3%
1993	2019 Ford Transit Van	CARGO VAN	2,099.3	2,987.3	70.3%
1994	2020 Ford Transit Van	CARGO VAN	88.7	129.7	68.4%
1995	2023 Ford Transit Van	CARGO VAN	923.1	1,317.1	70.1%
1996	2018 Ford Transit Van	CARGO VAN	726.8	1,059.2	68.6%
1997	2019 Ford Transit Van	CARGO VAN	969.7	1,302.6	74.4%
1998	2020 Ford Transit Van	CARGO VAN	882.3	1,548.4	57.0%
1999	2023 Ford Transit Van	CARGO VAN	991.1	1,444.8	68.6%
2000	2015 Ford Transit Van	CARGO VAN	397.9	535.6	74.3%
2001	2020 Ford Transit Van	CARGO VAN	252.1	338.0	74.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2002	2015 Ford Transit Van	CARGO VAN	414.6	557.6	74.4%
2003	2020 Ford Transit Van	CARGO VAN	1,291.8	1,729.1	74.7%
2004	2020 Ford Transit Van	CARGO VAN	533.5	807.9	66.0%
2005	2020 Ford Transit Van	CARGO VAN	472.3	672.7	70.2%
2006	2020 Ford Transit Van	CARGO VAN	392.8	568.3	69.1%
2007	2020 Ford Transit Van	CARGO VAN	753.9	1,060.8	71.1%
2008	2019 Ford F-550	CARGO VAN	792.0	1,251.6	63.3%
2009	2020 Ford Transit Van	CARGO VAN	131.9	236.7	55.7%
2010	2020 Ford Transit Van	CARGO VAN	1,043.8	1,458.2	71.6%
2011	2020 Ford Transit Van	CARGO VAN	470.5	987.0	47.7%
2012	2024 Ram ProMaster 2500	CARGO VAN	224.5	440.0	51.0%
2013	2020 Ford F-450	PICKUP	754.3	1,443.7	52.3%
2014	2021 Ford F-550	PICKUP	2,091.4	4,372.1	47.8%
2015	2012 Ford F-450	PICKUP	1,022.5	1,748.3	58.5%
2016	2013 Ford F-450	PICKUP	1,721.4	2,751.6	62.6%
2017	2015 Ford F-450	PICKUP	659.1	1,330.6	49.5%
2018	2016 Ford F-450	PICKUP	1,112.9	1,809.5	61.5%
2019	2017 Ford F-450	PICKUP	998.8	2,224.4	44.9%
2020	2020 Ford F-450	PICKUP	1,172.3	2,616.6	44.8%
2021	2011 Ford F-450	PICKUP	1,807.7	2,643.7	68.4%
2022	2012 Ford F-450	PICKUP	572.9	1,381.1	41.5%
2023	2013 Ford F-450	PICKUP	1,851.2	2,629.2	70.4%
2024	2024 Ford F-550	PICKUP	74.7	129.8	57.6%
2025	2016 Ford F-450	PICKUP	3,460.3	4,304.3	80.4%
2026	2017 Ford F-450	PICKUP	1,136.9	1,870.0	60.8%
2027	2020 Ford F-450	PICKUP	1,139.8	2,562.3	44.5%
2028	2021 Ford F-550	PICKUP	1,164.0	1,942.9	59.9%
2029	2013 Ford F-450	PICKUP	892.6	2,007.6	44.5%
2030	2024 Ford F-550	PICKUP	29.3	57.3	51.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2031	2016 Ford F-450	PICKUP	1,653.8	3,346.9	49.4%
2032	2017 Ford F-450	PICKUP	2,652.5	3,730.8	71.1%
2033	2020 Ford F-450	PICKUP	649.9	1,486.1	43.7%
2034	2021 Ford F-550	PICKUP	1,108.4	2,312.5	47.9%
2035	2013 Ford F-450	PICKUP	1,567.1	2,326.8	67.4%
2036	2014 Ford F-450	PICKUP	1,524.1	2,668.7	57.1%
2037	2016 Ford F-450	PICKUP	1,242.4	1,984.2	62.6%
2038	2017 Ford F-450	PICKUP	1,560.2	2,735.1	57.0%
2039	2019 Ford F-450	PICKUP	771.0	1,884.6	40.9%
2040	2020 Ford F-450	PICKUP	821.6	1,864.0	44.1%
2041	2013 Ford F-450	PICKUP	1,695.9	2,505.7	67.7%
2042	2014 Ford F-450	PICKUP	1,727.8	2,908.8	59.4%
2043	2016 Ford F-450	PICKUP	2,290.2	3,213.2	71.3%
2044	2017 Ford F-450	PICKUP	3,046.1	4,590.0	66.4%
2045	2008 Chevrolet Silverado	PICKUP	1,052.9	1,647.2	63.9%
2046	2020 Ford F-450	PICKUP	1,090.0	1,894.0	57.5%
2047		PICKUP	1,524.5	3,513.6	43.4%
2048	2012 Ford F-450	PICKUP	574.5	1,710.8	33.6%
2049	2013 Ford F-450	PICKUP	2,237.9	2,834.9	78.9%
2050	2014 Ford F-450	PICKUP	1,415.8	1,930.4	73.3%
2051	2016 Ford F-450	PICKUP	676.7	1,588.4	42.6%
2052	2017 Ford F-450	PICKUP	974.5	1,771.7	55.0%
2053	2020 Ford F-450	PICKUP	1,304.8	2,251.2	58.0%
2054	2021 Ford F-550	PICKUP	845.3	1,830.7	46.2%
2055	2014 Ford F-450	PICKUP	2,509.5	3,358.4	74.7%
2056	2016 Ford F-450	PICKUP	813.3	2,265.8	35.9%
2057	2017 Ford F-450	PICKUP	2,262.2	3,582.8	63.1%
2058	2009 Chevrolet Silverado	PICKUP	1,103.6	1,899.1	58.1%
2059	2014 Ford F-450	PICKUP	2,415.9	3,292.1	73.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2060	2017 Ford F-450	PICKUP	65.8	98.4	66.9%
2061	2011 Ford F-450	PICKUP	649.3	1,284.9	50.5%
2062	2014 Ford F-450	PICKUP	2,070.9	3,258.9	63.5%
2063	2017 Ford F-450	PICKUP	1,586.8	2,607.5	60.9%
2064	2011 Ford F-450	PICKUP	827.4	1,166.6	70.9%
2065	2014 Ford F-450	PICKUP	1,883.4	2,949.9	63.8%
2066	2014 Ford F-450	PICKUP	2,724.6	3,519.7	77.4%
2067	2014 Ford F-450	PICKUP	1,904.7	2,405.4	79.2%
2068	2014 Ford F-450	PICKUP	2,129.1	3,041.7	70.0%
2069	2014 Ford F-450	PICKUP	1,703.1	2,418.1	70.4%
2070	2014 Ford F-450	PICKUP	2,242.3	3,165.1	70.8%
2071	2024 Ford F-550	PICKUP	27.9	89.7	31.1%
2072	2020 Ford F-550	PICKUP	1,892.2	3,031.0	62.4%
2073	2021 Ford F-550	PICKUP	2,052.1	3,029.2	67.7%
2074	2012 Ford F-450	PICKUP	1,836.2	2,827.9	64.9%
2075	2013 Ford F-450	PICKUP	2,838.1	3,974.7	71.4%
2076	2020 Ford F-550	PICKUP	725.6	1,793.7	40.5%
2077	2021 Ford F-550	PICKUP	1,111.3	2,444.7	45.5%
2078	2012 Ford F-450	PICKUP	2,443.0	3,268.2	74.8%
2079	2013 Ford F-450	PICKUP	2,483.9	4,357.8	57.0%
2080	2013 Ford F-450	PICKUP	1,504.1	2,178.1	69.1%
2081	2012 Ford F-450	PICKUP	2,079.4	2,523.3	82.4%
2082	2013 Ford F-450	PICKUP	2,061.0	3,144.5	65.5%
2083	2012 Ford F-450	PICKUP	1,934.0	2,336.9	82.8%
2084	2012 Ford F-450	PICKUP	1,187.0	1,670.8	71.0%
2085	2012 Ford F-450	PICKUP	3,616.4	4,086.0	88.5%
2086	2012 Ford F-450	PICKUP	1,735.6	2,170.1	80.0%
2087	2012 Ford F-450	PICKUP	3,313.6	3,787.0	87.5%
2088	2012 Ford F-450	PICKUP	3,656.5	4,193.9	87.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2089	2012 Ford F-450	PICKUP	2,538.2	2,961.6	85.7%
2090	2012 Ford F-450	PICKUP	3,321.5	3,778.4	87.9%
2091	2012 Ford F-450	PICKUP	3,592.4	4,043.5	88.8%
2092	2012 Ford F-450	PICKUP	1,846.1	2,492.0	74.1%
2093	2012 Ford F-450	PICKUP	3,772.8	4,264.6	88.5%
2094	2012 Ford F-450	PICKUP	2,023.3	2,451.8	82.5%
2095	2012 Ford F-450	PICKUP	4,060.5	4,636.5	87.6%
2096	2012 Ford F-450	PICKUP	1,951.0	2,782.5	70.1%
2097	2012 Ford F-450	PICKUP	2,571.2	3,025.4	85.0%
2098	2012 Ford F-450	PICKUP	1,663.1	2,260.9	73.6%
2099	2012 Ford F-450	PICKUP	1,847.9	2,209.4	83.6%
2100	2012 Ford F-450	PICKUP	566.0	1,117.9	50.6%
2101	2012 Ford F-450	PICKUP	2,814.4	3,346.4	84.1%
2102	2012 Ford F-450	PICKUP	2,748.2	3,261.3	84.3%
2103	2012 Ford F-450	PICKUP	2,643.1	3,209.7	82.3%
2104	2012 Ford F-450	PICKUP	2,731.1	3,223.2	84.7%
2105	2021 Ford F-550	DUMP TRUCK	2,159.5	3,381.7	63.9%
2106	2014 Ford F-450	DUMP TRUCK	867.0	1,439.0	60.3%
2107	2015 Ford F-450	DUMP TRUCK	2,070.2	2,578.4	80.3%
2108	2016 Ford F-450	DUMP TRUCK	235.3	498.6	47.2%
2109	2019 Ford F-550	DUMP TRUCK	1,019.0	1,613.8	63.1%
2110	2020 Ford F-550	DUMP TRUCK	1,991.4	3,146.2	63.3%
2111	2021 Ford F-550	DUMP TRUCK	1,640.6	2,957.5	55.5%
2112	2012 Ford F-450	DUMP TRUCK	150.9	331.7	45.5%
2113	2015 Ford F-450	DUMP TRUCK	1,166.7	1,690.4	69.0%
2114	2016 Ford F-450	DUMP TRUCK	1,135.4	1,810.6	62.7%
2115	2019 Ford F-550	DUMP TRUCK	1,582.4	2,510.4	63.0%
2116	2021 Ford F-550	DUMP TRUCK	480.3	826.0	58.2%
2117	2015 Ford F-450	DUMP TRUCK	1,558.5	1,883.6	82.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2118	2016 Ford F-450	DUMP TRUCK	1,195.3	1,931.1	61.9%
2119	2021 Ford F-550	DUMP TRUCK	495.2	722.2	68.6%
2120	2015 Ford F-450	DUMP TRUCK	1,084.3	1,425.8	76.0%
2121	2016 Ford F-450	DUMP TRUCK	520.1	898.1	57.9%
2122	2015 Ford F-450	DUMP TRUCK	685.3	962.8	71.2%
2123	2015 Ford F-450	DUMP TRUCK	3,143.3	4,544.7	69.2%
2124	2015 Ford F-450	DUMP TRUCK	1,520.9	2,004.0	75.9%
2125	2015 Ford F-450	DUMP TRUCK	724.9	932.5	77.7%
2126	2015 Ford F-450	DUMP TRUCK	2,005.3	2,418.8	82.9%
2127	2020 Ford F-550	DUMP TRUCK	53.6	111.4	48.1%
2128	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	467.9	816.6	57.3%
2129	2014 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,004.9	2,044.9	49.1%
2130	2016 Freightliner M2 112 Medium Duty	GAS SERVICE TRUCK	1,085.6	1,566.3	69.3%
2131	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,501.8	2,247.3	66.8%
2132	2008 International 4300	GAS SERVICE TRUCK	294.0	460.5	63.9%
2133	2009 International 4300	GAS SERVICE TRUCK	87.5	147.9	59.1%
2134	2020 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,943.0	2,709.1	71.7%
2135	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,134.0	1,963.8	57.7%
2136	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,195.7	1,994.3	60.0%
2137		GAS SERVICE TRUCK	1,884.7	2,395.1	78.7%
2138	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,918.2	2,440.4	78.6%
2139	2014 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,708.9	2,386.3	71.6%
2140	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	809.5	1,186.2	68.2%
2141	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,115.1	3,189.2	66.3%
2142	2008 International 4300	GAS SERVICE TRUCK	39.2	57.0	68.8%
2143	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	725.4	1,685.1	43.0%
2144	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,501.2	2,096.4	71.6%
2145	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,281.4	1,651.3	77.6%
2146	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,358.5	2,045.6	66.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2147	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,942.3	2,702.6	71.9%
2148	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,102.4	2,065.4	53.4%
2149	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,130.5	3,083.7	69.1%
2150	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,390.9	3,160.6	75.6%
2151	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,110.8	2,803.0	75.3%
2152	2017 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,581.3	2,270.1	69.7%
2153	2008 International 4300	GAS SERVICE TRUCK	569.2	833.8	68.3%
2154	2009 International 4300	GAS SERVICE TRUCK	140.5	266.1	52.8%
2155	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,250.9	1,829.7	68.4%
2156	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,788.2	2,356.1	75.9%
2157	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,975.7	2,486.2	79.5%
2158	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	624.3	804.8	77.6%
2159	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	3,443.8	4,380.2	78.6%
2160	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,406.6	2,129.3	66.1%
2161	2008 International 4300	GAS SERVICE TRUCK	98.4	178.8	55.0%
2162	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,560.7	2,269.5	68.8%
2163	2009 International 4300	GAS SERVICE TRUCK	1,871.3	2,436.7	76.8%
2164	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,806.0	3,776.4	74.3%
2165	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,062.6	1,730.6	61.4%
2166	2016 Freightliner M2 112 Medium Duty	GAS SERVICE TRUCK	1,071.6	1,530.4	70.0%
2167	2008 International 4300	GAS SERVICE TRUCK	526.4	916.0	57.5%
2168	2009 International 4300	GAS SERVICE TRUCK	2,068.9	2,800.7	73.9%
2169	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,560.7	2,322.0	67.2%
2170	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	975.0	1,631.2	59.8%
2171	2009 International 4300	GAS SERVICE TRUCK	737.3	968.0	76.2%
2172	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,164.7	1,992.6	58.5%
2173	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,534.7	1,908.9	80.4%
2174	2008 International 4300	GAS SERVICE TRUCK	544.0	789.7	68.9%
2175	2009 International 4300	GAS SERVICE TRUCK	235.3	317.1	74.2%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
2176	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,044.4	2,624.3	77.9%
2177	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,547.5	3,447.5	73.9%
2178	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,637.6	3,410.0	77.3%
2179	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	851.3	1,325.6	64.2%
2180	2008 International 4300	GAS SERVICE TRUCK	1,085.9	1,812.2	59.9%
2181	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,026.6	2,858.9	70.9%
2182	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,481.4	2,265.4	65.4%
2183	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,160.1	2,721.7	79.4%
2184	2008 International 4300	GAS SERVICE TRUCK	709.9	1,011.9	70.2%
2185	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,493.9	3,166.5	78.8%
2186	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,984.7	2,808.1	70.7%
2187	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,641.1	3,328.9	79.3%
2188	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,278.5	2,861.2	79.6%
2189	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,779.7	4,041.0	68.8%
2190	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	3,215.9	4,094.8	78.5%
2191	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,761.0	2,313.4	76.1%
2192	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	3,204.4	3,973.9	80.6%
2193	2009 International 4300	GAS SERVICE TRUCK	319.0	497.3	64.2%
2194	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,575.2	2,283.9	69.0%
2195	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	675.3	1,059.2	63.8%
2196	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,435.5	3,291.6	74.0%
2197	2022 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,102.4	1,892.3	58.3%
2198	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,255.4	2,943.6	76.6%
2199	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,941.1	2,942.6	66.0%
2200	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,817.4	3,685.6	76.4%
2201	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	941.6	1,657.5	56.8%
2202	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,315.4	3,187.1	72.6%
2203	2009 International 4300	GAS SERVICE TRUCK	760.2	1,292.9	58.8%
2204	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,874.1	2,684.1	69.8%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
2205	2015 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,069.1	1,566.7	68.2%
2206	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	3,426.0	4,382.9	78.2%
2207	2009 International 4300	GAS SERVICE TRUCK	1,590.2	2,411.2	66.0%
2208	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,624.1	2,542.4	63.9%
2209	2015 International DuraStar 4300	GAS SERVICE TRUCK	309.0	454.4	68.0%
2210	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,507.3	2,392.9	63.0%
2211	2009 International 4300	GAS SERVICE TRUCK	1,181.4	1,594.4	74.1%
2212	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,046.2	1,618.0	64.7%
2213	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	518.0	713.1	72.6%
2214	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,300.4	2,904.8	79.2%
2215	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,375.8	2,222.1	61.9%
2216	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	675.2	966.2	69.9%
2217	2016 Freightliner M2 112 Medium Duty	GAS SERVICE TRUCK	1,498.2	2,227.2	67.3%
2218	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,266.4	3,028.0	74.8%
2219	2009 International 4300	GAS SERVICE TRUCK	512.8	876.6	58.5%
2220	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,179.5	1,619.0	72.9%
2221	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	246.4	361.0	68.3%
2222	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,853.5	3,722.0	76.7%
2223	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,428.0	2,061.5	69.3%
2224	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,639.4	3,347.2	78.9%
2225	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	481.0	700.4	68.7%
2226	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,392.7	2,791.6	49.9%
2227	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,601.8	3,432.8	75.8%
2228	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,258.1	3,052.6	74.0%
2229		GAS SERVICE TRUCK	372.8	487.1	76.5%
2230	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,020.7	2,840.7	71.1%
2231	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,731.9	3,370.1	81.1%
2232	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,167.2	2,723.3	79.6%
2233	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,504.7	3,229.2	77.6%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
2234	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,907.1	2,744.0	69.5%
2235	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,809.1	3,847.3	73.0%
2236	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	325.7	506.8	64.3%
2237	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,137.6	2,935.2	72.8%
2238	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,136.5	1,690.7	67.2%
2239	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,955.3	3,623.3	81.6%
2240	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	239.3	308.6	77.6%
2241	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,315.0	1,960.7	67.1%
2242	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,612.7	2,489.8	64.8%
2243	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,315.2	3,016.8	76.7%
2244	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	33.8	58.4	57.9%
2245	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,802.0	3,644.6	76.9%
2246	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,579.9	2,133.1	74.1%
2247	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,745.8	3,359.2	81.7%
2248	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,240.8	2,879.4	77.8%
2249	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,798.4	2,507.4	71.7%
2250	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,142.3	2,723.8	78.7%
2251	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,140.4	2,816.1	76.0%
2252	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,583.1	3,286.2	78.6%
2253	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	713.5	865.6	82.4%
2254	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	959.1	1,415.6	67.8%
2255	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,156.0	3,031.5	71.1%
2256		GAS SERVICE TRUCK	45.8	84.5	54.2%
2257	2016 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	919.5	1,927.6	47.7%
2258	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,273.6	2,199.0	57.9%
2259	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,147.2	1,920.3	59.7%
2260	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	4,087.4	5,010.2	81.6%
2261	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,701.3	2,384.0	71.4%
2262	2025 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	688.6	870.8	79.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2263	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,586.4	3,355.5	77.1%
2264	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,261.2	2,921.2	77.4%
2265	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,614.1	2,386.4	67.6%
2266	2023 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,071.3	1,803.6	59.4%
2267	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,096.7	2,725.4	76.9%
2268	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,195.2	2,136.7	55.9%
2269	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	2,268.8	3,153.7	71.9%
2270	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,562.9	2,419.3	64.6%
2271	2018 Freightliner M2 106 Medium Duty	GAS SERVICE TRUCK	1,197.4	1,866.2	64.2%
2272	2021 Ford F-550	FLEET SERVICE TRUCK	280.4	923.6	30.4%
2273	2024 Ford F-550	FLEET SERVICE TRUCK	72.4	162.0	44.7%
2274	2015 GMC Sierra	FLEET SERVICE TRUCK	249.8	618.5	40.4%
2275	2019 Ford F-550	FLEET SERVICE TRUCK	307.6	1,088.8	28.2%
2276	2020 Ford F-550	FLEET SERVICE TRUCK	431.2	1,010.4	42.7%
2277	2021 Ford F-550	FLEET SERVICE TRUCK	269.3	698.1	38.6%
2278	2024 Ford F-550	FLEET SERVICE TRUCK	260.7	474.2	55.0%
2279	2015 GMC Sierra	FLEET SERVICE TRUCK	177.1	518.6	34.2%
2280	2017 Ford F-350	FLEET SERVICE TRUCK	593.4	1,438.9	41.2%
2281	2015 GMC Sierra	FLEET SERVICE TRUCK	265.3	790.9	33.5%
2282	2009 Chevrolet Silverado	FLEET SERVICE TRUCK	114.7	254.8	45.0%
2283	2021 Ford F-550	FLEET SERVICE TRUCK	261.9	677.7	38.6%
2284	2012 GMC Sierra	FLEET SERVICE TRUCK	289.0	743.7	38.9%
2285	2015 Freightliner M2 106 Medium Duty	FLEET SERVICE TRUCK	187.8	521.3	36.0%
2286	2009 Chevrolet Silverado	FLEET SERVICE TRUCK	161.8	587.5	27.5%
2287	2015 GMC Sierra	FLEET SERVICE TRUCK	873.3	2,505.2	34.9%
2288	2009 Chevrolet Silverado	FLEET SERVICE TRUCK	22.7	72.8	31.2%
2289	2011 Chevrolet Silverado	FLEET SERVICE TRUCK	285.9	1,040.5	27.5%
2290	2012 GMC Sierra	FLEET SERVICE TRUCK	211.5	614.1	34.4%
2291	2015 GMC Sierra	FLEET SERVICE TRUCK	269.7	722.0	37.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2292	2021 Ford F-550	FLEET SERVICE TRUCK	319.0	932.9	34.2%
2293	2012 GMC Sierra	FLEET SERVICE TRUCK	1,278.0	2,262.5	56.5%
2294	2015 GMC Sierra	FLEET SERVICE TRUCK	63.8	181.5	35.2%
2295	2009 Chevrolet Silverado	FLEET SERVICE TRUCK	87.9	313.2	28.1%
2296	2012 GMC Sierra	FLEET SERVICE TRUCK	756.4	1,304.9	58.0%
2297	2009 Chevrolet Silverado	FLEET SERVICE TRUCK	61.9	215.4	28.7%
2298	2019 Ford F-550	FLEET SERVICE TRUCK	329.3	852.7	38.6%
2299	2017 Freightliner M2 106 Medium Duty	FLEET SERVICE TRUCK	281.3	836.0	33.7%
2300	2018 Peterbilt 337	FLEET SERVICE TRUCK	701.4	996.6	70.4%
2301	2019 Ford F-550	FLEET SERVICE TRUCK	158.3	490.1	32.3%
2302	2018 Peterbilt 337	FLEET SERVICE TRUCK	75.9	170.8	44.4%
2303	2017 Ford F-550	FLEET SERVICE TRUCK	349.7	1,145.9	30.5%
2304	2018 Ford F-550	FLEET SERVICE TRUCK	167.7	518.4	32.3%
2305	2017 Ford F-550	FLEET SERVICE TRUCK	509.4	934.8	54.5%
2306	2018 Ford F-550	FLEET SERVICE TRUCK	365.6	785.7	46.5%
2307	2022 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,455.2	3,395.9	72.3%
2308	2003 International 7400	DUMP TRUCK	31.0	81.3	38.1%
2309	2024 Freightliner M2 106 Medium Duty	DUMP TRUCK	2.3	6.4	36.3%
2310	2015 Freightliner M2 106 Medium Duty	DUMP TRUCK	583.1	1,109.7	52.5%
2311	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,218.1	1,695.6	71.8%
2312	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	895.0	1,340.1	66.8%
2313	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,047.3	2,596.7	78.8%
2314	2019 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,578.2	2,618.5	60.3%
2315	2013 International WorkStar 7400	DUMP TRUCK	1,057.7	1,775.8	59.6%
2316	2015 Freightliner M2 106 Medium Duty	DUMP TRUCK	992.5	1,680.2	59.1%
2317	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,433.4	2,337.3	61.3%
2318	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	371.2	625.3	59.4%
2319	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,506.3	2,002.2	75.2%
2320	2019 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,771.4	2,755.7	64.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2321	2013 International WorkStar 7400	DUMP TRUCK	465.7	799.0	58.3%
2322	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,060.1	1,938.3	54.7%
2323	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	328.8	573.3	57.4%
2324	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	3,066.7	4,420.7	69.4%
2325	2013 International WorkStar 7400	DUMP TRUCK	1,181.9	1,635.2	72.3%
2326	2015 Freightliner 108SD	DUMP TRUCK	262.0	613.4	42.7%
2327	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,646.6	2,541.3	64.8%
2328	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,327.4	2,848.4	81.7%
2329	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,372.2	1,946.1	70.5%
2330	2013 International WorkStar 7400	DUMP TRUCK	708.2	1,511.5	46.9%
2331	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	998.0	1,597.8	62.5%
2332	2015 Freightliner 108SD	DUMP TRUCK	175.4	394.9	44.4%
2333	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	993.5	1,561.5	63.6%
2334	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,252.3	1,847.4	67.8%
2335	2013 International WorkStar 7400	DUMP TRUCK	149.9	242.0	61.9%
2336	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,392.4	1,803.1	77.2%
2337	2015 International DuraStar 4400	DUMP TRUCK	1,227.3	2,059.7	59.6%
2338	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	515.1	977.3	52.7%
2339	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	477.3	884.9	53.9%
2340	2012 International WorkStar 7400	DUMP TRUCK	430.6	751.6	57.3%
2341	2013 International WorkStar 7400	DUMP TRUCK	1,040.2	1,448.4	71.8%
2342	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,185.3	1,704.0	69.6%
2343	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,830.4	2,658.1	68.9%
2344	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	2,094.7	3,662.7	57.2%
2345	2012 International WorkStar 7400	DUMP TRUCK	296.8	520.7	57.0%
2346	2013 International WorkStar 7400	DUMP TRUCK	1,476.3	2,493.3	59.2%
2347	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,166.3	1,573.3	74.1%
2348	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,217.6	1,799.8	67.7%
2349	2012 International WorkStar 7400	DUMP TRUCK	68.9	155.9	44.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2350	2013 International WorkStar 7400	DUMP TRUCK	1,367.4	1,858.5	73.6%
2351	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,563.1	2,296.9	68.1%
2352	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,057.3	2,638.3	78.0%
2353	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,273.4	2,851.4	79.7%
2354	2022 Western Star Trucks 4700	DUMP TRUCK	365.8	487.3	75.1%
2355	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,010.6	3,262.1	61.6%
2356	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,205.4	1,892.4	63.7%
2357	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,537.3	2,366.8	65.0%
2358	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,999.2	3,128.3	63.9%
2359	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,692.9	2,416.7	70.1%
2360	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,209.5	1,630.7	74.2%
2361	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,761.7	3,483.2	50.6%
2362	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,300.7	1,751.1	74.3%
2363	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	684.9	1,058.7	64.7%
2364	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,234.1	1,855.8	66.5%
2365	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,199.3	1,790.4	67.0%
2366	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	730.0	1,174.9	62.1%
2367	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	884.5	1,411.3	62.7%
2368	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	719.9	1,084.4	66.4%
2369	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,536.5	2,137.7	71.9%
2370	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	3,109.1	4,511.5	68.9%
2371	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,778.4	2,315.9	76.8%
2372	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	879.4	1,434.8	61.3%
2373	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,828.6	2,548.0	71.8%
2374	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	522.7	971.5	53.8%
2375	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,523.7	2,217.3	68.7%
2376	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	920.4	1,600.6	57.5%
2377	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,423.8	2,321.0	61.3%
2378	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,350.4	1,963.1	68.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2379	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	731.3	1,376.1	53.1%
2380	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	980.6	1,596.6	61.4%
2381	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,029.6	2,570.1	79.0%
2382	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,640.5	2,645.4	62.0%
2383	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	84.9	177.6	47.8%
2384	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,157.2	1,668.6	69.4%
2385	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,488.5	2,090.3	71.2%
2386	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	850.6	1,313.0	64.8%
2387	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	947.9	1,307.6	72.5%
2388	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,259.9	1,718.9	73.3%
2389	2014 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,803.2	2,239.7	80.5%
2390	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,697.1	2,378.2	71.4%
2391	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,492.0	2,166.2	68.9%
2392	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	751.4	1,407.9	53.4%
2393	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,246.9	2,893.2	77.7%
2394	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,451.7	1,969.3	73.7%
2395	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,373.4	1,899.7	72.3%
2396	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	754.3	1,137.7	66.3%
2397	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,168.0	1,690.3	69.1%
2398	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	840.3	1,489.0	56.4%
2399	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	861.3	1,393.2	61.8%
2400	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	904.5	1,486.9	60.8%
2401	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	912.6	1,488.4	61.3%
2402	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,644.9	2,143.8	76.7%
2403	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,698.1	2,360.2	71.9%
2404	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,365.8	2,005.4	68.1%
2405	2013 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,203.3	1,739.0	69.2%
2406	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	196.2	307.0	63.9%
2407	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,025.0	1,593.7	64.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2408	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,471.4	2,162.9	68.0%
2409	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	215.2	293.9	73.2%
2410	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,918.6	2,574.5	74.5%
2411	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	453.4	792.3	57.2%
2412	2019 Peterbilt 337	DUMP TRUCK	1,307.7	1,725.1	75.8%
2413	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,567.6	2,269.1	69.1%
2414	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	236.7	445.9	53.1%
2415	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,685.5	2,244.7	75.1%
2416	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,276.5	1,837.8	69.5%
2417	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	904.3	1,457.3	62.1%
2418	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	746.3	1,205.9	61.9%
2419	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,634.1	2,670.9	61.2%
2420	2017 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,132.6	2,866.7	74.4%
2421	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,423.7	1,994.4	71.4%
2422	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,383.4	2,944.3	81.0%
2423	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,124.4	1,736.8	64.7%
2424	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,363.0	1,890.5	72.1%
2425	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	994.1	1,442.4	68.9%
2426	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,070.6	2,692.9	76.9%
2427	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,072.1	2,600.9	79.7%
2428	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	230.7	393.1	58.7%
2429	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,317.5	2,776.8	83.5%
2430	2023 Ford F-750	DUMP TRUCK	447.0	581.2	76.9%
2431	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,662.8	2,191.8	75.9%
2432	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	2,781.2	4,734.8	58.7%
2433	2023 Ford F-750	DUMP TRUCK	296.7	461.1	64.4%
2434	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,363.1	1,933.9	70.5%
2435	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,877.6	2,414.1	77.8%
2436	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,060.8	1,601.1	66.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2437	2022 Freightliner M2 106 Medium Duty	DUMP TRUCK	204.5	515.9	39.6%
2438	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,083.0	1,650.3	65.6%
2439	2016 Freightliner M2 106 Medium Duty	DUMP TRUCK	997.7	1,464.2	68.1%
2440	2018 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,208.2	2,226.3	54.3%
2441	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,043.5	1,609.2	64.8%
2442	2019 Freightliner 108SD	DUMP TRUCK	182.4	403.7	45.2%
2443	2022 Freightliner 108SD	DUMP TRUCK	135.2	276.0	49.0%
2444	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,558.0	2,102.0	74.1%
2445	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,890.2	2,346.9	80.5%
2446	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,523.7	2,113.5	72.1%
2447	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,594.5	2,077.4	76.8%
2448	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,608.2	2,242.4	71.7%
2449	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,031.6	1,649.8	62.5%
2450	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	987.1	1,508.6	65.4%
2451	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	2,218.1	2,734.6	81.1%
2452	2014 International WorkStar 7400	DUMP TRUCK	187.6	397.6	47.2%
2453	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	624.5	985.0	63.4%
2454	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,069.4	1,650.1	64.8%
2455	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	588.0	1,050.0	56.0%
2456	2022 Western Star Trucks 4700	DUMP TRUCK	69.5	131.3	52.9%
2457	2022 Western Star Trucks 4700	DUMP TRUCK	139.2	196.9	70.7%
2458	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,671.3	2,226.7	75.1%
2459	2021 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,060.6	1,519.2	69.8%
2460	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,003.2	1,606.2	62.5%
2461	2022 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,540.5	2,189.2	70.4%
2462	2018 Freightliner 114SD	DUMP TRUCK	928.3	1,301.7	71.3%
2463	2020 Freightliner M2 106 Medium Duty	DUMP TRUCK	1,296.5	1,767.1	73.4%
2464	2022 Ford F-750	DUMP TRUCK	28.9	39.1	74.0%
2465	2018 Freightliner 114SD	DUMP TRUCK	509.5	873.8	58.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2466	2020 International HV607	DUMP TRUCK	110.6	176.8	62.5%
2467	2020 Freightliner M2 106 Medium Duty	CRANE	171.6	346.2	49.6%
2468	2014 International WorkStar 7400	CRANE	602.5	927.2	65.0%
2469	2017 International WorkStar 7400	CRANE	231.9	649.8	35.7%
2470	2020 Freightliner M2 106 Medium Duty	CRANE	112.3	267.4	42.0%
2471	2020 Freightliner M2 106 Medium Duty	CRANE	239.2	472.5	50.6%
2472	2020 Freightliner M2 106 Medium Duty	CRANE	194.3	312.7	62.1%
2473	2020 Freightliner M2 106 Medium Duty	CRANE	257.0	587.6	43.7%
2474	2012 International WorkStar 7400	CRANE	962.7	1,219.9	78.9%
2475	2020 Freightliner M2 106 Medium Duty	CRANE	106.3	289.8	36.7%
2476	2012 International WorkStar 7400	CRANE	717.9	1,079.5	66.5%
2477	2020 Freightliner M2 106 Medium Duty	CRANE	839.2	1,393.7	60.2%
2478	2012 International WorkStar 7400	CRANE	845.6	1,122.3	75.3%
2479	2020 Freightliner M2 106 Medium Duty	CRANE	202.9	418.1	48.5%
2480	2012 International WorkStar 7400	CRANE	197.6	458.4	43.1%
2481	2012 International WorkStar 7400	CRANE	646.8	882.1	73.3%
2482	2010 Chevrolet Silverado	DRIP TRUCK	105.3	168.0	62.7%
2483		FLATBED/STAKE RACK	2,341.0	2,497.9	93.7%
2484	2015 Ford F-450	FLATBED/STAKE RACK	686.2	1,327.9	51.7%
2485	2017 Ford F-450	FLATBED/STAKE RACK	113.7	265.9	42.8%
2486	2009 International 7400	FLATBED/STAKE RACK	203.0	403.0	50.4%
2487	2020 Ford F-450	FLATBED/STAKE RACK	356.8	596.6	59.8%
2488	2022 Ford F-550	FLATBED/STAKE RACK	1,613.5	2,993.6	53.9%
2489	2013 International WorkStar 7400	FLATBED/STAKE RACK	143.4	337.5	42.5%
2490	2014 Ford F-350	FLEET SERVICE TRUCK	368.5	500.4	73.6%
2491	2015 Ford F-450	FLATBED/STAKE RACK	678.7	1,527.3	44.4%
2492	2009 International 7400	FLATBED/STAKE RACK	100.5	209.6	47.9%
2493	2015 Ford F-450	FLATBED/STAKE RACK	1,250.2	2,248.4	55.6%
2494	2016 Ford F-450	FLATBED/STAKE RACK	62.6	105.3	59.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2495	2019 Ford F-550	FLATBED/STAKE RACK	1,558.7	1,829.4	85.2%
2496	2024 Ford Transit Van	FLATBED/STAKE RACK	936.1	1,350.7	69.3%
2497	2012 Ford F-450	FLATBED/STAKE RACK	2,491.0	2,896.7	86.0%
2498	2014 Ford F-450	FLATBED/STAKE RACK	351.6	846.7	41.5%
2499	2015 Ford F-450	FLATBED/STAKE RACK	2,933.9	3,633.6	80.7%
2500	2019 Ford F-450	FLATBED/STAKE RACK	511.4	1,851.7	27.6%
2501	2020 Ford F-450	FLATBED/STAKE RACK	291.0	552.4	52.7%
2502	2014 Ford F-450	FLATBED/STAKE RACK	804.9	1,034.2	77.8%
2503	2015 Ford F-450	FLATBED/STAKE RACK	267.6	911.9	29.3%
2504	2016 Ford F-450	FLATBED/STAKE RACK	1,544.0	2,726.8	56.6%
2505	2019 Ford F-450	FLATBED/STAKE RACK	425.4	683.6	62.2%
2506	2010 Chevrolet Silverado	FLATBED/STAKE RACK	75.3	170.2	44.2%
2507	2014 Ford F-450	FLATBED/STAKE RACK	2,925.1	3,477.4	84.1%
2508	2015 Ford F-450	FLATBED/STAKE RACK	2,414.4	2,886.5	83.6%
2509	2019 Ford F-450	FLATBED/STAKE RACK	2,227.6	3,591.6	62.0%
2510	2010 Chevrolet Silverado	FLATBED/STAKE RACK	1,619.2	2,810.2	57.6%
2511	2021 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	335.8	541.1	62.1%
2512	2012 International DuraStar 4400	FLATBED/STAKE RACK	85.4	152.3	56.1%
2513	2014 Ford F-450	FLATBED/STAKE RACK	140.1	236.2	59.3%
2514	2015 Ford F-450	FLATBED/STAKE RACK	1,215.5	1,746.3	69.6%
2515	2010 Ford F-450	FLATBED/STAKE RACK	368.4	632.7	58.2%
2516	2022 Ford F-550	FLATBED/STAKE RACK	1,570.7	2,850.2	55.1%
2517	2014 Ford F-450	FLATBED/STAKE RACK	1,303.2	1,605.5	81.2%
2518	2015 Ford F-450	FLATBED/STAKE RACK	530.8	1,296.0	41.0%
2519	2010 Ford F-450	FLATBED/STAKE RACK	54.1	92.6	58.5%
2520	2014 Ford F-450	FLATBED/STAKE RACK	1,800.9	2,456.0	73.3%
2521	2010 Ford F-450	FLATBED/STAKE RACK	199.6	294.6	67.8%
2522	2014 Ford F-450	FLATBED/STAKE RACK	2,376.6	2,851.9	83.3%
2523	2015 Ford F-450	FLATBED/STAKE RACK	1,312.5	2,149.6	61.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2524	2019 Ford F-450	FLATBED/STAKE RACK	4,510.5	6,072.3	74.3%
2525	2020 Ford F-450	FLATBED/STAKE RACK	93.8	329.2	28.5%
2526	2012 International WorkStar 7400	FLATBED/STAKE RACK	392.9	603.7	65.1%
2527	2014 Ford F-450	FLATBED/STAKE RACK	1,130.6	1,531.4	73.8%
2528	2016 Ford F-550	FLATBED/STAKE RACK	1,299.2	1,621.4	80.1%
2529	2012 International WorkStar 7400	FLATBED/STAKE RACK	96.9	171.5	56.5%
2530	2014 Ford F-450	FLATBED/STAKE RACK	367.9	1,404.1	26.2%
2531	2015 Ford F-450	FLATBED/STAKE RACK	676.9	1,643.9	41.2%
2532	2016 Ford F-550	FLATBED/STAKE RACK	1,748.7	2,702.7	64.7%
2533	2019 Ford F-450	FLATBED/STAKE RACK	1,046.5	1,679.9	62.3%
2534	2012 Ford F-450	FLATBED/STAKE RACK	70.5	200.0	35.3%
2535	2015 Ford F-450	FLATBED/STAKE RACK	261.9	700.2	37.4%
2536	2016 Ford F-550	FLATBED/STAKE RACK	1,477.2	2,195.8	67.3%
2537	2019 Ford F-450	FLATBED/STAKE RACK	548.7	871.7	62.9%
2538	2012 Ford F-450	FLATBED/STAKE RACK	2,487.8	3,170.6	78.5%
2539	2015 Ford F-450	FLATBED/STAKE RACK	242.7	507.9	47.8%
2540	2016 Ford F-550	FLATBED/STAKE RACK	1,390.0	1,765.6	78.7%
2541	2012 Ford F-450	FLATBED/STAKE RACK	78.4	172.6	45.4%
2542	2016 Ford F-550	FLATBED/STAKE RACK	2,406.8	3,377.4	71.3%
2543	2009 Ford F-450	FLATBED/STAKE RACK	236.2	326.2	72.4%
2544	2012 Ford F-450	FLATBED/STAKE RACK	95.9	158.4	60.6%
2545	2015 Ford F-450	FLATBED/STAKE RACK	327.3	1,040.4	31.5%
2546	2016 Ford F-550	FLATBED/STAKE RACK	3,101.5	3,948.9	78.5%
2547	2012 Ford F-450	FLATBED/STAKE RACK	2,477.1	2,931.6	84.5%
2548	2016 Ford F-550	FLATBED/STAKE RACK	1,208.1	1,740.1	69.4%
2549	2012 Ford F-450	FLATBED/STAKE RACK	256.8	475.6	54.0%
2550	2015 Ford F-750	FLATBED/STAKE RACK	93.4	133.6	69.9%
2551	2016 Ford F-550	FLATBED/STAKE RACK	1,524.5	1,944.6	78.4%
2552	1991 International 4700	FLATBED/STAKE RACK	88.7	230.3	38.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2553	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	1,805.8	2,614.0	69.1%
2554	2023 Ram 5500 Chassis	FLATBED/STAKE RACK	534.2	940.3	56.8%
2555	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	1,571.4	2,104.2	74.7%
2556	2017 Ford F-550	FLATBED/STAKE RACK	1,786.2	2,938.0	60.8%
2557	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	2,279.2	3,116.9	73.1%
2558	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	32.1	60.2	53.3%
2559	2017 Ford F-550	FLATBED/STAKE RACK	1,287.5	1,554.0	82.9%
2560	2017 Ford F-550	FLATBED/STAKE RACK	1,711.1	2,076.0	82.4%
2561	2020 Ford F-550	FLATBED/STAKE RACK	1,027.3	1,965.6	52.3%
2562	2016 Ford F-550	FLATBED/STAKE RACK	1,492.5	1,834.8	81.3%
2563	2017 Ford F-550	FLATBED/STAKE RACK	2,148.7	2,604.8	82.5%
2564	2019 Ford F-550	FLATBED/STAKE RACK	229.1	503.4	45.5%
2565	2020 Ford F-550	FLATBED/STAKE RACK	2,889.8	3,846.7	75.1%
2566	2023 Ram 5500 Chassis	FLATBED/STAKE RACK	433.4	640.0	67.7%
2567	2017 Ford F-550	FLATBED/STAKE RACK	1,596.4	2,026.6	78.8%
2568	2020 Ford F-550	FLATBED/STAKE RACK	1,794.6	3,468.0	51.7%
2569	2022 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	868.4	1,504.4	57.7%
2570	2017 Ford F-550	FLATBED/STAKE RACK	3,172.0	3,726.8	85.1%
2571	2018 Ford F-550	FLATBED/STAKE RACK	1,597.9	2,725.7	58.6%
2572	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	298.8	373.4	80.0%
2573	2017 Ford F-550	FLATBED/STAKE RACK	3,546.5	3,981.5	89.1%
2574	2018 Ford F-550	FLATBED/STAKE RACK	1,426.6	2,559.7	55.7%
2575	2018 Ford F-550	FLATBED/STAKE RACK	1,503.2	2,879.6	52.2%
2576	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	806.8	1,140.5	70.7%
2577	2017 Ford F-550	FLATBED/STAKE RACK	1,517.3	1,942.3	78.1%
2578	2016 Ford F-550	FLATBED/STAKE RACK	1,706.7	2,064.4	82.7%
2579	2017 Ford F-550	FLATBED/STAKE RACK	1,733.8	2,499.9	69.4%
2580	2020 Ford F-550	FLATBED/STAKE RACK	1,823.0	2,757.4	66.1%
2581	2016 Ford F-550	FLATBED/STAKE RACK	2,950.4	4,186.6	70.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2582	2017 Ford F-550	FLATBED/STAKE RACK	1,000.8	1,645.2	60.8%
2583	2020 Ford F-550	FLATBED/STAKE RACK	2,720.4	3,872.8	70.2%
2584	2022 Chevrolet Silverado 4500HD / Silverado 5500HD	FLATBED/STAKE RACK	1,206.9	1,623.5	74.3%
2585	2022 Ford F-550	FLATBED/STAKE RACK	481.4	669.1	71.9%
2586	2016 Ford F-550	FLATBED/STAKE RACK	2,314.2	2,672.9	86.6%
2587	2017 Ford F-550	FLATBED/STAKE RACK	1,771.1	2,741.4	64.6%
2588	2022 Chevrolet Silverado 4500HD / Silverado 5500HD	FLATBED/STAKE RACK	1,077.8	1,462.8	73.7%
2589	2016 Ford F-550	FLATBED/STAKE RACK	1,938.1	2,328.8	83.2%
2590	2017 Ford F-550	FLATBED/STAKE RACK	640.3	1,045.8	61.2%
2591	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	382.7	907.9	42.2%
2592	2016 Ford F-550	FLATBED/STAKE RACK	2,922.4	3,880.0	75.3%
2593	2016 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	2,240.0	2,691.2	83.2%
2594	2023 Ram 5500 Chassis	FLATBED/STAKE RACK	761.1	1,317.6	57.8%
2595	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	793.7	1,552.8	51.1%
2596	2016 Ford F-550	FLATBED/STAKE RACK	978.6	1,540.5	63.5%
2597	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	600.5	1,195.6	50.2%
2598	2016 Ford F-550	FLATBED/STAKE RACK	1,543.9	1,893.7	81.5%
2599	2016 Ford F-550	FLATBED/STAKE RACK	1,074.1	1,629.6	65.9%
2600	2016 Ford F-550	FLATBED/STAKE RACK	861.5	1,708.2	50.4%
2601	2024 Ram 5500 Chassis	FLATBED/STAKE RACK	1,284.9	1,837.7	69.9%
2602	2016 Ford F-550	FLATBED/STAKE RACK	1,496.1	2,115.5	70.7%
2603	2020 Ford F-450	ELECTRIC SERVICE TRUCK	464.7	1,092.5	42.5%
2604	2013 Ford F-450	ELECTRIC SERVICE TRUCK	986.8	1,687.2	58.5%
2605	2016 Ford F-450	ELECTRIC SERVICE TRUCK	781.0	1,183.9	66.0%
2606	2011 Ford F-350	ELECTRIC SERVICE TRUCK	3,437.1	4,174.1	82.3%
2607	2015 Ford F-450	ELECTRIC SERVICE TRUCK	1,451.0	2,750.8	52.8%
2608	2016 Ford F-450	ELECTRIC SERVICE TRUCK	1,002.6	1,415.9	70.8%
2609	2019 Ford F-450	ELECTRIC SERVICE TRUCK	2,391.3	3,485.2	68.6%
2610	2007 GMC Sierra	ELECTRIC SERVICE TRUCK	513.0	940.5	54.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2611	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,582.1	2,457.1	64.4%
2612	2019 Ford F-450	ELECTRIC SERVICE TRUCK	492.9	1,456.0	33.9%
2613	2019 Ford F-450	ELECTRIC SERVICE TRUCK	936.4	2,320.9	40.3%
2614	2012 Ford F-450	ELECTRIC SERVICE TRUCK	326.7	519.5	62.9%
2615	2019 Ford F-450	ELECTRIC SERVICE TRUCK	574.9	1,872.4	30.7%
2616	2011 Ford F-350	ELECTRIC SERVICE TRUCK	828.3	1,303.9	63.5%
2617	2012 Ford F-450	ELECTRIC SERVICE TRUCK	1,622.0	2,369.4	68.5%
2618	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,648.2	2,214.4	74.4%
2619	2012 Ford F-450	ELECTRIC SERVICE TRUCK	1,784.0	2,784.4	64.1%
2620	2012 Ford F-450	ELECTRIC SERVICE TRUCK	588.5	1,226.5	48.0%
2621	2015 Ford F-450	ELECTRIC SERVICE TRUCK	2,311.2	3,264.5	70.8%
2622	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,420.2	2,419.1	58.7%
2623	2011 Ford F-350	ELECTRIC SERVICE TRUCK	552.3	902.0	61.2%
2624	2012 Ford F-450	ELECTRIC SERVICE TRUCK	822.1	1,463.2	56.2%
2625	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,223.1	2,084.2	58.7%
2626	2012 Ford F-450	ELECTRIC SERVICE TRUCK	1,661.3	2,309.4	71.9%
2627	2019 Ford F-450	ELECTRIC SERVICE TRUCK	2,071.0	3,107.6	66.6%
2628	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,342.3	2,729.3	49.2%
2629	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,513.6	2,240.8	67.5%
2630	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,578.8	2,803.8	56.3%
2631	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,032.8	1,758.9	58.7%
2632	2022 Ford F-450	ELECTRIC SERVICE TRUCK	731.8	1,995.2	36.7%
2633	2019 Ford F-450	ELECTRIC SERVICE TRUCK	2,429.7	3,376.3	72.0%
2634	2022 Ford F-450	ELECTRIC SERVICE TRUCK	2,042.2	3,107.7	65.7%
2635	2019 Ford F-450	ELECTRIC SERVICE TRUCK	450.9	768.2	58.7%
2636	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,081.3	2,013.4	53.7%
2637	2019 Ford F-450	ELECTRIC SERVICE TRUCK	2,251.1	2,950.8	76.3%
2638	2022 Ford F-450	ELECTRIC SERVICE TRUCK	896.5	2,439.8	36.7%
2639	2019 Ford F-450	ELECTRIC SERVICE TRUCK	1,030.3	1,810.0	56.9%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2640	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,101.6	2,541.8	43.3%
2641	2022 Ford F-450	ELECTRIC SERVICE TRUCK	836.6	1,937.2	43.2%
2642	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,838.6	4,030.0	45.6%
2643	2022 Ford F-450	ELECTRIC SERVICE TRUCK	2,069.5	3,024.4	68.4%
2644	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,543.3	2,125.6	72.6%
2645	2022 Ford F-450	ELECTRIC SERVICE TRUCK	554.6	1,418.0	39.1%
2646	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,383.1	2,241.3	61.7%
2647	2022 Ford F-450	ELECTRIC SERVICE TRUCK	2,154.3	3,126.7	68.9%
2648	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,229.7	2,124.4	57.9%
2649	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,178.7	1,803.4	65.4%
2650	2022 Ford F-450	ELECTRIC SERVICE TRUCK	1,378.6	2,275.7	60.6%
2651	2022 Ford F-450	ELECTRIC SERVICE TRUCK	2,776.4	3,863.3	71.9%
2652	2020 Ford F-550	SERVICE BUCKET TRUCK	901.0	1,550.3	58.1%
2653	2022 Ford F-550	ELECTRIC SERVICE TRUCK	1,393.6	2,100.6	66.3%
2654	2020 Ford F-550	SERVICE BUCKET TRUCK	234.7	770.4	30.5%
2655	2020 Ford F-550	SERVICE BUCKET TRUCK	410.1	1,189.6	34.5%
2656	2012 Ford F-550	SERVICE BUCKET TRUCK	627.1	1,545.2	40.6%
2657	2024 Ford F-550	SERVICE BUCKET TRUCK	509.1	798.4	63.8%
2658	2015 Ford F-550	SERVICE BUCKET TRUCK	975.1	2,340.5	41.7%
2659	2016 Ford F-550	SERVICE BUCKET TRUCK	257.1	650.6	39.5%
2660	2017 Ford F-550	SERVICE BUCKET TRUCK	709.2	1,775.9	39.9%
2661	2020 Ford F-550	SERVICE BUCKET TRUCK	556.1	1,132.3	49.1%
2662	2013 Ford F-550	SERVICE BUCKET TRUCK	1,131.2	1,755.2	64.4%
2663	2016 Ford F-550	SERVICE BUCKET TRUCK	1,058.9	2,524.9	41.9%
2664	2017 Ford F-550	SERVICE BUCKET TRUCK	944.8	3,459.3	27.3%
2665	2018 Ford F-550	SERVICE BUCKET TRUCK	1,160.7	3,630.0	32.0%
2666	2020 Ford F-550	SERVICE BUCKET TRUCK	304.7	699.1	43.6%
2667	2021 Ford F-550	SERVICE BUCKET TRUCK	919.3	2,836.4	32.4%
2668	2014 Ford F-550	SERVICE BUCKET TRUCK	860.8	1,957.8	44.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2669	2015 Ford F-550	SERVICE BUCKET TRUCK	672.5	2,347.7	28.6%
2670	2016 Ford F-550	SERVICE BUCKET TRUCK	1,604.9	3,928.5	40.9%
2671	2017 Ford F-550	SERVICE BUCKET TRUCK	473.8	1,434.4	33.0%
2672	2018 Ford F-550	SERVICE BUCKET TRUCK	1,535.4	4,082.9	37.6%
2673	2020 Ford F-550	SERVICE BUCKET TRUCK	749.1	2,800.9	26.7%
2674	2021 Ford F-550	SERVICE BUCKET TRUCK	2,226.8	3,989.0	55.8%
2675	2023 Ford F-550	SERVICE BUCKET TRUCK	749.7	1,340.7	55.9%
2676	2024 Ford F-550	SERVICE BUCKET TRUCK	677.2	1,468.0	46.1%
2677	2016 Ford F-550	SERVICE BUCKET TRUCK	1,942.3	5,171.9	37.6%
2678	2017 Ford F-550	SERVICE BUCKET TRUCK	2,581.9	4,494.1	57.5%
2679	2020 Ford F-550	SERVICE BUCKET TRUCK	439.5	884.9	49.7%
2680	2021 Ford F-550	SERVICE BUCKET TRUCK	2,397.4	5,447.7	44.0%
2681	2023 Ford F-550	SERVICE BUCKET TRUCK	268.1	864.3	31.0%
2682	2014 Ford F-550	SERVICE BUCKET TRUCK	709.2	1,481.4	47.9%
2683	2016 Ford F-550	SERVICE BUCKET TRUCK	454.7	1,320.9	34.4%
2684	2021 Ford F-550	SERVICE BUCKET TRUCK	1,194.2	3,682.1	32.4%
2685	2014 Ford F-550	SERVICE BUCKET TRUCK	921.4	1,631.2	56.5%
2686	2016 Ford F-550	SERVICE BUCKET TRUCK	520.2	1,783.8	29.2%
2687	2017 Ford F-550	SERVICE BUCKET TRUCK	1,630.7	4,419.3	36.9%
2688	2018 Ford F-550	SERVICE BUCKET TRUCK	2,576.2	5,373.7	47.9%
2689	2020 Ford F-550	SERVICE BUCKET TRUCK	1,415.1	3,690.7	38.3%
2690	2023 Ford F-550	SERVICE BUCKET TRUCK	201.1	692.1	29.1%
2691	2014 Ford F-550	SERVICE BUCKET TRUCK	733.7	1,426.6	51.4%
2692	2015 Ford F-550	SERVICE BUCKET TRUCK	475.0	1,686.6	28.2%
2693	2016 Ford F-550	SERVICE BUCKET TRUCK	82.7	174.1	47.5%
2694	2017 Ford F-550	SERVICE BUCKET TRUCK	2,366.9	4,352.5	54.4%
2695	2018 Ford F-550	SERVICE BUCKET TRUCK	1,538.5	2,914.7	52.8%
2696	2020 Ford F-550	SERVICE BUCKET TRUCK	1,852.7	3,102.4	59.7%
2697	2016 Ford F-550	SERVICE BUCKET TRUCK	2,019.1	4,324.5	46.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2698	2018 Ford F-550	SERVICE BUCKET TRUCK	2,091.9	3,809.9	54.9%
2699	2020 Ford F-550	SERVICE BUCKET TRUCK	1,292.9	3,705.0	34.9%
2700	2023 Ford F-550	SERVICE BUCKET TRUCK	943.4	2,524.1	37.4%
2701	2014 Ford F-550	SERVICE BUCKET TRUCK	665.8	1,559.1	42.7%
2702	2015 Ford F-550	SERVICE BUCKET TRUCK	863.5	1,857.8	46.5%
2703	2018 Ford F-550	SERVICE BUCKET TRUCK	983.6	2,299.3	42.8%
2704	2019 Ford F-550	SERVICE BUCKET TRUCK	1,093.0	3,262.0	33.5%
2705	2020 Ford F-550	SERVICE BUCKET TRUCK	257.8	559.3	46.1%
2706	2015 Ford F-550	SERVICE BUCKET TRUCK	2,228.1	3,512.2	63.4%
2707	2017 Ford F-550	SERVICE BUCKET TRUCK	1,093.6	3,518.7	31.1%
2708	2018 Ford F-550	SERVICE BUCKET TRUCK	825.5	2,516.5	32.8%
2709	2020 Ford F-550	SERVICE BUCKET TRUCK	2,137.6	4,724.8	45.2%
2710	2023 Ford F-550	SERVICE BUCKET TRUCK	347.6	964.6	36.0%
2711	2015 Ford F-550	SERVICE BUCKET TRUCK	1,043.4	1,788.6	58.3%
2712	2017 Ford F-550	SERVICE BUCKET TRUCK	968.3	3,694.6	26.2%
2713	2019 Ford F-550	SERVICE BUCKET TRUCK	4,282.5	6,071.0	70.5%
2714	2020 Ford F-550	SERVICE BUCKET TRUCK	2,835.3	4,798.7	59.1%
2715	2023 Ford F-550	SERVICE BUCKET TRUCK	375.7	1,324.1	28.4%
2716	2015 Ford F-550	SERVICE BUCKET TRUCK	1,729.5	2,777.6	62.3%
2717	2017 Ford F-550	SERVICE BUCKET TRUCK	466.0	1,508.6	30.9%
2718	2021 Ford F-550	SERVICE BUCKET TRUCK	3,288.3	5,078.2	64.8%
2719	2023 Ford F-550	SERVICE BUCKET TRUCK	1,179.1	2,541.0	46.4%
2720	2015 Ford F-550	SERVICE BUCKET TRUCK	1,927.4	3,205.4	60.1%
2721	2017 Ford F-550	SERVICE BUCKET TRUCK	765.5	2,551.8	30.0%
2722	2018 Ford F-550	SERVICE BUCKET TRUCK	1,080.4	3,836.8	28.2%
2723	2020 Ford F-550	SERVICE BUCKET TRUCK	4,666.4	7,072.3	66.0%
2724	2015 Ford F-550	SERVICE BUCKET TRUCK	1,051.4	2,298.5	45.7%
2725	2018 Ford F-550	SERVICE BUCKET TRUCK	1,457.2	3,347.7	43.5%
2726	2019 Ford F-550	SERVICE BUCKET TRUCK	1,408.8	3,150.7	44.7%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
2727	2020 Ford F-550	SERVICE BUCKET TRUCK	465.6	1,062.3	43.8%
2728	2011 Ford F-550	SERVICE BUCKET TRUCK	929.6	1,515.7	61.3%
2729	2023 Ford F-550	SERVICE BUCKET TRUCK	638.3	1,786.1	35.7%
2730	2015 Ford F-550	SERVICE BUCKET TRUCK	640.2	1,533.5	41.7%
2731	2018 Ford F-550	SERVICE BUCKET TRUCK	1,902.3	5,545.4	34.3%
2732	2020 Ford F-550	SERVICE BUCKET TRUCK	1,596.5	3,919.2	40.7%
2733	2023 Ford F-550	SERVICE BUCKET TRUCK	421.0	1,118.0	37.7%
2734	2018 Ford F-550	SERVICE BUCKET TRUCK	510.0	1,300.8	39.2%
2735	2020 Ford F-550	SERVICE BUCKET TRUCK	975.6	1,704.1	57.2%
2736	2023 Ford F-550	SERVICE BUCKET TRUCK	551.5	2,046.2	27.0%
2737	2019 Ford F-550	SERVICE BUCKET TRUCK	1,720.9	3,949.7	43.6%
2738	2020 Ford F-550	SERVICE BUCKET TRUCK	298.5	748.4	39.9%
2739	2023 Ford F-550	SERVICE BUCKET TRUCK	669.5	1,321.2	50.7%
2740	2019 Ford F-550	SERVICE BUCKET TRUCK	1,360.6	3,692.9	36.8%
2741	2020 Ford F-550	SERVICE BUCKET TRUCK	1,499.3	2,451.1	61.2%
2742	2018 Ford F-550	SERVICE BUCKET TRUCK	1,363.7	3,921.3	34.8%
2743	2020 Ford F-550	SERVICE BUCKET TRUCK	1,038.9	2,259.8	46.0%
2744	2021 Ford F-550	SERVICE BUCKET TRUCK	2,011.3	4,955.9	40.6%
2745	2012 Ford F-550	SERVICE BUCKET TRUCK	2,199.6	3,247.0	67.7%
2746	2020 Ford F-550	SERVICE BUCKET TRUCK	1,359.9	2,442.5	55.7%
2747	2021 Ford F-550	SERVICE BUCKET TRUCK	1,534.6	3,175.4	48.3%
2748	2019 Ford F-550	SERVICE BUCKET TRUCK	1,269.8	2,034.0	62.4%
2749	2020 Ford F-550	SERVICE BUCKET TRUCK	935.4	3,491.0	26.8%
2750	2021 Ford F-550	SERVICE BUCKET TRUCK	3,139.5	5,531.4	56.8%
2751	2012 Ford F-550	SERVICE BUCKET TRUCK	287.1	728.5	39.4%
2752	2019 Ford F-550	SERVICE BUCKET TRUCK	1,022.5	2,078.4	49.2%
2753	2021 Ford F-550	SERVICE BUCKET TRUCK	2,788.3	4,537.4	61.5%
2754	2012 Ford F-550	SERVICE BUCKET TRUCK	594.6	1,048.6	56.7%
2755	2018 Ford F-550	SERVICE BUCKET TRUCK	875.9	3,101.7	28.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2756	2021 Ford F-550	SERVICE BUCKET TRUCK	3,045.9	4,756.8	64.0%
2757	2012 Ford F-550	SERVICE BUCKET TRUCK	605.7	1,327.5	45.6%
2758	2019 Ford F-550	SERVICE BUCKET TRUCK	256.5	874.9	29.3%
2759	2021 Ford F-550	SERVICE BUCKET TRUCK	1,147.4	3,888.8	29.5%
2760	2019 Ford F-550	SERVICE BUCKET TRUCK	2,655.9	5,519.1	48.1%
2761	2021 Ford F-550	SERVICE BUCKET TRUCK	903.7	2,819.4	32.1%
2762	2021 Ford F-550	SERVICE BUCKET TRUCK	1,220.5	2,593.7	47.1%
2763	2021 Ford F-550	SERVICE BUCKET TRUCK	857.6	2,304.2	37.2%
2764	2018 Ford F-550	SERVICE BUCKET TRUCK	1,723.2	4,743.9	36.3%
2765	2021 Ram 5500 Chassis	SERVICE BUCKET TRUCK	844.8	2,537.2	33.3%
2766	2018 Ford F-550	SERVICE BUCKET TRUCK	990.2	3,156.2	31.4%
2767	2021 Ram 5500 Chassis	SERVICE BUCKET TRUCK	3,459.8	5,534.5	62.5%
2768	2018 Ford F-550	SERVICE BUCKET TRUCK	882.0	2,933.0	30.1%
2769	2016 Freightliner M2 106 Medium Duty	SERVICE BUCKET TRUCK	783.0	2,399.7	32.6%
2770	2022 Ram 5500 Chassis	SERVICE BUCKET TRUCK	6.0	12.3	48.4%
2771	2016 Freightliner M2 106 Medium Duty	SERVICE BUCKET TRUCK	712.4	2,720.1	26.2%
2772	2014 Ford F-550	SERVICE BUCKET TRUCK	569.8	1,432.6	39.8%
2773	2021 International MV607	STREETLIGHT TRUCK	1,563.2	3,741.5	41.8%
2774	2012 International DuraStar 4300	STREETLIGHT TRUCK	1,920.6	3,218.3	59.7%
2775	2012 International DuraStar 4300	STREETLIGHT TRUCK	222.2	740.8	30.0%
2776	2012 International DuraStar 4300	STREETLIGHT TRUCK	656.1	2,374.4	27.6%
2777	2012 International DuraStar 4300	STREETLIGHT TRUCK	190.2	439.9	43.2%
2778	2012 International DuraStar 4300	STREETLIGHT TRUCK	2,013.6	3,413.8	59.0%
2779	2012 International DuraStar 4300	STREETLIGHT TRUCK	294.4	478.3	61.6%
2780	2015 Freightliner MT45 Chassis	VAN	350.7	425.9	82.4%
2781	2011 Freightliner MT45 Chassis	VAN	123.9	169.5	73.1%
2782	2020 Freightliner M2 106 Medium Duty	ELECTRIC SERVICE TRUCK	475.2	723.3	65.7%
2783	2022 Freightliner M2 106 Medium Duty	ELECTRIC SERVICE TRUCK	1,245.3	1,858.5	67.0%
2784	2013 Freightliner M2 106 Medium Duty	ELECTRIC SERVICE TRUCK	107.0	151.7	70.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2785	2014 Freightliner M2 106 Medium Duty	ELECTRIC SERVICE TRUCK	196.7	369.9	53.2%
2786	2014 Ford E-450 Super Duty	VAN	3,386.5	3,982.6	85.0%
2787	2014 Ford E-450 Super Duty	VAN	4,185.2	4,689.3	89.3%
2788	2014 Ford E-450 Super Duty	VAN	1,485.8	1,746.0	85.1%
2789	2014 Ford E-450 Super Duty	VAN	3,288.2	3,675.5	89.5%
2790	2014 Ford E-450 Super Duty	VAN	2,980.5	3,444.6	86.5%
2791	2014 Ford E-450 Super Duty	VAN	2,103.9	2,483.0	84.7%
2792	2014 Ford E-450 Super Duty	VAN	4,129.1	4,580.7	90.1%
2793	2014 Ford E-450 Super Duty	VAN	3,636.8	4,071.5	89.3%
2794	2014 Ford E-450 Super Duty	VAN	3,504.3	3,875.5	90.4%
2795	2014 Ford E-450 Super Duty	VAN	1,116.5	1,299.7	85.9%
2796	2014 Ford E-450 Super Duty	VAN	2,407.5	2,778.3	86.7%
2797	2014 Ford E-450 Super Duty	VAN	1,599.8	2,133.7	75.0%
2798	2014 Ford E-450 Super Duty	VAN	3,077.4	3,421.0	90.0%
2799	2014 Ford E-450 Super Duty	VAN	4,255.1	4,710.8	90.3%
2800	2014 Ford E-450 Super Duty	VAN	2,929.9	3,322.9	88.2%
2801	2014 Ford E-450 Super Duty	VAN	3,112.4	3,496.7	89.0%
2802	2014 Ford E-450 Super Duty	VAN	3,619.4	4,072.3	88.9%
2803	2014 Ford E-450 Super Duty	VAN	1,102.5	1,270.2	86.8%
2804	2014 Ford E-450 Super Duty	VAN	4,068.3	4,491.2	90.6%
2805	2014 Ford E-450 Super Duty	VAN	3,135.4	3,534.1	88.7%
2806	2014 Ford E-450 Super Duty	VAN	1,014.3	1,179.0	86.0%
2807	2014 Ford E-450 Super Duty	VAN	4,251.2	4,705.5	90.3%
2808	2014 Ford E-450 Super Duty	VAN	3,170.2	3,520.2	90.1%
2809	2014 Ford E-450 Super Duty	VAN	3,850.5	4,267.6	90.2%
2810	2014 Ford E-450 Super Duty	VAN	3,500.9	3,958.5	88.4%
2811	2014 Ford E-450 Super Duty	VAN	3,032.5	3,369.9	90.0%
2812	2014 Ford E-450 Super Duty	VAN	3,751.2	4,073.8	92.1%
2813	2014 Ford E-450 Super Duty	VAN	3,884.7	4,406.8	88.2%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
2814	2014 Ford E-450 Super Duty	VAN	2,769.9	3,190.7	86.8%
2815	2014 Ford E-450 Super Duty	VAN	1,860.5	2,236.5	83.2%
2816	2014 Ford E-450 Super Duty	VAN	3,504.4	3,891.8	90.0%
2817	2014 Ford E-450 Super Duty	VAN	3,487.6	3,958.7	88.1%
2818	2014 Ford E-450 Super Duty	VAN	2,315.2	2,744.5	84.4%
2819	2014 Ford E-450 Super Duty	VAN	405.2	499.2	81.2%
2820	2014 Ford E-450 Super Duty	VAN	2,378.6	2,811.4	84.6%
2821	2014 Ford E-450 Super Duty	VAN	2,228.8	2,512.4	88.7%
2822	2014 Ford E-450 Super Duty	VAN	3,877.2	4,360.2	88.9%
2823	2014 Ford E-450 Super Duty	VAN	2,051.0	2,369.9	86.5%
2824	2014 Ford E-450 Super Duty	VAN	1,968.0	2,261.1	87.0%
2825	2014 Ford E-450 Super Duty	VAN	2,669.7	3,081.3	86.6%
2826	2014 Ford E-450 Super Duty	VAN	2,049.8	2,301.8	89.1%
2827	2014 Ford E-450 Super Duty	VAN	3,352.7	3,754.7	89.3%
2828	2014 Ford E-450 Super Duty	VAN	3,616.1	4,126.0	87.6%
2829	2014 Ford E-450 Super Duty	VAN	2,970.3	3,496.0	85.0%
2830	2014 Ford E-450 Super Duty	VAN	4,028.7	4,466.7	90.2%
2831	2014 Ford E-450 Super Duty	VAN	4,253.1	4,730.7	89.9%
2832	2014 Ford E-450 Super Duty	VAN	3,766.3	4,304.2	87.5%
2833	2014 Ford E-450 Super Duty	VAN	4,314.0	4,730.2	91.2%
2834	2014 Ford E-450 Super Duty	VAN	3,017.7	3,388.5	89.1%
2835	2014 Ford E-450 Super Duty	VAN	1,408.3	1,613.3	87.3%
2836	2014 Ford E-450 Super Duty	VAN	3,321.4	3,844.7	86.4%
2837	2014 Ford E-450 Super Duty	VAN	3,193.9	3,827.7	83.4%
2838	2014 Ford E-450 Super Duty	VAN	1,470.8	1,677.9	87.7%
2839	2014 Ford E-450 Super Duty	VAN	2,127.9	2,455.2	86.7%
2840	2014 Ford E-450 Super Duty	VAN	1,152.2	1,335.7	86.3%
2841	2014 Ford E-450 Super Duty	VAN	2,413.4	2,865.1	84.2%
2842	2014 Ford E-450 Super Duty	VAN	3,885.4	4,443.8	87.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2843	2014 Ford E-450 Super Duty	VAN	3,084.0	3,473.3	88.8%
2844	2014 Ford E-450 Super Duty	VAN	2,968.6	3,319.1	89.4%
2845	2014 Ford E-450 Super Duty	VAN	3,375.5	3,959.2	85.3%
2846	2014 Ford E-450 Super Duty	VAN	2,937.2	3,348.8	87.7%
2847	2014 Ford E-450 Super Duty	VAN	2,938.7	3,348.3	87.8%
2848	2014 Ford E-450 Super Duty	VAN	2,450.1	2,773.2	88.3%
2849	2014 Ford E-450 Super Duty	VAN	2,512.2	2,882.0	87.2%
2850	2014 Ford E-450 Super Duty	VAN	74.4	285.3	26.1%
2851	2014 Ford E-450 Super Duty	VAN	2,407.2	2,717.1	88.6%
2852	2014 Ford E-450 Super Duty	VAN	3,096.1	3,417.7	90.6%
2853	2014 Ford E-450 Super Duty	VAN	2,612.0	3,003.5	87.0%
2854	2015 Ford E-450 Super Duty	VAN	3,561.1	4,001.9	89.0%
2855	2011 International WorkStar 7300	DIGGER DERRICK	426.2	1,109.6	38.4%
2856	2014 International WorkStar 7300	DIGGER DERRICK	174.3	486.1	35.9%
2857	2011 International WorkStar 7300	DIGGER DERRICK	649.5	1,318.3	49.3%
2858	2012 International WorkStar 7300	DIGGER DERRICK	790.5	2,129.3	37.1%
2859	2007 International 7300	DIGGER DERRICK	762.4	1,955.9	39.0%
2860	2012 International WorkStar 7300	DIGGER DERRICK	868.5	1,910.0	45.5%
2861	2010 International 7300	DIGGER DERRICK	314.3	650.9	48.3%
2862	2012 International WorkStar 7300	DIGGER DERRICK	249.5	408.8	61.0%
2863	2011 International WorkStar 7300	DIGGER DERRICK	433.5	748.0	57.9%
2864	2012 International WorkStar 7300	DIGGER DERRICK	1,003.2	1,920.2	52.2%
2865	2011 International WorkStar 7300	DIGGER DERRICK	306.5	644.7	47.5%
2866	2013 International WorkStar 7300	DIGGER DERRICK	475.0	881.5	53.9%
2867	2013 International WorkStar 7300	DIGGER DERRICK	465.5	1,364.2	34.1%
2868	2010 International 7300	DIGGER DERRICK	1,032.0	1,838.4	56.1%
2869	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	93.3	163.8	57.0%
2870	2018 International DuraStar 4300	DIGGER DERRICK	1,309.4	2,441.3	53.6%
2871	2024 Freightliner M2 106 Medium Duty	DIGGER DERRICK	532.4	914.5	58.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2872	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	222.5	347.4	64.1%
2873	2019 International MV607	DIGGER DERRICK	95.7	146.6	65.3%
2874	2024 Freightliner M2 106 Medium Duty	DIGGER DERRICK	600.5	1,010.6	59.4%
2875	2018 Freightliner M2 106 Medium Duty	DIGGER DERRICK	69.6	123.0	56.6%
2876	2020 International HV607	DIGGER DERRICK	1,220.3	2,995.5	40.7%
2877	2011 International WorkStar 7400	DIGGER DERRICK	1,602.2	2,568.7	62.4%
2878	2012 International WorkStar 7400	DIGGER DERRICK	266.5	579.6	46.0%
2879	2013 International WorkStar 7400	DIGGER DERRICK	1,023.8	2,180.2	47.0%
2880	2014 International WorkStar 7400	DIGGER DERRICK	1,420.9	2,630.1	54.0%
2881	2015 International WorkStar 7400	DIGGER DERRICK	823.4	2,089.8	39.4%
2882	2006 International 7400	DIGGER DERRICK	14.9	28.8	51.9%
2883	2007 International 7400	DIGGER DERRICK	57.1	122.0	46.8%
2884	2010 International 7400	DIGGER DERRICK	1,066.1	2,447.2	43.6%
2885	2020 International HV607	DIGGER DERRICK	1,491.1	3,785.3	39.4%
2886	2021 International HV607	DIGGER DERRICK	1,504.9	3,774.7	39.9%
2887	2012 International WorkStar 7400	DIGGER DERRICK	186.8	482.8	38.7%
2888	2022 International HV607	DIGGER DERRICK	2,618.4	4,354.0	60.1%
2889	2014 International WorkStar 7400	DIGGER DERRICK	694.7	1,789.1	38.8%
2890	2015 International WorkStar 7400	DIGGER DERRICK	1,048.5	2,603.2	40.3%
2891	2020 International HV607	DIGGER DERRICK	1,104.8	3,111.9	35.5%
2892	2021 International HV607	DIGGER DERRICK	1,366.1	3,695.5	37.0%
2893	2012 International WorkStar 7400	DIGGER DERRICK	217.3	768.5	28.3%
2894	2022 International HV607	DIGGER DERRICK	771.3	1,173.8	65.7%
2895	2014 International WorkStar 7400	DIGGER DERRICK	965.2	2,404.2	40.1%
2896		DIGGER DERRICK	203.6	361.8	56.3%
2897	2020 International HV607	DIGGER DERRICK	735.4	2,069.8	35.5%
2898	2021 International HV607	DIGGER DERRICK	951.3	2,685.5	35.4%
2899	2022 International HV607	DIGGER DERRICK	1,284.0	2,554.3	50.3%
2900	2025 International HV607	DIGGER DERRICK	189.3	521.8	36.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2901	2020 International HV607	DIGGER DERRICK	1,342.9	2,399.4	56.0%
2902	2021 International HV607	DIGGER DERRICK	2,149.3	3,360.3	64.0%
2903	2022 International HV507	DIGGER DERRICK	2,716.6	4,071.3	66.7%
2904	2022 International HV607	DIGGER DERRICK	1,577.1	2,508.9	62.9%
2905	2014 International WorkStar 7400	DIGGER DERRICK	789.8	1,408.1	56.1%
2906	2020 International HV607	DIGGER DERRICK	1,124.8	2,906.6	38.7%
2907	2021 International HV607	DIGGER DERRICK	701.4	2,142.2	32.7%
2908	2022 International HV607	DIGGER DERRICK	1,575.7	3,242.9	48.6%
2909	2014 International WorkStar 7400	DIGGER DERRICK	703.9	2,037.2	34.5%
2910	2025 International HV607	DIGGER DERRICK	310.5	857.6	36.2%
2911	2020 International HV607	DIGGER DERRICK	1,203.4	2,992.6	40.2%
2912	2021 International HV607	DIGGER DERRICK	723.6	2,422.7	29.9%
2913	2014 International WorkStar 7400	DIGGER DERRICK	1,380.5	2,611.6	52.9%
2914	2025 International HV607	DIGGER DERRICK	57.2	172.1	33.2%
2915	2007 International 7400	DIGGER DERRICK	48.4	90.9	53.2%
2916	2020 International HV607	DIGGER DERRICK	1,420.0	3,215.4	44.2%
2917	2021 International HV607	DIGGER DERRICK	764.7	2,371.2	32.3%
2918	2012 International WorkStar 7400	DIGGER DERRICK	1,244.4	2,149.9	57.9%
2919	2014 International WorkStar 7400	DIGGER DERRICK	1,248.7	2,681.4	46.6%
2920	2017 International WorkStar 7400	DIGGER DERRICK	963.2	2,369.5	40.7%
2921	2020 International HV607	DIGGER DERRICK	4,082.6	5,364.3	76.1%
2922	2021 International HV607	DIGGER DERRICK	1,469.2	3,955.7	37.1%
2923	2012 International WorkStar 7400	DIGGER DERRICK	1,032.4	2,318.0	44.5%
2924	2007 International 7400	DIGGER DERRICK	889.7	2,164.2	41.1%
2925	2010 International 7400	DIGGER DERRICK	943.0	1,987.3	47.4%
2926	2021 International HV607	DIGGER DERRICK	616.6	1,906.8	32.3%
2927	2012 International WorkStar 7400	DIGGER DERRICK	710.4	1,794.9	39.6%
2928	2025 International HV607	DIGGER DERRICK	88.3	223.8	39.4%
2929	2006 International 7400	DIGGER DERRICK	341.9	554.5	61.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2930	2010 International 7400	DIGGER DERRICK	416.5	1,247.2	33.4%
2931	2020 International HV607	DIGGER DERRICK	891.0	2,757.9	32.3%
2932	2021 International HV607	DIGGER DERRICK	518.3	2,031.0	25.5%
2933	2012 International WorkStar 7400	DIGGER DERRICK	650.5	1,347.4	48.3%
2934	2014 International WorkStar 7400	DIGGER DERRICK	989.4	2,343.0	42.2%
2935	2005 International 7400	DIGGER DERRICK	425.4	961.8	44.2%
2936	2006 International 7400	DIGGER DERRICK	169.3	369.1	45.9%
2937	2007 International 7400	DIGGER DERRICK	431.5	710.0	60.8%
2938	2010 International 7400	DIGGER DERRICK	827.1	1,657.6	49.9%
2939	2020 International HV607	DIGGER DERRICK	843.8	2,693.6	31.3%
2940	2021 International HV607	DIGGER DERRICK	1,685.2	2,938.9	57.3%
2941	2022 International HV607	DIGGER DERRICK	1,929.6	3,311.1	58.3%
2942	2013 International WorkStar 7400	DIGGER DERRICK	1,930.7	3,249.4	59.4%
2943	2015 International WorkStar 7400	DIGGER DERRICK	986.5	1,681.8	58.7%
2944	2020 Freightliner M2 106 Medium Duty	DIGGER DERRICK	885.3	2,372.8	37.3%
2945	2021 International HV607	DIGGER DERRICK	1,546.0	3,146.3	49.1%
2946	2015 International WorkStar 7400	DIGGER DERRICK	753.2	1,505.8	50.0%
2947	2017 International WorkStar 7400	DIGGER DERRICK	986.4	2,409.3	40.9%
2948	2020 Freightliner M2 106 Medium Duty	DIGGER DERRICK	859.3	2,840.3	30.3%
2949	2021 International HV607	DIGGER DERRICK	1,287.4	2,305.4	55.8%
2950	2013 International WorkStar 7400	DIGGER DERRICK	465.2	1,119.9	41.5%
2951	2015 International WorkStar 7400	DIGGER DERRICK	582.6	1,545.8	37.7%
2952	2017 International WorkStar 7400	DIGGER DERRICK	715.8	1,879.0	38.1%
2953	2020 Freightliner M2 106 Medium Duty	DIGGER DERRICK	893.1	2,910.4	30.7%
2954	2021 International HV607	DIGGER DERRICK	913.1	2,847.3	32.1%
2955	2015 International WorkStar 7400	DIGGER DERRICK	1,102.4	2,232.5	49.4%
2956	2010 International 7400	DIGGER DERRICK	1,578.9	3,037.9	52.0%
2957	2020 Freightliner M2 106 Medium Duty	DIGGER DERRICK	1,009.8	3,100.0	32.6%
2958	2021 International HV507	DIGGER DERRICK	782.5	2,425.9	32.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2959	2013 International WorkStar 7400	DIGGER DERRICK	1,192.1	1,923.8	62.0%
2960	2015 International WorkStar 7400	DIGGER DERRICK	914.4	2,302.8	39.7%
2961	2010 International 7400	DIGGER DERRICK	531.8	1,187.9	44.8%
2962	2020 International HV607	DIGGER DERRICK	609.5	1,708.0	35.7%
2963	2021 International HV607	DIGGER DERRICK	872.2	1,799.8	48.5%
2964	2013 International WorkStar 7400	DIGGER DERRICK	765.8	1,607.5	47.6%
2965	2014 International WorkStar 7400	DIGGER DERRICK	1,027.5	2,126.4	48.3%
2966	2015 International WorkStar 7400	DIGGER DERRICK	1,772.9	3,033.0	58.5%
2967	2010 International 7400	DIGGER DERRICK	143.6	256.8	55.9%
2968	2020 International HV607	DIGGER DERRICK	1,375.9	3,320.0	41.4%
2969	2021 International HV507	DIGGER DERRICK	1,863.3	4,586.3	40.6%
2970	2015 International WorkStar 7400	DIGGER DERRICK	289.6	766.9	37.8%
2971	2020 International HV607	DIGGER DERRICK	830.6	2,189.1	37.9%
2972	2021 International HV507	DIGGER DERRICK	1,771.4	4,274.8	41.4%
2973	2022 International HV607	DIGGER DERRICK	2,440.2	4,738.2	51.5%
2974	2013 International WorkStar 7400	DIGGER DERRICK	743.8	1,962.9	37.9%
2975	2014 International WorkStar 7400	DIGGER DERRICK	169.8	409.2	41.5%
2976	2015 International WorkStar 7400	DIGGER DERRICK	1,160.5	2,518.5	46.1%
2977	2021 International HV507	DIGGER DERRICK	809.2	2,425.5	33.4%
2978	2013 International WorkStar 7400	DIGGER DERRICK	1,751.6	2,874.2	60.9%
2979	2014 International WorkStar 7400	DIGGER DERRICK	975.2	2,101.3	46.4%
2980	2015 International WorkStar 7400	DIGGER DERRICK	1,282.3	2,327.2	55.1%
2981	2021 International HV507	DIGGER DERRICK	979.2	2,866.4	34.2%
2982	2014 International WorkStar 7400	DIGGER DERRICK	1,228.1	2,250.8	54.6%
2983	2015 International WorkStar 7400	DIGGER DERRICK	1,210.1	2,047.7	59.1%
2984	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	2,098.4	4,452.3	47.1%
2985	2021 International HV507	DIGGER DERRICK	935.5	2,530.1	37.0%
2986	2022 International HV607	DIGGER DERRICK	290.6	876.3	33.2%
2987	2014 International WorkStar 7400	DIGGER DERRICK	1,339.8	2,319.9	57.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
2988	2015 International WorkStar 7400	DIGGER DERRICK	1,107.9	2,268.0	48.8%
2989	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	1,193.2	3,206.8	37.2%
2990	2014 International WorkStar 7400	DIGGER DERRICK	1,166.6	2,536.3	46.0%
2991	2015 International WorkStar 7400	DIGGER DERRICK	354.6	749.8	47.3%
2992	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	1,155.9	2,898.6	39.9%
2993	2015 International WorkStar 7400	DIGGER DERRICK	1,243.2	2,171.4	57.3%
2994	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	661.8	2,503.0	26.4%
2995	2022 International HV607	DIGGER DERRICK	2,379.4	3,981.2	59.8%
2996	2015 International WorkStar 7400	DIGGER DERRICK	585.9	1,487.3	39.4%
2997	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	1,089.1	3,176.5	34.3%
2998	2015 International WorkStar 7400	DIGGER DERRICK	355.2	907.6	39.1%
2999	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	748.5	2,559.5	29.2%
3000	2015 International WorkStar 7400	DIGGER DERRICK	392.1	838.3	46.8%
3001	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	675.3	1,987.9	34.0%
3002	2019 Freightliner M2 106 Medium Duty	DIGGER DERRICK	496.9	1,433.7	34.7%
3003	2022 International HV607	DIGGER DERRICK	673.7	1,144.8	58.9%
3004	2025 International HV607	DIGGER DERRICK	118.1	293.0	40.3%
3005	2022 International HV507	DIGGER DERRICK	593.3	947.8	62.6%
3006	2025 International HV607	DIGGER DERRICK	143.8	444.4	32.4%
3007	2022 International HV607	DIGGER DERRICK	2,493.9	3,641.2	68.5%
3008	2025 International HV607	DIGGER DERRICK	122.5	214.5	57.1%
3009	2025 International HV607	DIGGER DERRICK	153.4	404.9	37.9%
3010	2022 International HV607	DIGGER DERRICK	1,270.9	3,450.1	36.8%
3011	2025 International HV607	DIGGER DERRICK	187.0	338.2	55.3%
3012	2025 International HV607	DIGGER DERRICK	141.4	363.5	38.9%
3013	2022 International HV607	DIGGER DERRICK	2,034.6	3,442.4	59.1%
3014	2022 International HV607	DIGGER DERRICK	1,913.7	3,477.8	55.0%
3015	2022 International HV607	DIGGER DERRICK	1,920.3	3,861.6	49.7%
3016	2022 International HV607	DIGGER DERRICK	1,473.6	3,224.5	45.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3017	2022 International HV607	DIGGER DERRICK	2,256.7	3,669.7	61.5%
3018	2022 International HV607	DIGGER DERRICK	417.4	1,114.0	37.5%
3019	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	315.8	451.2	70.0%
3020	2025 International MV607	DIGGER DERRICK	908.3	1,252.8	72.5%
3021	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	740.9	2,838.6	26.1%
3022	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	242.9	409.5	59.3%
3023	2025 International MV607	DIGGER DERRICK	783.5	1,072.7	73.0%
3024	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	968.4	2,401.4	40.3%
3025	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	1,083.2	1,670.5	64.8%
3026	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	254.3	445.5	57.1%
3027	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	351.7	593.2	59.3%
3028	2024 Freightliner M2 106 Medium Duty	DIGGER DERRICK	76.2	110.8	68.8%
3029	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	127.4	269.0	47.4%
3030	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	506.4	761.1	66.5%
3031	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	89.9	168.2	53.4%
3032	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	670.3	1,180.1	56.8%
3033	2025 Freightliner M2 106 Medium Duty	DIGGER DERRICK	642.6	987.4	65.1%
3034	2021 Freightliner M2 106 Medium Duty	DIGGER DERRICK	141.3	272.8	51.8%
3035	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	195.8	364.0	53.8%
3036	2022 Freightliner M2 106 Medium Duty	DIGGER DERRICK	172.7	308.7	55.9%
3037	2015 Freightliner M2 106 Medium Duty	DIGGER DERRICK	459.0	753.9	60.9%
3038	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	325.5	705.4	46.1%
3039	2023 Freightliner M2 106 Medium Duty	DIGGER DERRICK	201.1	418.4	48.1%
3040	2020 Freightliner M2 106 Medium Duty	DIGGER DERRICK	179.4	300.9	59.6%
3041	2013 International WorkStar 7300	BUCKET TRUCK	588.8	1,385.0	42.5%
3042	2015 International WorkStar 7300	BUCKET TRUCK	763.8	2,296.8	33.3%
3043	2015 International WorkStar 7300	BUCKET TRUCK	450.4	1,128.7	39.9%
3044	2015 International WorkStar 7300	BUCKET TRUCK	770.2	1,907.1	40.4%
3045	2010 International 7300	BUCKET TRUCK	813.0	1,934.7	42.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3046	2015 International WorkStar 7300	BUCKET TRUCK	192.7	382.8	50.3%
3047	2015 International WorkStar 7300	BUCKET TRUCK	775.7	2,019.7	38.4%
3048	2015 International WorkStar 7300	BUCKET TRUCK	521.3	1,522.6	34.2%
3049	2015 International WorkStar 7300	BUCKET TRUCK	212.3	685.7	31.0%
3050	2015 International WorkStar 7300	BUCKET TRUCK	356.1	830.1	42.9%
3051	2015 International WorkStar 7300	BUCKET TRUCK	406.3	1,215.5	33.4%
3052	2010 International 7300	BUCKET TRUCK	207.8	605.3	34.3%
3053	2010 International 7300	BUCKET TRUCK	160.0	603.4	26.5%
3054	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	850.8	2,729.1	31.2%
3055	2021 Freightliner M2 106 Medium Duty	BUCKET TRUCK	818.7	1,418.5	57.7%
3056	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	669.6	1,108.8	60.4%
3057	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	808.0	2,648.3	30.5%
3058	2024 International MV607	BUCKET TRUCK	63.4	111.0	57.1%
3059	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	181.7	461.0	39.4%
3060	2005 GMC C8500	FLATBED/STAKE RACK	117.8	332.8	35.4%
3061	2007 GMC C8500	FLATBED/STAKE RACK	213.2	519.9	41.0%
3062	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,049.6	1,407.1	74.6%
3063	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,048.7	1,270.8	82.5%
3064	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	375.6	749.0	50.1%
3065	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	828.7	1,111.6	74.5%
3066	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	24.1	41.3	58.2%
3067	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	829.1	1,177.8	70.4%
3068	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	919.4	1,169.5	78.6%
3069	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	11.9	26.0	45.8%
3070	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	356.1	498.4	71.4%
3071	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	262.6	365.9	71.8%
3072	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,640.3	1,979.8	82.9%
3073	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	703.6	901.4	78.1%
3074	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,149.6	1,520.6	75.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3075	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	676.2	1,057.5	63.9%
3076	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	387.5	517.3	74.9%
3077	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	123.8	153.0	80.9%
3078	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	123.0	329.7	37.3%
3079	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	14.9	27.4	54.4%
3080	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,098.0	1,405.3	78.1%
3081	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	308.8	440.8	70.1%
3082	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	215.5	649.4	33.2%
3083	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	473.7	577.9	82.0%
3084	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	895.8	1,170.3	76.5%
3085	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	118.2	178.4	66.3%
3086	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	294.3	381.7	77.1%
3087	2018 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,145.0	1,715.4	66.7%
3088	2022 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	573.4	798.4	71.8%
3089	2022 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	365.9	502.0	72.9%
3090	2022 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	257.9	369.1	69.9%
3091	2020 Freightliner Coronado 12	OTR TRACTOR	357.6	1,041.6	34.3%
3092	2013 Freightliner Cascadia 113	OTR TRACTOR	614.8	1,921.3	32.0%
3093	2014 International ProStar	OTR TRACTOR	422.2	1,427.5	29.6%
3094	2025 Freightliner Cascadia 126	OTR TRACTOR	427.5	1,586.6	26.9%
3095	2012 Freightliner Coronado 12	OTR TRACTOR	184.5	505.4	36.5%
3096	2013 Freightliner Cascadia 125	OTR TRACTOR	158.3	383.9	41.2%
3097	2014 Freightliner Coronado 12	OTR TRACTOR	822.3	2,743.8	30.0%
3098	2015 Freightliner Coronado 12	OTR TRACTOR	408.8	983.0	41.6%
3099	2006 International 9400i	OTR TRACTOR	71.6	178.4	40.1%
3100	2012 Freightliner Coronado 12	OTR TRACTOR	196.1	528.1	37.1%
3101	2013 Freightliner Cascadia 125	OTR TRACTOR	144.0	412.7	34.9%
3102	2014 Freightliner Coronado 12	OTR TRACTOR	536.2	1,113.6	48.2%
3103	2006 International 5600i	OTR TRACTOR	139.8	224.3	62.3%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3104	2014 Freightliner Coronado 12	OTR TRACTOR	174.8	334.2	52.3%
3105	2022 Western Star Trucks 4900	OTR TRACTOR	816.4	2,846.7	28.7%
3106	2014 Freightliner Coronado 12	OTR TRACTOR	201.3	539.5	37.3%
3107	2014 Freightliner Coronado 12	OTR TRACTOR	199.4	387.1	51.5%
3108	2017 Freightliner Coronado 12	OTR TRACTOR	723.3	2,191.7	33.0%
3109	2014 Freightliner Coronado 12	OTR TRACTOR	202.0	391.8	51.6%
3110	2017 Freightliner Coronado 12	OTR TRACTOR	309.4	558.3	55.4%
3111	2022 Western Star Trucks 4900	OTR TRACTOR	211.1	443.4	47.6%
3112	2014 Freightliner Coronado 12	OTR TRACTOR	220.1	642.2	34.3%
3113	2017 Freightliner Coronado 12	OTR TRACTOR	102.4	217.4	47.1%
3114	2022 Western Star Trucks 4900	OTR TRACTOR	38.6	61.9	62.3%
3115	2014 Freightliner Coronado 12	OTR TRACTOR	133.9	353.4	37.9%
3116	2014 Freightliner Coronado 12	OTR TRACTOR	28.7	55.9	51.4%
3117	2014 Freightliner Coronado 12	OTR TRACTOR	230.3	474.9	48.5%
3118	2014 Freightliner Coronado 12	OTR TRACTOR	251.9	501.0	50.3%
3119	2014 Freightliner Coronado 12	OTR TRACTOR	161.4	316.3	51.0%
3120	2014 Freightliner Coronado 12	OTR TRACTOR	148.7	298.0	49.9%
3121	2014 Freightliner Cascadia 125	OTR TRACTOR	163.8	511.0	32.0%
3122	2014 Freightliner Cascadia 125	OTR TRACTOR	183.8	496.5	37.0%
3123	2024 Western Star Trucks 49X	OTR TRACTOR	298.4	797.8	37.4%
3124	2024 Western Star Trucks 49X	OTR TRACTOR	114.3	306.6	37.3%
3125	2020 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	69.3	103.6	66.9%
3126	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	255.2	984.3	25.9%
3127	2016 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,449.4	1,896.1	76.4%
3128	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	950.6	1,234.8	77.0%
3129	2018 Freightliner 108SD	FLATBED/STAKE RACK	2,338.4	3,176.8	73.6%
3130	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	654.7	985.2	66.5%
3131	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	203.2	454.0	44.8%
3132	2016 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	955.3	1,227.7	77.8%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3133	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,307.9	2,023.8	64.6%
3134	2018 Freightliner 108SD	FLATBED/STAKE RACK	260.5	347.7	74.9%
3135	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	600.6	1,020.5	58.9%
3136	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,957.4	2,696.8	72.6%
3137	2018 Freightliner 108SD	FLATBED/STAKE RACK	1,071.3	1,400.8	76.5%
3138	2019 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	141.4	395.7	35.7%
3139	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	226.0	336.8	67.1%
3140	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	128.2	252.2	50.8%
3141	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,200.5	1,701.6	70.5%
3142	2018 Freightliner 108SD	FLATBED/STAKE RACK	254.5	399.9	63.6%
3143	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	578.7	725.3	79.8%
3144	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	629.9	842.5	74.8%
3145	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	162.9	271.7	59.9%
3146	2018 Freightliner 108SD	FLATBED/STAKE RACK	1,267.2	1,521.8	83.3%
3147	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	506.8	682.7	74.2%
3148	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	494.8	836.0	59.2%
3149	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	251.4	441.6	56.9%
3150	2018 Freightliner 108SD	FLATBED/STAKE RACK	1,103.1	1,442.6	76.5%
3151	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	698.4	878.9	79.5%
3152	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	967.2	1,178.7	82.1%
3153	2017 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	846.4	1,449.2	58.4%
3154	2018 Freightliner 108SD	FLATBED/STAKE RACK	691.2	931.7	74.2%
3155	2013 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	402.6	515.2	78.2%
3156	2018 Freightliner 108SD	FLATBED/STAKE RACK	1,693.1	2,277.6	74.3%
3157	2018 Freightliner 108SD	FLATBED/STAKE RACK	225.9	540.6	41.8%
3158	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	91.4	142.5	64.1%
3159	2018 Freightliner 108SD	FLATBED/STAKE RACK	254.3	346.3	73.4%
3160	2018 Freightliner 108SD	FLATBED/STAKE RACK	436.0	576.2	75.7%
3161	2018 Freightliner 108SD	FLATBED/STAKE RACK	250.2	359.1	69.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3162	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	78.2	135.4	57.8%
3163	2018 Freightliner 108SD	FLATBED/STAKE RACK	421.8	582.6	72.4%
3164	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	402.6	633.0	63.6%
3165	2018 Freightliner 108SD	FLATBED/STAKE RACK	1,107.6	1,446.6	76.6%
3166	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	1,464.4	2,002.7	73.1%
3167	2018 Freightliner 108SD	FLATBED/STAKE RACK	212.6	308.9	68.8%
3168	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	848.8	1,154.8	73.5%
3169	2018 Freightliner 108SD	FLATBED/STAKE RACK	671.6	829.1	81.0%
3170	2014 Freightliner M2 106 Medium Duty	FLATBED/STAKE RACK	220.1	444.1	49.6%
3171	2018 Freightliner 108SD	FLATBED/STAKE RACK	692.1	840.5	82.3%
3172	2018 Freightliner 108SD	FLATBED/STAKE RACK	285.6	390.2	73.2%
3173	2018 Freightliner 108SD	FLATBED/STAKE RACK	300.9	465.5	64.6%
3174	2018 Freightliner 108SD	FLATBED/STAKE RACK	867.3	1,116.4	77.7%
3175	2020 International HV607	BUCKET TRUCK	812.3	2,974.5	27.3%
3176	2021 International HV607	BUCKET TRUCK	2,254.0	3,894.6	57.9%
3177	2022 International HV607	BUCKET TRUCK	2,592.8	3,841.0	67.5%
3178	2014 International WorkStar 7400	BUCKET TRUCK	1,080.3	2,360.2	45.8%
3179	2015 International WorkStar 7400	BUCKET TRUCK	680.1	1,510.6	45.0%
3180	2017 International WorkStar 7400	BUCKET TRUCK	148.4	231.7	64.0%
3181	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,693.0	2,540.9	66.6%
3182	2010 International 7400	BUCKET TRUCK	1,180.8	1,924.1	61.4%
3183	2020 International HV607	BUCKET TRUCK	1,403.0	3,738.5	37.5%
3184	2022 International HV607	BUCKET TRUCK	2,770.9	3,639.7	76.1%
3185	2014 International WorkStar 7400	BUCKET TRUCK	250.0	739.8	33.8%
3186	2015 International WorkStar 7400	BUCKET TRUCK	1,227.1	2,433.6	50.4%
3187	2017 International WorkStar 7400	BUCKET TRUCK	1,787.6	3,176.8	56.3%
3188	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	285.2	1,078.5	26.4%
3189	2020 International HV607	BUCKET TRUCK	2,023.4	3,581.3	56.5%
3190	2021 International HV607	BUCKET TRUCK	1,561.8	4,475.5	34.9%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3191	2014 International WorkStar 7400	BUCKET TRUCK	967.7	2,080.9	46.5%
3192	2015 International WorkStar 7400	BUCKET TRUCK	377.5	1,001.9	37.7%
3193	2017 International WorkStar 7400	BUCKET TRUCK	367.9	1,230.4	29.9%
3194	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	652.9	2,134.5	30.6%
3195	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	559.3	1,907.7	29.3%
3196	2020 International HV607	BUCKET TRUCK	473.5	1,479.9	32.0%
3197	2021 International HV607	BUCKET TRUCK	1,903.4	2,969.5	64.1%
3198	2022 International HV607	BUCKET TRUCK	1,404.2	2,222.9	63.2%
3199	2014 International WorkStar 7400	BUCKET TRUCK	523.1	1,430.1	36.6%
3200	2015 International WorkStar 7400	BUCKET TRUCK	362.5	1,392.1	26.0%
3201	2017 International WorkStar 7400	BUCKET TRUCK	497.0	665.0	74.7%
3202	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,533.6	3,811.5	40.2%
3203	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	672.2	1,777.7	37.8%
3204	2022 International HV607	BUCKET TRUCK	3,068.4	4,354.3	70.5%
3205	2014 International WorkStar 7400	BUCKET TRUCK	799.2	2,403.1	33.3%
3206	2015 International WorkStar 7400	BUCKET TRUCK	510.2	1,235.3	41.3%
3207	2017 International WorkStar 7400	BUCKET TRUCK	1,032.2	2,990.4	34.5%
3208	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	472.5	1,761.5	26.8%
3209	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,052.1	3,120.0	33.7%
3210	2020 International HV607	BUCKET TRUCK	1,439.6	3,214.5	44.8%
3211	2021 International HV607	BUCKET TRUCK	1,759.4	4,168.8	42.2%
3212	2022 International HV607	BUCKET TRUCK	1,103.5	3,158.1	34.9%
3213	2014 International WorkStar 7400	BUCKET TRUCK	1,427.2	2,144.1	66.6%
3214	2015 International WorkStar 7400	BUCKET TRUCK	666.6	1,815.8	36.7%
3215	2017 International WorkStar 7400	BUCKET TRUCK	1,006.7	1,544.2	65.2%
3216	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	524.3	1,822.9	28.8%
3217	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,344.5	2,108.2	63.8%
3218	2014 International WorkStar 7400	BUCKET TRUCK	643.9	2,405.3	26.8%
3219	2015 International WorkStar 7400	BUCKET TRUCK	1,599.8	2,604.6	61.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3220	2017 International WorkStar 7400	BUCKET TRUCK	773.7	1,908.7	40.5%
3221	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	547.9	1,830.6	29.9%
3222	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	2,464.1	3,552.2	69.4%
3223	2021 International HV607	BUCKET TRUCK	2,170.4	3,183.2	68.2%
3224	2014 International WorkStar 7400	BUCKET TRUCK	1,089.1	3,133.1	34.8%
3225	2015 International WorkStar 7400	BUCKET TRUCK	538.7	1,712.4	31.5%
3226	2017 International WorkStar 7400	BUCKET TRUCK	847.2	2,485.8	34.1%
3227	2018 Freightliner M2 106 Medium Duty	BUCKET TRUCK	843.9	2,654.9	31.8%
3228	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	327.6	1,234.1	26.5%
3229	2021 International HV607	BUCKET TRUCK	1,271.4	2,855.9	44.5%
3230	2022 International HV607	BUCKET TRUCK	2,436.8	4,246.5	57.4%
3231	2014 International WorkStar 7400	BUCKET TRUCK	1,638.6	3,257.2	50.3%
3232	2015 International WorkStar 7400	BUCKET TRUCK	561.4	1,492.3	37.6%
3233	2017 International WorkStar 7400	BUCKET TRUCK	902.6	2,283.0	39.5%
3234	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,260.7	3,564.9	35.4%
3235	2021 International HV607	BUCKET TRUCK	886.5	2,319.3	38.2%
3236	2022 International HV607	BUCKET TRUCK	3,845.0	5,188.6	74.1%
3237	2014 International WorkStar 7400	BUCKET TRUCK	1,108.3	3,052.5	36.3%
3238	2015 International WorkStar 7400	BUCKET TRUCK	1,635.7	2,744.0	59.6%
3239	2017 International WorkStar 7400	BUCKET TRUCK	686.0	2,211.6	31.0%
3240	2010 International 7400	BUCKET TRUCK	868.9	1,460.4	59.5%
3241	2021 International HV607	BUCKET TRUCK	922.5	3,183.5	29.0%
3242	2022 International HV607	BUCKET TRUCK	1,897.8	3,813.9	49.8%
3243	2014 International WorkStar 7400	BUCKET TRUCK	815.9	2,325.6	35.1%
3244	2015 International WorkStar 7400	BUCKET TRUCK	3,015.7	4,733.9	63.7%
3245	2022 International HV607	BUCKET TRUCK	593.0	1,641.3	36.1%
3246	2014 International WorkStar 7400	BUCKET TRUCK	2,425.4	3,830.0	63.3%
3247	2015 International WorkStar 7400	BUCKET TRUCK	1,810.1	2,945.7	61.4%
3248	2017 International WorkStar 7400	BUCKET TRUCK	744.0	2,187.8	34.0%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3249	2022 International HV607	BUCKET TRUCK	3,585.3	4,738.7	75.7%
3250	2017 International WorkStar 7400	BUCKET TRUCK	1,153.2	3,230.2	35.7%
3251	2010 International 7400	BUCKET TRUCK	1,064.6	2,536.7	42.0%
3252	2022 International HV607	BUCKET TRUCK	1,196.8	2,374.4	50.4%
3253	2015 International WorkStar 7400	BUCKET TRUCK	584.0	1,598.7	36.5%
3254	2017 International WorkStar 7400	BUCKET TRUCK	1,123.8	3,152.4	35.6%
3255	2022 International HV607	BUCKET TRUCK	605.6	1,495.8	40.5%
3256	2014 International WorkStar 7400	BUCKET TRUCK	497.4	1,403.2	35.4%
3257	2015 International WorkStar 7400	BUCKET TRUCK	349.2	1,238.7	28.2%
3258	2017 International WorkStar 7400	BUCKET TRUCK	573.1	1,443.2	39.7%
3259	2022 International HV607	BUCKET TRUCK	919.8	3,095.0	29.7%
3260	2014 International WorkStar 7400	BUCKET TRUCK	766.1	1,862.4	41.1%
3261	2015 International WorkStar 7400	BUCKET TRUCK	926.4	1,806.1	51.3%
3262	2017 International WorkStar 7400	BUCKET TRUCK	978.0	1,922.0	50.9%
3263	2022 International HV607	BUCKET TRUCK	2,387.6	3,552.0	67.2%
3264	2014 International WorkStar 7400	BUCKET TRUCK	707.3	1,541.3	45.9%
3265	2015 International WorkStar 7400	BUCKET TRUCK	929.4	1,690.4	55.0%
3266	2017 International WorkStar 7400	BUCKET TRUCK	633.0	1,931.6	32.8%
3267	2022 International HV607	BUCKET TRUCK	1,820.2	3,460.7	52.6%
3268	2014 International WorkStar 7400	BUCKET TRUCK	446.0	1,590.3	28.0%
3269	2017 International WorkStar 7400	BUCKET TRUCK	596.3	2,010.0	29.7%
3270	2014 International WorkStar 7400	BUCKET TRUCK	835.9	2,143.5	39.0%
3271	2015 International WorkStar 7400	BUCKET TRUCK	492.8	1,542.1	32.0%
3272	2017 International WorkStar 7400	BUCKET TRUCK	687.4	2,029.6	33.9%
3273	2014 International WorkStar 7400	BUCKET TRUCK	641.0	2,114.7	30.3%
3274	2015 International WorkStar 7400	BUCKET TRUCK	388.9	1,351.5	28.8%
3275	2017 International WorkStar 7400	BUCKET TRUCK	458.1	1,530.8	29.9%
3276	2014 International WorkStar 7400	BUCKET TRUCK	401.4	1,067.8	37.6%
3277	2015 International WorkStar 7400	BUCKET TRUCK	328.5	720.0	45.6%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3278	2017 International WorkStar 7400	BUCKET TRUCK	635.6	2,433.0	26.1%
3279	2014 International WorkStar 7400	BUCKET TRUCK	307.0	861.5	35.6%
3280	2015 International WorkStar 7400	BUCKET TRUCK	1,298.9	2,150.6	60.4%
3281	2017 International WorkStar 7400	BUCKET TRUCK	571.6	1,938.1	29.5%
3282	2014 International WorkStar 7400	BUCKET TRUCK	632.7	2,103.1	30.1%
3283	2025 International HV607	BUCKET TRUCK	750.8	1,268.1	59.2%
3284	2017 International WorkStar 7400	BUCKET TRUCK	479.9	1,434.1	33.5%
3285	2015 International WorkStar 7400	BUCKET TRUCK	437.6	1,381.1	31.7%
3286	2017 International WorkStar 7400	BUCKET TRUCK	360.4	1,423.5	25.3%
3287	2014 International WorkStar 7400	BUCKET TRUCK	507.7	1,417.3	35.8%
3288	2025 International HV607	BUCKET TRUCK	239.9	809.1	29.6%
3289	2017 International WorkStar 7400	BUCKET TRUCK	1,714.1	3,346.3	51.2%
3290	2015 International WorkStar 7400	BUCKET TRUCK	485.6	1,649.6	29.4%
3291	2017 International WorkStar 7400	BUCKET TRUCK	501.2	1,625.6	30.8%
3292	2014 International WorkStar 7400	BUCKET TRUCK	492.7	1,375.8	35.8%
3293	2025 International HV607	BUCKET TRUCK	599.1	1,000.8	59.9%
3294	2017 International WorkStar 7400	BUCKET TRUCK	265.0	814.7	32.5%
3295	2014 International WorkStar 7400	BUCKET TRUCK	721.4	2,364.1	30.5%
3296	2017 International WorkStar 7400	BUCKET TRUCK	344.5	1,161.3	29.7%
3297	2017 International WorkStar 7400	BUCKET TRUCK	1,579.3	2,497.5	63.2%
3298	2017 International WorkStar 7400	BUCKET TRUCK	871.6	2,107.7	41.4%
3299	2017 International WorkStar 7400	BUCKET TRUCK	1,705.1	3,124.4	54.6%
3300	2017 International WorkStar 7400	BUCKET TRUCK	558.0	1,272.5	43.9%
3301	2017 International WorkStar 7400	BUCKET TRUCK	689.7	1,831.8	37.7%
3302	2017 International WorkStar 7400	BUCKET TRUCK	1,125.2	3,699.2	30.4%
3303	2017 International WorkStar 7400	BUCKET TRUCK	1,971.8	3,463.6	56.9%
3304	2017 International WorkStar 7400	BUCKET TRUCK	808.0	1,499.2	53.9%
3305	2017 International WorkStar 7400	BUCKET TRUCK	187.3	266.5	70.3%
3306	2017 International WorkStar 7400	BUCKET TRUCK	888.5	1,961.6	45.3%

	(a)	(b)	(c)	(d)	(e)
	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
Line No.					
3307	2017 International WorkStar 7400	BUCKET TRUCK	781.0	2,886.4	27.1%
3308	2017 International WorkStar 7400	BUCKET TRUCK	286.5	599.5	47.8%
3309	2017 International WorkStar 7400	BUCKET TRUCK	725.0	2,158.2	33.6%
3310	2013 International WorkStar 7400	BUCKET TRUCK	391.2	885.1	44.2%
3311	2013 International WorkStar 7400	BUCKET TRUCK	1,292.5	2,262.1	57.1%
3312	2013 International WorkStar 7400	BUCKET TRUCK	783.5	2,008.6	39.0%
3313	2013 International WorkStar 7400	BUCKET TRUCK	1,564.6	2,375.7	65.9%
3314	2013 International WorkStar 7400	BUCKET TRUCK	894.5	1,768.0	50.6%
3315	2013 International WorkStar 7400	BUCKET TRUCK	1,231.5	2,393.5	51.5%
3316	2013 International WorkStar 7400	BUCKET TRUCK	1,336.3	2,700.2	49.5%
3317	2013 International WorkStar 7400	BUCKET TRUCK	253.8	781.6	32.5%
3318	2013 International WorkStar 7400	BUCKET TRUCK	475.1	1,197.0	39.7%
3319	2013 International WorkStar 7400	BUCKET TRUCK	572.8	1,202.0	47.7%
3320	2013 International WorkStar 7400	BUCKET TRUCK	852.2	2,483.1	34.3%
3321	2013 International WorkStar 7400	BUCKET TRUCK	852.5	2,984.5	28.6%
3322	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,100.1	2,565.5	42.9%
3323	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,102.8	2,343.4	47.1%
3324	2024 Freightliner M2 106 Medium Duty	BUCKET TRUCK	296.7	560.1	53.0%
3325	2023 Freightliner M2 106 Medium Duty	BUCKET TRUCK	118.2	207.9	56.8%
3326	2021 Freightliner M2 106 Medium Duty	BUCKET TRUCK	349.6	673.1	51.9%
3327	2023 Freightliner M2 106 Medium Duty	BUCKET TRUCK	107.7	238.9	45.1%
3328	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	896.1	1,759.1	50.9%
3329	2024 Freightliner M2 106 Medium Duty	BUCKET TRUCK	281.4	441.1	63.8%
3330	2023 Freightliner M2 106 Medium Duty	BUCKET TRUCK	584.6	1,069.2	54.7%
3331	2024 Freightliner M2 106 Medium Duty	BUCKET TRUCK	96.9	183.3	52.9%
3332	2023 Freightliner M2 106 Medium Duty	BUCKET TRUCK	175.9	304.9	57.7%
3333	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	695.4	1,231.6	56.5%
3334	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	804.1	1,132.0	71.0%
3335	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	2,047.9	2,696.9	75.9%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3336	2010 International 4300	SERVICE TRUCK	620.3	1,031.4	60.1%
3337	2021 Freightliner M2 106 Medium Duty	SERVICE TRUCK	673.0	1,187.8	56.7%
3338	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,005.5	1,402.6	71.7%
3339	2015 Freightliner M2 106 Medium Duty	SERVICE TRUCK	853.6	1,279.9	66.7%
3340	2016 International DuraStar 4400	SERVICE TRUCK	614.5	911.0	67.4%
3341	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	2,248.3	3,068.2	73.3%
3342	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	691.2	1,349.3	51.2%
3343	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	316.6	431.7	73.3%
3344	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	679.2	952.2	71.3%
3345	2015 International DuraStar 4400	SERVICE TRUCK	180.1	273.5	65.8%
3346	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	288.3	498.8	57.8%
3347	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,421.9	1,893.3	75.1%
3348	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	519.8	771.4	67.4%
3349	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,091.6	1,418.0	77.0%
3350	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	929.6	1,633.8	56.9%
3351	2010 International 4300	SERVICE TRUCK	128.0	265.1	48.3%
3352	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	2,463.6	3,323.5	74.1%
3353	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	267.2	379.5	70.4%
3354	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	259.1	428.1	60.5%
3355	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,687.0	2,064.6	81.7%
3356	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	3,091.1	4,083.4	75.7%
3357	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	695.5	965.1	72.1%
3358	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	177.9	300.4	59.2%
3359	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,034.6	1,505.5	68.7%
3360	2010 International 4300	SERVICE TRUCK	291.1	624.8	46.6%
3361	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	2,158.7	2,855.8	75.6%
3362	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,137.4	1,568.0	72.5%
3363	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	506.4	765.8	66.1%
3364	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	29.9	67.6	44.2%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3365	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,472.9	2,013.3	73.2%
3366	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	506.8	856.2	59.2%
3367	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	467.5	815.1	57.4%
3368	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	109.5	259.5	42.2%
3369	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,971.0	2,600.0	75.8%
3370	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	466.0	595.1	78.3%
3371	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	329.2	512.3	64.2%
3372	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	36.6	70.2	52.1%
3373	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	849.1	1,632.1	52.0%
3374	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	338.5	605.8	55.9%
3375	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,036.1	1,402.8	73.9%
3376	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	919.9	1,435.5	64.1%
3377	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,040.8	1,877.7	55.4%
3378	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,241.1	1,665.7	74.5%
3379	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	988.2	1,305.7	75.7%
3380	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	737.4	1,259.2	58.6%
3381	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	2,017.2	2,998.2	67.3%
3382	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	298.7	493.4	60.6%
3383	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	435.2	826.1	52.7%
3384	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	258.7	485.7	53.3%
3385	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,630.0	2,472.6	65.9%
3386	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	402.8	652.4	61.7%
3387	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	78.2	123.8	63.1%
3388	2018 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,068.4	1,400.6	76.3%
3389	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,082.2	2,033.4	53.2%
3390	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	728.2	996.9	73.1%
3391	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	382.9	583.6	65.6%
3392	2022 Freightliner M2 106 Medium Duty	SERVICE TRUCK	826.7	1,458.7	56.7%
3393	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	934.2	1,365.0	68.4%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3394	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,157.7	1,608.1	72.0%
3395	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	570.1	949.2	60.1%
3396	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	957.9	1,387.3	69.0%
3397	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	202.8	447.9	45.3%
3398	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	303.4	437.2	69.4%
3399	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	490.5	748.2	65.6%
3400	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	843.9	1,123.1	75.1%
3401	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	703.6	993.6	70.8%
3402	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	289.5	496.1	58.3%
3403	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	708.0	1,117.6	63.3%
3404	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	816.0	1,264.0	64.6%
3405	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	333.7	432.0	77.2%
3406	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	396.8	613.4	64.7%
3407	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	558.9	761.9	73.3%
3408	2014 Freightliner M2 106 Medium Duty	SERVICE TRUCK	1,519.8	1,887.8	80.5%
3409	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	144.0	234.9	61.3%
3410		SERVICE TRUCK	995.0	1,318.5	75.5%
3411	2013 Freightliner M2 106 Medium Duty	SERVICE TRUCK	204.7	288.6	70.9%
3412	2014 International WorkStar 7400	BUCKET TRUCK	1,409.9	3,026.3	46.6%
3413	2015 International WorkStar 7400	BUCKET TRUCK	1,036.2	3,070.8	33.7%
3414	2017 International WorkStar 7400	BUCKET TRUCK	1,093.6	2,677.8	40.8%
3415	2017 International WorkStar 7400	BUCKET TRUCK	667.0	1,942.2	34.3%
3416	2017 International WorkStar 7400	BUCKET TRUCK	1,141.2	2,497.3	45.7%
3417	2017 International WorkStar 7400	BUCKET TRUCK	729.3	1,882.0	38.8%
3418	2017 International WorkStar 7400	BUCKET TRUCK	570.0	2,197.0	25.9%
3419	2017 International WorkStar 7400	BUCKET TRUCK	1,054.8	2,594.0	40.7%
3420	2015 Western Star Trucks 4700	DIGGER DERRICK	265.1	790.6	33.5%
3421	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	873.4	3,087.0	28.3%
3422	2022 International HV607	BUCKET TRUCK	1,991.0	3,942.2	50.5%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3423	2013 International WorkStar 7400	BUCKET TRUCK	629.2	1,596.6	39.4%
3424	2010 International 7400	BUCKET TRUCK	497.7	1,198.1	41.5%
3425	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,857.0	3,130.4	59.3%
3426	2011 International WorkStar 7400	BUCKET TRUCK	1,286.2	2,490.6	51.6%
3427	2013 International WorkStar 7400	BUCKET TRUCK	584.1	1,563.8	37.4%
3428	2015 International WorkStar 7400	BUCKET TRUCK	540.3	2,143.3	25.2%
3429	2010 International 7400	BUCKET TRUCK	548.1	1,250.3	43.8%
3430	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	2,740.0	4,040.7	67.8%
3431	2012 International WorkStar 7400	BUCKET TRUCK	88.5	164.6	53.8%
3432	2010 International 7400	BUCKET TRUCK	482.2	1,501.8	32.1%
3433	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	955.4	2,901.9	32.9%
3434	2010 International 7400	BUCKET TRUCK	468.3	1,512.9	31.0%
3435	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	550.6	2,066.8	26.6%
3436	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	658.0	2,239.1	29.4%
3437	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	846.4	2,722.3	31.1%
3438	2010 International 7400	BUCKET TRUCK	541.8	1,121.9	48.3%
3439	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,668.5	2,660.0	62.7%
3440	2010 International 7400	BUCKET TRUCK	741.0	1,132.4	65.4%
3441	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	725.7	2,327.1	31.2%
3442	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,506.7	2,286.6	65.9%
3443	2010 International 7400	BUCKET TRUCK	426.1	947.3	45.0%
3444	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,705.7	2,988.3	57.1%
3445	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,116.0	3,431.3	32.5%
3446	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,995.7	3,537.8	56.4%
3447	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,224.6	3,890.5	31.5%
3448	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	932.3	2,422.1	38.5%
3449	2010 International 7400	BUCKET TRUCK	1,091.5	2,243.2	48.7%
3450	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,289.7	4,013.8	32.1%
3451	2010 International 7400	BUCKET TRUCK	789.6	1,832.1	43.1%

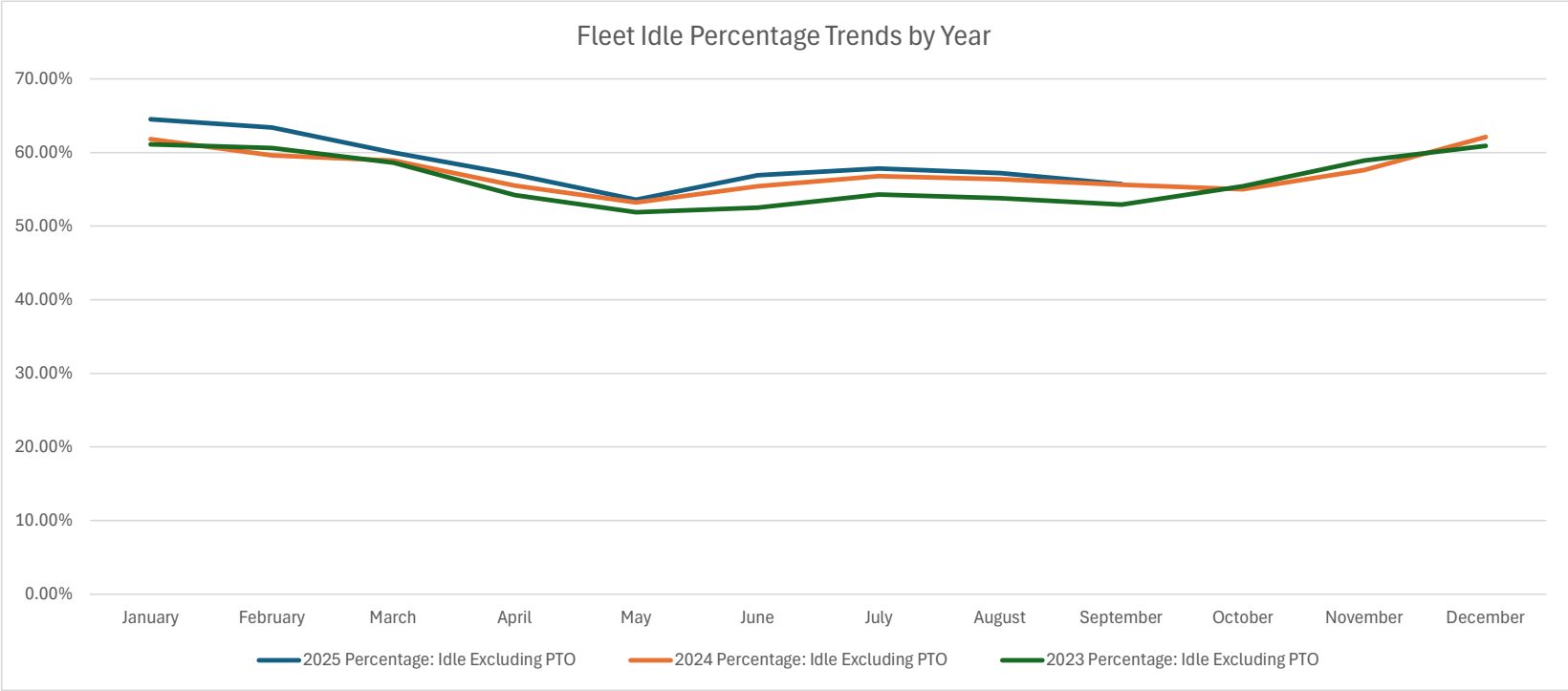
	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3452	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,072.0	2,957.8	36.2%
3453	2006 International 7400	BUCKET TRUCK	630.9	1,934.4	32.6%
3454	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,000.4	3,670.9	27.3%
3455	2020 Freightliner M2 106 Medium Duty	BUCKET TRUCK	761.5	2,771.6	27.5%
3456	2022 International HV607	BUCKET TRUCK	534.3	1,943.4	27.5%
3457	2020 International HV607	BUCKET TRUCK	677.8	1,876.7	36.1%
3458	2010 International 7400	BUCKET TRUCK	83.5	193.4	43.2%
3459	2020 International HV607	BUCKET TRUCK	1,567.4	3,995.8	39.2%
3460	2022 International HV607	BUCKET TRUCK	598.4	2,036.6	29.4%
3461	2020 International HV607	BUCKET TRUCK	837.2	2,647.2	31.6%
3462	2022 International HV607	BUCKET TRUCK	1,624.4	3,001.8	54.1%
3463	2010 International 7400	BUCKET TRUCK	770.9	1,572.0	49.0%
3464	2020 International HV607	BUCKET TRUCK	673.3	2,614.7	25.7%
3465	2022 International HV607	BUCKET TRUCK	2,512.1	4,227.8	59.4%
3466	2020 International HV607	BUCKET TRUCK	1,053.5	3,445.4	30.6%
3467	2022 International HV607	BUCKET TRUCK	3,037.4	4,922.2	61.7%
3468	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	656.3	2,530.8	25.9%
3469	2022 International HV607	BUCKET TRUCK	705.1	2,607.6	27.0%
3470	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	581.7	1,815.2	32.0%
3471	2020 International HV607	BUCKET TRUCK	1,459.5	3,642.3	40.1%
3472	2022 International HV607	BUCKET TRUCK	1,436.5	2,488.8	57.7%
3473	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	459.9	1,294.6	35.5%
3474	2020 International HV607	BUCKET TRUCK	1,126.7	2,953.3	38.2%
3475	2022 International HV607	BUCKET TRUCK	509.3	1,775.4	28.7%
3476	2020 International HV607	BUCKET TRUCK	863.2	3,342.0	25.8%
3477	2022 International HV607	BUCKET TRUCK	742.9	1,770.4	42.0%
3478	2021 International HV607	BUCKET TRUCK	746.8	2,615.4	28.6%
3479	2022 International HV607	BUCKET TRUCK	719.2	1,580.4	45.5%
3480	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	390.8	1,559.0	25.1%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3481	2021 International HV607	BUCKET TRUCK	696.5	2,507.3	27.8%
3482	2022 International HV607	BUCKET TRUCK	1,215.5	3,749.2	32.4%
3483	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	501.8	1,453.7	34.5%
3484	2021 International HV607	BUCKET TRUCK	1,151.2	3,442.5	33.4%
3485	2022 International HV607	BUCKET TRUCK	1,701.2	3,359.3	50.6%
3486	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	805.1	3,185.1	25.3%
3487	2021 International HV607	BUCKET TRUCK	1,902.8	2,985.8	63.7%
3488	2022 International HV607	BUCKET TRUCK	2,433.6	3,811.5	63.8%
3489	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,288.0	3,394.6	37.9%
3490	2021 International HV607	BUCKET TRUCK	1,279.5	3,293.8	38.8%
3491	2022 International HV607	BUCKET TRUCK	1,925.1	3,360.3	57.3%
3492	2006 International 7400	BUCKET TRUCK	650.3	2,152.2	30.2%
3493	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	816.9	2,668.8	30.6%
3494	2021 International HV607	BUCKET TRUCK	718.2	2,349.0	30.6%
3495	2022 International HV607	BUCKET TRUCK	1,678.3	2,903.8	57.8%
3496	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,122.2	2,782.4	40.3%
3497	2021 International HV607	BUCKET TRUCK	733.7	2,543.7	28.8%
3498	2022 International HV607	BUCKET TRUCK	1,505.2	2,575.2	58.5%
3499	2019 Freightliner M2 106 Medium Duty	BUCKET TRUCK	1,460.2	2,818.0	51.8%
3500	2021 International HV607	BUCKET TRUCK	1,057.7	3,308.6	32.0%
3501	2021 International HV607	BUCKET TRUCK	1,078.9	3,198.3	33.7%
3502	2021 International HV607	BUCKET TRUCK	2,712.7	3,904.4	69.5%
3503	2021 International HV607	BUCKET TRUCK	1,309.9	3,240.0	40.4%
3504	2021 International HV607	BUCKET TRUCK	1,209.0	3,414.7	35.4%
3505	2021 International HV607	BUCKET TRUCK	2,380.4	3,478.1	68.4%
3506	2021 International HV607	BUCKET TRUCK	1,510.4	2,418.8	62.4%
3507	2021 International HV607	BUCKET TRUCK	1,341.9	4,160.2	32.3%
3508	2021 International HV607	BUCKET TRUCK	1,670.7	2,918.7	57.2%
3509	2021 International HV607	BUCKET TRUCK	759.7	2,744.9	27.7%

	(a)	(b)	(c)	(d)	(e)
Line No.	Year Make Model	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO
3510	2014 International WorkStar 7400	BUCKET TRUCK	547.9	1,776.5	30.8%
3511	2012 International WorkStar 7400	CRANE	67.6	140.8	48.0%
3512	2014 Freightliner 108SD	CRANE	53.5	148.8	36.0%
3513	2022 Freightliner 114SD	CRANE	169.6	295.3	57.4%
3514	2014 Freightliner 108SD	CRANE	738.1	1,069.0	69.0%
3515	2012 International WorkStar 7400	CRANE	178.1	220.9	80.6%
3516	2012 International WorkStar 7400	CRANE	225.6	315.7	71.5%
3517	2014 International WorkStar 7400	DUMP TRUCK	80.9	134.3	60.2%
3518	1988 International F-1954	VACUUM TRUCK	2.9	4.4	67.4%
3519	2011 Freightliner M2 106 Medium Duty	CUBE VAN	312.6	937.8	33.3%
3520	2003 Workhorse Custom Chassis P42	VAN	136.4	175.2	77.9%
3521		VAN	9.6	23.3	41.4%
3522	2018 Peterbilt 567	SERVICE TRUCK	1,151.6	1,543.0	74.6%
3523	2016 Ford F59	VAN	314.2	516.7	60.8%
3524	2018 Freightliner 114SD	VACUUM TRUCK	129.7	154.5	84.0%
3525	2016 Ford F59	VAN	207.5	360.5	57.6%
3526	2018 Freightliner 114SD	VACUUM TRUCK	687.6	810.6	84.8%
3527	2022 Ford Econoline	SERVICE TRUCK	126.3	371.4	34.0%
3528	2019 International MV607	VACUUM TRUCK	705.0	1,001.5	70.4%
3529	2012 International DuraStar 4300	CUBE VAN	61.3	235.4	26.0%
3530	2020 International MV607	VACUUM TRUCK	139.4	206.4	67.6%
3531	2018 Isuzu NPR	CUBE VAN	29.3	85.2	34.4%

(a)		(b)	(c)	(d)
Line No.	Data Period Year	2025	2024	2023
	Data Period Month Name	Percentage: Idle Excluding PTO	Percentage: Idle Excluding PTO	Percentage: Idle Excluding PTO
1	January	64.50%	61.80%	61.10%
2	February	63.40%	59.60%	60.60%
3	March	60.00%	58.90%	58.60%
4	April	57.00%	55.50%	54.20%
5	May	53.60%	53.20%	51.90%
6	June	56.90%	55.40%	52.50%
7	July	57.80%	56.80%	54.30%
8	August	57.20%	56.40%	53.80%
9	September	55.70%	55.60%	52.90%
10	October		55.00%	55.40%
11	November		57.60%	58.90%
12	December		62.10%	60.90%

Source: Utilimarc
Benchmark Idle Target: 25% or lower



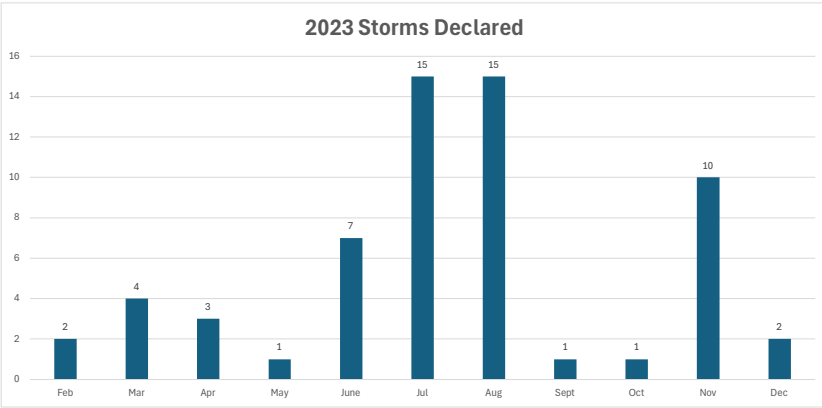
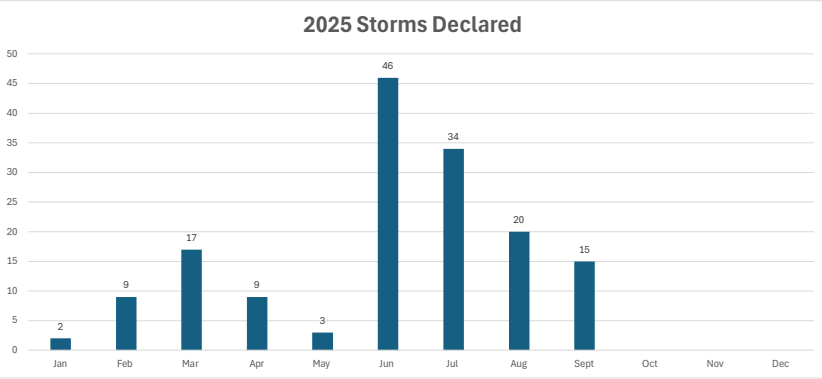
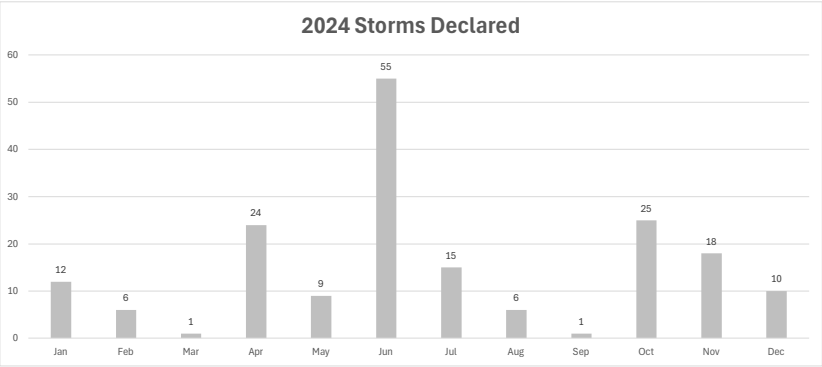
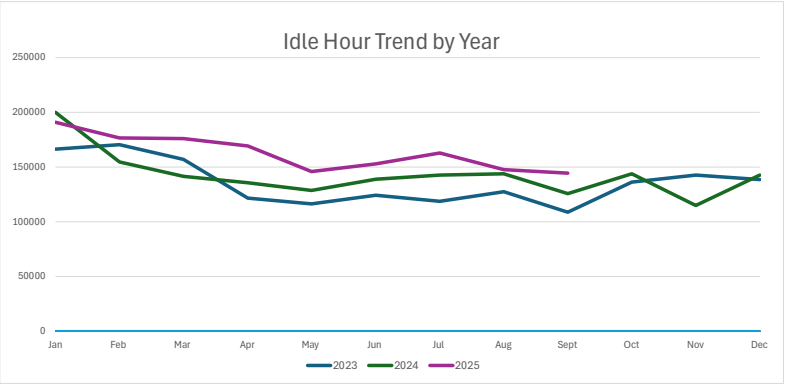
		(a)	(b)	(c)	(d)	(e)
Line No.	Month	Idling Hours @ Service Centers MONTH	Apprxoximate Gallons Consumed MONTH	Approximate Service Center idling as Percentage of overall idling	Idling @ Service Centers Approx Cost Per MONTH	Apprxoximate CO2 Emmisions MONTH (Metric Tons)
	Jan 2025	No data				
	Feb 2025					
1	Mar 2025	30,841	24,673	17.5%	\$78,706.23	235
2	Apr 2025	27,039	21,631	16.0%	\$69,003.53	206
3	May 2025	22,312	17,850	15.3%	\$57,297.22	170
4	Jun 2025	23,525	18,820	15.4%	\$61,729.60	179
5	Jul 2025	24,837	19,870	15.3%	\$67,357.94	189
6	Aug 2025	23,736	18,989	16.1%	\$64,561.92	181
7	Sept 2025	23,360	18,688	16.2%	\$63,539.20	178
8	Oct 2025					
9	Nov 2025					
10	Dec 2025					

Recently developed data capture. Data available from March 2025 onward.

Line No.	(a)			(b)			(c)		
	2023			2024			2025		
1	Jan		166349	Jan 2024		200125	Jan 2025		190951
2	Feb		170537	Feb 2024		154654	Feb 2025		176676
3	Mar		156988	Mar 2024		141615	Mar 2025		176232
4	Apr		121653	Apr 2024		135599	Apr 2025		169518
5	May		116257	May 2024		128603	May 2025		146083
6	Jun		124239	Jun 2024		138861	Jun 2025		152971
7	Jul		118605	Jul 2024		142543	Jul 2025		162914
8	Aug		127410	Aug 2024		143944	Aug 2025		147748
9	Sept		108727	Sept 2024		125566	Sept 2025		144609
10	Oct		136112	Oct 2024		143803	Oct 2025		
11	Nov		142673	Nov 2024		114957	Nov 2025		
12	Dec		138,498	Dec 2024		142,551	Dec 2025		
			1628048			1712821			1467702

Data through September 2025

	(a)			(b)			(c)		
	2023			2024			2025		
13	Jan		2	Jan		12	Jan		2
14	Feb		2	Feb		6	Feb		9
15	Mar		4	Mar		1	Mar		17
16	Apr		3	Apr		24	Apr		9
17	May		1	May		9	May		3
18	Jun		7	Jun		55	Jun		46
19	Jul		15	Jul		15	Jul		34
20	Aug		15	Aug		6	Aug		20
21	Sept		1	Sept		1	Sept		15
22	Oct		1	Oct		25	Oct		
23	Nov		10	Nov		18	Nov		
24	Dec		2	Dec		10	Dec		
			63			182			155



Idling Cost by Year

		(a)	(b)	(C)
Line No.		2023	2024	2025*
1	Approximate Gallons Idled	1,302,438	1,370,257	1,174,162
2	Avg Cost Fuel/Gal (gas & diesel)/Year	\$3.69	\$3.47	\$3.27
3	Approximate Cost	\$4,805,997.70	\$4,754,791.10	\$3,839,508.43

*through Sept 2025

	(a)	(b)	(c)
Line No.	Spec	Idle Hours	Approx Idle Hours Cost
1	06	2064.5	\$3,809.00
2	07	19636.1	\$36,228.60
3	08	1146.2	\$2,537.69
4	22	47996	\$141,684.19
5	23	307589.9	\$908,005.38
6	26	30070.4	\$88,767.82
7	27	98183.2	\$289,836.81
8	28	276652.1	\$816,677.00
9	29	1927.3	\$5,689.39
10	30	22168.5	\$65,441.41
11	32	16675.8	\$49,226.96
12	33	168.6	\$497.71
13	36	54297.7	\$160,286.81
14	37	32444.7	\$95,776.75
15	38	82530.9	\$24,363.12
16	39	4489	\$13,251.53
17	41	24550.5	\$72,473.08
18	42	25890	\$76,427.28
19	43	9110.7	\$26,894.79
20	44	74557	\$220,092.26
21	45	3609.6	\$10,655.54
22	54	53977.8	\$159,342.47
23	55	8255.8	\$24,371.12
24	57	2020.2	\$5,963.63

Line No.	(a)	(b)	(c)
25	59	50544.1	\$149,206.18
26	60	20222.9	\$59,698.00
27	61	632.8	\$1,868.03
28	64	47862.2	\$141,289.21
29	65	2281.8	\$6,735.87
30	67	516.9	\$1,525.89
31	68	67693.1	\$199,830.03
32	75	3750.8	\$11,072.36
33	77	51149.5	\$150,993.32
34	82	3445.4	\$10,170.82
35	83	4624.5	\$13,651.52
36	85	2969.8	\$8,766.85
37	86	9431.4	\$27,841.49
38	89	50373.5	\$148,702.57
39	90	20456.9	\$60,388.77
40	94	2418.6	\$7,139.71
41	96	32115.8	\$94,805.84
42	97	289	\$853.13
43	98	694.9	\$2,051.34
44	99	1554.1	\$4,587.70

	(a)	(b)	(c)
Line No.	Spec	Idle Hours	Approx Idle Hours Cost
1	06	2539.6	\$4,406.20
2	07	28460.5	\$49,378.97
3	08	1198.7	\$2,495.69
4	10	539.5	\$1,497.65
5	20	2266.4	\$6,291.53
6	22	53996.3	\$149,893.73
7	23	340063.6	\$944,016.55
8	24	2753.1	\$7,642.61
9	26	32838.3	\$91,159.12
10	27	99943.2	\$277,442.32
11	28	293240	\$814,034.24
12	29	1806.8	\$5,015.68
13	30	26710.1	\$74,147.24
14	32	14219.7	\$39,473.89
15	33	273.7	\$759.79
16	36	47525	\$131,929.40
17	37	35580.8	\$98,772.30
18	38	90836	\$252,160.74
19	39	4464.2	\$12,392.62
20	41	32268.7	\$89,577.91
21	42	28604.1	\$79,404.98
22	43	9736.8	\$27,029.36
23	44	80703.1	\$244,031.81
24	45	3973	\$11,029.05

Line No.	(a)	(b)	(c)
25	54	57119	\$158,562.34
26	55	8348.6	\$23,175.71
27	57	1695.4	\$4,706.43
28	59	50789.4	\$140,991.37
29	60	22949	\$63,706.42
30	61	564.1	\$1,565.94
31	64	53713.8	\$149,109.51
32	65	2566.4	\$7,124.33
33	67	888.7	\$2,467.03
34	68	71444	\$198,328.54
35	75	3961.2	\$10,996.29
36	77	51813.9	\$143,835.39
37	82	3119.4	\$8,659.45
38	83	6516.7	\$18,090.36
39	85	2967	\$8,236.39
40	86	11441.4	\$31,761.33
41	89	53763.2	\$149,264.64
42	90	21777.9	\$60,455.45
43	94	2494.2	\$6,923.90
44	96	32555.1	\$90,372.96
45	97	129.7	\$360.05
46	98	436.6	\$1,212.00
47	99	1476.8	\$4,099.60

	(a)	(b)	(c)
Line No.	Spec	Idle Hours Jan to Sept 2025	Approx Idle Hours Cost Jan to Sept 2025
1	06	3499.1	\$6,865.23
2	07	27437.9	\$53,833.16
3	08	998.4	\$1,958.86
4	10	721.6	\$1,887.71
5	12	187.2	\$489.72
6	20	2727.8	\$7,135.92
7	22	51861.5	\$135,669.98
8	23	268282	\$701,825.71
9	24	3022.9	\$7,907.91
10	25	1008.8	\$2,639.02
11	26	31300.4	\$81,881.85
12	27	88431.1	\$231,335.76
13	28	261398.3	\$683,817.95
14	29	2022.5	\$5,290.86
15	30	21561	\$56,403.58
16	32	12614	\$32,998.22
17	33	4005.1	\$10,477.34
18	36	39392.4	\$103,050.52
19	37	27772.3	\$72,652.34
20	38	74503	\$194,899.85
21	39	4757	\$12,444.31
22	41	25728.2	\$67,304.97
23	42	22666.8	\$59,296.35
24	43	8638	\$22,597.01

Line No.	(a)	(b)	(c)
25	44	72255.9	\$189,021.43
26	45	3419.1	\$8,944.37
27	54	53000.4	\$138,649.05
28	55	8031.9	\$21,011.45
29	57	1681.1	\$4,397.76
30	59	42637.8	\$111,540.48
31	60	20558.4	\$53,780.77
32	61	426.3	\$1,115.20
33	64	40602.1	\$106,215.09
34	65	1840.4	\$4,814.49
35	67	618.5	\$1,618.00
36	68	58361	\$152,672.38
37	75	3121.1	\$8,164.80
38	77	48316	\$126,394.66
39	82	2953.7	\$7,726.88
40	83	5643	\$14,762.09
41	85	3689	\$9,650.42
42	86	12007.5	\$31,411.62
43	89	50593.4	\$132,352.33
44	90	21224.2	\$55,522.51
45	94	2600.3	\$6,802.38
46	95	97.8	\$255.84
47	96	30604.9	\$80,062.42
48	97	129.3	\$338.25
49	98	465.7	\$1,218.27
50	99	1034.8	\$2,707.04

(a)		(b)	(c)		(d)
Line No.	Vehicle Type	Total Tons CO2 Emissions from Fuel While Idle	Row Labels	Sum of Total Tons CO2 Emissions from Fuel While Idle	
1	FL06	0.01	FL06	11.41	
2	FL06	0.01	FL07	50.28	
3	FL06	0.03	FL22	349.73	
4	FL06	0.02	FL23	1,137.66	
5	FL06	0.01	FL26	75.29	
6	FL06	0.00	FL27A	67.31	
7	FL06	0.02	FL27B	333.77	
8	FL06	0.07	FL28	1,560.89	
9	FL06	0.01	FL36	206.88	
10	FL06	0.06	FL37	204.69	
11	FL06	0.06	FL39	7.37	
12	FL06	0.14	FL41	142.36	
13	FL06	0.01	FL42A	164.85	
14	FL06	0.10	FL42B	4.98	
15	FL06	0.04	FL43	59.31	
16	FL06	0.15	FL44	639.09	
17	FL06	0.03	FL45	25.30	
18	FL06	0.01	FL46	8.36	
19	FL06	0.12	FL54	542.73	
20	FL06	0.02	FL55	28.35	
21	FL06	0.04	FL57	16.95	
22	FL06	0.12	FL59	306.96	
23	FL06	0.02	FL60	133.85	
24	FL06	0.17	FL64	391.52	
25	FL06	0.11	FL65	23.32	
26	FL06	0.05	FL67	3.50	
27	FL06	0.05	FL68	381.09	
28	FL06	0.04	FL75	36.49	
29	FL06	0.17	FL77	603.22	
30	FL06	0.10	FL82	60.56	
31	FL06	0.11	FL83	42.33	
32	FL06	0.07	FL84	2.25	
33	FL06	0.13	FL85A	50.03	
34	FL06	0.15	FL86A	63.05	
35	FL06	0.11	FL86B	28.62	
36	FL06	0.19	FL89	764.79	
37	FL06	0.08	FL90	198.62	
38	FL06	0.18	FL94	37.85	
39	FL06	0.01	FL96	492.27	
40	FL06	0.23	FL97	3.60	
41	FL06	0.06	FL98	5.03	
42	FL06	0.09	Grand Total	9,266.54	
43	FL06	0.12			
44	FL06	0.10			
45	FL06	0.17			
46	FL06	0.12			
47	FL06	0.17			
48	FL06	0.39			
49	FL06	0.31			
50	FL06	0.09			
51	FL06	0.20			
52	FL06	0.03			
Line No	(a)	(b)			
53	FL06	0.13			
54	FL06	0.34			
55	FL06	0.17			
56	FL06	0.13			

57	FL06	0.31
58	FL06	0.20
59	FL06	0.35
60	FL06	0.44
61	FL06	0.30
62	FL06	0.04
63	FL06	0.16
64	FL06	0.07
65	FL06	0.15
66	FL06	0.53
67	FL06	0.17
68	FL06	0.33
69	FL06	0.09
70	FL06	0.69
71	FL06	0.52
72	FL06	0.39
73	FL06	0.38
74	FL06	0.60
75	FL06	0.00
76	FL06	0.01
77	FL07	0.14
78	FL07	0.27
79	FL07	0.08
80	FL07	0.12
81	FL07	0.09
82	FL07	0.33
Line No	(a)	(b)
83	FL07	0.09
84	FL07	0.14
85	FL07	0.20
86	FL07	0.04
87	FL07	0.14
88	FL07	0.06
89	FL07	0.20
90	FL07	0.05
91	FL07	0.20
92	FL07	0.18
93	FL07	0.09
94	FL07	0.09
95	FL07	0.01
96	FL07	0.05
97	FL07	0.03
98	FL07	0.38
99	FL07	0.18
100	FL07	0.00
101	FL07	0.53
102	FL07	0.23
103	FL07	0.33
104	FL07	0.03
105	FL07	0.07
106	FL07	0.04
107	FL07	0.23
108	FL07	0.28
109	FL07	0.16
110	FL07	0.08
111	FL07	0.11
112	FL07	0.91
Line No	(a)	(b)
113	FL07	0.16
114	FL07	0.00
115	FL07	0.28
116	FL07	0.23
117	FL07	0.07
118	FL07	0.12
119	FL07	0.64
120	FL07	0.00
121	FL07	0.07

122	FL07	0.00
123	FL07	0.78
124	FL07	0.50
125	FL07	0.22
126	FL07	0.00
127	FL07	0.51
128	FL07	0.10
129	FL07	0.19
130	FL07	0.00
131	FL07	0.24
132	FL07	0.21
133	FL07	0.29
134	FL07	0.13
135	FL07	0.09
136	FL07	0.61
137	FL07	0.34
138	FL07	0.30
139	FL07	0.29
140	FL07	0.20
141	FL07	0.03
142	FL07	0.36
Line No	(a)	(b)
143	FL07	0.44
144	FL07	0.25
145	FL07	0.22
146	FL07	0.38
147	FL07	0.27
148	FL07	0.00
149	FL07	0.27
150	FL07	0.21
151	FL07	0.31
152	FL07	0.25
153	FL07	0.38
154	FL07	0.25
155	FL07	1.75
156	FL07	0.00
157	FL07	0.73
158	FL07	0.13
159	FL07	0.96
160	FL07	0.30
161	FL07	0.39
162	FL07	0.20
163	FL07	1.33
164	FL07	0.59
165	FL07	0.20
166	FL07	0.43
167	FL07	0.04
168	FL07	0.00
169	FL07	1.21
170	FL07	1.33
171	FL07	0.00
172	FL07	0.74
Line No	(a)	(b)
173	FL07	0.58
174	FL07	0.08
175	FL07	0.84
176	FL07	0.19
177	FL07	1.21
178	FL07	0.36
179	FL07	0.44
180	FL07	0.32
181	FL07	0.53
182	FL07	0.32
183	FL07	0.93
184	FL07	0.00
185	FL07	0.47
186	FL07	0.00

187	FL07	0.00
188	FL07	0.00
189	FL07	0.90
190	FL07	1.37
191	FL07	0.21
192	FL07	0.23
193	FL07	0.26
194	FL07	0.44
195	FL07	0.25
196	FL07	0.53
197	FL07	0.60
198	FL07	0.17
199	FL07	0.61
200	FL07	0.15
201	FL07	1.11
202	FL07	0.89
Line No	(a)	(b)
203	FL07	0.53
204	FL07	0.32
205	FL07	1.79
206	FL07	0.15
207	FL07	0.78
208	FL07	0.97
209	FL07	0.34
210	FL07	0.33
211	FL07	0.87
212	FL07	0.84
213	FL07	0.67
214	FL07	0.20
215	FL07	0.75
216	FL07	1.04
217	FL07	0.00
218	FL22	0.40
219	FL22	0.78
220	FL22	0.14
221	FL22	0.24
222	FL22	0.36
223	FL22	0.61
224	FL22	0.20
225	FL22	0.48
226	FL22	0.66
227	FL22	0.42
228	FL22	0.40
229	FL22	0.28
230	FL22	0.43
231	FL22	0.21
232	FL22	0.74
Line No	(a)	(b)
233	FL22	0.54
234	FL22	0.67
235	FL22	0.57
236	FL22	0.36
237	FL22	1.06
238	FL22	0.48
239	FL22	0.40
240	FL22	0.55
241	FL22	0.47
242	FL22	0.76
243	FL22	0.42
244	FL22	0.81
245	FL22	0.62
246	FL22	0.71
247	FL22	0.12
248	FL22	0.53
249	FL22	0.32
250	FL22	0.27
251	FL22	0.59

252	FL22	0.67
253	FL22	0.17
254	FL22	1.16
255	FL22	0.73
256	FL22	0.83
257	FL22	0.32
258	FL22	1.13
259	FL22	0.85
260	FL22	0.32
261	FL22	0.76
262	FL22	0.06
Line No	(a)	(b)
263	FL22	0.12
264	FL22	0.39
265	FL22	0.36
266	FL22	0.76
267	FL22	0.49
268	FL22	0.03
269	FL22	0.45
270	FL22	0.11
271	FL22	1.13
272	FL22	0.32
273	FL22	0.81
274	FL22	0.89
275	FL22	0.87
276	FL22	0.52
277	FL22	0.90
278	FL22	0.21
279	FL22	0.50
280	FL22	0.39
281	FL22	0.09
282	FL22	0.53
283	FL22	0.42
284	FL22	1.31
285	FL22	0.35
286	FL22	0.19
287	FL22	1.16
288	FL22	0.12
289	FL22	0.57
290	FL22	0.13
291	FL22	0.83
292	FL22	0.50
Line No	(a)	(b)
293	FL22	0.28
294	FL22	0.04
295	FL22	0.48
296	FL22	0.57
297	FL22	1.05
298	FL22	0.23
299	FL22	0.16
300	FL22	0.04
301	FL22	0.13
302	FL22	0.15
303	FL22	0.21
304	FL22	0.25
305	FL22	0.24
306	FL22	0.66
307	FL22	0.60
308	FL22	0.56
309	FL22	0.17
310	FL22	0.84
311	FL22	1.08
312	FL22	0.58
313	FL22	0.07
314	FL22	0.26
315	FL22	0.56
316	FL22	0.60

317	FL22	0.66
318	FL22	0.09
319	FL22	0.87
320	FL22	1.11
321	FL22	0.32
322	FL22	0.60
Line No	(a)	(b)
323	FL22	0.81
324	FL22	0.98
325	FL22	0.32
326	FL22	0.25
327	FL22	0.52
328	FL22	0.16
329	FL22	0.33
330	FL22	0.13
331	FL22	0.14
332	FL22	1.21
333	FL22	0.47
334	FL22	0.91
335	FL22	0.28
336	FL22	0.32
337	FL22	0.49
338	FL22	1.64
339	FL22	0.56
340	FL22	0.04
341	FL22	0.96
342	FL22	0.92
343	FL22	0.69
344	FL22	0.14
345	FL22	0.35
346	FL22	0.39
347	FL22	0.55
348	FL22	0.90
349	FL22	0.79
350	FL22	0.06
351	FL22	0.88
352	FL22	0.49
Line No	(a)	(b)
353	FL22	0.02
354	FL22	0.08
355	FL22	0.09
356	FL22	0.36
357	FL22	0.05
358	FL22	0.85
359	FL22	0.99
360	FL22	0.15
361	FL22	0.31
362	FL22	0.34
363	FL22	0.65
364	FL22	0.87
365	FL22	0.65
366	FL22	1.11
367	FL22	0.95
368	FL22	0.28
369	FL22	0.28
370	FL22	0.53
371	FL22	0.57
372	FL22	0.83
373	FL22	0.59
374	FL22	0.30
375	FL22	0.94
376	FL22	1.00
377	FL22	1.34
378	FL22	0.23
379	FL22	0.24
380	FL22	0.19
381	FL22	0.55

382	FL22	0.08
Line No	(a)	(b)
383	FL22	1.02
384	FL22	0.29
385	FL22	0.38
386	FL22	0.73
387	FL22	0.66
388	FL22	0.57
389	FL22	0.16
390	FL22	0.30
391	FL22	0.09
392	FL22	0.59
393	FL22	0.16
394	FL22	0.24
395	FL22	0.30
396	FL22	1.59
397	FL22	0.00
398	FL22	0.93
399	FL22	0.70
400	FL22	0.14
401	FL22	0.50
402	FL22	0.82
403	FL22	0.32
404	FL22	0.55
405	FL22	0.61
406	FL22	0.55
407	FL22	0.15
408	FL22	1.46
409	FL22	0.42
410	FL22	0.40
411	FL22	0.20
412	FL22	0.21
Line No	(a)	(b)
413	FL22	0.18
414	FL22	0.80
415	FL22	0.34
416	FL22	0.45
417	FL22	0.14
418	FL22	1.23
419	FL22	0.79
420	FL22	0.11
421	FL22	0.42
422	FL22	2.21
423	FL22	0.60
424	FL22	0.07
425	FL22	2.31
426	FL22	0.79
427	FL22	0.41
428	FL22	0.19
429	FL22	0.21
430	FL22	0.62
431	FL22	0.43
432	FL22	1.35
433	FL22	0.69
434	FL22	1.56
435	FL22	0.85
436	FL22	1.41
437	FL22	0.39
438	FL22	0.81
439	FL22	0.10
440	FL22	0.64
441	FL22	0.38
442	FL22	1.10
Line No	(a)	(b)
443	FL22	0.46
444	FL22	1.39
445	FL22	0.35

446	FL22	1.57
447	FL22	2.01
448	FL22	1.10
449	FL22	1.39
450	FL22	1.38
451	FL22	0.02
452	FL22	0.72
453	FL22	0.50
454	FL22	1.28
455	FL22	1.28
456	FL22	1.65
457	FL22	0.84
458	FL22	0.39
459	FL22	0.99
460	FL22	0.16
461	FL22	1.17
462	FL22	0.53
463	FL22	1.30
464	FL22	2.43
465	FL22	0.31
466	FL22	0.36
467	FL22	0.37
468	FL22	0.79
469	FL22	1.35
470	FL22	0.35
471	FL22	0.59
472	FL22	1.01
Line No	(a)	(b)
473	FL22	1.85
474	FL22	2.02
475	FL22	0.95
476	FL22	0.65
477	FL22	0.66
478	FL22	0.05
479	FL22	0.36
480	FL22	0.57
481	FL22	0.52
482	FL22	0.18
483	FL22	0.26
484	FL22	0.79
485	FL22	0.62
486	FL22	0.41
487	FL22	1.11
488	FL22	0.22
489	FL22	0.21
490	FL22	0.62
491	FL22	0.77
492	FL22	0.47
493	FL22	0.80
494	FL22	0.91
495	FL22	0.56
496	FL22	0.42
497	FL22	0.29
498	FL22	1.50
499	FL22	0.30
500	FL22	1.91
501	FL22	0.32
502	FL22	0.74
Line No	(a)	(b)
503	FL22	0.56
504	FL22	0.03
505	FL22	0.35
506	FL22	0.24
507	FL22	1.31
508	FL22	1.27
509	FL22	0.61
510	FL22	1.67

511	FL22	2.29
512	FL22	1.21
513	FL22	1.39
514	FL22	1.04
515	FL22	0.34
516	FL22	2.00
517	FL22	0.88
518	FL22	1.58
519	FL22	2.28
520	FL22	0.29
521	FL22	1.64
522	FL22	0.69
523	FL22	0.58
524	FL22	0.67
525	FL22	3.13
526	FL22	0.69
527	FL22	0.46
528	FL22	2.10
529	FL22	0.41
530	FL22	0.14
531	FL22	1.28
532	FL22	0.26
Line No	(a)	(b)
533	FL22	1.65
534	FL22	1.59
535	FL22	0.25
536	FL22	0.40
537	FL22	1.98
538	FL22	0.05
539	FL22	2.59
540	FL22	0.01
541	FL22	0.57
542	FL22	0.71
543	FL22	0.31
544	FL22	1.16
545	FL22	0.73
546	FL22	1.29
547	FL22	1.17
548	FL22	0.34
549	FL22	1.45
550	FL22	0.83
551	FL22	1.00
552	FL22	1.01
553	FL22	1.66
554	FL22	0.44
555	FL22	0.46
556	FL22	0.52
557	FL22	0.67
558	FL22	0.83
559	FL22	1.82
560	FL22	1.43
561	FL22	1.24
562	FL22	0.38
Line No	(a)	(b)
563	FL22	0.64
564	FL22	0.92
565	FL22	0.28
566	FL22	1.07
567	FL22	0.24
568	FL22	0.34
569	FL22	1.30
570	FL22	0.92
571	FL22	0.80
572	FL22	1.51
573	FL22	1.87
574	FL22	0.44
575	FL22	0.81

576	FL22	0.60
577	FL22	1.21
578	FL22	0.60
579	FL22	0.77
580	FL22	1.80
581	FL22	1.23
582	FL22	0.13
583	FL22	1.35
584	FL22	0.31
585	FL22	1.61
586	FL22	3.02
587	FL22	1.03
588	FL22	0.95
589	FL22	2.99
590	FL22	0.90
591	FL22	1.54
592	FL22	0.49
Line No	(a)	(b)
593	FL22	0.39
594	FL22	1.37
595	FL22	2.44
596	FL22	0.52
597	FL22	2.17
598	FL22	3.23
599	FL22	1.21
600	FL22	3.23
601	FL22	0.86
602	FL22	1.45
603	FL22	0.01
604	FL22	0.40
605	FL22	0.42
606	FL22	1.41
607	FL22	0.60
608	FL22	1.06
609	FL22	2.37
610	FL22	3.53
611	FL22	1.34
612	FL22	1.03
613	FL22	3.97
614	FL22	0.82
615	FL22	1.30
616	FL22	0.10
617	FL22	4.62
618	FL22	2.61
619	FL22	1.65
620	FL22	3.75
621	FL22	0.24
622	FL22	0.32
Line No	(a)	(b)
623	FL22	2.52
624	FL22	0.53
625	FL22	0.44
626	FL22	0.91
627	FL22	0.07
628	FL22	2.28
629	FL22	0.52
630	FL22	0.29
631	FL22	2.54
632	FL22	6.14
633	FL22	0.00
634	FL22	2.40
635	FL22	11.12
636	FL22	0.77
637	FL22	8.84
638	FL22	0.00
639	FL23	0.01
640	FL23	0.91

641	FL23	0.21
642	FL23	0.90
643	FL23	0.16
644	FL23	0.59
645	FL23	0.62
646	FL23	0.05
647	FL23	0.27
648	FL23	1.20
649	FL23	1.61
650	FL23	1.68
651	FL23	1.12
652	FL23	2.10
Line No	(a)	(b)
653	FL23	1.20
654	FL23	1.06
655	FL23	1.06
656	FL23	0.28
657	FL23	0.89
658	FL23	0.20
659	FL23	1.01
660	FL23	3.78
661	FL23	0.11
662	FL23	0.13
663	FL23	0.70
664	FL23	1.60
665	FL23	0.87
666	FL23	0.01
667	FL23	0.09
668	FL23	3.40
669	FL23	0.29
670	FL23	3.34
671	FL23	0.57
672	FL23	1.78
673	FL23	0.20
674	FL23	0.95
675	FL23	0.92
676	FL23	5.18
677	FL23	1.54
678	FL23	2.32
679	FL23	2.42
680	FL23	1.41
681	FL23	1.40
682	FL23	0.10
Line No	(a)	(b)
683	FL23	2.14
684	FL23	1.45
685	FL23	1.75
686	FL23	3.62
687	FL23	1.33
688	FL23	0.63
689	FL23	1.46
690	FL23	1.89
691	FL23	0.90
692	FL23	2.71
693	FL23	2.16
694	FL23	4.56
695	FL23	3.36
696	FL23	3.85
697	FL23	3.93
698	FL23	1.82
699	FL23	1.21
700	FL23	0.01
701	FL23	1.48
702	FL23	3.85
703	FL23	4.54
704	FL23	1.93
705	FL23	2.80

706	FL23	3.03
707	FL23	4.06
708	FL23	2.19
709	FL23	1.10
710	FL23	2.24
711	FL23	2.32
712	FL23	2.51
Line No	(a)	(b)
713	FL23	1.56
714	FL23	2.76
715	FL23	3.46
716	FL23	1.52
717	FL23	3.35
718	FL23	2.30
719	FL23	2.23
720	FL23	3.75
721	FL23	4.25
722	FL23	0.98
723	FL23	3.10
724	FL23	1.44
725	FL23	0.78
726	FL23	1.82
727	FL23	1.35
728	FL23	1.64
729	FL23	3.03
730	FL23	1.32
731	FL23	5.00
732	FL23	3.94
733	FL23	4.44
734	FL23	0.26
735	FL23	3.14
736	FL23	1.06
737	FL23	3.40
738	FL23	2.85
739	FL23	1.49
740	FL23	0.92
741	FL23	2.39
742	FL23	2.17
Line No	(a)	(b)
743	FL23	2.69
744	FL23	3.71
745	FL23	3.56
746	FL23	4.70
747	FL23	5.11
748	FL23	3.82
749	FL23	2.00
750	FL23	2.44
751	FL23	4.74
752	FL23	3.37
753	FL23	5.07
754	FL23	2.44
755	FL23	0.54
756	FL23	2.90
757	FL23	2.07
758	FL23	1.00
759	FL23	0.23
760	FL23	3.44
761	FL23	2.00
762	FL23	2.11
763	FL23	4.74
764	FL23	1.62
765	FL23	4.88
766	FL23	3.22
767	FL23	1.90
768	FL23	2.08
769	FL23	3.03
770	FL23	4.84

771	FL23	4.64
772	FL23	0.02
Line No	(a)	(b)
773	FL23	3.00
774	FL23	1.97
775	FL23	1.65
776	FL23	2.69
777	FL23	0.74
778	FL23	3.34
779	FL23	3.04
780	FL23	3.75
781	FL23	3.45
782	FL23	3.23
783	FL23	0.82
784	FL23	0.52
785	FL23	4.89
786	FL23	3.34
787	FL23	0.02
788	FL23	2.86
789	FL23	4.35
790	FL23	5.68
791	FL23	4.72
792	FL23	2.71
793	FL23	5.87
794	FL23	3.91
795	FL23	3.01
796	FL23	2.32
797	FL23	2.61
798	FL23	1.36
799	FL23	3.84
800	FL23	1.82
801	FL23	3.16
802	FL23	1.15
Line No	(a)	(b)
803	FL23	2.36
804	FL23	4.02
805	FL23	1.26
806	FL23	5.58
807	FL23	2.80
808	FL23	4.29
809	FL23	3.74
810	FL23	5.39
811	FL23	3.72
812	FL23	3.42
813	FL23	2.80
814	FL23	3.25
815	FL23	5.33
816	FL23	4.75
817	FL23	1.50
818	FL23	3.26
819	FL23	3.96
820	FL23	3.90
821	FL23	2.89
822	FL23	2.49
823	FL23	5.24
824	FL23	3.70
825	FL23	4.73
826	FL23	5.59
827	FL23	4.05
828	FL23	3.00
829	FL23	1.94
830	FL23	3.57
831	FL23	3.13
832	FL23	1.45
Line No	(a)	(b)
833	FL23	4.13
834	FL23	1.76

835	FL23	0.78
836	FL23	1.74
837	FL23	5.41
838	FL23	4.64
839	FL23	7.29
840	FL23	4.10
841	FL23	1.73
842	FL23	4.09
843	FL23	2.38
844	FL23	3.28
845	FL23	3.47
846	FL23	4.55
847	FL23	3.59
848	FL23	3.20
849	FL23	4.54
850	FL23	4.55
851	FL23	2.25
852	FL23	5.19
853	FL23	2.85
854	FL23	3.04
855	FL23	3.42
856	FL23	3.65
857	FL23	0.31
858	FL23	2.95
859	FL23	4.78
860	FL23	0.00
861	FL23	6.31
862	FL23	1.87
Line No	(a)	(b)
863	FL23	2.75
864	FL23	8.67
865	FL23	4.56
866	FL23	1.86
867	FL23	5.23
868	FL23	3.94
869	FL23	4.46
870	FL23	3.71
871	FL23	2.84
872	FL23	2.52
873	FL23	1.56
874	FL23	2.21
875	FL23	2.89
876	FL23	0.76
877	FL23	1.35
878	FL23	4.30
879	FL23	4.65
880	FL23	4.01
881	FL23	1.35
882	FL23	2.28
883	FL23	5.81
884	FL23	2.41
885	FL23	4.78
886	FL23	1.73
887	FL23	7.03
888	FL23	3.24
889	FL23	3.91
890	FL23	3.13
891	FL23	2.23
892	FL23	0.28
Line No	(a)	(b)
893	FL23	5.68
894	FL23	4.03
895	FL23	2.41
896	FL23	1.97
897	FL23	4.68
898	FL23	3.37
899	FL23	5.53

900	FL23	1.36
901	FL23	3.51
902	FL23	5.49
903	FL23	4.76
904	FL23	3.49
905	FL23	4.89
906	FL23	4.55
907	FL23	1.57
908	FL23	2.69
909	FL23	6.13
910	FL23	5.33
911	FL23	2.75
912	FL23	8.66
913	FL23	6.12
914	FL23	7.37
915	FL23	2.94
916	FL23	7.17
917	FL23	0.05
918	FL23	5.87
919	FL23	2.97
920	FL23	3.47
921	FL23	3.33
922	FL23	3.72
Line No	(a)	(b)
923	FL23	2.80
924	FL23	2.20
925	FL23	0.76
926	FL23	3.52
927	FL23	0.26
928	FL23	3.97
929	FL23	3.63
930	FL23	3.85
931	FL23	4.96
932	FL23	2.83
933	FL23	4.09
934	FL23	2.63
935	FL23	3.35
936	FL23	2.44
937	FL23	4.99
938	FL23	3.85
939	FL23	2.80
940	FL23	0.14
941	FL23	5.47
942	FL23	1.83
943	FL23	3.81
944	FL23	3.24
945	FL23	3.57
946	FL23	4.35
947	FL23	5.68
948	FL23	3.50
949	FL23	4.63
950	FL23	7.80
951	FL23	0.51
952	FL23	6.18
Line No	(a)	(b)
953	FL23	7.75
954	FL23	8.20
955	FL23	5.85
956	FL23	3.03
957	FL23	4.39
958	FL23	3.54
959	FL23	5.61
960	FL23	3.43
961	FL23	7.39
962	FL23	3.51
963	FL23	3.33
964	FL23	1.66

965	FL23	8.86
966	FL23	5.57
967	FL23	5.36
968	FL23	5.98
969	FL23	6.13
970	FL23	6.93
971	FL23	6.72
972	FL23	1.96
973	FL23	4.00
974	FL23	4.63
975	FL23	1.50
976	FL23	6.09
977	FL23	4.90
978	FL23	5.08
979	FL23	8.00
980	FL23	4.53
981	FL23	5.86
982	FL23	4.82
Line No	(a)	(b)
983	FL23	5.36
984	FL23	0.23
985	FL23	2.97
986	FL23	6.76
987	FL23	1.67
988	FL23	4.33
989	FL23	3.27
990	FL23	3.33
991	FL23	0.21
992	FL23	6.94
993	FL23	0.67
994	FL23	4.21
995	FL23	5.18
996	FL23	5.76
997	FL23	2.53
998	FL23	0.32
999	FL23	8.73
1000	FL23	3.33
1001	FL23	1.70
1002	FL23	1.74
1003	FL23	3.55
1004	FL23	3.80
1005	FL23	0.02
1006	FL26	0.34
1007	FL26	2.57
1008	FL26	2.52
1009	FL26	1.00
1010	FL26	1.33
1011	FL26	4.24
1012	FL26	0.13
Line No	(a)	(b)
1013	FL26	3.77
1014	FL26	3.32
1015	FL26	3.05
1016	FL26	4.32
1017	FL26	0.99
1018	FL26	4.00
1019	FL26	3.17
1020	FL26	5.25
1021	FL26	0.49
1022	FL26	4.67
1023	FL26	5.37
1024	FL26	3.14
1025	FL26	2.18
1026	FL26	4.44
1027	FL26	6.62
1028	FL26	8.37
1029	FL27A	3.05

1030	FL27A	3.20
1031	FL27A	0.62
1032	FL27A	3.20
1033	FL27A	4.29
1034	FL27A	3.60
1035	FL27A	4.64
1036	FL27A	5.83
1037	FL27A	5.40
1038	FL27A	3.41
1039	FL27A	6.12
1040	FL27A	3.96
1041	FL27A	5.38
1042	FL27A	5.39

Line No	(a)	(b)
1043	FL27A	3.03
1044	FL27A	6.19
1045	FL27B	0.00
1046	FL27B	0.69
1047	FL27B	0.79
1048	FL27B	2.02
1049	FL27B	2.18
1050	FL27B	2.59
1051	FL27B	1.78
1052	FL27B	1.41
1053	FL27B	2.74
1054	FL27B	1.70
1055	FL27B	1.34
1056	FL27B	1.73
1057	FL27B	1.73
1058	FL27B	1.56
1059	FL27B	4.40
1060	FL27B	2.48
1061	FL27B	0.98
1062	FL27B	3.23
1063	FL27B	5.27
1064	FL27B	2.74
1065	FL27B	2.06
1066	FL27B	2.42
1067	FL27B	3.49
1068	FL27B	4.77
1069	FL27B	0.81
1070	FL27B	3.27
1071	FL27B	2.45
1072	FL27B	2.49

Line No	(a)	(b)
1073	FL27B	3.67
1074	FL27B	2.74
1075	FL27B	3.48
1076	FL27B	5.41
1077	FL27B	4.05
1078	FL27B	4.12
1079	FL27B	5.15
1080	FL27B	2.55
1081	FL27B	3.42
1082	FL27B	0.39
1083	FL27B	4.14
1084	FL27B	0.56
1085	FL27B	2.15
1086	FL27B	5.39
1087	FL27B	4.03
1088	FL27B	5.24
1089	FL27B	3.93
1090	FL27B	5.82
1091	FL27B	5.21
1092	FL27B	3.25
1093	FL27B	5.94
1094	FL27B	1.95

1095	FL27B	7.43
1096	FL27B	1.58
1097	FL27B	1.70
1098	FL27B	3.38
1099	FL27B	5.12
1100	FL27B	2.32
1101	FL27B	2.46
1102	FL27B	6.00
Line No	(a)	(b)
1103	FL27B	3.12
1104	FL27B	6.97
1105	FL27B	0.55
1106	FL27B	2.07
1107	FL27B	4.55
1108	FL27B	6.00
1109	FL27B	2.98
1110	FL27B	3.64
1111	FL27B	2.05
1112	FL27B	6.77
1113	FL27B	5.29
1114	FL27B	7.24
1115	FL27B	5.39
1116	FL27B	6.79
1117	FL27B	8.13
1118	FL27B	6.36
1119	FL27B	5.75
1120	FL27B	2.57
1121	FL27B	5.27
1122	FL27B	5.45
1123	FL27B	5.53
1124	FL27B	4.20
1125	FL27B	7.37
1126	FL27B	6.33
1127	FL27B	5.01
1128	FL27B	5.74
1129	FL27B	6.23
1130	FL27B	4.54
1131	FL27B	7.93
1132	FL27B	2.50
Line No	(a)	(b)
1133	FL27B	0.76
1134	FL27B	1.12
1135	FL27B	0.84
1136	FL27B	3.03
1137	FL28	0.42
1138	FL28	0.01
1139	FL28	0.30
1140	FL28	0.79
1141	FL28	0.36
1142	FL28	0.35
1143	FL28	0.18
1144	FL28	0.14
1145	FL28	0.23
1146	FL28	0.13
1147	FL28	0.12
1148	FL28	0.39
1149	FL28	0.12
1150	FL28	0.58
1151	FL28	0.20
1152	FL28	0.24
1153	FL28	0.18
1154	FL28	0.30
1155	FL28	0.09
1156	FL28	0.02
1157	FL28	0.50
1158	FL28	0.57
1159	FL28	0.18

1160	FL28	1.09
1161	FL28	0.94
1162	FL28	0.06
Line No	(a)	(b)
1163	FL28	0.13
1164	FL28	0.12
1165	FL28	0.24
1166	FL28	1.19
1167	FL28	0.49
1168	FL28	0.22
1169	FL28	0.19
1170	FL28	0.24
1171	FL28	0.21
1172	FL28	1.91
1173	FL28	0.65
1174	FL28	0.38
1175	FL28	1.10
1176	FL28	0.15
1177	FL28	1.40
1178	FL28	0.06
1179	FL28	0.90
1180	FL28	1.56
1181	FL28	0.24
1182	FL28	0.35
1183	FL28	0.36
1184	FL28	0.11
1185	FL28	0.58
1186	FL28	0.01
1187	FL28	0.42
1188	FL28	0.39
1189	FL28	0.15
1190	FL28	0.30
1191	FL28	0.05
1192	FL28	0.21
Line No	(a)	(b)
1193	FL28	0.15
1194	FL28	0.39
1195	FL28	0.40
1196	FL28	1.77
1197	FL28	4.01
1198	FL28	0.36
1199	FL28	1.02
1200	FL28	0.53
1201	FL28	0.50
1202	FL28	0.58
1203	FL28	2.12
1204	FL28	0.24
1205	FL28	0.33
1206	FL28	0.06
1207	FL28	0.13
1208	FL28	0.82
1209	FL28	0.14
1210	FL28	0.40
1211	FL28	2.66
1212	FL28	3.88
1213	FL28	0.24
1214	FL28	0.08
1215	FL28	4.14
1216	FL28	3.92
1217	FL28	0.30
1218	FL28	0.81
1219	FL28	0.31
1220	FL28	2.60
1221	FL28	1.15
1222	FL28	0.09
Line No	(a)	(b)
1223	FL28	2.05

1224	FL28	0.87
1225	FL28	0.06
1226	FL28	1.23
1227	FL28	0.37
1228	FL28	0.36
1229	FL28	3.43
1230	FL28	1.00
1231	FL28	2.73
1232	FL28	0.15
1233	FL28	1.69
1234	FL28	0.17
1235	FL28	0.56
1236	FL28	0.15
1237	FL28	3.47
1238	FL28	0.07
1239	FL28	1.49
1240	FL28	0.68
1241	FL28	0.57
1242	FL28	0.39
1243	FL28	1.97
1244	FL28	0.18
1245	FL28	3.19
1246	FL28	0.73
1247	FL28	5.68
1248	FL28	5.02
1249	FL28	2.92
1250	FL28	0.94
1251	FL28	4.34
1252	FL28	3.02
Line No	(a)	(b)
1253	FL28	0.53
1254	FL28	1.63
1255	FL28	2.77
1256	FL28	0.09
1257	FL28	2.47
1258	FL28	0.13
1259	FL28	0.11
1260	FL28	0.56
1261	FL28	2.61
1262	FL28	1.36
1263	FL28	0.15
1264	FL28	4.12
1265	FL28	4.49
1266	FL28	0.22
1267	FL28	0.07
1268	FL28	0.88
1269	FL28	4.05
1270	FL28	0.18
1271	FL28	4.30
1272	FL28	0.18
1273	FL28	0.20
1274	FL28	3.62
1275	FL28	2.99
1276	FL28	0.23
1277	FL28	3.60
1278	FL28	4.19
1279	FL28	2.81
1280	FL28	1.66
1281	FL28	0.75
1282	FL28	0.15
Line No	(a)	(b)
1283	FL28	1.18
1284	FL28	3.88
1285	FL28	0.66
1286	FL28	2.24
1287	FL28	0.72
1288	FL28	3.46

1289	FL28	3.33
1290	FL28	0.19
1291	FL28	1.47
1292	FL28	0.63
1293	FL28	0.98
1294	FL28	4.61
1295	FL28	0.31
1296	FL28	1.23
1297	FL28	0.56
1298	FL28	4.25
1299	FL28	3.04
1300	FL28	2.85
1301	FL28	3.33
1302	FL28	1.10
1303	FL28	1.43
1304	FL28	3.86
1305	FL28	3.70
1306	FL28	5.21
1307	FL28	4.32
1308	FL28	0.20
1309	FL28	1.33
1310	FL28	2.57
1311	FL28	0.71
1312	FL28	2.55
Line No	(a)	(b)
1313	FL28	3.01
1314	FL28	5.20
1315	FL28	3.79
1316	FL28	1.50
1317	FL28	0.34
1318	FL28	3.14
1319	FL28	1.36
1320	FL28	2.47
1321	FL28	0.80
1322	FL28	0.27
1323	FL28	1.26
1324	FL28	0.27
1325	FL28	3.20
1326	FL28	0.76
1327	FL28	3.78
1328	FL28	4.04
1329	FL28	2.41
1330	FL28	0.04
1331	FL28	1.00
1332	FL28	2.75
1333	FL28	0.61
1334	FL28	0.43
1335	FL28	1.94
1336	FL28	0.11
1337	FL28	0.28
1338	FL28	5.37
1339	FL28	1.96
1340	FL28	4.74
1341	FL28	3.52
1342	FL28	1.92
Line No	(a)	(b)
1343	FL28	3.69
1344	FL28	0.78
1345	FL28	0.52
1346	FL28	1.75
1347	FL28	3.09
1348	FL28	4.43
1349	FL28	1.59
1350	FL28	3.70
1351	FL28	2.17
1352	FL28	4.22
1353	FL28	1.89

1354	FL28	3.33
1355	FL28	3.22
1356	FL28	4.06
1357	FL28	2.50
1358	FL28	2.00
1359	FL28	1.62
1360	FL28	3.84
1361	FL28	4.62
1362	FL28	3.96
1363	FL28	0.79
1364	FL28	0.89
1365	FL28	1.52
1366	FL28	1.37
1367	FL28	2.26
1368	FL28	1.43
1369	FL28	3.72
1370	FL28	3.51
1371	FL28	2.70
1372	FL28	2.54
Line No	(a)	(b)
1373	FL28	3.31
1374	FL28	1.18
1375	FL28	4.10
1376	FL28	3.44
1377	FL28	4.63
1378	FL28	2.73
1379	FL28	3.88
1380	FL28	4.56
1381	FL28	1.70
1382	FL28	0.35
1383	FL28	0.33
1384	FL28	3.28
1385	FL28	0.66
1386	FL28	0.38
1387	FL28	5.18
1388	FL28	5.66
1389	FL28	2.06
1390	FL28	0.49
1391	FL28	6.12
1392	FL28	2.43
1393	FL28	4.22
1394	FL28	5.25
1395	FL28	2.14
1396	FL28	5.63
1397	FL28	1.77
1398	FL28	3.84
1399	FL28	0.37
1400	FL28	1.29
1401	FL28	5.35
1402	FL28	2.16
Line No	(a)	(b)
1403	FL28	1.63
1404	FL28	3.25
1405	FL28	1.31
1406	FL28	2.82
1407	FL28	3.14
1408	FL28	2.92
1409	FL28	4.01
1410	FL28	4.13
1411	FL28	4.84
1412	FL28	1.48
1413	FL28	3.17
1414	FL28	2.16
1415	FL28	5.09
1416	FL28	4.24
1417	FL28	5.71
1418	FL28	1.60

1419	FL28	3.80
1420	FL28	2.13
1421	FL28	5.38
1422	FL28	4.22
1423	FL28	3.35
1424	FL28	3.50
1425	FL28	3.59
1426	FL28	3.76
1427	FL28	2.99
1428	FL28	4.88
1429	FL28	2.22
1430	FL28	1.57
1431	FL28	0.57
1432	FL28	0.68
Line No	(a)	(b)
1433	FL28	3.44
1434	FL28	3.84
1435	FL28	5.47
1436	FL28	0.31
1437	FL28	0.40
1438	FL28	2.50
1439	FL28	4.29
1440	FL28	3.16
1441	FL28	1.08
1442	FL28	1.52
1443	FL28	4.01
1444	FL28	4.10
1445	FL28	6.21
1446	FL28	3.11
1447	FL28	4.71
1448	FL28	0.80
1449	FL28	2.34
1450	FL28	4.88
1451	FL28	3.79
1452	FL28	0.30
1453	FL28	3.59
1454	FL28	4.99
1455	FL28	4.39
1456	FL28	1.33
1457	FL28	1.59
1458	FL28	2.48
1459	FL28	3.40
1460	FL28	6.37
1461	FL28	1.85
1462	FL28	5.32
Line No	(a)	(b)
1463	FL28	1.57
1464	FL28	2.74
1465	FL28	6.68
1466	FL28	2.65
1467	FL28	2.94
1468	FL28	4.14
1469	FL28	2.83
1470	FL28	0.77
1471	FL28	2.38
1472	FL28	4.56
1473	FL28	3.21
1474	FL28	4.78
1475	FL28	3.28
1476	FL28	5.48
1477	FL28	2.38
1478	FL28	3.00
1479	FL28	1.99
1480	FL28	3.91
1481	FL28	4.96
1482	FL28	3.37
1483	FL28	2.74

1484	FL28	1.93
1485	FL28	4.24
1486	FL28	2.26
1487	FL28	3.25
1488	FL28	2.75
1489	FL28	3.84
1490	FL28	5.85
1491	FL28	1.22
1492	FL28	5.69
Line No	(a)	(b)
1493	FL28	2.61
1494	FL28	1.64
1495	FL28	4.16
1496	FL28	2.53
1497	FL28	3.69
1498	FL28	3.56
1499	FL28	2.62
1500	FL28	2.98
1501	FL28	1.51
1502	FL28	4.20
1503	FL28	2.02
1504	FL28	2.41
1505	FL28	2.16
1506	FL28	0.90
1507	FL28	6.93
1508	FL28	3.64
1509	FL28	5.81
1510	FL28	1.77
1511	FL28	5.80
1512	FL28	0.35
1513	FL28	4.10
1514	FL28	3.06
1515	FL28	0.20
1516	FL28	4.39
1517	FL28	5.61
1518	FL28	4.61
1519	FL28	2.75
1520	FL28	5.06
1521	FL28	1.08
1522	FL28	2.21
Line No	(a)	(b)
1523	FL28	4.33
1524	FL28	3.38
1525	FL28	4.47
1526	FL28	1.53
1527	FL28	2.58
1528	FL28	4.33
1529	FL28	5.41
1530	FL28	0.22
1531	FL28	4.18
1532	FL28	1.69
1533	FL28	2.00
1534	FL28	5.12
1535	FL28	1.25
1536	FL28	2.97
1537	FL28	5.85
1538	FL28	1.97
1539	FL28	5.68
1540	FL28	4.92
1541	FL28	6.83
1542	FL28	1.28
1543	FL28	3.76
1544	FL28	6.12
1545	FL28	3.78
1546	FL28	0.49
1547	FL28	3.29
1548	FL28	4.18

1549	FL28	3.40
1550	FL28	1.01
1551	FL28	3.79
1552	FL28	0.13
Line No	(a)	(b)
1553	FL28	4.98
1554	FL28	5.34
1555	FL28	0.51
1556	FL28	3.69
1557	FL28	3.86
1558	FL28	0.69
1559	FL28	4.47
1560	FL28	2.89
1561	FL28	5.54
1562	FL28	2.41
1563	FL28	4.12
1564	FL28	4.68
1565	FL28	6.37
1566	FL28	3.62
1567	FL28	4.21
1568	FL28	6.24
1569	FL28	3.72
1570	FL28	3.21
1571	FL28	1.38
1572	FL28	4.12
1573	FL28	4.31
1574	FL28	5.36
1575	FL28	1.91
1576	FL28	4.38
1577	FL28	5.70
1578	FL28	1.55
1579	FL28	1.06
1580	FL28	0.08
1581	FL28	6.07
1582	FL28	2.37
Line No	(a)	(b)
1583	FL28	6.38
1584	FL28	5.41
1585	FL28	1.84
1586	FL28	7.44
1587	FL28	4.87
1588	FL28	4.79
1589	FL28	3.36
1590	FL28	0.38
1591	FL28	5.51
1592	FL28	2.81
1593	FL28	6.16
1594	FL28	4.60
1595	FL28	5.71
1596	FL28	7.61
1597	FL28	6.30
1598	FL28	3.73
1599	FL28	0.15
1600	FL28	3.11
1601	FL28	2.59
1602	FL28	3.41
1603	FL28	0.46
1604	FL28	0.27
1605	FL28	5.67
1606	FL28	6.56
1607	FL28	3.01
1608	FL28	4.11
1609	FL28	4.11
1610	FL28	6.83
1611	FL28	4.81
1612	FL28	0.32
Line No	(a)	(b)

1613	FL28	0.61
1614	FL28	4.03
1615	FL28	1.08
1616	FL28	4.69
1617	FL28	7.87
1618	FL28	3.36
1619	FL28	3.58
1620	FL28	3.05
1621	FL28	5.53
1622	FL28	4.89
1623	FL28	5.78
1624	FL28	6.16
1625	FL28	0.10
1626	FL28	6.29
1627	FL28	0.51
1628	FL28	6.39
1629	FL28	2.44
1630	FL28	3.55
1631	FL28	3.81
1632	FL28	1.42
1633	FL28	0.88
1634	FL28	8.39
1635	FL28	3.57
1636	FL28	2.52
1637	FL28	5.97
1638	FL28	0.21
1639	FL28	6.03
1640	FL28	5.07
1641	FL28	4.10
1642	FL28	6.31
Line No	(a)	(b)
1643	FL28	0.88
1644	FL28	0.69
1645	FL28	5.38
1646	FL28	0.42
1647	FL28	5.74
1648	FL28	0.50
1649	FL28	2.69
1650	FL28	1.89
1651	FL28	2.06
1652	FL28	3.17
1653	FL28	0.85
1654	FL28	0.73
1655	FL28	3.68
1656	FL28	1.02
1657	FL28	8.40
1658	FL28	1.88
1659	FL28	0.19
1660	FL28	3.12
1661	FL28	4.26
1662	FL28	2.77
1663	FL28	6.45
1664	FL28	2.69
1665	FL28	0.40
1666	FL28	4.86
1667	FL28	0.98
1668	FL28	4.37
1669	FL28	6.71
1670	FL28	3.56
1671	FL28	6.19
1672	FL28	3.84
Line No	(a)	(b)
1673	FL28	3.92
1674	FL28	3.38
1675	FL28	4.62
1676	FL28	5.23
1677	FL28	5.25

1678	FL28	2.48
1679	FL28	5.01
1680	FL28	4.72
1681	FL28	5.38
1682	FL28	5.83
1683	FL28	5.35
1684	FL28	3.30
1685	FL28	5.02
1686	FL28	6.41
1687	FL28	2.83
1688	FL28	0.40
1689	FL28	5.48
1690	FL28	5.58
1691	FL28	5.62
1692	FL28	6.64
1693	FL28	4.59
1694	FL28	5.71
1695	FL28	5.59
1696	FL28	3.96
1697	FL28	2.24
1698	FL28	7.61
1699	FL28	4.99
1700	FL28	5.39
1701	FL28	9.50
1702	FL28	6.39
Line No	(a)	(b)
1703	FL28	13.85
1704	FL28	6.83
1705	FL28	6.56
1706	FL28	0.75
1707	FL28	5.60
1708	FL28	0.02
1709	FL28	1.73
1710	FL28	0.02
1711	FL36	1.89
1712	FL36	0.33
1713	FL36	1.49
1714	FL36	0.94
1715	FL36	2.08
1716	FL36	0.19
1717	FL36	2.58
1718	FL36	4.46
1719	FL36	2.50
1720	FL36	0.08
1721	FL36	0.51
1722	FL36	1.52
1723	FL36	0.29
1724	FL36	2.31
1725	FL36	3.65
1726	FL36	2.67
1727	FL36	1.59
1728	FL36	3.66
1729	FL36	2.23
1730	FL36	3.29
1731	FL36	4.07
1732	FL36	2.54
Line No	(a)	(b)
1733	FL36	1.64
1734	FL36	1.22
1735	FL36	3.30
1736	FL36	4.06
1737	FL36	1.78
1738	FL36	0.37
1739	FL36	1.89
1740	FL36	2.81
1741	FL36	3.17
1742	FL36	3.65

1743	FL36	3.18
1744	FL36	1.94
1745	FL36	3.84
1746	FL36	4.92
1747	FL36	1.05
1748	FL36	4.14
1749	FL36	3.05
1750	FL36	3.50
1751	FL36	3.95
1752	FL36	1.77
1753	FL36	3.21
1754	FL36	3.38
1755	FL36	3.62
1756	FL36	2.44
1757	FL36	0.31
1758	FL36	3.85
1759	FL36	5.36
1760	FL36	4.84
1761	FL36	4.55
1762	FL36	2.64
Line No	(a)	(b)
1763	FL36	2.15
1764	FL36	4.01
1765	FL36	2.83
1766	FL36	0.64
1767	FL36	3.40
1768	FL36	3.75
1769	FL36	3.64
1770	FL36	3.36
1771	FL36	4.07
1772	FL36	3.41
1773	FL36	3.52
1774	FL36	2.56
1775	FL36	4.98
1776	FL36	4.85
1777	FL36	4.99
1778	FL36	4.87
1779	FL36	3.07
1780	FL36	6.35
1781	FL36	1.00
1782	FL36	5.12
1783	FL37	0.27
1784	FL37	0.13
1785	FL37	1.76
1786	FL37	1.82
1787	FL37	2.61
1788	FL37	3.46
1789	FL37	7.27
1790	FL37	0.40
1791	FL37	0.07
1792	FL37	2.72
Line No	(a)	(b)
1793	FL37	8.42
1794	FL37	2.65
1795	FL37	4.48
1796	FL37	5.57
1797	FL37	2.15
1798	FL37	3.47
1799	FL37	4.67
1800	FL37	5.71
1801	FL37	5.66
1802	FL37	6.01
1803	FL37	6.85
1804	FL37	7.33
1805	FL37	3.23
1806	FL37	7.35
1807	FL37	9.51

1808	FL37	5.25
1809	FL37	7.95
1810	FL37	4.44
1811	FL37	8.34
1812	FL37	6.61
1813	FL37	5.45
1814	FL37	7.95
1815	FL37	6.19
1816	FL37	8.08
1817	FL37	9.65
1818	FL37	6.82
1819	FL37	11.21
1820	FL37	6.37
1821	FL37	6.80
1822	FL39	1.36
Line No	(a)	(b)
1823	FL39	0.68
1824	FL39	0.33
1825	FL39	0.53
1826	FL39	1.06
1827	FL39	1.17
1828	FL39	0.42
1829	FL39	1.83
1830	FL41	2.45
1831	FL41	0.00
1832	FL41	2.04
1833	FL41	4.93
1834	FL41	3.81
1835	FL41	1.50
1836	FL41	2.73
1837	FL41	2.05
1838	FL41	2.04
1839	FL41	2.10
1840	FL41	1.95
1841	FL41	2.48
1842	FL41	2.03
1843	FL41	2.88
1844	FL41	1.85
1845	FL41	1.68
1846	FL41	0.83
1847	FL41	3.22
1848	FL41	1.47
1849	FL41	1.89
1850	FL41	2.83
1851	FL41	6.15
1852	FL41	3.68
Line No	(a)	(b)
1853	FL41	4.53
1854	FL41	1.51
1855	FL41	4.96
1856	FL41	3.20
1857	FL41	0.14
1858	FL41	3.26
1859	FL41	6.38
1860	FL41	3.20
1861	FL41	4.97
1862	FL41	0.46
1863	FL41	5.14
1864	FL41	4.02
1865	FL41	6.61
1866	FL41	7.61
1867	FL41	3.54
1868	FL41	2.83
1869	FL41	2.86
1870	FL41	6.18
1871	FL41	4.51
1872	FL41	4.38

1873	FL41	5.50
1874	FL41	0.01
1875	FL42A	6.39
1876	FL42A	4.76
1877	FL42A	4.67
1878	FL42A	6.63
1879	FL42A	1.42
1880	FL42A	7.23
1881	FL42A	1.97
1882	FL42A	2.91
Line No	(a)	(b)
1883	FL42A	3.43
1884	FL42A	3.73
1885	FL42A	3.69
1886	FL42A	3.89
1887	FL42A	4.53
1888	FL42A	4.92
1889	FL42A	6.63
1890	FL42A	5.88
1891	FL42A	5.56
1892	FL42A	6.90
1893	FL42A	7.67
1894	FL42A	6.90
1895	FL42A	6.37
1896	FL42A	6.22
1897	FL42A	6.55
1898	FL42A	8.85
1899	FL42A	10.00
1900	FL42A	6.03
1901	FL42A	4.24
1902	FL42A	7.66
1903	FL42A	9.22
1904	FL42B	4.98
1905	FL43	3.67
1906	FL43	2.96
1907	FL43	1.92
1908	FL43	6.63
1909	FL43	0.51
1910	FL43	0.06
1911	FL43	1.35
1912	FL43	0.65
Line No	(a)	(b)
1913	FL43	0.50
1914	FL43	6.15
1915	FL43	2.59
1916	FL43	2.43
1917	FL43	3.88
1918	FL43	4.75
1919	FL43	0.67
1920	FL43	1.28
1921	FL43	3.36
1922	FL43	3.06
1923	FL43	2.56
1924	FL43	3.37
1925	FL43	3.50
1926	FL43	3.49
1927	FL44	1.08
1928	FL44	0.42
1929	FL44	4.25
1930	FL44	4.17
1931	FL44	4.17
1932	FL44	3.94
1933	FL44	3.75
1934	FL44	4.51
1935	FL44	3.11
1936	FL44	2.39
1937	FL44	2.64

1938	FL44	4.46
1939	FL44	3.42
1940	FL44	0.11
1941	FL44	4.18
1942	FL44	3.20
Line No	(a)	(b)
1943	FL44	6.45
1944	FL44	2.95
1945	FL44	4.11
1946	FL44	3.41
1947	FL44	3.77
1948	FL44	4.17
1949	FL44	4.53
1950	FL44	3.69
1951	FL44	4.55
1952	FL44	3.99
1953	FL44	4.94
1954	FL44	1.03
1955	FL44	0.35
1956	FL44	3.23
1957	FL44	5.23
1958	FL44	3.00
1959	FL44	1.68
1960	FL44	3.48
1961	FL44	4.65
1962	FL44	7.38
1963	FL44	3.71
1964	FL44	4.64
1965	FL44	4.65
1966	FL44	5.12
1967	FL44	5.03
1968	FL44	2.93
1969	FL44	1.38
1970	FL44	5.12
1971	FL44	2.30
1972	FL44	3.92
Line No	(a)	(b)
1973	FL44	4.44
1974	FL44	3.87
1975	FL44	5.53
1976	FL44	3.98
1977	FL44	6.18
1978	FL44	5.19
1979	FL44	5.64
1980	FL44	5.74
1981	FL44	0.54
1982	FL44	1.67
1983	FL44	4.33
1984	FL44	3.24
1985	FL44	4.11
1986	FL44	5.71
1987	FL44	0.31
1988	FL44	6.34
1989	FL44	7.42
1990	FL44	3.92
1991	FL44	5.42
1992	FL44	4.73
1993	FL44	4.76
1994	FL44	6.81
1995	FL44	7.16
1996	FL44	5.32
1997	FL44	6.97
1998	FL44	7.53
1999	FL44	8.07
2000	FL44	4.07
2001	FL44	4.92
2002	FL44	7.01

Line No	(a)	(b)
2003	FL44	6.13
2004	FL44	6.89
2005	FL44	0.55
2006	FL44	0.90
2007	FL44	6.68
2008	FL44	7.43
2009	FL44	7.77
2010	FL44	4.44
2011	FL44	2.11
2012	FL44	7.63
2013	FL44	3.26
2014	FL44	1.17
2015	FL44	5.87
2016	FL44	8.78
2017	FL44	3.11
2018	FL44	3.70
2019	FL44	9.55
2020	FL44	7.57
2021	FL44	2.20
2022	FL44	5.18
2023	FL44	7.47
2024	FL44	1.72
2025	FL44	9.42
2026	FL44	5.49
2027	FL44	8.68
2028	FL44	0.74
2029	FL44	6.96
2030	FL44	8.38
2031	FL44	6.40
2032	FL44	7.99
Line No	(a)	(b)
2033	FL44	8.46
2034	FL44	7.15
2035	FL44	8.01
2036	FL44	7.23
2037	FL44	5.26
2038	FL44	9.67
2039	FL44	3.72
2040	FL44	10.79
2041	FL44	4.63
2042	FL44	2.31
2043	FL44	8.25
2044	FL44	11.95
2045	FL44	6.84
2046	FL44	9.03
2047	FL44	4.45
2048	FL44	0.00
2049	FL44	10.80
2050	FL44	3.84
2051	FL44	6.81
2052	FL44	6.38
2053	FL44	12.48
2054	FL44	9.74
2055	FL44	0.97
2056	FL45	0.27
2057	FL45	0.35
2058	FL45	1.91
2059	FL45	0.30
2060	FL45	0.29
2061	FL45	0.75
2062	FL45	0.61
Line No	(a)	(b)
2063	FL45	0.17
2064	FL45	0.66
2065	FL45	0.52
2066	FL45	1.65

2067	FL45	0.61
2068	FL45	0.97
2069	FL45	0.09
2070	FL45	0.60
2071	FL45	0.50
2072	FL45	0.13
2073	FL45	0.39
2074	FL45	0.77
2075	FL45	0.62
2076	FL45	0.58
2077	FL45	0.52
2078	FL45	0.27
2079	FL45	0.24
2080	FL45	0.63
2081	FL45	0.65
2082	FL45	0.74
2083	FL45	0.74
2084	FL45	0.23
2085	FL45	0.71
2086	FL45	0.59
2087	FL45	0.45
2088	FL45	0.59
2089	FL45	1.62
2090	FL45	0.39
2091	FL45	1.52
2092	FL45	2.01
Line No	(a)	(b)
2093	FL45	0.62
2094	FL46	1.71
2095	FL46	1.86
2096	FL46	4.79
2097	FL54	1.14
2098	FL54	0.23
2099	FL54	3.96
2100	FL54	2.56
2101	FL54	0.76
2102	FL54	1.62
2103	FL54	1.85
2104	FL54	1.79
2105	FL54	0.25
2106	FL54	5.68
2107	FL54	0.60
2108	FL54	2.94
2109	FL54	1.10
2110	FL54	0.72
2111	FL54	5.30
2112	FL54	1.34
2113	FL54	0.07
2114	FL54	0.51
2115	FL54	1.21
2116	FL54	2.05
2117	FL54	3.52
2118	FL54	4.85
2119	FL54	6.19
2120	FL54	0.34
2121	FL54	4.12
2122	FL54	6.65
Line No	(a)	(b)
2123	FL54	3.52
2124	FL54	0.73
2125	FL54	3.81
2126	FL54	4.23
2127	FL54	1.03
2128	FL54	4.16
2129	FL54	0.96
2130	FL54	4.76
2131	FL54	5.91

2132	FL54	2.98
2133	FL54	2.77
2134	FL54	3.35
2135	FL54	2.31
2136	FL54	3.89
2137	FL54	6.59
2138	FL54	6.98
2139	FL54	2.85
2140	FL54	5.64
2141	FL54	1.89
2142	FL54	6.09
2143	FL54	2.68
2144	FL54	3.73
2145	FL54	6.49
2146	FL54	5.89
2147	FL54	2.84
2148	FL54	0.00
2149	FL54	3.02
2150	FL54	2.25
2151	FL54	4.16
2152	FL54	2.31
Line No	(a)	(b)
2153	FL54	3.58
2154	FL54	3.76
2155	FL54	3.25
2156	FL54	10.36
2157	FL54	3.68
2158	FL54	4.68
2159	FL54	3.59
2160	FL54	3.95
2161	FL54	4.19
2162	FL54	3.21
2163	FL54	3.75
2164	FL54	3.83
2165	FL54	4.09
2166	FL54	6.00
2167	FL54	5.96
2168	FL54	2.45
2169	FL54	2.18
2170	FL54	3.95
2171	FL54	3.20
2172	FL54	0.85
2173	FL54	5.09
2174	FL54	0.35
2175	FL54	4.28
2176	FL54	4.30
2177	FL54	4.18
2178	FL54	1.39
2179	FL54	4.46
2180	FL54	5.69
2181	FL54	5.34
2182	FL54	6.43
Line No	(a)	(b)
2183	FL54	3.51
2184	FL54	5.08
2185	FL54	6.00
2186	FL54	5.09
2187	FL54	1.63
2188	FL54	5.77
2189	FL54	4.49
2190	FL54	3.10
2191	FL54	4.26
2192	FL54	2.62
2193	FL54	4.92
2194	FL54	4.04
2195	FL54	6.08
2196	FL54	6.57

2197	FL54	2.31
2198	FL54	6.84
2199	FL54	4.23
2200	FL54	4.25
2201	FL54	4.86
2202	FL54	5.00
2203	FL54	6.72
2204	FL54	4.75
2205	FL54	5.76
2206	FL54	6.28
2207	FL54	5.55
2208	FL54	5.20
2209	FL54	5.77
2210	FL54	4.10
2211	FL54	5.04
2212	FL54	7.02
Line No	(a)	(b)
2213	FL54	7.71
2214	FL54	6.69
2215	FL54	5.84
2216	FL54	9.80
2217	FL54	7.22
2218	FL54	5.78
2219	FL54	5.13
2220	FL54	7.72
2221	FL54	8.30
2222	FL54	9.50
2223	FL54	7.77
2224	FL54	5.43
2225	FL54	6.81
2226	FL54	4.67
2227	FL54	6.36
2228	FL55	0.83
2229	FL55	4.10
2230	FL55	0.33
2231	FL55	0.00
2232	FL55	0.22
2233	FL55	3.66
2234	FL55	2.49
2235	FL55	0.68
2236	FL55	2.56
2237	FL55	3.93
2238	FL55	3.91
2239	FL55	0.58
2240	FL55	4.55
2241	FL55	0.53
2242	FL57	0.59
Line No	(a)	(b)
2243	FL57	0.50
2244	FL57	0.61
2245	FL57	1.66
2246	FL57	0.67
2247	FL57	1.81
2248	FL57	1.89
2249	FL57	1.80
2250	FL57	2.41
2251	FL57	1.52
2252	FL57	3.48
2253	FL59	0.05
2254	FL59	0.12
2255	FL59	0.41
2256	FL59	1.50
2257	FL59	2.16
2258	FL59	0.51
2259	FL59	2.17
2260	FL59	0.92
2261	FL59	4.66

2262	FL59	1.17
2263	FL59	1.52
2264	FL59	3.59
2265	FL59	2.16
2266	FL59	1.85
2267	FL59	3.65
2268	FL59	1.10
2269	FL59	0.02
2270	FL59	2.63
2271	FL59	0.45
2272	FL59	1.06
Line No	(a)	(b)
2273	FL59	4.36
2274	FL59	1.54
2275	FL59	3.08
2276	FL59	0.06
2277	FL59	1.43
2278	FL59	2.99
2279	FL59	1.45
2280	FL59	0.41
2281	FL59	4.00
2282	FL59	0.84
2283	FL59	1.12
2284	FL59	0.51
2285	FL59	0.35
2286	FL59	0.19
2287	FL59	2.12
2288	FL59	0.24
2289	FL59	1.22
2290	FL59	2.62
2291	FL59	0.77
2292	FL59	4.40
2293	FL59	2.59
2294	FL59	0.38
2295	FL59	4.70
2296	FL59	0.05
2297	FL59	0.86
2298	FL59	3.88
2299	FL59	0.22
2300	FL59	0.94
2301	FL59	4.34
2302	FL59	0.23
Line No	(a)	(b)
2303	FL59	4.22
2304	FL59	0.67
2305	FL59	0.23
2306	FL59	4.95
2307	FL59	0.50
2308	FL59	1.17
2309	FL59	6.76
2310	FL59	2.20
2311	FL59	1.21
2312	FL59	2.50
2313	FL59	10.26
2314	FL59	1.12
2315	FL59	4.60
2316	FL59	0.72
2317	FL59	0.19
2318	FL59	1.61
2319	FL59	0.23
2320	FL59	0.35
2321	FL59	2.29
2322	FL59	0.37
2323	FL59	2.82
2324	FL59	0.15
2325	FL59	8.34
2326	FL59	4.40

2327	FL59	2.67
2328	FL59	2.08
2329	FL59	1.10
2330	FL59	2.52
2331	FL59	0.12
2332	FL59	4.28
Line No	(a)	(b)
2333	FL59	4.05
2334	FL59	4.13
2335	FL59	3.07
2336	FL59	0.32
2337	FL59	3.60
2338	FL59	2.27
2339	FL59	3.20
2340	FL59	5.02
2341	FL59	5.98
2342	FL59	6.09
2343	FL59	6.22
2344	FL59	5.35
2345	FL59	4.34
2346	FL59	7.07
2347	FL59	5.96
2348	FL59	5.33
2349	FL59	3.47
2350	FL59	4.61
2351	FL59	6.05
2352	FL59	5.37
2353	FL59	3.49
2354	FL59	6.38
2355	FL59	3.83
2356	FL59	4.23
2357	FL59	3.19
2358	FL59	5.02
2359	FL59	7.68
2360	FL59	8.06
2361	FL59	7.86
2362	FL59	7.46
Line No	(a)	(b)
2363	FL59	0.03
2364	FL60	2.40
2365	FL60	0.79
2366	FL60	1.42
2367	FL60	1.91
2368	FL60	0.77
2369	FL60	2.11
2370	FL60	1.49
2371	FL60	1.41
2372	FL60	2.23
2373	FL60	1.68
2374	FL60	0.84
2375	FL60	1.29
2376	FL60	4.15
2377	FL60	1.79
2378	FL60	4.92
2379	FL60	2.07
2380	FL60	2.38
2381	FL60	4.13
2382	FL60	1.93
2383	FL60	2.00
2384	FL60	2.51
2385	FL60	3.16
2386	FL60	3.56
2387	FL60	2.86
2388	FL60	2.11
2389	FL60	0.53
2390	FL60	5.03
2391	FL60	3.43

2392	FL60	1.45
Line No	(a)	(b)
2393	FL60	2.69
2394	FL60	6.16
2395	FL60	3.82
2396	FL60	2.00
2397	FL60	3.67
2398	FL60	6.69
2399	FL60	2.41
2400	FL60	1.93
2401	FL60	3.47
2402	FL60	2.55
2403	FL60	3.54
2404	FL60	3.08
2405	FL60	0.60
2406	FL60	4.97
2407	FL60	4.28
2408	FL60	6.17
2409	FL60	3.52
2410	FL60	5.92
2411	FL64	0.98
2412	FL64	2.75
2413	FL64	3.50
2414	FL64	1.99
2415	FL64	2.59
2416	FL64	2.57
2417	FL64	3.02
2418	FL64	3.36
2419	FL64	3.00
2420	FL64	0.35
2421	FL64	2.48
2422	FL64	2.74
Line No	(a)	(b)
2423	FL64	1.25
2424	FL64	3.00
2425	FL64	2.32
2426	FL64	4.08
2427	FL64	0.36
2428	FL64	1.67
2429	FL64	2.19
2430	FL64	3.20
2431	FL64	1.31
2432	FL64	1.00
2433	FL64	1.73
2434	FL64	2.42
2435	FL64	5.39
2436	FL64	2.32
2437	FL64	2.87
2438	FL64	0.49
2439	FL64	4.17
2440	FL64	2.96
2441	FL64	4.87
2442	FL64	4.76
2443	FL64	0.06
2444	FL64	4.34
2445	FL64	3.13
2446	FL64	3.54
2447	FL64	4.10
2448	FL64	3.85
2449	FL64	4.23
2450	FL64	0.15
2451	FL64	0.08
2452	FL64	4.13
Line No	(a)	(b)
2453	FL64	2.73
2454	FL64	0.23
2455	FL64	1.77

2456	FL64	2.89
2457	FL64	1.44
2458	FL64	2.75
2459	FL64	1.41
2460	FL64	5.07
2461	FL64	1.60
2462	FL64	3.91
2463	FL64	1.68
2464	FL64	0.05
2465	FL64	0.05
2466	FL64	2.94
2467	FL64	4.02
2468	FL64	1.02
2469	FL64	0.05
2470	FL64	5.03
2471	FL64	4.95
2472	FL64	2.29
2473	FL64	2.05
2474	FL64	2.72
2475	FL64	2.58
2476	FL64	3.87
2477	FL64	0.06
2478	FL64	4.78
2479	FL64	0.07
2480	FL64	4.74
2481	FL64	6.75
2482	FL64	0.08
Line No	(a)	(b)
2483	FL64	4.05
2484	FL64	7.98
2485	FL64	3.25
2486	FL64	1.70
2487	FL64	2.47
2488	FL64	5.45
2489	FL64	4.42
2490	FL64	2.47
2491	FL64	3.38
2492	FL64	3.53
2493	FL64	5.26
2494	FL64	1.86
2495	FL64	4.11
2496	FL64	0.10
2497	FL64	4.77
2498	FL64	3.45
2499	FL64	3.37
2500	FL64	6.29
2501	FL64	3.90
2502	FL64	5.59
2503	FL64	4.68
2504	FL64	4.75
2505	FL64	3.06
2506	FL64	1.99
2507	FL64	3.11
2508	FL64	6.65
2509	FL64	1.63
2510	FL64	4.82
2511	FL64	8.19
2512	FL64	6.27
Line No	(a)	(b)
2513	FL64	8.43
2514	FL64	4.70
2515	FL64	2.55
2516	FL64	5.27
2517	FL64	3.54
2518	FL64	7.26
2519	FL64	3.32
2520	FL64	5.42

2521	FL64	5.46
2522	FL64	5.95
2523	FL64	6.50
2524	FL64	6.37
2525	FL64	7.01
2526	FL64	4.30
2527	FL64	10.04
2528	FL65	4.20
2529	FL65	3.14
2530	FL65	1.45
2531	FL65	5.54
2532	FL65	7.20
2533	FL65	1.56
2534	FL65	0.25
2535	FL67	1.28
2536	FL67	0.29
2537	FL67	1.55
2538	FL67	0.38
2539	FL68	0.28
2540	FL68	1.03
2541	FL68	0.77
2542	FL68	1.05
Line No	(a)	(b)
2543	FL68	2.29
2544	FL68	2.39
2545	FL68	4.10
2546	FL68	0.80
2547	FL68	2.37
2548	FL68	6.30
2549	FL68	1.88
2550	FL68	5.61
2551	FL68	2.77
2552	FL68	3.78
2553	FL68	2.90
2554	FL68	2.65
2555	FL68	5.79
2556	FL68	3.56
2557	FL68	4.67
2558	FL68	5.98
2559	FL68	6.34
2560	FL68	2.68
2561	FL68	7.93
2562	FL68	5.54
2563	FL68	7.49
2564	FL68	4.95
2565	FL68	6.78
2566	FL68	7.31
2567	FL68	7.88
2568	FL68	8.43
2569	FL68	3.95
2570	FL68	7.08
2571	FL68	7.33
2572	FL68	8.27
Line No	(a)	(b)
2573	FL68	5.00
2574	FL68	5.98
2575	FL68	6.90
2576	FL68	2.14
2577	FL68	4.79
2578	FL68	5.17
2579	FL68	6.70
2580	FL68	7.62
2581	FL68	6.08
2582	FL68	6.88
2583	FL68	8.56
2584	FL68	8.88
2585	FL68	6.47

2586	FL68	8.80
2587	FL68	1.41
2588	FL68	4.87
2589	FL68	4.66
2590	FL68	3.70
2591	FL68	6.31
2592	FL68	9.18
2593	FL68	9.40
2594	FL68	7.10
2595	FL68	1.24
2596	FL68	6.44
2597	FL68	3.91
2598	FL68	8.34
2599	FL68	4.98
2600	FL68	6.94
2601	FL68	8.73
2602	FL68	6.95
Line No	(a)	(b)
2603	FL68	6.78
2604	FL68	7.85
2605	FL68	8.09
2606	FL68	4.89
2607	FL68	8.66
2608	FL68	7.81
2609	FL75	0.00
2610	FL75	4.21
2611	FL75	2.35
2612	FL75	3.29
2613	FL75	2.40
2614	FL75	1.79
2615	FL75	3.35
2616	FL75	1.69
2617	FL75	2.16
2618	FL75	3.33
2619	FL75	4.19
2620	FL75	3.98
2621	FL75	2.32
2622	FL75	1.42
2623	FL77	0.00
2624	FL77	4.16
2625	FL77	0.00
2626	FL77	2.96
2627	FL77	4.14
2628	FL77	0.47
2629	FL77	7.18
2630	FL77	6.05
2631	FL77	7.53
2632	FL77	6.31
Line No	(a)	(b)
2633	FL77	5.38
2634	FL77	0.93
2635	FL77	4.31
2636	FL77	6.08
2637	FL77	4.73
2638	FL77	3.14
2639	FL77	4.51
2640	FL77	3.76
2641	FL77	6.39
2642	FL77	5.23
2643	FL77	5.63
2644	FL77	5.04
2645	FL77	4.02
2646	FL77	7.06
2647	FL77	3.68
2648	FL77	6.95
2649	FL77	5.86
2650	FL77	3.24

2651	FL77	8.07
2652	FL77	5.68
2653	FL77	3.00
2654	FL77	3.71
2655	FL77	7.05
2656	FL77	5.18
2657	FL77	5.65
2658	FL77	5.67
2659	FL77	5.59
2660	FL77	7.04
2661	FL77	0.64
2662	FL77	6.12
Line No	(a)	(b)
2663	FL77	4.05
2664	FL77	6.61
2665	FL77	6.67
2666	FL77	4.21
2667	FL77	4.54
2668	FL77	5.19
2669	FL77	8.14
2670	FL77	0.00
2671	FL77	5.48
2672	FL77	2.17
2673	FL77	3.09
2674	FL77	3.47
2675	FL77	5.39
2676	FL77	3.41
2677	FL77	2.92
2678	FL77	2.60
2679	FL77	5.04
2680	FL77	7.52
2681	FL77	3.41
2682	FL77	5.48
2683	FL77	7.76
2684	FL77	7.16
2685	FL77	4.77
2686	FL77	6.30
2687	FL77	1.43
2688	FL77	5.98
2689	FL77	3.72
2690	FL77	6.87
2691	FL77	4.57
2692	FL77	4.97
Line No	(a)	(b)
2693	FL77	8.23
2694	FL77	4.40
2695	FL77	3.48
2696	FL77	3.94
2697	FL77	1.91
2698	FL77	5.64
2699	FL77	3.58
2700	FL77	4.53
2701	FL77	4.65
2702	FL77	1.75
2703	FL77	2.65
2704	FL77	3.77
2705	FL77	6.42
2706	FL77	4.55
2707	FL77	4.23
2708	FL77	3.31
2709	FL77	4.80
2710	FL77	8.82
2711	FL77	4.53
2712	FL77	2.91
2713	FL77	2.51
2714	FL77	6.71
2715	FL77	7.69

2716	FL77	6.08
2717	FL77	4.19
2718	FL77	6.68
2719	FL77	6.97
2720	FL77	7.12
2721	FL77	4.85
2722	FL77	3.69
Line No	(a)	(b)
2723	FL77	9.40
2724	FL77	5.19
2725	FL77	5.90
2726	FL77	0.00
2727	FL77	4.81
2728	FL77	1.11
2729	FL77	9.09
2730	FL77	3.18
2731	FL77	5.36
2732	FL77	0.00
2733	FL77	8.28
2734	FL77	4.56
2735	FL77	6.44
2736	FL77	3.38
2737	FL77	3.92
2738	FL77	3.41
2739	FL77	1.72
2740	FL77	9.64
2741	FL77	4.55
2742	FL77	6.54
2743	FL77	2.48
2744	FL77	4.74
2745	FL77	12.58
2746	FL77	4.62
2747	FL77	1.08
2748	FL77	4.93
2749	FL77	0.65
2750	FL77	0.00
2751	FL82	3.78
2752	FL82	3.95
Line No	(a)	(b)
2753	FL82	4.68
2754	FL82	3.11
2755	FL82	2.90
2756	FL82	3.19
2757	FL82	2.44
2758	FL82	3.38
2759	FL82	4.99
2760	FL82	5.12
2761	FL82	4.35
2762	FL82	4.80
2763	FL82	6.43
2764	FL82	3.25
2765	FL82	0.27
2766	FL82	2.32
2767	FL82	1.60
2768	FL83	0.75
2769	FL83	0.05
2770	FL83	0.59
2771	FL83	0.24
2772	FL83	0.13
2773	FL83	0.21
2774	FL83	1.68
2775	FL83	0.48
2776	FL83	1.12
2777	FL83	0.35
2778	FL83	3.29
2779	FL83	0.27
2780	FL83	0.88

2781	FL83	2.02
2782	FL83	0.03
Line No	(a)	(b)
2783	FL83	0.44
2784	FL83	1.33
2785	FL83	0.10
2786	FL83	4.30
2787	FL83	2.84
2788	FL83	3.88
2789	FL83	3.31
2790	FL83	1.31
2791	FL83	5.53
2792	FL83	0.43
2793	FL83	0.98
2794	FL83	1.11
2795	FL83	4.64
2796	FL83	0.02
2797	FL84	0.26
2798	FL84	0.27
2799	FL84	1.41
2800	FL84	0.30
2801	FL85A	0.09
2802	FL85A	2.96
2803	FL85A	0.41
2804	FL85A	3.18
2805	FL85A	2.61
2806	FL85A	3.14
2807	FL85A	1.95
2808	FL85A	0.19
2809	FL85A	0.82
2810	FL85A	0.90
2811	FL85A	1.74
2812	FL85A	2.13
Line No	(a)	(b)
2813	FL85A	1.48
2814	FL85A	0.27
2815	FL85A	6.06
2816	FL85A	2.70
2817	FL85A	1.78
2818	FL85A	0.27
2819	FL85A	0.57
2820	FL85A	1.31
2821	FL85A	1.11
2822	FL85A	1.04
2823	FL85A	0.78
2824	FL85A	1.09
2825	FL85A	1.82
2826	FL85A	1.57
2827	FL85A	0.41
2828	FL85A	2.09
2829	FL85A	1.29
2830	FL85A	0.89
2831	FL85A	1.51
2832	FL85A	1.43
2833	FL85A	0.44
2834	FL86A	0.64
2835	FL86A	0.69
2836	FL86A	0.58
2837	FL86A	0.47
2838	FL86A	0.08
2839	FL86A	0.43
2840	FL86A	0.16
2841	FL86A	0.45
2842	FL86A	0.28
Line No	(a)	(b)
2843	FL86A	1.86
2844	FL86A	0.18

2845	FL86A	0.80
2846	FL86A	0.25
2847	FL86A	4.03
2848	FL86A	0.04
2849	FL86A	0.31
2850	FL86A	2.26
2851	FL86A	0.49
2852	FL86A	2.77
2853	FL86A	2.64
2854	FL86A	3.36
2855	FL86A	1.30
2856	FL86A	5.96
2857	FL86A	1.04
2858	FL86A	1.63
2859	FL86A	0.57
2860	FL86A	4.00
2861	FL86A	6.16
2862	FL86A	1.87
2863	FL86A	0.66
2864	FL86A	0.80
2865	FL86A	3.29
2866	FL86A	1.78
2867	FL86A	1.32
2868	FL86A	1.16
2869	FL86A	0.78
2870	FL86A	0.42
2871	FL86A	1.13
2872	FL86A	3.26
Line No	(a)	(b)
2873	FL86A	2.84
2874	FL86A	0.30
2875	FL86A	0.05
2876	FL86B	0.44
2877	FL86B	6.95
2878	FL86B	0.82
2879	FL86B	4.09
2880	FL86B	3.09
2881	FL86B	5.87
2882	FL86B	0.78
2883	FL86B	1.29
2884	FL86B	4.41
2885	FL86B	0.87
2886	FL89	0.80
2887	FL89	1.25
2888	FL89	4.77
2889	FL89	4.66
2890	FL89	5.62
2891	FL89	4.14
2892	FL89	3.18
2893	FL89	5.55
2894	FL89	7.19
2895	FL89	6.02
2896	FL89	4.39
2897	FL89	4.75
2898	FL89	6.32
2899	FL89	5.10
2900	FL89	3.24
2901	FL89	6.70
2902	FL89	4.52
Line No	(a)	(b)
2903	FL89	1.67
2904	FL89	3.97
2905	FL89	6.76
2906	FL89	12.06
2907	FL89	4.51
2908	FL89	5.13
2909	FL89	4.12

2910	FL89	5.03
2911	FL89	5.63
2912	FL89	9.01
2913	FL89	4.14
2914	FL89	4.64
2915	FL89	3.38
2916	FL89	2.99
2917	FL89	2.77
2918	FL89	5.52
2919	FL89	7.20
2920	FL89	4.34
2921	FL89	3.65
2922	FL89	7.33
2923	FL89	7.11
2924	FL89	7.14
2925	FL89	4.21
2926	FL89	6.06
2927	FL89	2.33
2928	FL89	2.66
2929	FL89	3.30
2930	FL89	5.38
2931	FL89	6.71
2932	FL89	7.71
Line No	(a)	(b)
2933	FL89	3.87
2934	FL89	5.48
2935	FL89	2.87
2936	FL89	8.46
2937	FL89	0.19
2938	FL89	6.30
2939	FL89	4.87
2940	FL89	1.90
2941	FL89	6.20
2942	FL89	7.18
2943	FL89	5.12
2944	FL89	3.87
2945	FL89	4.91
2946	FL89	4.95
2947	FL89	4.98
2948	FL89	1.10
2949	FL89	1.42
2950	FL89	5.56
2951	FL89	7.18
2952	FL89	5.52
2953	FL89	2.84
2954	FL89	7.26
2955	FL89	5.42
2956	FL89	2.57
2957	FL89	4.59
2958	FL89	7.18
2959	FL89	3.43
2960	FL89	5.57
2961	FL89	2.54
2962	FL89	3.94
Line No	(a)	(b)
2963	FL89	5.72
2964	FL89	3.93
2965	FL89	4.24
2966	FL89	4.49
2967	FL89	4.51
2968	FL89	6.72
2969	FL89	4.70
2970	FL89	4.43
2971	FL89	5.72
2972	FL89	5.81
2973	FL89	3.86
2974	FL89	5.02

2975	FL89	2.52
2976	FL89	6.40
2977	FL89	2.36
2978	FL89	6.92
2979	FL89	7.78
2980	FL89	3.46
2981	FL89	1.57
2982	FL89	1.35
2983	FL89	2.10
2984	FL89	2.82
2985	FL89	3.17
2986	FL89	3.79
2987	FL89	3.71
2988	FL89	8.55
2989	FL89	5.21
2990	FL89	2.73
2991	FL89	6.29
2992	FL89	5.54
Line No	(a)	(b)
2993	FL89	3.01
2994	FL89	3.03
2995	FL89	4.15
2996	FL89	1.70
2997	FL89	4.29
2998	FL89	6.54
2999	FL89	4.99
3000	FL89	3.26
3001	FL89	5.34
3002	FL89	7.31
3003	FL89	6.50
3004	FL89	8.19
3005	FL89	4.33
3006	FL89	8.06
3007	FL89	6.90
3008	FL89	7.71
3009	FL89	4.76
3010	FL89	3.61
3011	FL89	3.85
3012	FL89	3.78
3013	FL89	6.68
3014	FL89	7.70
3015	FL89	7.54
3016	FL89	2.67
3017	FL89	10.05
3018	FL89	5.76
3019	FL89	7.42
3020	FL89	6.15
3021	FL89	6.94
3022	FL89	2.07
Line No	(a)	(b)
3023	FL89	7.86
3024	FL89	4.42
3025	FL89	3.84
3026	FL89	8.17
3027	FL89	4.78
3028	FL89	6.46
3029	FL89	7.15
3030	FL89	5.06
3031	FL89	6.10
3032	FL89	9.42
3033	FL89	6.08
3034	FL89	8.19
3035	FL89	2.72
3036	FL89	7.67
3037	FL89	1.46
3038	FL89	1.49
3039	FL89	2.29

3040	FL90	1.56
3041	FL90	2.00
3042	FL90	0.38
3043	FL90	2.10
3044	FL90	0.56
3045	FL90	0.64
3046	FL90	0.84
3047	FL90	0.54
3048	FL90	0.34
3049	FL90	1.19
3050	FL90	1.22
3051	FL90	0.38
3052	FL90	3.53
Line No	(a)	(b)
3053	FL90	1.10
3054	FL90	3.06
3055	FL90	2.58
3056	FL90	0.39
3057	FL90	2.42
3058	FL90	0.36
3059	FL90	4.16
3060	FL90	1.54
3061	FL90	4.36
3062	FL90	2.73
3063	FL90	2.59
3064	FL90	0.00
3065	FL90	1.05
3066	FL90	2.71
3067	FL90	0.78
3068	FL90	2.39
3069	FL90	1.15
3070	FL90	3.04
3071	FL90	1.03
3072	FL90	7.80
3073	FL90	6.54
3074	FL90	1.68
3075	FL90	0.17
3076	FL90	1.16
3077	FL90	1.83
3078	FL90	1.91
3079	FL90	0.55
3080	FL90	8.54
3081	FL90	3.47
3082	FL90	0.30
Line No	(a)	(b)
3083	FL90	0.19
3084	FL90	5.21
3085	FL90	2.88
3086	FL90	0.41
3087	FL90	4.85
3088	FL90	1.19
3089	FL90	0.27
3090	FL90	4.18
3091	FL90	2.31
3092	FL90	4.26
3093	FL90	1.35
3094	FL90	2.09
3095	FL90	3.33
3096	FL90	5.60
3097	FL90	0.36
3098	FL90	1.90
3099	FL90	1.37
3100	FL90	7.53
3101	FL90	4.04
3102	FL90	5.82
3103	FL90	2.59
3104	FL90	2.13

3105	FL90	3.89
3106	FL90	3.06
3107	FL90	1.93
3108	FL90	3.91
3109	FL90	1.89
3110	FL90	5.02
3111	FL90	3.52
3112	FL90	1.20
Line No	(a)	(b)
3113	FL90	0.72
3114	FL90	1.07
3115	FL90	5.18
3116	FL90	4.81
3117	FL90	1.29
3118	FL90	5.13
3119	FL90	5.44
3120	FL94	5.14
3121	FL94	8.36
3122	FL94	1.72
3123	FL94	5.30
3124	FL94	3.61
3125	FL94	5.41
3126	FL94	3.49
3127	FL94	4.83
3128	FL96	1.05
3129	FL96	0.00
3130	FL96	4.53
3131	FL96	6.19
3132	FL96	4.83
3133	FL96	6.49
3134	FL96	6.02
3135	FL96	7.97
3136	FL96	5.13
3137	FL96	7.25
3138	FL96	5.46
3139	FL96	6.92
3140	FL96	7.01
3141	FL96	6.15
3142	FL96	6.18
Line No	(a)	(b)
3143	FL96	7.16
3144	FL96	4.70
3145	FL96	0.00
3146	FL96	5.30
3147	FL96	5.60
3148	FL96	5.96
3149	FL96	4.87
3150	FL96	5.42
3151	FL96	8.19
3152	FL96	4.76
3153	FL96	3.90
3154	FL96	6.52
3155	FL96	5.09
3156	FL96	5.48
3157	FL96	5.34
3158	FL96	3.23
3159	FL96	7.08
3160	FL96	5.32
3161	FL96	5.85
3162	FL96	5.39
3163	FL96	3.91
3164	FL96	2.76
3165	FL96	6.01
3166	FL96	3.29
3167	FL96	7.66
3168	FL96	6.30
3169	FL96	5.09

3170	FL96	6.37
3171	FL96	2.43
3172	FL96	4.57
Line No	(a)	(b)
3173	FL96	5.10
3174	FL96	4.65
3175	FL96	4.48
3176	FL96	7.08
3177	FL96	9.12
3178	FL96	4.34
3179	FL96	7.49
3180	FL96	4.18
3181	FL96	5.10
3182	FL96	5.34
3183	FL96	6.71
3184	FL96	6.20
3185	FL96	6.62
3186	FL96	6.41
3187	FL96	8.28
3188	FL96	3.72
3189	FL96	8.10
3190	FL96	4.73
3191	FL96	5.59
3192	FL96	2.91
3193	FL96	5.42
3194	FL96	3.46
3195	FL96	5.51
3196	FL96	4.37
3197	FL96	2.78
3198	FL96	3.84
3199	FL96	3.14
3200	FL96	5.01
3201	FL96	4.40
3202	FL96	5.55
Line No	(a)	(b)
3203	FL96	5.55
3204	FL96	7.18
3205	FL96	4.36
3206	FL96	5.55
3207	FL96	4.13
3208	FL96	4.89
3209	FL96	7.45
3210	FL96	9.14
3211	FL96	5.85
3212	FL96	8.35
3213	FL96	0.62
3214	FL96	6.92
3215	FL96	6.05
3216	FL96	6.26
3217	FL96	7.92
3218	FL96	2.93
3219	FL96	3.54
3220	FL96	1.21
3221	FL97	3.60
3222	FL98	0.45
3223	FL98	2.54
3224	FL98	0.94
3225	FL98	0.76
3226	FL98	0.34

Source Data:
Utilimarc

(a)		(b)	(c)		(d)
Line No.	Vehicle Type	Total Tons CO2 Emissions from Fuel While Idle			
			Row Labels	Sum of Total Tons CO2 Emissions from Fuel While Idle	
1	FL06	0.01	FL06	14.76	
2	FL06	0.01	FL07	70.55	
3	FL06	0.01	FL22	309.65	
4	FL06	0.01	FL23	1,182.64	
5	FL06	0.06	FL26	84.72	
6	FL06	0.00	FL27A	60.21	
7	FL06	0.13	FL27B	326.66	
8	FL06	0.03	FL28	1,602.23	
9	FL06	0.04	FL36	157.31	
10	FL06	0.01	FL37	257.01	
11	FL06	0.06	FL39	8.18	
12	FL06	0.03	FL41	212.40	
13	FL06	0.04	FL42A	199.23	
14	FL06	0.18	FL42B	6.24	
15	FL06	0.11	FL43	70.33	
16	FL06	0.02	FL44	692.66	
17	FL06	0.02	FL45	24.12	
18	FL06	0.00	FL46	8.74	
19	FL06	0.17	FL54	570.10	
20	FL06	0.01	FL55	34.03	
21	FL06	0.13	FL57	15.81	
22	FL06	0.06	FL59	318.50	
23	FL06	0.02	FL60	157.91	
24	FL06	0.05	FL64	379.81	
25	FL06	0.10	FL65	24.89	
26	FL06	0.04	FL67	6.13	
27	FL06	0.08	FL68	401.44	
28	FL06	0.07	FL75	33.11	
29	FL06	0.08	FL77	636.93	
30	FL06	0.05	FL82	64.48	
31	FL06	0.04	FL83	60.72	
32	FL06	0.21	FL84	1.93	
33	FL06	0.19	FL85A	54.25	
34	FL06	0.03	FL86A	84.96	
35	FL06	0.21	FL86B	25.07	
36	FL06	0.04	FL89	784.75	
37	FL06	0.13	FL90	204.77	
38	FL06	0.17	FL94	40.90	
39	FL06	0.11	FL96	512.73	
40	FL06	0.21	FL97	2.11	
41	FL06	0.17	FL98	4.48	

42	FL06	0.11	Grand Total	9,707.46
43	FL06	0.28		
44	FL06	0.14		
45	FL06	0.10		
46	FL06	0.18		
47	FL06	0.25		
48	FL06	0.19		
49	FL06	0.12		
50	FL06	0.38		
51	FL06	0.12		
Line No.	(a)	(b)		
52	FL06	0.34		
53	FL06	0.39		
54	FL06	0.36		
55	FL06	0.06		
56	FL06	0.09		
57	FL06	0.11		
58	FL06	0.07		
59	FL06	0.33		
60	FL06	0.13		
61	FL06	1.00		
62	FL06	0.18		
63	FL06	0.11		
64	FL06	0.62		
65	FL06	0.37		
66	FL06	0.56		
67	FL06	0.46		
68	FL06	0.07		
69	FL06	0.12		
70	FL06	0.13		
71	FL06	0.35		
72	FL06	0.24		
73	FL06	0.46		
74	FL06	0.08		
75	FL06	0.92		
76	FL06	0.21		
77	FL06	1.14		
78	FL06	0.87		
79	FL07	0.10		
80	FL07	0.39		
81	FL07	0.08		
Line No.	(a)	(b)		
82	FL07	0.33		
83	FL07	0.11		
84	FL07	0.04		
85	FL07	0.12		
86	FL07	0.23		
87	FL07	0.07		
88	FL07	0.67		
89	FL07	0.09		
90	FL07	0.36		

91	FL07	0.51
92	FL07	0.10
93	FL07	0.44
94	FL07	0.05
95	FL07	0.37
96	FL07	0.14
97	FL07	0.12
98	FL07	0.30
99	FL07	0.11
100	FL07	0.19
101	FL07	0.18
102	FL07	0.28
103	FL07	0.57
104	FL07	0.31
105	FL07	0.18
106	FL07	0.30
107	FL07	0.41
108	FL07	0.07
109	FL07	0.96
110	FL07	0.18
111	FL07	0.12
Line No.	(a)	(b)
112	FL07	0.00
113	FL07	0.08
114	FL07	0.04
115	FL07	0.32
116	FL07	0.10
117	FL07	0.13
118	FL07	0.32
119	FL07	0.06
120	FL07	0.42
121	FL07	0.23
122	FL07	0.11
123	FL07	0.19
124	FL07	0.24
125	FL07	0.00
126	FL07	0.16
127	FL07	0.14
128	FL07	0.12
129	FL07	0.64
130	FL07	0.37
131	FL07	0.27
132	FL07	0.30
133	FL07	0.77
134	FL07	0.00
135	FL07	0.23
136	FL07	0.00
137	FL07	0.53
138	FL07	0.48
139	FL07	0.17
140	FL07	0.25

141	FL07	0.51
Line No.	(a)	(b)
142	FL07	0.60
143	FL07	0.69
144	FL07	0.00
145	FL07	0.76
146	FL07	0.00
147	FL07	0.80
148	FL07	0.27
149	FL07	0.34
150	FL07	0.82
151	FL07	0.90
152	FL07	0.56
153	FL07	0.54
154	FL07	0.52
155	FL07	0.23
156	FL07	0.00
157	FL07	0.00
158	FL07	1.46
159	FL07	0.87
160	FL07	0.84
161	FL07	1.23
162	FL07	0.19
163	FL07	0.70
164	FL07	0.52
165	FL07	0.07
166	FL07	0.90
167	FL07	1.02
168	FL07	1.47
169	FL07	0.89
170	FL07	0.39
171	FL07	0.31
Line No.	(a)	(b)
172	FL07	0.64
173	FL07	0.00
174	FL07	0.31
175	FL07	0.85
176	FL07	0.12
177	FL07	0.19
178	FL07	0.82
179	FL07	0.60
180	FL07	0.35
181	FL07	0.14
182	FL07	0.00
183	FL07	0.59
184	FL07	0.48
185	FL07	0.01
186	FL07	2.87
187	FL07	0.62
188	FL07	1.14
189	FL07	0.00

190	FL07	0.18
191	FL07	0.86
192	FL07	0.71
193	FL07	0.14
194	FL07	0.76
195	FL07	1.87
196	FL07	0.36
197	FL07	0.65
198	FL07	0.98
199	FL07	0.35
200	FL07	0.38
201	FL07	0.62
Line No.	(a)	(b)
202	FL07	0.92
203	FL07	0.00
204	FL07	0.82
205	FL07	0.00
206	FL07	0.61
207	FL07	0.70
208	FL07	0.00
209	FL07	1.41
210	FL07	2.08
211	FL07	0.56
212	FL07	1.30
213	FL07	1.57
214	FL07	0.97
215	FL07	2.26
216	FL07	0.26
217	FL07	1.65
218	FL07	1.24
219	FL07	1.46
220	FL07	1.65
221	FL07	0.00
222	FL22	0.39
223	FL22	0.10
224	FL22	0.70
225	FL22	0.81
226	FL22	0.65
227	FL22	0.90
228	FL22	0.73
229	FL22	0.91
230	FL22	0.60
231	FL22	0.37
Line No.	(a)	(b)
232	FL22	0.65
233	FL22	0.12
234	FL22	0.90
235	FL22	1.09
236	FL22	0.15
237	FL22	0.64
238	FL22	0.83

239	FL22	0.50
240	FL22	0.29
241	FL22	0.13
242	FL22	0.69
243	FL22	0.10
244	FL22	0.61
245	FL22	0.09
246	FL22	0.56
247	FL22	0.47
248	FL22	0.20
249	FL22	0.36
250	FL22	0.41
251	FL22	0.25
252	FL22	0.45
253	FL22	0.24
254	FL22	0.24
255	FL22	0.05
256	FL22	0.19
257	FL22	0.10
258	FL22	0.38
259	FL22	0.29
260	FL22	0.80
261	FL22	0.66
Line No.	(a)	(b)
262	FL22	0.52
263	FL22	0.19
264	FL22	0.13
265	FL22	0.23
266	FL22	0.42
267	FL22	0.35
268	FL22	0.94
269	FL22	0.44
270	FL22	0.05
271	FL22	0.58
272	FL22	0.06
273	FL22	0.22
274	FL22	0.50
275	FL22	0.62
276	FL22	0.45
277	FL22	0.57
278	FL22	0.67
279	FL22	0.22
280	FL22	0.75
281	FL22	0.36
282	FL22	0.79
283	FL22	0.17
284	FL22	0.58
285	FL22	0.11
286	FL22	0.27
287	FL22	0.14
288	FL22	0.38

289	FL22	1.43
290	FL22	0.20
291	FL22	0.27
Line No.	(a)	(b)
292	FL22	0.22
293	FL22	0.91
294	FL22	0.38
295	FL22	0.74
296	FL22	0.10
297	FL22	0.20
298	FL22	0.31
299	FL22	2.54
300	FL22	0.27
301	FL22	0.32
302	FL22	0.65
303	FL22	0.35
304	FL22	0.80
305	FL22	0.12
306	FL22	0.33
307	FL22	0.42
308	FL22	0.13
309	FL22	0.44
310	FL22	0.73
311	FL22	1.05
312	FL22	0.30
313	FL22	0.23
314	FL22	0.78
315	FL22	0.28
316	FL22	0.20
317	FL22	0.44
318	FL22	0.08
319	FL22	0.22
320	FL22	0.40
321	FL22	0.62
Line No.	(a)	(b)
322	FL22	0.32
323	FL22	0.38
324	FL22	0.43
325	FL22	0.70
326	FL22	0.39
327	FL22	1.08
328	FL22	0.64
329	FL22	0.05
330	FL22	0.21
331	FL22	0.17
332	FL22	0.41
333	FL22	0.23
334	FL22	0.23
335	FL22	0.57
336	FL22	1.49
337	FL22	2.18

338	FL22	0.32
339	FL22	0.43
340	FL22	0.66
341	FL22	0.39
342	FL22	0.97
343	FL22	0.78
344	FL22	0.76
345	FL22	0.86
346	FL22	0.05
347	FL22	0.27
348	FL22	0.42
349	FL22	0.20
350	FL22	0.51
351	FL22	0.50
Line No.	(a)	(b)
352	FL22	1.11
353	FL22	0.82
354	FL22	0.87
355	FL22	0.27
356	FL22	0.87
357	FL22	0.90
358	FL22	0.37
359	FL22	0.74
360	FL22	0.62
361	FL22	0.80
362	FL22	0.79
363	FL22	0.22
364	FL22	0.18
365	FL22	0.42
366	FL22	0.33
367	FL22	0.38
368	FL22	0.05
369	FL22	0.81
370	FL22	0.41
371	FL22	0.63
372	FL22	0.41
373	FL22	0.24
374	FL22	0.60
375	FL22	0.33
376	FL22	0.90
377	FL22	0.76
378	FL22	1.67
379	FL22	0.15
380	FL22	0.52
381	FL22	0.78
Line No.	(a)	(b)
382	FL22	0.26
383	FL22	1.38
384	FL22	0.45
385	FL22	0.62
386	FL22	0.58

387	FL22	0.37
388	FL22	0.89
389	FL22	0.66
390	FL22	0.32
391	FL22	0.53
392	FL22	1.90
393	FL22	0.19
394	FL22	0.87
395	FL22	0.42
396	FL22	0.70
397	FL22	0.59
398	FL22	0.47
399	FL22	0.98
400	FL22	0.06
401	FL22	0.18
402	FL22	0.69
403	FL22	0.63
404	FL22	0.59
405	FL22	1.03
406	FL22	0.30
407	FL22	0.10
408	FL22	1.10
409	FL22	0.35
410	FL22	0.26
411	FL22	0.53
Line No.	(a)	(b)
412	FL22	0.38
413	FL22	0.36
414	FL22	0.62
415	FL22	1.10
416	FL22	0.33
417	FL22	0.40
418	FL22	0.81
419	FL22	0.32
420	FL22	0.27
421	FL22	0.22
422	FL22	0.06
423	FL22	0.60
424	FL22	0.55
425	FL22	1.22
426	FL22	0.75
427	FL22	1.26
428	FL22	2.64
429	FL22	1.54
430	FL22	0.20
431	FL22	0.43
432	FL22	0.84
433	FL22	0.71
434	FL22	0.49
435	FL22	0.51
436	FL22	0.88

437	FL22	0.37
438	FL22	0.25
439	FL22	1.11
440	FL22	1.05
441	FL22	0.30
Line No.	(a)	(b)
442	FL22	0.63
443	FL22	0.86
444	FL22	0.12
445	FL22	2.42
446	FL22	1.20
447	FL22	0.57
448	FL22	0.55
449	FL22	0.51
450	FL22	0.02
451	FL22	0.41
452	FL22	0.63
453	FL22	0.34
454	FL22	0.74
455	FL22	0.73
456	FL22	0.15
457	FL22	0.78
458	FL22	0.73
459	FL22	0.43
460	FL22	0.92
461	FL22	0.80
462	FL22	0.47
463	FL22	1.35
464	FL22	0.65
465	FL22	1.08
466	FL22	0.79
467	FL22	0.12
468	FL22	0.05
469	FL22	0.54
470	FL22	0.57
471	FL22	0.66
Line No.	(a)	(b)
472	FL22	0.58
473	FL22	0.87
474	FL22	1.36
475	FL22	0.82
476	FL22	0.20
477	FL22	0.24
478	FL22	0.48
479	FL22	0.57
480	FL22	1.07
481	FL22	1.05
482	FL22	0.38
483	FL22	0.02
484	FL22	0.23
485	FL22	0.01

486	FL22	0.05
487	FL22	0.40
488	FL22	1.96
489	FL22	1.80
490	FL22	0.93
491	FL22	0.53
492	FL22	0.32
493	FL22	0.57
494	FL22	0.61
495	FL22	0.34
496	FL22	0.67
497	FL22	0.43
498	FL22	0.15
499	FL22	0.27
500	FL22	0.82
501	FL22	0.74
Line No.	(a)	(b)
502	FL22	1.30
503	FL22	0.34
504	FL22	0.42
505	FL22	1.58
506	FL22	0.52
507	FL22	0.41
508	FL22	0.60
509	FL22	0.64
510	FL22	0.81
511	FL22	0.40
512	FL22	0.19
513	FL22	0.34
514	FL22	0.28
515	FL22	0.18
516	FL22	0.53
517	FL22	0.86
518	FL22	1.66
519	FL22	1.52
520	FL22	1.06
521	FL22	0.88
522	FL22	0.26
523	FL22	0.22
524	FL22	1.34
525	FL22	0.79
526	FL22	0.16
527	FL22	0.48
528	FL22	0.54
529	FL22	0.79
530	FL22	0.24
531	FL22	1.34
Line No.	(a)	(b)
532	FL22	0.73
533	FL22	0.27
534	FL22	0.97

535	FL22	1.77
536	FL22	1.41
537	FL22	0.10
538	FL22	0.53
539	FL22	0.34
540	FL22	0.26
541	FL22	0.27
542	FL22	0.23
543	FL22	0.38
544	FL22	0.67
545	FL22	0.22
546	FL22	0.25
547	FL22	0.64
548	FL22	1.69
549	FL22	0.21
550	FL22	0.56
551	FL22	1.29
552	FL22	0.51
553	FL22	0.13
554	FL22	1.31
555	FL22	0.80
556	FL22	1.19
557	FL22	0.29
558	FL22	1.03
559	FL22	0.49
560	FL22	0.54
561	FL22	1.26
Line No.	(a)	(b)
562	FL22	0.35
563	FL22	0.18
564	FL22	0.69
565	FL22	0.31
566	FL22	0.86
567	FL22	0.43
568	FL22	0.63
569	FL22	0.87
570	FL22	1.26
571	FL22	0.33
572	FL22	0.27
573	FL22	0.52
574	FL22	1.19
575	FL22	3.62
576	FL22	0.07
577	FL22	0.01
578	FL22	0.73
579	FL22	0.59
580	FL22	1.56
581	FL22	0.07
582	FL22	2.63
583	FL22	0.96
584	FL22	0.27

585	FL22	0.17
586	FL22	0.55
587	FL22	1.30
588	FL22	0.66
589	FL22	1.11
590	FL22	0.52
591	FL22	0.75
Line No.	(a)	(b)
592	FL22	0.25
593	FL22	1.55
594	FL22	1.20
595	FL22	0.40
596	FL22	2.58
597	FL22	0.13
598	FL22	0.41
599	FL22	0.47
600	FL22	0.79
601	FL22	3.01
602	FL22	0.04
603	FL22	0.64
604	FL22	1.67
605	FL22	0.82
606	FL22	1.65
607	FL22	0.35
608	FL22	0.53
609	FL22	1.45
610	FL22	1.51
611	FL22	1.74
612	FL22	0.81
613	FL22	0.05
614	FL22	0.98
615	FL22	1.00
616	FL22	1.42
617	FL22	3.38
618	FL22	1.10
619	FL22	3.45
620	FL22	1.61
621	FL22	0.12
Line No.	(a)	(b)
622	FL22	2.43
623	FL22	0.49
624	FL22	0.58
625	FL22	1.16
626	FL22	3.60
627	FL22	0.11
628	FL22	1.33
629	FL22	1.61
630	FL22	1.47
631	FL22	0.45
632	FL22	2.08
633	FL22	2.92

634	FL22	0.34
635	FL22	3.92
636	FL22	0.71
637	FL22	0.37
638	FL22	1.30
639	FL22	1.28
640	FL22	0.02
641	FL22	2.22
642	FL22	3.33
643	FL22	2.78
644	FL22	4.25
645	FL22	6.38
646	FL22	1.32
647	FL22	6.43
648	FL23	0.03
649	FL23	0.15
650	FL23	0.21
651	FL23	0.24
Line No.	(a)	(b)
652	FL23	0.50
653	FL23	0.91
654	FL23	0.16
655	FL23	0.84
656	FL23	1.24
657	FL23	1.55
658	FL23	0.00
659	FL23	0.02
660	FL23	0.84
661	FL23	0.39
662	FL23	1.28
663	FL23	0.24
664	FL23	0.05
665	FL23	1.74
666	FL23	2.13
667	FL23	2.29
668	FL23	0.92
669	FL23	0.14
670	FL23	1.45
671	FL23	2.93
672	FL23	0.56
673	FL23	1.10
674	FL23	0.79
675	FL23	3.45
676	FL23	0.59
677	FL23	1.05
678	FL23	1.74
679	FL23	0.26
680	FL23	2.07
681	FL23	0.37
Line No.	(a)	(b)
682	FL23	0.62

683	FL23	1.69
684	FL23	2.21
685	FL23	1.70
686	FL23	0.75
687	FL23	1.99
688	FL23	3.03
689	FL23	0.85
690	FL23	1.50
691	FL23	1.88
692	FL23	1.64
693	FL23	1.60
694	FL23	2.48
695	FL23	1.53
696	FL23	0.52
697	FL23	2.50
698	FL23	3.86
699	FL23	3.03
700	FL23	3.21
701	FL23	3.34
702	FL23	2.35
703	FL23	1.82
704	FL23	2.81
705	FL23	0.83
706	FL23	0.53
707	FL23	1.46
708	FL23	2.92
709	FL23	0.98
710	FL23	1.95
711	FL23	3.76
Line No.	(a)	(b)
712	FL23	1.12
713	FL23	1.73
714	FL23	3.60
715	FL23	3.88
716	FL23	3.59
717	FL23	1.00
718	FL23	1.74
719	FL23	6.05
720	FL23	4.78
721	FL23	0.03
722	FL23	4.73
723	FL23	2.48
724	FL23	1.99
725	FL23	0.52
726	FL23	1.53
727	FL23	2.44
728	FL23	2.07
729	FL23	4.00
730	FL23	0.12
731	FL23	3.29
732	FL23	4.16

733	FL23	3.67
734	FL23	3.34
735	FL23	1.72
736	FL23	3.45
737	FL23	4.02
738	FL23	5.16
739	FL23	2.51
740	FL23	2.54
741	FL23	4.10
Line No.	(a)	(b)
742	FL23	2.59
743	FL23	4.70
744	FL23	0.96
745	FL23	0.14
746	FL23	7.04
747	FL23	2.99
748	FL23	1.74
749	FL23	3.96
750	FL23	2.33
751	FL23	3.87
752	FL23	3.99
753	FL23	4.09
754	FL23	2.91
755	FL23	3.15
756	FL23	2.03
757	FL23	1.60
758	FL23	2.02
759	FL23	4.70
760	FL23	4.88
761	FL23	2.13
762	FL23	1.37
763	FL23	2.18
764	FL23	4.31
765	FL23	2.54
766	FL23	5.39
767	FL23	2.57
768	FL23	4.35
769	FL23	1.84
770	FL23	3.88
771	FL23	1.45
Line No.	(a)	(b)
772	FL23	3.53
773	FL23	3.74
774	FL23	1.68
775	FL23	4.48
776	FL23	3.14
777	FL23	3.79
778	FL23	2.39
779	FL23	3.31
780	FL23	3.31
781	FL23	0.09

782	FL23	5.35
783	FL23	2.97
784	FL23	0.62
785	FL23	2.77
786	FL23	0.21
787	FL23	5.45
788	FL23	2.25
789	FL23	1.03
790	FL23	0.71
791	FL23	3.96
792	FL23	2.58
793	FL23	2.72
794	FL23	5.22
795	FL23	2.34
796	FL23	3.73
797	FL23	3.53
798	FL23	2.96
799	FL23	3.74
800	FL23	1.29
801	FL23	2.66
Line No.	(a)	(b)
802	FL23	0.84
803	FL23	1.97
804	FL23	4.03
805	FL23	3.15
806	FL23	4.84
807	FL23	1.23
808	FL23	2.43
809	FL23	2.24
810	FL23	4.84
811	FL23	3.71
812	FL23	4.08
813	FL23	2.62
814	FL23	3.04
815	FL23	2.51
816	FL23	2.90
817	FL23	3.46
818	FL23	2.35
819	FL23	1.45
820	FL23	1.53
821	FL23	1.67
822	FL23	2.44
823	FL23	4.39
824	FL23	3.71
825	FL23	2.97
826	FL23	2.70
827	FL23	7.63
828	FL23	3.99
829	FL23	3.68
830	FL23	3.53
831	FL23	3.04

Line No.	(a)	(b)
832	FL23	1.01
833	FL23	2.83
834	FL23	0.44
835	FL23	5.61
836	FL23	3.36
837	FL23	3.21
838	FL23	4.48
839	FL23	0.88
840	FL23	3.91
841	FL23	2.94
842	FL23	3.26
843	FL23	4.57
844	FL23	4.28
845	FL23	3.84
846	FL23	2.42
847	FL23	4.20
848	FL23	2.22
849	FL23	5.39
850	FL23	4.86
851	FL23	2.64
852	FL23	3.42
853	FL23	2.21
854	FL23	2.68
855	FL23	4.32
856	FL23	2.88
857	FL23	2.03
858	FL23	4.73
859	FL23	3.57
860	FL23	4.24
861	FL23	3.75
Line No.	(a)	(b)
862	FL23	2.98
863	FL23	3.70
864	FL23	1.68
865	FL23	2.64
866	FL23	3.32
867	FL23	0.77
868	FL23	4.64
869	FL23	3.52
870	FL23	3.68
871	FL23	4.20
872	FL23	5.54
873	FL23	0.00
874	FL23	2.19
875	FL23	3.01
876	FL23	1.59
877	FL23	1.37
878	FL23	0.34
879	FL23	2.49
880	FL23	2.98

881	FL23	3.10			
882	FL23	5.70			
883	FL23	5.31			
884	FL23	2.66			
885	FL23	6.73			
886	FL23	3.90			
887	FL23	6.92			
888	FL23	3.14			
889	FL23	2.27			
890	FL23	6.59			
891	FL23	3.96			
Line No.	(a)	(b)			
892	FL23	2.53			
893	FL23	2.86			
894	FL23	4.15			
895	FL23	2.71			
896	FL23	6.58			
897	FL23	1.90			
898	FL23	3.89			
899	FL23	2.84			
900	FL23	3.34			
901	FL23	2.83			
902	FL23	0.51			
903	FL23	3.70			
904	FL23	3.78			
905	FL23	1.67			
906	FL23	5.13			
907	FL23	2.95			
908	FL23	6.65			
909	FL23	3.43			
910	FL23	2.12			
911	FL23	0.44			
912	FL23	3.53			
913	FL23	4.20			
914	FL23	3.28			
915	FL23	7.94			
916	FL23	3.59			
917	FL23	1.93			
918	FL23	7.27			
919	FL23	4.39			
920	FL23	8.65			
921	FL23	5.17			
Line No.	(a)	(b)	922	FL23	4.35
923	FL23	4.61			
924	FL23	2.73			
925	FL23	2.41			
926	FL23	3.89			
927	FL23	2.96			
928	FL23	7.36			
929	FL23	4.85			
930	FL23	2.65			

931	FL23	4.10
932	FL23	7.86
933	FL23	4.95
934	FL23	6.82
935	FL23	3.23
936	FL23	6.61
937	FL23	2.66
938	FL23	4.41
939	FL23	1.75
940	FL23	3.36
941	FL23	4.02
942	FL23	3.04
943	FL23	5.28
944	FL23	3.45
945	FL23	6.25
946	FL23	7.93
947	FL23	7.22
948	FL23	4.35
949	FL23	7.13
950	FL23	1.80
951	FL23	7.25
952	FL23	5.74
Line No.	(a)	(b)
953	FL23	1.11
954	FL23	3.81
955	FL23	5.71
956	FL23	5.84
957	FL23	3.35
958	FL23	0.89
959	FL23	5.27
960	FL23	1.31
961	FL23	2.95
962	FL23	4.43
963	FL23	2.50
964	FL23	7.69
965	FL23	4.09
966	FL23	0.39
967	FL23	2.83
968	FL23	0.02
969	FL23	4.04
970	FL23	7.79
971	FL23	4.40
972	FL23	1.45
973	FL23	4.85
974	FL23	4.32
975	FL23	5.90
976	FL23	3.85
977	FL23	6.30
978	FL23	2.38
979	FL23	3.46
980	FL23	0.09

981	FL23	3.76
982	FL23	8.85
Line No.	(a)	(b)
983	FL23	4.05
984	FL23	2.35
985	FL23	0.45
986	FL23	1.98
987	FL23	3.53
988	FL23	7.11
989	FL23	3.49
990	FL23	3.29
991	FL23	2.74
992	FL23	0.00
993	FL23	4.23
994	FL23	2.67
995	FL23	5.39
996	FL23	8.04
997	FL23	5.92
998	FL23	9.70
999	FL23	5.99
1000	FL23	7.90
1001	FL23	6.00
1002	FL23	10.07
1003	FL23	0.79
1004	FL23	7.94
1005	FL23	6.59
1006	FL23	3.18
1007	FL23	3.05
1008	FL23	3.67
1009	FL23	4.25
1010	FL23	4.65
1011	FL23	0.93
1012	FL23	11.03
Line No.	(a)	(b)
1013	FL23	1.95
1014	FL23	3.24
1015	FL23	3.36
1016	FL23	4.72
1017	FL23	0.01
1018	FL23	2.48
1019	FL23	2.87
1020	FL23	2.12
1021	FL23	0.05
1022	FL23	0.01
1023	FL26	1.26
1024	FL26	0.68
1025	FL26	0.45
1026	FL26	2.38
1027	FL26	3.37
1028	FL26	3.79
1029	FL26	3.72

1030	FL26	1.84
1031	FL26	5.28
1032	FL26	5.33
1033	FL26	3.30
1034	FL26	3.31
1035	FL26	4.40
1036	FL26	1.08
1037	FL26	3.79
1038	FL26	3.78
1039	FL26	4.53
1040	FL26	3.81
1041	FL26	4.71
1042	FL26	0.96
Line No.	(a)	(b)
1043	FL26	3.49
1044	FL26	4.85
1045	FL26	0.44
1046	FL26	5.49
1047	FL26	5.12
1048	FL26	3.55
1049	FL27A	0.31
1050	FL27A	3.87
1051	FL27A	3.15
1052	FL27A	3.96
1053	FL27A	3.39
1054	FL27A	0.85
1055	FL27A	3.62
1056	FL27A	3.26
1057	FL27A	5.76
1058	FL27A	4.36
1059	FL27A	0.76
1060	FL27A	3.05
1061	FL27A	5.44
1062	FL27A	4.61
1063	FL27A	5.01
1064	FL27A	3.95
1065	FL27A	4.87
1066	FL27B	1.47
1067	FL27B	2.60
1068	FL27B	1.22
1069	FL27B	1.72
1070	FL27B	1.65
1071	FL27B	1.42
1072	FL27B	2.03
Line No.	(a)	(b)
1073	FL27B	2.78
1074	FL27B	3.25
1075	FL27B	3.61
1076	FL27B	1.14
1077	FL27B	3.33
1078	FL27B	2.52

1079	FL27B	2.41
1080	FL27B	0.00
1081	FL27B	0.85
1082	FL27B	1.79
1083	FL27B	2.01
1084	FL27B	0.32
1085	FL27B	3.13
1086	FL27B	1.01
1087	FL27B	4.65
1088	FL27B	3.77
1089	FL27B	2.88
1090	FL27B	4.21
1091	FL27B	2.93
1092	FL27B	2.21
1093	FL27B	3.03
1094	FL27B	4.86
1095	FL27B	0.62
1096	FL27B	0.63
1097	FL27B	1.22
1098	FL27B	3.63
1099	FL27B	4.02
1100	FL27B	3.69
1101	FL27B	1.94
1102	FL27B	1.08
Line No.	(a)	(b)
1103	FL27B	3.78
1104	FL27B	7.34
1105	FL27B	2.25
1106	FL27B	2.88
1107	FL27B	3.77
1108	FL27B	2.80
1109	FL27B	2.00
1110	FL27B	0.98
1111	FL27B	2.90
1112	FL27B	2.19
1113	FL27B	4.45
1114	FL27B	5.75
1115	FL27B	0.91
1116	FL27B	3.18
1117	FL27B	1.01
1118	FL27B	3.51
1119	FL27B	2.50
1120	FL27B	4.18
1121	FL27B	3.93
1122	FL27B	3.20
1123	FL27B	1.93
1124	FL27B	5.85
1125	FL27B	6.98
1126	FL27B	1.17
1127	FL27B	3.00
1128	FL27B	4.79

1129	FL27B	5.55
1130	FL27B	2.16
1131	FL27B	7.28
1132	FL27B	4.97
Line No.	(a)	(b)
1133	FL27B	4.03
1134	FL27B	5.73
1135	FL27B	4.91
1136	FL27B	4.08
1137	FL27B	4.20
1138	FL27B	7.24
1139	FL27B	8.49
1140	FL27B	6.41
1141	FL27B	4.33
1142	FL27B	5.05
1143	FL27B	7.35
1144	FL27B	4.75
1145	FL27B	3.89
1146	FL27B	6.96
1147	FL27B	1.78
1148	FL27B	5.22
1149	FL27B	4.49
1150	FL27B	4.67
1151	FL27B	5.03
1152	FL27B	6.54
1153	FL27B	7.82
1154	FL27B	11.20
1155	FL27B	1.18
1156	FL27B	0.90
1157	FL27B	0.55
1158	FL27B	3.27
1159	FL27B	3.77
1160	FL28	0.07
1161	FL28	0.20
1162	FL28	0.11
Line No.	(a)	(b)
1163	FL28	1.29
1164	FL28	0.37
1165	FL28	0.19
1166	FL28	0.18
1167	FL28	0.46
1168	FL28	0.96
1169	FL28	0.09
1170	FL28	0.46
1171	FL28	0.33
1172	FL28	0.77
1173	FL28	0.34
1174	FL28	1.36
1175	FL28	2.29
1176	FL28	1.28
1177	FL28	0.67

1178	FL28	2.45
1179	FL28	2.11
1180	FL28	1.19
1181	FL28	1.38
1182	FL28	2.48
1183	FL28	0.33
1184	FL28	0.54
1185	FL28	0.21
1186	FL28	0.20
1187	FL28	0.08
1188	FL28	1.83
1189	FL28	3.13
1190	FL28	0.06
1191	FL28	0.53
1192	FL28	0.74
Line No.	(a)	(b)
1193	FL28	0.12
1194	FL28	0.20
1195	FL28	0.06
1196	FL28	2.47
1197	FL28	0.22
1198	FL28	0.20
1199	FL28	0.22
1200	FL28	0.54
1201	FL28	0.24
1202	FL28	0.32
1203	FL28	0.42
1204	FL28	1.95
1205	FL28	1.04
1206	FL28	0.11
1207	FL28	0.21
1208	FL28	0.30
1209	FL28	0.24
1210	FL28	1.23
1211	FL28	0.30
1212	FL28	0.67
1213	FL28	0.07
1214	FL28	0.48
1215	FL28	0.46
1216	FL28	0.13
1217	FL28	3.07
1218	FL28	0.18
1219	FL28	3.79
1220	FL28	4.09
1221	FL28	0.40
1222	FL28	0.11
Line No.	(a)	(b)
1223	FL28	0.24
1224	FL28	1.74
1225	FL28	5.28
1226	FL28	1.74

1227	FL28	2.21
1228	FL28	0.34
1229	FL28	0.35
1230	FL28	0.15
1231	FL28	0.11
1232	FL28	0.19
1233	FL28	0.16
1234	FL28	0.50
1235	FL28	4.11
1236	FL28	0.16
1237	FL28	0.10
1238	FL28	2.08
1239	FL28	1.98
1240	FL28	0.55
1241	FL28	0.58
1242	FL28	0.51
1243	FL28	0.21
1244	FL28	0.37
1245	FL28	1.31
1246	FL28	0.57
1247	FL28	0.36
1248	FL28	0.69
1249	FL28	2.99
1250	FL28	2.45
1251	FL28	0.12
1252	FL28	0.08
Line No.	(a)	(b)
1253	FL28	2.33
1254	FL28	1.18
1255	FL28	0.38
1256	FL28	0.64
1257	FL28	0.56
1258	FL28	1.54
1259	FL28	0.13
1260	FL28	0.85
1261	FL28	0.58
1262	FL28	0.32
1263	FL28	1.25
1264	FL28	0.39
1265	FL28	0.21
1266	FL28	0.12
1267	FL28	0.28
1268	FL28	0.97
1269	FL28	0.50
1270	FL28	0.66
1271	FL28	0.16
1272	FL28	0.65
1273	FL28	0.05
1274	FL28	2.88
1275	FL28	0.48
1276	FL28	3.05

1277	FL28	0.84
1278	FL28	1.24
1279	FL28	2.72
1280	FL28	0.19
1281	FL28	4.28
1282	FL28	0.39
Line No.	(a)	(b)
1283	FL28	0.62
1284	FL28	0.23
1285	FL28	0.21
1286	FL28	0.99
1287	FL28	1.27
1288	FL28	3.06
1289	FL28	0.06
1290	FL28	1.58
1291	FL28	0.20
1292	FL28	1.86
1293	FL28	0.47
1294	FL28	0.19
1295	FL28	2.85
1296	FL28	0.98
1297	FL28	4.96
1298	FL28	2.02
1299	FL28	1.66
1300	FL28	5.20
1301	FL28	0.67
1302	FL28	4.06
1303	FL28	0.30
1304	FL28	0.41
1305	FL28	1.69
1306	FL28	3.21
1307	FL28	0.39
1308	FL28	4.19
1309	FL28	1.47
1310	FL28	3.15
1311	FL28	0.12
1312	FL28	4.57
Line No.	(a)	(b)
1313	FL28	3.50
1314	FL28	0.47
1315	FL28	0.04
1316	FL28	0.06
1317	FL28	1.38
1318	FL28	1.57
1319	FL28	2.15
1320	FL28	0.12
1321	FL28	4.18
1322	FL28	0.44
1323	FL28	2.62
1324	FL28	0.24
1325	FL28	0.28

1326	FL28	2.88
1327	FL28	1.92
1328	FL28	0.16
1329	FL28	0.16
1330	FL28	1.41
1331	FL28	2.62
1332	FL28	0.23
1333	FL28	0.80
1334	FL28	0.41
1335	FL28	2.81
1336	FL28	0.65
1337	FL28	3.45
1338	FL28	4.41
1339	FL28	0.88
1340	FL28	1.52
1341	FL28	4.87
1342	FL28	1.92
Line No.	(a)	(b)
1343	FL28	4.91
1344	FL28	0.04
1345	FL28	1.13
1346	FL28	2.68
1347	FL28	4.33
1348	FL28	4.57
1349	FL28	0.22
1350	FL28	5.04
1351	FL28	1.07
1352	FL28	0.32
1353	FL28	2.14
1354	FL28	1.94
1355	FL28	5.29
1356	FL28	4.14
1357	FL28	1.52
1358	FL28	3.91
1359	FL28	2.70
1360	FL28	3.14
1361	FL28	0.41
1362	FL28	2.66
1363	FL28	1.14
1364	FL28	4.99
1365	FL28	4.24
1366	FL28	4.97
1367	FL28	3.57
1368	FL28	4.33
1369	FL28	0.45
1370	FL28	2.08
1371	FL28	2.59
1372	FL28	1.35
Line No.	(a)	(b)
1373	FL28	0.89
1374	FL28	4.77

1375	FL28	1.79
1376	FL28	1.77
1377	FL28	5.19
1378	FL28	3.94
1379	FL28	4.53
1380	FL28	2.44
1381	FL28	3.92
1382	FL28	3.70
1383	FL28	0.07
1384	FL28	0.48
1385	FL28	4.14
1386	FL28	2.81
1387	FL28	1.11
1388	FL28	1.67
1389	FL28	2.40
1390	FL28	2.15
1391	FL28	3.62
1392	FL28	3.37
1393	FL28	0.26
1394	FL28	1.47
1395	FL28	2.99
1396	FL28	3.87
1397	FL28	5.15
1398	FL28	0.17
1399	FL28	0.27
1400	FL28	0.25
1401	FL28	3.19
1402	FL28	4.31
Line No.	(a)	(b)
1403	FL28	4.22
1404	FL28	1.51
1405	FL28	0.93
1406	FL28	1.65
1407	FL28	4.28
1408	FL28	0.69
1409	FL28	2.62
1410	FL28	2.24
1411	FL28	2.32
1412	FL28	0.09
1413	FL28	3.15
1414	FL28	2.67
1415	FL28	0.27
1416	FL28	1.61
1417	FL28	0.13
1418	FL28	1.61
1419	FL28	3.46
1420	FL28	4.17
1421	FL28	3.89
1422	FL28	3.74
1423	FL28	0.35
1424	FL28	3.34

1425	FL28	4.44
1426	FL28	0.40
1427	FL28	3.93
1428	FL28	4.43
1429	FL28	4.62
1430	FL28	5.15
1431	FL28	0.64
1432	FL28	4.05
Line No.	(a)	(b)
1433	FL28	3.84
1434	FL28	6.03
1435	FL28	2.45
1436	FL28	1.69
1437	FL28	0.45
1438	FL28	0.14
1439	FL28	4.85
1440	FL28	0.95
1441	FL28	3.98
1442	FL28	1.20
1443	FL28	2.58
1444	FL28	4.95
1445	FL28	3.95
1446	FL28	0.42
1447	FL28	6.17
1448	FL28	1.07
1449	FL28	3.49
1450	FL28	1.02
1451	FL28	5.30
1452	FL28	4.77
1453	FL28	2.74
1454	FL28	4.07
1455	FL28	4.35
1456	FL28	1.51
1457	FL28	4.88
1458	FL28	0.26
1459	FL28	3.46
1460	FL28	4.81
1461	FL28	3.44
1462	FL28	1.84
Line No.	(a)	(b)
1463	FL28	4.30
1464	FL28	2.02
1465	FL28	1.31
1466	FL28	1.65
1467	FL28	4.45
1468	FL28	0.61
1469	FL28	3.79
1470	FL28	0.91
1471	FL28	4.82
1472	FL28	3.79
1473	FL28	1.14

1474	FL28	2.28
1475	FL28	2.08
1476	FL28	5.36
1477	FL28	3.17
1478	FL28	5.10
1479	FL28	4.04
1480	FL28	2.78
1481	FL28	1.27
1482	FL28	1.51
1483	FL28	3.84
1484	FL28	4.24
1485	FL28	3.36
1486	FL28	3.47
1487	FL28	2.64
1488	FL28	3.30
1489	FL28	0.22
1490	FL28	3.12
1491	FL28	2.25
1492	FL28	2.93
Line No.	(a)	(b)
1493	FL28	1.42
1494	FL28	3.16
1495	FL28	4.00
1496	FL28	2.61
1497	FL28	2.21
1498	FL28	5.21
1499	FL28	5.05
1500	FL28	2.86
1501	FL28	2.27
1502	FL28	2.78
1503	FL28	4.63
1504	FL28	3.31
1505	FL28	5.88
1506	FL28	0.34
1507	FL28	2.28
1508	FL28	5.48
1509	FL28	3.38
1510	FL28	5.73
1511	FL28	0.16
1512	FL28	5.26
1513	FL28	4.76
1514	FL28	5.68
1515	FL28	3.47
1516	FL28	6.88
1517	FL28	2.37
1518	FL28	0.61
1519	FL28	4.30
1520	FL28	1.31
1521	FL28	6.22
1522	FL28	2.64
Line No.	(a)	(b)

1523	FL28	4.43
1524	FL28	2.93
1525	FL28	0.54
1526	FL28	3.76
1527	FL28	4.29
1528	FL28	2.94
1529	FL28	2.19
1530	FL28	0.07
1531	FL28	5.90
1532	FL28	3.94
1533	FL28	4.39
1534	FL28	2.06
1535	FL28	0.84
1536	FL28	4.31
1537	FL28	4.56
1538	FL28	1.78
1539	FL28	3.83
1540	FL28	1.60
1541	FL28	4.44
1542	FL28	5.43
1543	FL28	1.53
1544	FL28	2.18
1545	FL28	2.99
1546	FL28	2.61
1547	FL28	4.27
1548	FL28	3.45
1549	FL28	4.20
1550	FL28	1.17
1551	FL28	1.99
1552	FL28	4.84
Line No.	(a)	(b)
1553	FL28	2.67
1554	FL28	3.90
1555	FL28	4.64
1556	FL28	5.83
1557	FL28	0.21
1558	FL28	3.32
1559	FL28	4.12
1560	FL28	3.61
1561	FL28	2.94
1562	FL28	3.84
1563	FL28	4.92
1564	FL28	3.12
1565	FL28	5.16
1566	FL28	3.80
1567	FL28	0.29
1568	FL28	1.95
1569	FL28	0.94
1570	FL28	4.66
1571	FL28	2.10
1572	FL28	2.70

1573	FL28	4.16
1574	FL28	5.30
1575	FL28	2.50
1576	FL28	4.05
1577	FL28	4.10
1578	FL28	1.41
1579	FL28	3.71
1580	FL28	4.74
1581	FL28	5.60
1582	FL28	3.90
Line No.	(a)	(b)
1583	FL28	4.07
1584	FL28	4.06
1585	FL28	1.38
1586	FL28	3.89
1587	FL28	0.10
1588	FL28	2.01
1589	FL28	5.04
1590	FL28	4.59
1591	FL28	2.00
1592	FL28	3.00
1593	FL28	4.86
1594	FL28	1.47
1595	FL28	0.22
1596	FL28	4.93
1597	FL28	4.40
1598	FL28	2.03
1599	FL28	2.49
1600	FL28	4.05
1601	FL28	2.26
1602	FL28	4.69
1603	FL28	6.04
1604	FL28	3.16
1605	FL28	4.81
1606	FL28	6.13
1607	FL28	3.61
1608	FL28	4.96
1609	FL28	3.14
1610	FL28	2.98
1611	FL28	3.68
1612	FL28	0.12
Line No.	(a)	(b)
1613	FL28	5.03
1614	FL28	5.13
1615	FL28	4.55
1616	FL28	4.32
1617	FL28	3.74
1618	FL28	5.29
1619	FL28	0.59
1620	FL28	5.69
1621	FL28	0.58

1622	FL28	8.62
1623	FL28	5.50
1624	FL28	5.54
1625	FL28	1.26
1626	FL28	6.80
1627	FL28	1.46
1628	FL28	3.17
1629	FL28	5.01
1630	FL28	5.86
1631	FL28	1.23
1632	FL28	3.90
1633	FL28	4.54
1634	FL28	4.78
1635	FL28	1.06
1636	FL28	1.08
1637	FL28	0.29
1638	FL28	1.69
1639	FL28	5.27
1640	FL28	3.31
1641	FL28	0.12
1642	FL28	0.21
Line No.	(a)	(b)
1643	FL28	1.77
1644	FL28	8.05
1645	FL28	3.24
1646	FL28	2.63
1647	FL28	0.15
1648	FL28	0.56
1649	FL28	3.67
1650	FL28	3.51
1651	FL28	5.63
1652	FL28	4.98
1653	FL28	3.03
1654	FL28	1.03
1655	FL28	4.43
1656	FL28	5.44
1657	FL28	7.31
1658	FL28	0.45
1659	FL28	5.30
1660	FL28	3.75
1661	FL28	0.43
1662	FL28	0.69
1663	FL28	3.47
1664	FL28	2.41
1665	FL28	6.38
1666	FL28	6.76
1667	FL28	6.74
1668	FL28	5.24
1669	FL28	2.54
1670	FL28	4.28
1671	FL28	3.58

1672	FL28	6.83
Line No.	(a)	(b)
1673	FL28	6.71
1674	FL28	3.99
1675	FL28	2.69
1676	FL28	6.81
1677	FL28	0.71
1678	FL28	5.66
1679	FL28	0.54
1680	FL28	7.23
1681	FL28	1.52
1682	FL28	6.14
1683	FL28	6.56
1684	FL28	5.24
1685	FL28	2.90
1686	FL28	0.89
1687	FL28	2.52
1688	FL28	3.73
1689	FL28	2.67
1690	FL28	4.14
1691	FL28	8.22
1692	FL28	0.39
1693	FL28	0.51
1694	FL28	0.85
1695	FL28	2.11
1696	FL28	0.92
1697	FL28	7.30
1698	FL28	4.48
1699	FL28	3.61
1700	FL28	2.25
1701	FL28	5.89
1702	FL28	5.58
Line No.	(a)	(b)
1703	FL28	4.76
1704	FL28	0.09
1705	FL28	2.38
1706	FL28	6.86
1707	FL28	0.43
1708	FL28	7.61
1709	FL28	0.40
1710	FL28	3.95
1711	FL28	2.39
1712	FL28	4.27
1713	FL28	4.79
1714	FL28	3.75
1715	FL28	2.24
1716	FL28	4.54
1717	FL28	4.84
1718	FL28	0.18
1719	FL28	5.57
1720	FL28	5.38

1721	FL28	6.37
1722	FL28	4.65
1723	FL28	5.80
1724	FL28	4.64
1725	FL28	7.66
1726	FL28	5.15
1727	FL28	5.80
1728	FL28	4.64
1729	FL28	5.28
1730	FL28	5.22
1731	FL28	4.96
1732	FL28	5.91
Line No.	(a)	(b)
1733	FL28	5.61
1734	FL28	4.35
1735	FL28	6.22
1736	FL28	6.35
1737	FL28	3.83
1738	FL28	5.99
1739	FL28	4.83
1740	FL28	1.42
1741	FL28	6.55
1742	FL28	6.39
1743	FL28	2.47
1744	FL28	1.46
1745	FL28	5.49
1746	FL28	7.70
1747	FL28	6.74
1748	FL28	6.43
1749	FL28	5.52
1750	FL28	15.72
1751	FL28	5.00
1752	FL36	0.08
1753	FL36	1.86
1754	FL36	0.30
1755	FL36	2.02
1756	FL36	1.84
1757	FL36	2.52
1758	FL36	1.26
1759	FL36	1.58
1760	FL36	1.14
1761	FL36	1.81
1762	FL36	1.97
Line No.	(a)	(b)
1763	FL36	1.99
1764	FL36	2.40
1765	FL36	2.94
1766	FL36	1.77
1767	FL36	1.12
1768	FL36	2.97
1769	FL36	3.20

1770	FL36	1.75
1771	FL36	2.76
1772	FL36	3.15
1773	FL36	3.46
1774	FL36	0.13
1775	FL36	1.77
1776	FL36	1.92
1777	FL36	2.73
1778	FL36	1.54
1779	FL36	3.26
1780	FL36	0.11
1781	FL36	2.95
1782	FL36	3.00
1783	FL36	3.23
1784	FL36	2.79
1785	FL36	0.31
1786	FL36	2.56
1787	FL36	4.46
1788	FL36	3.28
1789	FL36	0.26
1790	FL36	1.37
1791	FL36	1.22
1792	FL36	2.69
Line No.	(a)	(b)
1793	FL36	0.05
1794	FL36	1.18
1795	FL36	3.85
1796	FL36	3.78
1797	FL36	0.18
1798	FL36	3.13
1799	FL36	2.74
1800	FL36	2.63
1801	FL36	3.28
1802	FL36	1.08
1803	FL36	3.05
1804	FL36	0.38
1805	FL36	3.03
1806	FL36	0.19
1807	FL36	0.31
1808	FL36	4.37
1809	FL36	3.06
1810	FL36	1.21
1811	FL36	2.39
1812	FL36	0.58
1813	FL36	3.63
1814	FL36	0.35
1815	FL36	1.47
1816	FL36	0.18
1817	FL36	4.71
1818	FL36	2.62
1819	FL36	0.00

1820	FL36	3.84
1821	FL36	3.50
1822	FL36	2.95
Line No.	(a)	(b)
1823	FL36	3.19
1824	FL36	1.15
1825	FL36	5.80
1826	FL37	0.39
1827	FL37	1.16
1828	FL37	1.14
1829	FL37	0.60
1830	FL37	3.91
1831	FL37	5.16
1832	FL37	4.95
1833	FL37	0.60
1834	FL37	9.28
1835	FL37	1.74
1836	FL37	3.07
1837	FL37	7.83
1838	FL37	6.51
1839	FL37	5.60
1840	FL37	3.45
1841	FL37	2.97
1842	FL37	5.82
1843	FL37	4.18
1844	FL37	7.09
1845	FL37	7.71
1846	FL37	5.60
1847	FL37	7.41
1848	FL37	10.65
1849	FL37	9.89
1850	FL37	7.99
1851	FL37	9.42
1852	FL37	7.07
Line No.	(a)	(b)
1853	FL37	7.26
1854	FL37	8.64
1855	FL37	10.45
1856	FL37	5.80
1857	FL37	10.93
1858	FL37	9.52
1859	FL37	7.57
1860	FL37	12.42
1861	FL37	12.01
1862	FL37	11.48
1863	FL37	8.94
1864	FL37	10.79
1865	FL39	1.21
1866	FL39	1.43
1867	FL39	1.26
1868	FL39	0.50

1869	FL39	0.85
1870	FL39	0.24
1871	FL39	0.56
1872	FL39	2.12
1873	FL41	2.58
1874	FL41	0.00
1875	FL41	6.02
1876	FL41	2.14
1877	FL41	2.36
1878	FL41	3.77
1879	FL41	5.65
1880	FL41	5.77
1881	FL41	0.98
1882	FL41	2.25
Line No.	(a)	(b)
1883	FL41	2.73
1884	FL41	1.74
1885	FL41	2.85
1886	FL41	2.00
1887	FL41	3.93
1888	FL41	2.26
1889	FL41	6.45
1890	FL41	4.62
1891	FL41	3.34
1892	FL41	4.37
1893	FL41	4.85
1894	FL41	1.41
1895	FL41	4.12
1896	FL41	5.28
1897	FL41	5.54
1898	FL41	3.45
1899	FL41	7.33
1900	FL41	6.16
1901	FL41	5.73
1902	FL41	5.56
1903	FL41	4.51
1904	FL41	5.14
1905	FL41	6.84
1906	FL41	5.74
1907	FL41	3.30
1908	FL41	8.50
1909	FL41	6.84
1910	FL41	7.71
1911	FL41	8.33
1912	FL41	5.85
Line No.	(a)	(b)
1913	FL41	8.99
1914	FL41	5.13
1915	FL41	3.29
1916	FL41	11.30
1917	FL41	5.68

1918	FL42A	1.38
1919	FL42A	7.45
1920	FL42A	4.94
1921	FL42A	4.99
1922	FL42A	9.00
1923	FL42A	7.85
1924	FL42A	3.08
1925	FL42A	3.34
1926	FL42A	5.82
1927	FL42A	4.20
1928	FL42A	4.68
1929	FL42A	8.67
1930	FL42A	4.93
1931	FL42A	5.72
1932	FL42A	4.76
1933	FL42A	8.22
1934	FL42A	7.29
1935	FL42A	9.20
1936	FL42A	5.58
1937	FL42A	6.65
1938	FL42A	9.46
1939	FL42A	7.54
1940	FL42A	8.10
1941	FL42A	9.85
1942	FL42A	10.81
Line No.	(a)	(b)
1943	FL42A	9.22
1944	FL42A	6.18
1945	FL42A	10.73
1946	FL42A	9.61
1947	FL42B	2.05
1948	FL42B	4.20
1949	FL43	0.19
1950	FL43	1.57
1951	FL43	5.55
1952	FL43	5.05
1953	FL43	3.36
1954	FL43	1.68
1955	FL43	0.92
1956	FL43	3.29
1957	FL43	4.09
1958	FL43	1.46
1959	FL43	1.18
1960	FL43	0.69
1961	FL43	8.04
1962	FL43	2.71
1963	FL43	1.50
1964	FL43	3.79
1965	FL43	3.19
1966	FL43	2.86
1967	FL43	3.52

1968	FL43	2.66
1969	FL43	4.88
1970	FL43	1.86
1971	FL43	6.31
1972	FL44	0.79
Line No.	(a)	(b)
1973	FL44	4.24
1974	FL44	3.58
1975	FL44	4.17
1976	FL44	0.06
1977	FL44	2.88
1978	FL44	3.80
1979	FL44	1.71
1980	FL44	1.46
1981	FL44	4.60
1982	FL44	3.76
1983	FL44	3.08
1984	FL44	3.12
1985	FL44	3.85
1986	FL44	4.22
1987	FL44	4.97
1988	FL44	3.78
1989	FL44	3.31
1990	FL44	4.34
1991	FL44	3.00
1992	FL44	1.36
1993	FL44	6.36
1994	FL44	0.31
1995	FL44	5.06
1996	FL44	4.46
1997	FL44	7.99
1998	FL44	4.82
1999	FL44	5.26
2000	FL44	3.25
2001	FL44	4.72
2002	FL44	3.83
Line No.	(a)	(b)
2003	FL44	2.68
2004	FL44	1.90
2005	FL44	2.50
2006	FL44	4.75
2007	FL44	5.06
2008	FL44	8.95
2009	FL44	4.51
2010	FL44	6.02
2011	FL44	2.58
2012	FL44	4.99
2013	FL44	4.49
2014	FL44	5.51
2015	FL44	6.05
2016	FL44	0.58

2017	FL44	3.20
2018	FL44	5.18
2019	FL44	1.54
2020	FL44	6.33
2021	FL44	4.32
2022	FL44	9.29
2023	FL44	6.66
2024	FL44	6.77
2025	FL44	7.94
2026	FL44	6.40
2027	FL44	5.52
2028	FL44	4.09
2029	FL44	6.02
2030	FL44	6.70
2031	FL44	6.89
2032	FL44	8.55
Line No.	(a)	(b)
2033	FL44	6.55
2034	FL44	9.22
2035	FL44	6.14
2036	FL44	7.27
2037	FL44	3.37
2038	FL44	5.17
2039	FL44	3.83
2040	FL44	6.50
2041	FL44	7.29
2042	FL44	5.13
2043	FL44	6.88
2044	FL44	3.42
2045	FL44	7.74
2046	FL44	8.11
2047	FL44	7.38
2048	FL44	1.88
2049	FL44	5.05
2050	FL44	8.21
2051	FL44	9.31
2052	FL44	0.66
2053	FL44	6.42
2054	FL44	7.21
2055	FL44	5.70
2056	FL44	6.97
2057	FL44	5.65
2058	FL44	1.28
2059	FL44	7.51
2060	FL44	1.41
2061	FL44	7.79
2062	FL44	1.43
Line No.	(a)	(b)
2063	FL44	4.97
2064	FL44	6.99
2065	FL44	6.91

2066	FL44	8.86
2067	FL44	9.49
2068	FL44	8.00
2069	FL44	7.08
2070	FL44	1.49
2071	FL44	6.04
2072	FL44	7.59
2073	FL44	2.04
2074	FL44	7.00
2075	FL44	8.31
2076	FL44	9.29
2077	FL44	9.56
2078	FL44	7.69
2079	FL44	6.54
2080	FL44	6.46
2081	FL44	5.25
2082	FL44	6.98
2083	FL44	8.91
2084	FL44	7.64
2085	FL44	9.11
2086	FL44	8.40
2087	FL44	0.00
2088	FL44	8.67
2089	FL44	4.53
2090	FL44	9.62
2091	FL44	11.84
2092	FL44	5.81
Line No.	(a)	(b)
2093	FL44	6.00
2094	FL44	8.77
2095	FL44	12.71
2096	FL44	0.02
2097	FL44	6.92
2098	FL44	8.28
2099	FL44	0.08
2100	FL44	0.19
2101	FL45	0.69
2102	FL45	0.04
2103	FL45	0.21
2104	FL45	1.77
2105	FL45	0.56
2106	FL45	0.21
2107	FL45	0.20
2108	FL45	0.50
2109	FL45	0.39
2110	FL45	0.37
2111	FL45	0.06
2112	FL45	0.42
2113	FL45	0.11
2114	FL45	0.74
2115	FL45	0.76

2116	FL45	0.43
2117	FL45	0.89
2118	FL45	2.32
2119	FL45	0.60
2120	FL45	0.50
2121	FL45	0.45
2122	FL45	0.52
Line No.	(a)	(b)
2123	FL45	0.50
2124	FL45	0.49
2125	FL45	0.29
2126	FL45	0.35
2127	FL45	1.02
2128	FL45	0.47
2129	FL45	0.59
2130	FL45	0.78
2131	FL45	1.38
2132	FL45	0.81
2133	FL45	0.27
2134	FL45	1.18
2135	FL45	2.55
2136	FL45	0.71
2137	FL46	2.62
2138	FL46	6.13
2139	FL54	2.92
2140	FL54	2.17
2141	FL54	1.33
2142	FL54	2.58
2143	FL54	1.11
2144	FL54	0.66
2145	FL54	3.04
2146	FL54	0.05
2147	FL54	5.09
2148	FL54	0.83
2149	FL54	0.35
2150	FL54	2.12
2151	FL54	3.73
2152	FL54	5.78
Line No.	(a)	(b)
2153	FL54	2.31
2154	FL54	0.22
2155	FL54	5.07
2156	FL54	0.60
2157	FL54	4.95
2158	FL54	2.05
2159	FL54	2.63
2160	FL54	7.53
2161	FL54	1.25
2162	FL54	5.65
2163	FL54	3.97
2164	FL54	5.38

2165	FL54	1.28
2166	FL54	3.38
2167	FL54	0.54
2168	FL54	1.48
2169	FL54	1.15
2170	FL54	1.13
2171	FL54	7.63
2172	FL54	5.68
2173	FL54	3.36
2174	FL54	5.40
2175	FL54	2.34
2176	FL54	0.54
2177	FL54	6.76
2178	FL54	0.00
2179	FL54	3.08
2180	FL54	11.38
2181	FL54	0.63
2182	FL54	7.78
Line No.	(a)	(b)
2183	FL54	3.77
2184	FL54	4.98
2185	FL54	4.35
2186	FL54	3.45
2187	FL54	3.94
2188	FL54	4.56
2189	FL54	3.86
2190	FL54	8.88
2191	FL54	2.87
2192	FL54	5.13
2193	FL54	7.90
2194	FL54	3.72
2195	FL54	1.86
2196	FL54	5.08
2197	FL54	4.63
2198	FL54	4.41
2199	FL54	3.62
2200	FL54	10.16
2201	FL54	2.81
2202	FL54	3.48
2203	FL54	4.12
2204	FL54	3.62
2205	FL54	3.12
2206	FL54	1.23
2207	FL54	12.05
2208	FL54	3.80
2209	FL54	3.44
2210	FL54	3.27
2211	FL54	4.30
2212	FL54	4.27
Line No.	(a)	(b)
2213	FL54	4.06

2214	FL54	2.99
2215	FL54	4.69
2216	FL54	3.91
2217	FL54	4.04
2218	FL54	4.60
2219	FL54	5.42
2220	FL54	3.52
2221	FL54	0.11
2222	FL54	3.88
2223	FL54	6.52
2224	FL54	3.95
2225	FL54	1.84
2226	FL54	3.69
2227	FL54	4.60
2228	FL54	4.47
2229	FL54	4.58
2230	FL54	1.94
2231	FL54	5.58
2232	FL54	7.44
2233	FL54	5.08
2234	FL54	4.58
2235	FL54	4.65
2236	FL54	3.41
2237	FL54	5.50
2238	FL54	5.45
2239	FL54	8.10
2240	FL54	6.77
2241	FL54	6.36
2242	FL54	4.38
Line No.	(a)	(b)
2243	FL54	6.26
2244	FL54	6.28
2245	FL54	4.49
2246	FL54	7.33
2247	FL54	2.13
2248	FL54	8.20
2249	FL54	2.24
2250	FL54	6.80
2251	FL54	4.01
2252	FL54	1.10
2253	FL54	7.65
2254	FL54	4.12
2255	FL54	5.35
2256	FL54	6.10
2257	FL54	5.15
2258	FL54	7.51
2259	FL54	8.94
2260	FL54	7.94
2261	FL54	6.84
2262	FL54	4.96
2263	FL54	5.45

2264	FL54	5.59
2265	FL54	5.84
2266	FL54	7.20
2267	FL54	0.11
2268	FL54	7.34
2269	FL54	5.49
2270	FL54	9.39
2271	FL54	0.61
2272	FL55	1.25
Line No.	(a)	(b)
2273	FL55	4.28
2274	FL55	0.27
2275	FL55	2.70
2276	FL55	3.45
2277	FL55	3.80
2278	FL55	4.63
2279	FL55	4.81
2280	FL55	4.07
2281	FL55	3.46
2282	FL55	0.00
2283	FL55	0.74
2284	FL55	0.57
2285	FL57	0.55
2286	FL57	0.96
2287	FL57	0.69
2288	FL57	1.69
2289	FL57	0.83
2290	FL57	0.51
2291	FL57	1.49
2292	FL57	2.53
2293	FL57	2.03
2294	FL57	2.22
2295	FL57	2.31
2296	FL59	0.34
2297	FL59	1.87
2298	FL59	2.40
2299	FL59	1.85
2300	FL59	0.19
2301	FL59	1.23
2302	FL59	2.21
Line No.	(a)	(b)
2303	FL59	1.46
2304	FL59	3.03
2305	FL59	2.35
2306	FL59	1.09
2307	FL59	0.41
2308	FL59	2.22
2309	FL59	2.93
2310	FL59	0.41
2311	FL59	3.47
2312	FL59	0.07

2313	FL59	0.86
2314	FL59	0.67
2315	FL59	0.20
2316	FL59	5.63
2317	FL59	1.97
2318	FL59	0.79
2319	FL59	0.87
2320	FL59	0.80
2321	FL59	3.53
2322	FL59	3.86
2323	FL59	1.74
2324	FL59	0.21
2325	FL59	0.82
2326	FL59	1.44
2327	FL59	1.69
2328	FL59	3.56
2329	FL59	0.18
2330	FL59	1.30
2331	FL59	0.35
2332	FL59	1.83
Line No.	(a)	(b)
2333	FL59	1.12
2334	FL59	0.33
2335	FL59	2.09
2336	FL59	4.83
2337	FL59	2.87
2338	FL59	3.16
2339	FL59	0.11
2340	FL59	0.38
2341	FL59	2.84
2342	FL59	4.98
2343	FL59	5.04
2344	FL59	0.53
2345	FL59	2.07
2346	FL59	0.17
2347	FL59	1.58
2348	FL59	0.70
2349	FL59	1.85
2350	FL59	6.26
2351	FL59	1.86
2352	FL59	4.42
2353	FL59	1.08
2354	FL59	2.57
2355	FL59	5.63
2356	FL59	0.80
2357	FL59	0.79
2358	FL59	0.29
2359	FL59	1.12
2360	FL59	2.25
2361	FL59	9.37
2362	FL59	0.36

Line No.	(a)	(b)
2363	FL59	0.75
2364	FL59	2.28
2365	FL59	0.22
2366	FL59	6.82
2367	FL59	3.05
2368	FL59	0.29
2369	FL59	1.17
2370	FL59	0.31
2371	FL59	2.71
2372	FL59	1.86
2373	FL59	0.67
2374	FL59	0.13
2375	FL59	1.09
2376	FL59	2.29
2377	FL59	4.45
2378	FL59	0.85
2379	FL59	3.84
2380	FL59	3.30
2381	FL59	3.47
2382	FL59	3.27
2383	FL59	0.25
2384	FL59	3.02
2385	FL59	2.77
2386	FL59	0.21
2387	FL59	4.99
2388	FL59	4.39
2389	FL59	1.49
2390	FL59	4.52
2391	FL59	2.87
2392	FL59	3.64
Line No.	(a)	(b)
2393	FL59	0.45
2394	FL59	2.57
2395	FL59	1.82
2396	FL59	4.18
2397	FL59	0.81
2398	FL59	4.80
2399	FL59	8.76
2400	FL59	4.50
2401	FL59	8.15
2402	FL59	4.42
2403	FL59	7.78
2404	FL59	3.54
2405	FL59	4.66
2406	FL59	4.42
2407	FL59	6.67
2408	FL59	7.37
2409	FL59	5.03
2410	FL59	7.35
2411	FL59	5.24

2412	FL59	6.31
2413	FL59	4.80
2414	FL59	7.65
2415	FL59	4.98
2416	FL60	1.76
2417	FL60	2.25
2418	FL60	2.43
2419	FL60	3.33
2420	FL60	0.47
2421	FL60	3.25
2422	FL60	1.46
Line No.	(a)	(b)
2423	FL60	0.29
2424	FL60	1.62
2425	FL60	1.07
2426	FL60	2.06
2427	FL60	1.69
2428	FL60	3.01
2429	FL60	4.70
2430	FL60	3.57
2431	FL60	0.65
2432	FL60	3.00
2433	FL60	3.98
2434	FL60	3.32
2435	FL60	1.99
2436	FL60	5.67
2437	FL60	2.22
2438	FL60	4.83
2439	FL60	3.28
2440	FL60	3.21
2441	FL60	5.34
2442	FL60	2.61
2443	FL60	4.66
2444	FL60	5.08
2445	FL60	2.85
2446	FL60	3.24
2447	FL60	5.24
2448	FL60	1.64
2449	FL60	3.61
2450	FL60	1.09
2451	FL60	6.67
2452	FL60	2.87
Line No.	(a)	(b)
2453	FL60	4.10
2454	FL60	4.32
2455	FL60	6.81
2456	FL60	8.00
2457	FL60	0.66
2458	FL60	4.27
2459	FL60	5.73
2460	FL60	8.18

2461	FL60	5.82
2462	FL60	0.01
2463	FL64	0.63
2464	FL64	1.59
2465	FL64	2.31
2466	FL64	0.85
2467	FL64	1.97
2468	FL64	0.80
2469	FL64	2.47
2470	FL64	2.69
2471	FL64	0.63
2472	FL64	4.74
2473	FL64	1.54
2474	FL64	3.07
2475	FL64	2.50
2476	FL64	1.56
2477	FL64	3.95
2478	FL64	3.09
2479	FL64	3.40
2480	FL64	2.32
2481	FL64	3.16
2482	FL64	0.93
Line No.	(a)	(b)
2483	FL64	2.76
2484	FL64	3.06
2485	FL64	2.33
2486	FL64	1.16
2487	FL64	3.93
2488	FL64	4.55
2489	FL64	3.11
2490	FL64	2.18
2491	FL64	2.03
2492	FL64	3.78
2493	FL64	2.89
2494	FL64	2.57
2495	FL64	2.94
2496	FL64	2.04
2497	FL64	1.60
2498	FL64	2.68
2499	FL64	1.81
2500	FL64	1.87
2501	FL64	4.10
2502	FL64	4.39
2503	FL64	1.33
2504	FL64	3.30
2505	FL64	1.57
2506	FL64	1.45
2507	FL64	3.21
2508	FL64	2.49
2509	FL64	4.06
2510	FL64	4.79

2511	FL64	4.16
2512	FL64	1.84
Line No.	(a)	(b)
2513	FL64	1.52
2514	FL64	1.45
2515	FL64	4.39
2516	FL64	5.22
2517	FL64	3.20
2518	FL64	3.37
2519	FL64	3.66
2520	FL64	0.51
2521	FL64	3.97
2522	FL64	1.01
2523	FL64	3.98
2524	FL64	5.48
2525	FL64	4.40
2526	FL64	5.46
2527	FL64	1.55
2528	FL64	1.05
2529	FL64	4.21
2530	FL64	2.85
2531	FL64	1.57
2532	FL64	3.70
2533	FL64	3.08
2534	FL64	3.26
2535	FL64	1.81
2536	FL64	1.54
2537	FL64	4.63
2538	FL64	2.29
2539	FL64	1.94
2540	FL64	2.96
2541	FL64	4.30
2542	FL64	3.86
Line No.	(a)	(b)
2543	FL64	3.69
2544	FL64	3.29
2545	FL64	6.46
2546	FL64	1.81
2547	FL64	2.65
2548	FL64	3.71
2549	FL64	2.40
2550	FL64	3.59
2551	FL64	1.67
2552	FL64	5.49
2553	FL64	5.71
2554	FL64	5.44
2555	FL64	4.58
2556	FL64	4.56
2557	FL64	3.17
2558	FL64	8.49
2559	FL64	5.39

2560	FL64	1.03
2561	FL64	4.53
2562	FL64	3.52
2563	FL64	4.90
2564	FL64	5.81
2565	FL64	4.71
2566	FL64	2.83
2567	FL64	1.66
2568	FL64	1.04
2569	FL64	5.16
2570	FL64	5.21
2571	FL64	5.25
2572	FL64	4.06
Line No.	(a)	(b)
2573	FL64	3.05
2574	FL64	4.21
2575	FL64	3.96
2576	FL64	2.10
2577	FL64	3.18
2578	FL64	5.23
2579	FL64	1.85
2580	FL64	3.27
2581	FL64	7.23
2582	FL64	3.42
2583	FL64	0.08
2584	FL65	4.71
2585	FL65	0.86
2586	FL65	4.07
2587	FL65	1.14
2588	FL65	7.47
2589	FL65	6.02
2590	FL65	0.63
2591	FL67	3.56
2592	FL67	0.65
2593	FL67	0.26
2594	FL67	1.66
2595	FL68	0.21
2596	FL68	0.63
2597	FL68	0.74
2598	FL68	6.19
2599	FL68	4.51
2600	FL68	0.40
2601	FL68	2.69
2602	FL68	5.33
Line No.	(a)	(b)
2603	FL68	6.23
2604	FL68	2.70
2605	FL68	6.36
2606	FL68	5.65
2607	FL68	1.65
2608	FL68	6.38

2609	FL68	5.32
2610	FL68	1.98
2611	FL68	6.81
2612	FL68	5.92
2613	FL68	7.49
2614	FL68	5.69
2615	FL68	3.47
2616	FL68	6.27
2617	FL68	1.94
2618	FL68	6.28
2619	FL68	7.70
2620	FL68	8.21
2621	FL68	7.14
2622	FL68	3.36
2623	FL68	6.88
2624	FL68	3.07
2625	FL68	6.26
2626	FL68	1.62
2627	FL68	5.72
2628	FL68	8.98
2629	FL68	5.55
2630	FL68	8.73
2631	FL68	5.82
2632	FL68	6.54
Line No.	(a)	(b)
2633	FL68	3.03
2634	FL68	3.17
2635	FL68	6.08
2636	FL68	6.17
2637	FL68	5.14
2638	FL68	7.15
2639	FL68	6.50
2640	FL68	7.42
2641	FL68	7.44
2642	FL68	7.26
2643	FL68	7.98
2644	FL68	2.94
2645	FL68	6.19
2646	FL68	7.09
2647	FL68	6.07
2648	FL68	8.20
2649	FL68	9.55
2650	FL68	7.21
2651	FL68	2.91
2652	FL68	9.33
2653	FL68	9.28
2654	FL68	8.52
2655	FL68	6.90
2656	FL68	9.60
2657	FL68	4.80
2658	FL68	7.98

2659	FL68	6.65
2660	FL68	7.69
2661	FL68	7.53
2662	FL68	7.81
Line No.	(a)	(b)
2663	FL68	8.14
2664	FL68	3.30
2665	FL75	1.55
2666	FL75	0.55
2667	FL75	0.00
2668	FL75	3.40
2669	FL75	3.40
2670	FL75	1.19
2671	FL75	2.10
2672	FL75	3.68
2673	FL75	1.87
2674	FL75	2.13
2675	FL75	2.19
2676	FL75	1.82
2677	FL75	2.03
2678	FL75	4.16
2679	FL75	1.75
2680	FL75	1.28
2681	FL77	1.31
2682	FL77	0.00
2683	FL77	5.74
2684	FL77	0.06
2685	FL77	7.66
2686	FL77	10.38
2687	FL77	1.20
2688	FL77	5.95
2689	FL77	6.11
2690	FL77	5.60
2691	FL77	6.42
2692	FL77	7.44
Line No.	(a)	(b)
2693	FL77	6.54
2694	FL77	3.29
2695	FL77	5.43
2696	FL77	7.66
2697	FL77	6.70
2698	FL77	6.17
2699	FL77	8.38
2700	FL77	5.60
2701	FL77	6.66
2702	FL77	2.77
2703	FL77	7.72
2704	FL77	4.47
2705	FL77	5.93
2706	FL77	6.65
2707	FL77	6.62

2708	FL77	2.95
2709	FL77	3.49
2710	FL77	3.23
2711	FL77	5.37
2712	FL77	6.60
2713	FL77	7.55
2714	FL77	5.68
2715	FL77	0.25
2716	FL77	6.88
2717	FL77	1.91
2718	FL77	7.02
2719	FL77	8.61
2720	FL77	7.84
2721	FL77	4.60
2722	FL77	0.00
Line No.	(a)	(b)
2723	FL77	4.60
2724	FL77	6.53
2725	FL77	6.85
2726	FL77	6.06
2727	FL77	2.64
2728	FL77	2.62
2729	FL77	3.59
2730	FL77	7.15
2731	FL77	4.66
2732	FL77	9.60
2733	FL77	0.39
2734	FL77	5.66
2735	FL77	5.34
2736	FL77	2.79
2737	FL77	2.89
2738	FL77	7.75
2739	FL77	5.55
2740	FL77	3.20
2741	FL77	2.64
2742	FL77	7.17
2743	FL77	5.80
2744	FL77	6.09
2745	FL77	4.45
2746	FL77	3.20
2747	FL77	7.22
2748	FL77	3.56
2749	FL77	2.54
2750	FL77	1.99
2751	FL77	6.02
2752	FL77	5.36
Line No.	(a)	(b)
2753	FL77	5.08
2754	FL77	0.73
2755	FL77	3.93
2756	FL77	7.36

2757	FL77	5.25
2758	FL77	5.49
2759	FL77	3.51
2760	FL77	1.73
2761	FL77	6.93
2762	FL77	4.02
2763	FL77	4.38
2764	FL77	8.68
2765	FL77	3.46
2766	FL77	4.91
2767	FL77	8.63
2768	FL77	6.99
2769	FL77	1.90
2770	FL77	4.14
2771	FL77	2.34
2772	FL77	3.74
2773	FL77	3.31
2774	FL77	1.76
2775	FL77	0.00
2776	FL77	2.24
2777	FL77	7.98
2778	FL77	7.30
2779	FL77	4.29
2780	FL77	3.60
2781	FL77	1.62
2782	FL77	2.76
Line No.	(a)	(b)
2783	FL77	2.86
2784	FL77	4.16
2785	FL77	3.37
2786	FL77	5.33
2787	FL77	8.67
2788	FL77	3.67
2789	FL77	3.23
2790	FL77	5.04
2791	FL77	6.36
2792	FL77	7.04
2793	FL77	8.96
2794	FL77	3.38
2795	FL77	4.95
2796	FL77	6.65
2797	FL77	9.44
2798	FL77	12.15
2799	FL77	5.86
2800	FL77	3.28
2801	FL77	3.08
2802	FL77	8.60
2803	FL77	3.78
2804	FL77	7.17
2805	FL77	1.36
2806	FL77	0.00

2807	FL77	4.78
2808	FL77	1.28
2809	FL77	2.89
2810	FL77	4.95
2811	FL77	2.26
2812	FL77	0.00
Line No.	(a)	(b)
2813	FL77	0.00
2814	FL82	3.18
2815	FL82	2.35
2816	FL82	3.82
2817	FL82	3.25
2818	FL82	4.54
2819	FL82	5.07
2820	FL82	4.24
2821	FL82	5.62
2822	FL82	1.22
2823	FL82	4.40
2824	FL82	5.30
2825	FL82	3.79
2826	FL82	4.17
2827	FL82	4.28
2828	FL82	4.81
2829	FL82	1.62
2830	FL82	1.09
2831	FL82	1.73
2832	FL83	0.68
2833	FL83	0.42
2834	FL83	0.49
2835	FL83	2.30
2836	FL83	1.84
2837	FL83	0.65
2838	FL83	3.28
2839	FL83	4.48
2840	FL83	0.88
2841	FL83	1.94
2842	FL83	2.36
Line No.	(a)	(b)
2843	FL83	0.62
2844	FL83	4.29
2845	FL83	0.07
2846	FL83	1.51
2847	FL83	0.84
2848	FL83	4.76
2849	FL83	2.74
2850	FL83	1.99
2851	FL83	6.00
2852	FL83	1.49
2853	FL83	0.07
2854	FL83	0.19
2855	FL83	3.37

2856	FL83	0.13
2857	FL83	0.66
2858	FL83	7.95
2859	FL83	2.08
2860	FL83	2.65
2861	FL84	0.19
2862	FL84	0.32
2863	FL84	1.11
2864	FL84	0.31
2865	FL85A	0.06
2866	FL85A	2.20
2867	FL85A	1.33
2868	FL85A	1.37
2869	FL85A	2.01
2870	FL85A	3.28
2871	FL85A	0.90
2872	FL85A	1.74
Line No.	(a)	(b)
2873	FL85A	1.87
2874	FL85A	3.16
2875	FL85A	0.90
2876	FL85A	4.70
2877	FL85A	0.73
2878	FL85A	1.94
2879	FL85A	2.39
2880	FL85A	0.76
2881	FL85A	1.95
2882	FL85A	1.13
2883	FL85A	0.74
2884	FL85A	4.56
2885	FL85A	1.34
2886	FL85A	0.52
2887	FL85A	1.20
2888	FL85A	1.38
2889	FL85A	0.56
2890	FL85A	0.52
2891	FL85A	1.20
2892	FL85A	1.46
2893	FL85A	1.73
2894	FL85A	1.11
2895	FL85A	1.77
2896	FL85A	2.03
2897	FL85A	1.33
2898	FL85A	0.39
2899	FL86A	0.64
2900	FL86A	0.71
2901	FL86A	0.65
2902	FL86A	0.85
Line No.	(a)	(b)
2903	FL86A	0.32
2904	FL86A	0.10

2905	FL86A	0.17
2906	FL86A	0.51
2907	FL86A	2.78
2908	FL86A	0.11
2909	FL86A	1.83
2910	FL86A	1.51
2911	FL86A	0.75
2912	FL86A	2.28
2913	FL86A	2.86
2914	FL86A	4.58
2915	FL86A	1.66
2916	FL86A	6.10
2917	FL86A	3.07
2918	FL86A	0.99
2919	FL86A	0.85
2920	FL86A	2.37
2921	FL86A	1.96
2922	FL86A	1.18
2923	FL86A	6.37
2924	FL86A	4.35
2925	FL86A	2.89
2926	FL86A	2.85
2927	FL86A	0.58
2928	FL86A	3.11
2929	FL86A	3.45
2930	FL86A	0.61
2931	FL86A	2.32
2932	FL86A	2.72
Line No.	(a)	(b)
2933	FL86A	1.78
2934	FL86A	1.30
2935	FL86A	1.21
2936	FL86A	1.74
2937	FL86A	0.96
2938	FL86A	1.24
2939	FL86A	5.52
2940	FL86A	3.13
2941	FL86B	1.03
2942	FL86B	8.04
2943	FL86B	2.26
2944	FL86B	0.63
2945	FL86B	1.23
2946	FL86B	3.32
2947	FL86B	1.61
2948	FL86B	1.67
2949	FL86B	2.07
2950	FL86B	3.21
2951	FL89	0.37
2952	FL89	5.32
2953	FL89	4.35
2954	FL89	4.76

2955	FL89	6.89
2956	FL89	5.05
2957	FL89	2.17
2958	FL89	4.05
2959	FL89	7.62
2960	FL89	3.97
2961	FL89	3.80
2962	FL89	0.91
Line No.	(a)	(b)
2963	FL89	1.49
2964	FL89	4.79
2965	FL89	8.34
2966	FL89	2.82
2967	FL89	3.91
2968	FL89	4.64
2969	FL89	5.16
2970	FL89	3.17
2971	FL89	3.19
2972	FL89	2.22
2973	FL89	4.63
2974	FL89	3.77
2975	FL89	5.31
2976	FL89	7.67
2977	FL89	5.04
2978	FL89	4.23
2979	FL89	1.43
2980	FL89	4.62
2981	FL89	4.43
2982	FL89	6.60
2983	FL89	8.72
2984	FL89	3.78
2985	FL89	2.71
2986	FL89	2.15
2987	FL89	5.03
2988	FL89	3.66
2989	FL89	6.18
2990	FL89	5.34
2991	FL89	6.59
2992	FL89	4.75
Line No.	(a)	(b)
2993	FL89	3.31
2994	FL89	4.10
2995	FL89	0.32
2996	FL89	4.91
2997	FL89	2.66
2998	FL89	4.12
2999	FL89	7.66
3000	FL89	5.49
3001	FL89	5.08
3002	FL89	3.77
3003	FL89	3.60

3004	FL89	3.63
3005	FL89	6.96
3006	FL89	1.07
3007	FL89	7.18
3008	FL89	15.46
3009	FL89	6.37
3010	FL89	2.74
3011	FL89	4.99
3012	FL89	5.73
3013	FL89	4.45
3014	FL89	6.55
3015	FL89	3.42
3016	FL89	1.67
3017	FL89	3.69
3018	FL89	6.26
3019	FL89	6.70
3020	FL89	7.58
3021	FL89	7.74
3022	FL89	3.31
Line No.	(a)	(b)
3023	FL89	5.34
3024	FL89	4.51
3025	FL89	6.03
3026	FL89	2.14
3027	FL89	8.02
3028	FL89	1.42
3029	FL89	4.88
3030	FL89	4.23
3031	FL89	4.30
3032	FL89	6.85
3033	FL89	6.41
3034	FL89	2.82
3035	FL89	3.33
3036	FL89	3.67
3037	FL89	4.65
3038	FL89	4.52
3039	FL89	7.12
3040	FL89	4.37
3041	FL89	4.16
3042	FL89	4.34
3043	FL89	3.87
3044	FL89	6.09
3045	FL89	6.71
3046	FL89	4.44
3047	FL89	2.70
3048	FL89	3.74
3049	FL89	6.52
3050	FL89	4.94
3051	FL89	7.27
3052	FL89	5.44
Line No.	(a)	(b)

3053	FL89	5.42
3054	FL89	6.52
3055	FL89	6.32
3056	FL89	2.61
3057	FL89	5.31
3058	FL89	10.15
3059	FL89	1.40
3060	FL89	3.19
3061	FL89	4.94
3062	FL89	2.98
3063	FL89	7.14
3064	FL89	4.62
3065	FL89	6.83
3066	FL89	5.76
3067	FL89	6.02
3068	FL89	7.96
3069	FL89	2.25
3070	FL89	2.31
3071	FL89	5.36
3072	FL89	8.53
3073	FL89	4.02
3074	FL89	8.54
3075	FL89	6.73
3076	FL89	8.31
3077	FL89	5.04
3078	FL89	3.86
3079	FL89	4.74
3080	FL89	10.50
3081	FL89	4.75
3082	FL89	5.43
Line No.	(a)	(b)
3083	FL89	5.15
3084	FL89	6.11
3085	FL89	4.57
3086	FL89	7.73
3087	FL89	4.06
3088	FL89	4.17
3089	FL89	5.15
3090	FL89	5.09
3091	FL89	8.69
3092	FL89	5.42
3093	FL89	9.31
3094	FL89	0.79
3095	FL89	5.69
3096	FL89	5.50
3097	FL89	4.68
3098	FL89	10.19
3099	FL89	5.25
3100	FL89	5.73
3101	FL89	7.63
3102	FL89	6.00

3103	FL89	6.86
3104	FL89	9.29
3105	FL89	0.77
3106	FL89	1.35
3107	FL89	1.10
3108	FL90	0.62
3109	FL90	1.08
3110	FL90	0.32
3111	FL90	1.72
3112	FL90	3.42
Line No.	(a)	(b)
3113	FL90	2.19
3114	FL90	0.78
3115	FL90	1.69
3116	FL90	0.39
3117	FL90	2.62
3118	FL90	2.01
3119	FL90	2.15
3120	FL90	3.02
3121	FL90	0.92
3122	FL90	1.20
3123	FL90	0.20
3124	FL90	2.04
3125	FL90	2.68
3126	FL90	2.56
3127	FL90	1.67
3128	FL90	2.13
3129	FL90	1.82
3130	FL90	2.03
3131	FL90	0.00
3132	FL90	3.82
3133	FL90	6.70
3134	FL90	1.93
3135	FL90	2.46
3136	FL90	1.82
3137	FL90	2.65
3138	FL90	2.88
3139	FL90	0.83
3140	FL90	0.91
3141	FL90	0.65
3142	FL90	1.76
Line No.	(a)	(b)
3143	FL90	0.21
3144	FL90	2.07
3145	FL90	4.27
3146	FL90	1.65
3147	FL90	9.02
3148	FL90	0.89
3149	FL90	3.55
3150	FL90	2.35
3151	FL90	0.83

3152	FL90	4.24
3153	FL90	2.27
3154	FL90	2.33
3155	FL90	5.41
3156	FL90	5.42
3157	FL90	0.44
3158	FL90	2.36
3159	FL90	5.95
3160	FL90	3.08
3161	FL90	3.16
3162	FL90	0.62
3163	FL90	4.55
3164	FL90	2.55
3165	FL90	2.23
3166	FL90	3.34
3167	FL90	6.64
3168	FL90	2.33
3169	FL90	6.23
3170	FL90	2.79
3171	FL90	3.15
3172	FL90	3.62
Line No.	(a)	(b)
3173	FL90	1.97
3174	FL90	0.86
3175	FL90	2.14
3176	FL90	4.83
3177	FL90	2.72
3178	FL90	4.22
3179	FL90	0.43
3180	FL90	1.02
3181	FL90	2.37
3182	FL90	0.20
3183	FL90	4.03
3184	FL90	6.68
3185	FL90	5.08
3186	FL90	4.23
3187	FL90	0.77
3188	FL94	5.86
3189	FL94	4.98
3190	FL94	3.81
3191	FL94	8.12
3192	FL94	5.54
3193	FL94	5.57
3194	FL94	2.82
3195	FL94	4.19
3196	FL96	2.45
3197	FL96	0.00
3198	FL96	5.95
3199	FL96	5.99
3200	FL96	5.19
3201	FL96	0.00

3202	FL96	5.13
Line No.	(a)	(b)
3203	FL96	5.16
3204	FL96	5.38
3205	FL96	6.31
3206	FL96	2.76
3207	FL96	3.18
3208	FL96	6.26
3209	FL96	4.91
3210	FL96	6.11
3211	FL96	5.92
3212	FL96	5.06
3213	FL96	6.17
3214	FL96	5.51
3215	FL96	4.55
3216	FL96	7.74
3217	FL96	8.40
3218	FL96	7.22
3219	FL96	5.89
3220	FL96	6.02
3221	FL96	7.50
3222	FL96	8.06
3223	FL96	4.18
3224	FL96	6.44
3225	FL96	8.38
3226	FL96	5.35
3227	FL96	3.12
3228	FL96	5.78
3229	FL96	4.68
3230	FL96	6.10
3231	FL96	6.28
3232	FL96	6.29
Line No.	(a)	(b)
3233	FL96	4.13
3234	FL96	5.66
3235	FL96	6.23
3236	FL96	8.86
3237	FL96	3.87
3238	FL96	6.83
3239	FL96	3.64
3240	FL96	3.38
3241	FL96	9.10
3242	FL96	4.72
3243	FL96	8.58
3244	FL96	9.43
3245	FL96	3.41
3246	FL96	6.00
3247	FL96	6.35
3248	FL96	5.21
3249	FL96	5.19
3250	FL96	7.48

3251	FL96	6.57
3252	FL96	5.60
3253	FL96	5.62
3254	FL96	3.14
3255	FL96	4.60
3256	FL96	6.00
3257	FL96	4.51
3258	FL96	6.92
3259	FL96	5.21
3260	FL96	4.90
3261	FL96	5.32
3262	FL96	4.86
Line No.	(a)	(b)
3263	FL96	5.99
3264	FL96	6.82
3265	FL96	6.86
3266	FL96	4.49
3267	FL96	0.44
3268	FL96	5.25
3269	FL96	4.45
3270	FL96	4.56
3271	FL96	5.96
3272	FL96	9.07
3273	FL96	3.08
3274	FL96	7.83
3275	FL96	2.68
3276	FL96	6.34
3277	FL96	4.47
3278	FL96	6.14
3279	FL96	8.53
3280	FL96	10.82
3281	FL96	2.30
3282	FL96	5.69
3283	FL96	7.49
3284	FL96	6.49
3285	FL96	5.12
3286	FL96	5.46
3287	FL96	4.76
3288	FL96	0.92
3289	FL97	2.11
3290	FL98	0.23
3291	FL98	0.52
3292	FL98	2.54
Line No.	(a)	(b)
3293	FL98	0.47
3294	FL98	0.73

Source Data:
Utilimarc

(a)		(b)	(c)		(d)
Line No.	Vehicle Type	Total Tons CO2 Emissions from Fuel While Idle	Row Labels	Sum of Total Tons CO2 Emissions from Fuel While Idle	
1	FL06	0	FL06	16.81	
2	FL06	0.01	FL07	95.07	
3	FL06	0.01	FL22	297.07	
4	FL06	0.01	FL23	853.13	
5	FL06	0.08	FL26	104.74	
6	FL06	0.12	FL27A	50.13	
7	FL06	0.01	FL27B	323.43	
8	FL06	0.05	FL28	1530.26	
9	FL06	0.01	FL36	154.5	
10	FL06	0.08	FL37	202.29	
11	FL06	0	FL39	8.98	
12	FL06	0.06	FL41	171.9	
13	FL06	0.05	FL42A	156.73	
14	FL06	0.12	FL42B	8.53	
15	FL06	0.01	FL43	63.1	
16	FL06	0.09	FL44	548.5	
17	FL06	0	FL45	24.11	
18	FL06	0.01	FL46	2.72	
19	FL06	0.04	FL54	471.43	
20	FL06	0.15	FL55	26.87	
21	FL06	0.12	FL57	8.67	
22	FL06	0.05	FL59	290.27	
23	FL06	0.03	FL60	140.81	
24	FL06	0.03	FL64	280.37	
25	FL06	0.12	FL65	16.26	
26	FL06	0.06	FL67	4	
27	FL06	0.19	FL68	321.67	
28	FL06	0.14	FL75	18.07	
29	FL06	0.17	FL77	457	
30	FL06	0.23	FL82	30.38	
31	FL06	0.11	FL83	40.31	
32	FL06	0.01	FL84	1.51	
33	FL06	0.05	FL85A	50.47	
34	FL06	0.03	FL86A	77.34	
35	FL06	0.09	FL86B	22.72	
36	FL06	0.08	FL89	528.26	
37	FL06	0.04	FL90	167.74	
38	FL06	0.1	FL94	28.31	
39	FL06	0.02	FL96	357.76	
40	FL06	0.05	FL97	1.25	
41	FL06	0.01	FL98	4.07	
42	FL06	0.06	Grand Total	7957.54	
43	FL06	0.15	Through September 2025		
44	FL06	0.11			
45	FL06	0.01			
46	FL06	0.24			
47	FL06	0.04			
48	FL06	0.03			
Line No.	(a)	(b)			
49	FL06	0.18			
50	FL06	0.24			
51	FL06	0.13			
52	FL06	0.21			
53	FL06	0.28			
54	FL06	0.22			
55	FL06	0.25			
56	FL06	0.04			
57	FL06	0.12			
58	FL06	0.15			
59	FL06	0.06			
60	FL06	0.34			
61	FL06	0.3			
62	FL06	0.05			
63	FL06	1.02			
64	FL06	0.06			
65	FL06	0.3			
66	FL06	1.38			
67	FL06	0.54			

Through September 2025

68	FL06	0.12
69	FL06	0.4
70	FL06	0.56
71	FL06	0.25
72	FL06	0.29
73	FL06	1.06
74	FL06	0.07
75	FL06	0.68
76	FL06	0.35
Line No.	(a)	(b)
77	FL06	0.35
78	FL06	0.69
79	FL06	0.1
80	FL06	0.73
81	FL06	2.01
82	FL07	0
83	FL07	0.03
84	FL07	0.04
85	FL07	0.16
86	FL07	0.09
87	FL07	0.02
88	FL07	0.05
89	FL07	0.14
90	FL07	0.13
91	FL07	0.51
92	FL07	0
93	FL07	0.16
94	FL07	0.09
95	FL07	0.06
96	FL07	0.29
97	FL07	0.81
98	FL07	0.14
99	FL07	0.07
100	FL07	0.03
101	FL07	0.01
102	FL07	0.82
103	FL07	0.48
104	FL07	0.04
Line No.	(a)	(b)
105	FL07	0.15
106	FL07	0.14
107	FL07	0.63
108	FL07	0.12
109	FL07	0.11
110	FL07	0.05
111	FL07	0.06
112	FL07	0.15
113	FL07	0
114	FL07	0.21
115	FL07	0.18
116	FL07	0.53
117	FL07	0.23
118	FL07	0.09
119	FL07	0.08
120	FL07	0.05
121	FL07	0.46
122	FL07	0.04
123	FL07	0
124	FL07	0
125	FL07	0
126	FL07	0.19
127	FL07	0.2
128	FL07	0.04
129	FL07	0.23
130	FL07	0.07
131	FL07	0.39
132	FL07	0.33
Line No.	(a)	(b)
133	FL07	0.11
134	FL07	0.01
135	FL07	1.4
136	FL07	0.07
137	FL07	0
138	FL07	0.41
139	FL07	0.07
140	FL07	0.2
141	FL07	0.43
142	FL07	0.17
143	FL07	0.13

144	FL07	0.18
145	FL07	0.04
146	FL07	0.23
147	FL07	0.3
148	FL07	0.22
149	FL07	0.16
150	FL07	0
151	FL07	0.25
152	FL07	0.12
153	FL07	0.37
154	FL07	0.11
155	FL07	0.13
156	FL07	0
157	FL07	0.39
158	FL07	0.33
159	FL07	0.44
160	FL07	0.54
Line No.	(a)	(b)
161	FL07	0.32
162	FL07	0.37
163	FL07	0.23
164	FL07	0.37
165	FL07	0.15
166	FL07	1.22
167	FL07	0.19
168	FL07	0
169	FL07	0.28
170	FL07	0.77
171	FL07	0
172	FL07	0.58
173	FL07	0.53
174	FL07	0.09
175	FL07	0.27
176	FL07	0.51
177	FL07	0.13
178	FL07	0.92
179	FL07	0.03
180	FL07	0.61
181	FL07	0
182	FL07	0.52
183	FL07	0.07
184	FL07	0.32
185	FL07	0.39
186	FL07	0.22
187	FL07	0.73
188	FL07	0.39
Line No.	(a)	(b)
189	FL07	0.39
190	FL07	0.64
191	FL07	0.2
192	FL07	0.61
193	FL07	0.6
194	FL07	0.44
195	FL07	0.09
196	FL07	0.39
197	FL07	0.88
198	FL07	0
199	FL07	0.19
200	FL07	0.25
201	FL07	0.24
202	FL07	0.73
203	FL07	0.11
204	FL07	0.84
205	FL07	0.07
206	FL07	0.74
207	FL07	0.42
208	FL07	0.5
209	FL07	0.21
210	FL07	0.61
211	FL07	0.09
212	FL07	0.65
213	FL07	0.65
214	FL07	0.39
215	FL07	0.53
216	FL07	0.19
Line No.	(a)	(b)
217	FL07	1.14
218	FL07	1.57
219	FL07	0.57

220	FL07	0.88
221	FL07	0.37
222	FL07	0.6
223	FL07	0.8
224	FL07	0.24
225	FL07	0.34
226	FL07	0.33
227	FL07	0.89
228	FL07	0.22
229	FL07	0
230	FL07	0.54
231	FL07	0.58
232	FL07	1.72
233	FL07	0.46
234	FL07	0.17
235	FL07	0.27
236	FL07	0.64
237	FL07	0.18
238	FL07	0.71
239	FL07	0.34
240	FL07	0.67
241	FL07	0
242	FL07	0.5
243	FL07	0.8
244	FL07	0.05
Line No.	(a)	(b)
245	FL07	0.64
246	FL07	0.58
247	FL07	0
248	FL07	0.91
249	FL07	0.7
250	FL07	0.53
251	FL07	1.13
252	FL07	0.16
253	FL07	0.76
254	FL07	1.19
255	FL07	0.18
256	FL07	1.34
257	FL07	0
258	FL07	0.18
259	FL07	1.02
260	FL07	0.15
261	FL07	0.61
262	FL07	0.6
263	FL07	0.44
264	FL07	0.86
265	FL07	0
266	FL07	0.45
267	FL07	0
268	FL07	0.44
269	FL07	0.06
270	FL07	0.25
271	FL07	0
272	FL07	0.54
Line No.	(a)	(b)
273	FL07	0.2
274	FL07	0.77
275	FL07	0.02
276	FL07	0
277	FL07	0.65
278	FL07	0
279	FL07	1.24
280	FL07	0.32
281	FL07	0.65
282	FL07	1.61
283	FL07	0
284	FL07	0.91
285	FL07	0
286	FL07	0.89
287	FL07	1.28
288	FL07	0.66
289	FL07	0.42
290	FL07	0.71
291	FL07	2.23
292	FL07	0.49
293	FL07	0.94
294	FL07	0.81
295	FL07	0.7
296	FL07	0.51

297	FL07	0.42
298	FL07	1.04
299	FL07	1.1
300	FL07	1.07
Line No.	(a)	(b)
301	FL07	1.11
302	FL07	1.55
303	FL07	2.14
304	FL07	1.41
305	FL07	1.1
306	FL07	1.25
307	FL22	0
308	FL22	0
309	FL22	0.01
310	FL22	0.56
311	FL22	0.33
312	FL22	0.12
313	FL22	0.11
314	FL22	0.05
315	FL22	0.02
316	FL22	0.23
317	FL22	0.03
318	FL22	0.04
319	FL22	0
320	FL22	0.28
321	FL22	0.03
322	FL22	0.23
323	FL22	0.08
324	FL22	0.01
325	FL22	0.04
326	FL22	0.38
327	FL22	0.07
328	FL22	0.06
Line No.	(a)	(b)
329	FL22	0.21
330	FL22	0.55
331	FL22	0.5
332	FL22	0.13
333	FL22	0.2
334	FL22	0.13
335	FL22	0.19
336	FL22	0.75
337	FL22	0.62
338	FL22	0.36
339	FL22	0.08
340	FL22	0.3
341	FL22	0.24
342	FL22	0.81
343	FL22	0.39
344	FL22	0.06
345	FL22	0.15
346	FL22	0.17
347	FL22	0.34
348	FL22	0.24
349	FL22	0.46
350	FL22	0.97
351	FL22	0.2
352	FL22	0.1
353	FL22	0.01
354	FL22	0.3
355	FL22	0.48
356	FL22	0.2
Line No.	(a)	(b)
357	FL22	0.05
358	FL22	0.39
359	FL22	0.23
360	FL22	0.09
361	FL22	0.36
362	FL22	0.16
363	FL22	0.16
364	FL22	0.08
365	FL22	0.23
366	FL22	0.6
367	FL22	0.39
368	FL22	0.25
369	FL22	0.85
370	FL22	0.13
371	FL22	0.59
372	FL22	0.79

373	FL22	0.01
374	FL22	0.52
375	FL22	0.12
376	FL22	0.61
377	FL22	0.24
378	FL22	0.41
379	FL22	0.24
380	FL22	0.12
381	FL22	0.32
382	FL22	0.43
383	FL22	0.53
384	FL22	0.35
Line No.	(a)	(b)
385	FL22	0.36
386	FL22	0.18
387	FL22	0.39
388	FL22	0.17
389	FL22	1.39
390	FL22	0.44
391	FL22	0.87
392	FL22	0.69
393	FL22	0.47
394	FL22	0.99
395	FL22	0.35
396	FL22	0.5
397	FL22	0.85
398	FL22	0.23
399	FL22	0.87
400	FL22	0.06
401	FL22	0.56
402	FL22	0.1
403	FL22	0.68
404	FL22	0.95
405	FL22	0.36
406	FL22	0.4
407	FL22	0.36
408	FL22	0.61
409	FL22	0.43
410	FL22	0.08
411	FL22	0.14
412	FL22	0.48
Line No.	(a)	(b)
413	FL22	0.65
414	FL22	0.38
415	FL22	0.42
416	FL22	0.52
417	FL22	0.66
418	FL22	0.42
419	FL22	0.64
420	FL22	0.02
421	FL22	0.7
422	FL22	0.51
423	FL22	0.44
424	FL22	0.44
425	FL22	0.43
426	FL22	0.73
427	FL22	0.63
428	FL22	0.49
429	FL22	0.41
430	FL22	0.66
431	FL22	0.2
432	FL22	0.88
433	FL22	0.04
434	FL22	0.58
435	FL22	0.52
436	FL22	0.52
437	FL22	0.93
438	FL22	0.4
439	FL22	0.2
440	FL22	0.41
Line No.	(a)	(b)
441	FL22	0.36
442	FL22	0.26
443	FL22	0.23
444	FL22	0.31
445	FL22	0.31
446	FL22	0.39
447	FL22	0.56
448	FL22	1.08

449	FL22	0.15
450	FL22	1.11
451	FL22	0.41
452	FL22	0.03
453	FL22	0.14
454	FL22	0.59
455	FL22	0.43
456	FL22	1.32
457	FL22	0.62
458	FL22	0.15
459	FL22	0.4
460	FL22	0.13
461	FL22	0.26
462	FL22	0.39
463	FL22	0.55
464	FL22	0.52
465	FL22	1.33
466	FL22	0.8
467	FL22	0.25
468	FL22	0.24
Line No.	(a)	(b)
469	FL22	0.6
470	FL22	0.24
471	FL22	0.42
472	FL22	0.39
473	FL22	0.34
474	FL22	0.68
475	FL22	0.4
476	FL22	0.22
477	FL22	0.15
478	FL22	0.68
479	FL22	0.39
480	FL22	0.17
481	FL22	0.32
482	FL22	0.3
483	FL22	0.91
484	FL22	0.72
485	FL22	0.64
486	FL22	0.75
487	FL22	0.21
488	FL22	0.65
489	FL22	0.36
490	FL22	0.48
491	FL22	0.46
492	FL22	0.47
493	FL22	0.69
494	FL22	0.25
495	FL22	0.77
496	FL22	0.27
Line No.	(a)	(b)
497	FL22	0.27
498	FL22	0.8
499	FL22	0.7
500	FL22	0.18
501	FL22	0.25
502	FL22	0.67
503	FL22	0.23
504	FL22	0.36
505	FL22	0.15
506	FL22	0.52
507	FL22	1.09
508	FL22	1.67
509	FL22	0.18
510	FL22	0.94
511	FL22	0.59
512	FL22	0.74
513	FL22	0.51
514	FL22	0.6
515	FL22	0.25
516	FL22	0.75
517	FL22	0.47
518	FL22	0.46
519	FL22	0.92
520	FL22	0.49
521	FL22	0.36
522	FL22	0.49
523	FL22	0.55
524	FL22	0.24
Line No.	(a)	(b)

525	FL22	0.37
526	FL22	0.18
527	FL22	0.1
528	FL22	0.9
529	FL22	0.09
530	FL22	0.76
531	FL22	1.3
532	FL22	2.12
533	FL22	0.35
534	FL22	2.65
535	FL22	0.34
536	FL22	0.71
537	FL22	0.21
538	FL22	0.28
539	FL22	0.5
540	FL22	1.13
541	FL22	0.49
542	FL22	0.51
543	FL22	0.55
544	FL22	0.96
545	FL22	0.78
546	FL22	0.84
547	FL22	0.37
548	FL22	0.84
549	FL22	0.86
550	FL22	0.47
551	FL22	0.54
552	FL22	0.58
Line No.	(a)	(b)
553	FL22	0.79
554	FL22	0.79
555	FL22	0.16
556	FL22	0.19
557	FL22	0.69
558	FL22	0.85
559	FL22	0.41
560	FL22	0.31
561	FL22	0.84
562	FL22	0.52
563	FL22	0.21
564	FL22	0.82
565	FL22	0.24
566	FL22	0.27
567	FL22	0.37
568	FL22	1.2
569	FL22	0.38
570	FL22	0.64
571	FL22	0.66
572	FL22	0.97
573	FL22	0.42
574	FL22	0.46
575	FL22	0.85
576	FL22	0.76
577	FL22	0.25
578	FL22	0.33
579	FL22	1.33
580	FL22	0.63
Line No.	(a)	(b)
581	FL22	0.49
582	FL22	0.2
583	FL22	0.16
584	FL22	0.29
585	FL22	0.12
586	FL22	0.59
587	FL22	0.59
588	FL22	0.2
589	FL22	0.38
590	FL22	0.24
591	FL22	0.22
592	FL22	0.62
593	FL22	1.02
594	FL22	0.51
595	FL22	0.26
596	FL22	0.02
597	FL22	0.7
598	FL22	0.56
599	FL22	0.82
600	FL22	0.23
601	FL22	0.35

602	FL22	1.79
603	FL22	1.87
604	FL22	1.39
605	FL22	0.54
606	FL22	0.62
607	FL22	0.5
608	FL22	0.4
Line No.	(a)	(b)
609	FL22	0.43
610	FL22	1.17
611	FL22	0.5
612	FL22	0.4
613	FL22	0.64
614	FL22	0.31
615	FL22	0.17
616	FL22	0.65
617	FL22	0.37
618	FL22	0.39
619	FL22	1.97
620	FL22	0.23
621	FL22	0.93
622	FL22	0.88
623	FL22	1.17
624	FL22	0.19
625	FL22	0.68
626	FL22	0.49
627	FL22	1
628	FL22	1
629	FL22	0.28
630	FL22	0.34
631	FL22	0.15
632	FL22	0.95
633	FL22	0.79
634	FL22	0.5
635	FL22	0.6
636	FL22	0.33
Line No.	(a)	(b)
637	FL22	2.12
638	FL22	0.11
639	FL22	0.16
640	FL22	0.8
641	FL22	0.17
642	FL22	0.45
643	FL22	0.75
644	FL22	0.15
645	FL22	1.42
646	FL22	0.22
647	FL22	0.25
648	FL22	0.35
649	FL22	0.19
650	FL22	0.15
651	FL22	0.64
652	FL22	0.05
653	FL22	0.23
654	FL22	1.64
655	FL22	0.11
656	FL22	0.25
657	FL22	0.26
658	FL22	0.61
659	FL22	0.77
660	FL22	0.56
661	FL22	0.6
662	FL22	0.09
663	FL22	0.42
664	FL22	0.13
Line No.	(a)	(b)
665	FL22	0.28
666	FL22	0.29
667	FL22	0.11
668	FL22	0.15
669	FL22	0.02
670	FL22	1.26
671	FL22	0.31
672	FL22	1.02
673	FL22	0.5
674	FL22	0.6
675	FL22	0.57
676	FL22	0.32
677	FL22	0.96

678	FL22	1.03
679	FL22	0.64
680	FL22	0.33
681	FL22	0.28
682	FL22	0.47
683	FL22	0.12
684	FL22	0.26
685	FL22	1.31
686	FL22	0.11
687	FL22	0.34
688	FL22	0.18
689	FL22	0.46
690	FL22	0.68
691	FL22	0
692	FL22	0.57
Line No.	(a)	(b)
693	FL22	0.93
694	FL22	0.5
695	FL22	1.22
696	FL22	0.33
697	FL22	0.64
698	FL22	1.2
699	FL22	1.1
700	FL22	2.42
701	FL22	1.17
702	FL22	0.68
703	FL22	1.32
704	FL22	0.79
705	FL22	1.48
706	FL22	0.93
707	FL22	1.86
708	FL22	0.63
709	FL22	0.57
710	FL22	0.93
711	FL22	0.75
712	FL22	0.75
713	FL22	3.06
714	FL22	0.3
715	FL22	0.27
716	FL22	1.64
717	FL22	0.31
718	FL22	0.41
719	FL22	1.63
720	FL22	2.71
Line No.	(a)	(b)
721	FL22	0.04
722	FL22	1.52
723	FL22	0.26
724	FL22	1.5
725	FL22	2.02
726	FL22	0.06
727	FL22	0.07
728	FL22	0.86
729	FL22	0.59
730	FL22	2.68
731	FL22	0.31
732	FL22	0.96
733	FL22	0.13
734	FL22	2.81
735	FL22	0.3
736	FL22	0.02
737	FL22	0.84
738	FL22	2.26
739	FL22	1.11
740	FL22	1.99
741	FL22	0.19
742	FL22	0.32
743	FL22	2.94
744	FL22	1.56
745	FL22	0.14
746	FL22	1.04
747	FL22	0.89
748	FL22	0.26
Line No.	(a)	(b)
749	FL22	2.16
750	FL22	0.19
751	FL22	0.04
752	FL22	1.05
753	FL22	0.89

754	FL22	1.69
755	FL22	0.1
756	FL22	0.71
757	FL22	1.83
758	FL22	1.79
759	FL22	0.01
760	FL22	2.29
761	FL22	3.72
762	FL22	0.35
763	FL22	2.96
764	FL22	1.25
765	FL22	3.18
766	FL22	3.28
767	FL22	3.8
768	FL22	6.38
769	FL22	2.99
770	FL22	1.89
771	FL22	1.23
772	FL22	3.36
773	FL22	5.06
774	FL23	0
775	FL23	0.46
776	FL23	0.03
Line No.	(a)	(b)
777	FL23	0.79
778	FL23	0.11
779	FL23	0.16
780	FL23	0.14
781	FL23	0.01
782	FL23	0.71
783	FL23	0.23
784	FL23	0.08
785	FL23	0.02
786	FL23	0.17
787	FL23	0.1
788	FL23	0.01
789	FL23	0.02
790	FL23	0.13
791	FL23	0.42
792	FL23	0.37
793	FL23	0.9
794	FL23	0.41
795	FL23	0.11
796	FL23	0.15
797	FL23	0.04
798	FL23	0.12
799	FL23	0.01
800	FL23	0.18
801	FL23	0.14
802	FL23	0.81
803	FL23	0.27
804	FL23	0.39
Line No.	(a)	(b)
805	FL23	0.68
806	FL23	0.01
807	FL23	0.48
808	FL23	1.69
809	FL23	0.17
810	FL23	0.97
811	FL23	0.13
812	FL23	1.64
813	FL23	0.29
814	FL23	0.04
815	FL23	0.03
816	FL23	0.32
817	FL23	0.31
818	FL23	1.26
819	FL23	1.42
820	FL23	1.33
821	FL23	0.41
822	FL23	1.3
823	FL23	0.22
824	FL23	1.23
825	FL23	0.56
826	FL23	0.91
827	FL23	1.55
828	FL23	1.21
829	FL23	0.45
830	FL23	1.77

831	FL23	0.68
832	FL23	1.46
Line No.	(a)	(b)
833	FL23	2.07
834	FL23	0.63
835	FL23	0.29
836	FL23	0.67
837	FL23	0.47
838	FL23	0.22
839	FL23	1.14
840	FL23	0.01
841	FL23	0.89
842	FL23	0.05
843	FL23	0.09
844	FL23	1.01
845	FL23	0.58
846	FL23	1.23
847	FL23	0.66
848	FL23	1.64
849	FL23	1.21
850	FL23	0.48
851	FL23	0.27
852	FL23	2.26
853	FL23	0.84
854	FL23	0.92
855	FL23	2.3
856	FL23	0.08
857	FL23	1.5
858	FL23	1.95
859	FL23	0.7
860	FL23	2.1
Line No.	(a)	(b)
861	FL23	0.46
862	FL23	1.11
863	FL23	1.29
864	FL23	1.07
865	FL23	0.43
866	FL23	1.62
867	FL23	0.6
868	FL23	1.57
869	FL23	0.18
870	FL23	3.06
871	FL23	1.44
872	FL23	0.03
873	FL23	2.41
874	FL23	0.55
875	FL23	1.84
876	FL23	1
877	FL23	0.05
878	FL23	2.02
879	FL23	2.16
880	FL23	0.26
881	FL23	1.55
882	FL23	0.31
883	FL23	1.88
884	FL23	0.23
885	FL23	1.46
886	FL23	1.7
887	FL23	2.33
888	FL23	2.14
Line No.	(a)	(b)
889	FL23	0.84
890	FL23	1.85
891	FL23	2.84
892	FL23	1.16
893	FL23	2.2
894	FL23	1.74
895	FL23	0.6
896	FL23	0.19
897	FL23	1.67
898	FL23	0.2
899	FL23	2.74
900	FL23	0.01
901	FL23	3.57
902	FL23	4.21
903	FL23	1.14
904	FL23	0.29
905	FL23	0.07
906	FL23	1.27

907	FL23	1.72
908	FL23	2.68
909	FL23	2.82
910	FL23	2.49
911	FL23	0.82
912	FL23	0.45
913	FL23	5.58
914	FL23	1.77
915	FL23	2.32
916	FL23	2.79
Line No.	(a)	(b)
917	FL23	2.71
918	FL23	0.23
919	FL23	2.36
920	FL23	1.9
921	FL23	1.28
922	FL23	2.66
923	FL23	0.78
924	FL23	0.6
925	FL23	2.36
926	FL23	0.76
927	FL23	0.03
928	FL23	2.62
929	FL23	1.8
930	FL23	0.64
931	FL23	3.34
932	FL23	2.41
933	FL23	3.81
934	FL23	1.93
935	FL23	1.26
936	FL23	2.33
937	FL23	2.83
938	FL23	0.92
939	FL23	0.38
940	FL23	1.15
941	FL23	0.06
942	FL23	2.66
943	FL23	1.85
944	FL23	0.16
Line No.	(a)	(b)
945	FL23	3.63
946	FL23	1.71
947	FL23	1.08
948	FL23	1.63
949	FL23	0.17
950	FL23	2.03
951	FL23	0.78
952	FL23	0.13
953	FL23	2.88
954	FL23	0.39
955	FL23	1.17
956	FL23	1.19
957	FL23	0.58
958	FL23	2.37
959	FL23	1.43
960	FL23	2.26
961	FL23	1.14
962	FL23	1.73
963	FL23	1.3
964	FL23	1.48
965	FL23	2.34
966	FL23	2.04
967	FL23	2.09
968	FL23	0.8
969	FL23	0.65
970	FL23	0.33
971	FL23	2.62
972	FL23	0.54
Line No.	(a)	(b)
973	FL23	2.81
974	FL23	2.18
975	FL23	3.37
976	FL23	0.78
977	FL23	2.09
978	FL23	1.85
979	FL23	2.31
980	FL23	1.42
981	FL23	0.25
982	FL23	1.29

983	FL23	4.33
984	FL23	2.27
985	FL23	2.9
986	FL23	1.16
987	FL23	1.65
988	FL23	0.98
989	FL23	0.34
990	FL23	2.37
991	FL23	0.68
992	FL23	1.26
993	FL23	1.24
994	FL23	2.68
995	FL23	0.49
996	FL23	1.26
997	FL23	2.97
998	FL23	0.42
999	FL23	2.16
1000	FL23	1.29
Line No.	(a)	(b)
1001	FL23	2.21
1002	FL23	2.03
1003	FL23	1.11
1004	FL23	2.11
1005	FL23	0.4
1006	FL23	2.26
1007	FL23	2.49
1008	FL23	1.13
1009	FL23	1.16
1010	FL23	6.65
1011	FL23	2.28
1012	FL23	1.76
1013	FL23	2.16
1014	FL23	1.98
1015	FL23	1.51
1016	FL23	1.47
1017	FL23	0.5
1018	FL23	3.01
1019	FL23	1.73
1020	FL23	2.17
1021	FL23	0.44
1022	FL23	0.15
1023	FL23	1.92
1024	FL23	2.9
1025	FL23	1.33
1026	FL23	1.85
1027	FL23	1.95
1028	FL23	4.02
Line No.	(a)	(b)
1029	FL23	2.03
1030	FL23	3.13
1031	FL23	3.22
1032	FL23	1.54
1033	FL23	2.67
1034	FL23	2.24
1035	FL23	1.18
1036	FL23	4.46
1037	FL23	3.92
1038	FL23	2.73
1039	FL23	2.56
1040	FL23	2.66
1041	FL23	1.01
1042	FL23	2.52
1043	FL23	2.38
1044	FL23	0.75
1045	FL23	4.14
1046	FL23	4.22
1047	FL23	2.95
1048	FL23	0.34
1049	FL23	2.02
1050	FL23	2.92
1051	FL23	1.77
1052	FL23	1.81
1053	FL23	2.06
1054	FL23	2.53
1055	FL23	0.49
1056	FL23	1.06
Line No.	(a)	(b)
1057	FL23	4.91
1058	FL23	0.82

1059	FL23	2.83
1060	FL23	1.91
1061	FL23	1.11
1062	FL23	2.96
1063	FL23	0.33
1064	FL23	0.6
1065	FL23	0.98
1066	FL23	0.47
1067	FL23	0.41
1068	FL23	2.49
1069	FL23	1.06
1070	FL23	1.1
1071	FL23	1.82
1072	FL23	0.11
1073	FL23	1.65
1074	FL23	0
1075	FL23	1.91
1076	FL23	2.72
1077	FL23	3.06
1078	FL23	0.47
1079	FL23	3.53
1080	FL23	2.19
1081	FL23	1.09
1082	FL23	1.36
1083	FL23	0
1084	FL23	2.59
Line No.	(a)	(b)
1085	FL23	2.26
1086	FL23	0.09
1087	FL23	1.21
1088	FL23	0.47
1089	FL23	1.29
1090	FL23	2.19
1091	FL23	0.71
1092	FL23	1.97
1093	FL23	1.96
1094	FL23	0.01
1095	FL23	1.19
1096	FL23	2.59
1097	FL23	3.55
1098	FL23	2.44
1099	FL23	1.91
1100	FL23	4.21
1101	FL23	0.06
1102	FL23	5.7
1103	FL23	2.68
1104	FL23	0.19
1105	FL23	0.63
1106	FL23	1.8
1107	FL23	3.93
1108	FL23	5.25
1109	FL23	3.22
1110	FL23	2.48
1111	FL23	0.62
1112	FL23	1.67
Line No.	(a)	(b)
1113	FL23	0.19
1114	FL23	4.94
1115	FL23	4.39
1116	FL23	1.3
1117	FL23	6.19
1118	FL23	1.53
1119	FL23	5.33
1120	FL23	1.71
1121	FL23	0.77
1122	FL23	1.06
1123	FL23	0.38
1124	FL23	2.7
1125	FL23	2.25
1126	FL23	0.08
1127	FL23	1.37
1128	FL23	2.76
1129	FL23	5.44
1130	FL23	1.42
1131	FL23	3.07
1132	FL23	0.02
1133	FL23	2.69
1134	FL23	2.88
1135	FL23	4.64

1136	FL23	2.08
1137	FL23	5.1
1138	FL23	0
1139	FL23	1.49
1140	FL23	3.77
Line No.	(a)	(b)
1141	FL23	5.79
1142	FL23	1.29
1143	FL23	3.98
1144	FL23	3.58
1145	FL23	0.99
1146	FL23	3.48
1147	FL23	3.27
1148	FL23	5.54
1149	FL23	5.21
1150	FL23	2.97
1151	FL23	1.87
1152	FL23	0.41
1153	FL23	3.67
1154	FL23	4.95
1155	FL23	1.84
1156	FL23	2.23
1157	FL23	1.02
1158	FL23	4.28
1159	FL23	4.08
1160	FL23	1.95
1161	FL23	1.45
1162	FL23	3.08
1163	FL23	4.6
1164	FL23	0.42
1165	FL23	0.01
1166	FL23	2.66
1167	FL23	5.49
1168	FL23	1.85
Line No.	(a)	(b)
1169	FL23	3.15
1170	FL23	0.64
1171	FL23	5.12
1172	FL23	2.85
1173	FL23	1.31
1174	FL23	3.32
1175	FL23	6
1176	FL23	2.23
1177	FL23	5.87
1178	FL23	2.65
1179	FL23	1.48
1180	FL23	1.9
1181	FL23	1.77
1182	FL23	3.18
1183	FL23	7.45
1184	FL23	0.88
1185	FL23	4.97
1186	FL23	2.65
1187	FL23	2.66
1188	FL23	2.26
1189	FL23	3.06
1190	FL23	3.88
1191	FL23	0.46
1192	FL23	4.79
1193	FL23	0.48
1194	FL23	0.69
1195	FL23	3.23
1196	FL23	2.14
Line No.	(a)	(b)
1197	FL23	5.76
1198	FL23	8.1
1199	FL23	0.03
1200	FL23	2.71
1201	FL23	2.18
1202	FL23	7.06
1203	FL23	4.82
1204	FL23	3.62
1205	FL23	1.62
1206	FL23	1.8
1207	FL23	2.45
1208	FL23	1.45
1209	FL23	0.38
1210	FL23	1.33
1211	FL23	7.63

1212	FL23	1.98
1213	FL23	0.74
1214	FL23	3.23
1215	FL23	1.47
1216	FL23	1.25
1217	FL23	3.53
1218	FL23	3.01
1219	FL23	3.26
1220	FL23	0.95
1221	FL23	2.59
1222	FL23	4.9
1223	FL23	0.79
1224	FL23	2.67
Line No.	(a)	(b)
1225	FL23	5.03
1226	FL23	1.66
1227	FL23	2.68
1228	FL23	6.95
1229	FL23	7.47
1230	FL23	4.44
1231	FL23	0.01
1232	FL23	0.32
1233	FL23	1.68
1234	FL23	0.07
1235	FL23	0.64
1236	FL23	0
1237	FL23	0.75
1238	FL23	2.69
1239	FL23	1.95
1240	FL23	0.05
1241	FL23	1.58
1242	FL23	3.93
1243	FL23	0.3
1244	FL23	0
1245	FL23	0.09
1246	FL23	0.03
1247	FL23	0.01
1248	FL23	0
1249	FL26	0.29
1250	FL26	0.08
1251	FL26	0.72
1252	FL26	0.02
Line No.	(a)	(b)
1253	FL26	0.33
1254	FL26	0.07
1255	FL26	0.22
1256	FL26	0.03
1257	FL26	0.28
1258	FL26	0.35
1259	FL26	2.7
1260	FL26	1.82
1261	FL26	0.53
1262	FL26	0.11
1263	FL26	0.83
1264	FL26	3.11
1265	FL26	0.91
1266	FL26	2.29
1267	FL26	2.98
1268	FL26	2.93
1269	FL26	1.09
1270	FL26	3.45
1271	FL26	2.06
1272	FL26	1.93
1273	FL26	0.08
1274	FL26	3.05
1275	FL26	5.21
1276	FL26	0.89
1277	FL26	5.31
1278	FL26	2.71
1279	FL26	0.77
1280	FL26	4.3
Line No.	(a)	(b)
1281	FL26	1.44
1282	FL26	2.91
1283	FL26	1.93
1284	FL26	0.46
1285	FL26	5.13
1286	FL26	0.07
1287	FL26	0.03

1288	FL26	1.45
1289	FL26	3.87
1290	FL26	0.62
1291	FL26	0.09
1292	FL26	5.31
1293	FL26	4.57
1294	FL26	4.04
1295	FL26	6.37
1296	FL26	0
1297	FL26	0.23
1298	FL26	0.25
1299	FL26	1.77
1300	FL26	0.03
1301	FL26	0.01
1302	FL26	0.17
1303	FL26	0.17
1304	FL26	1.6
1305	FL26	2.78
1306	FL26	3.41
1307	FL26	4.58
1308	FL27A	1.95
Line No.	(a)	(b)
1309	FL27A	3.32
1310	FL27A	3.3
1311	FL27A	3.44
1312	FL27A	3.57
1313	FL27A	3.19
1314	FL27A	0.47
1315	FL27A	1.41
1316	FL27A	4.51
1317	FL27A	0.37
1318	FL27A	2.67
1319	FL27A	4.02
1320	FL27A	4.37
1321	FL27A	2.63
1322	FL27A	3.07
1323	FL27A	3.5
1324	FL27A	4.07
1325	FL27A	0.27
1326	FL27B	0
1327	FL27B	1.46
1328	FL27B	0.06
1329	FL27B	0.02
1330	FL27B	0.87
1331	FL27B	1.33
1332	FL27B	1.59
1333	FL27B	1.61
1334	FL27B	0.93
1335	FL27B	1.04
1336	FL27B	1.58
Line No.	(a)	(b)
1337	FL27B	2.12
1338	FL27B	2.28
1339	FL27B	1.21
1340	FL27B	0.7
1341	FL27B	3.4
1342	FL27B	2.82
1343	FL27B	0.43
1344	FL27B	0.85
1345	FL27B	2.82
1346	FL27B	2.43
1347	FL27B	2.75
1348	FL27B	1.76
1349	FL27B	0.41
1350	FL27B	0.05
1351	FL27B	1.8
1352	FL27B	1.64
1353	FL27B	2.37
1354	FL27B	1.18
1355	FL27B	1.61
1356	FL27B	3.58
1357	FL27B	0.01
1358	FL27B	0.48
1359	FL27B	1.82
1360	FL27B	1.67
1361	FL27B	1.75
1362	FL27B	0.87
1363	FL27B	2.04
1364	FL27B	0.52

Line No.	(a)	(b)
1365	FL27B	3.13
1366	FL27B	2.32
1367	FL27B	0.06
1368	FL27B	0.6
1369	FL27B	0.86
1370	FL27B	3.74
1371	FL27B	5.85
1372	FL27B	3.83
1373	FL27B	0.09
1374	FL27B	1.58
1375	FL27B	1.53
1376	FL27B	2.65
1377	FL27B	2.22
1378	FL27B	4.11
1379	FL27B	3.54
1380	FL27B	0.58
1381	FL27B	0.03
1382	FL27B	0.41
1383	FL27B	3.11
1384	FL27B	3.69
1385	FL27B	2.38
1386	FL27B	2.03
1387	FL27B	4.45
1388	FL27B	0.89
1389	FL27B	1.33
1390	FL27B	2.62
1391	FL27B	3.68
1392	FL27B	0.96
Line No.	(a)	(b)
1393	FL27B	1.77
1394	FL27B	3.22
1395	FL27B	3.51
1396	FL27B	2.8
1397	FL27B	3.66
1398	FL27B	2.91
1399	FL27B	0.67
1400	FL27B	2.8
1401	FL27B	2.06
1402	FL27B	4.01
1403	FL27B	2.52
1404	FL27B	2.46
1405	FL27B	4.31
1406	FL27B	2.01
1407	FL27B	3.76
1408	FL27B	1.98
1409	FL27B	3.14
1410	FL27B	2.64
1411	FL27B	3.64
1412	FL27B	2.73
1413	FL27B	1.53
1414	FL27B	3.12
1415	FL27B	3.3
1416	FL27B	4.67
1417	FL27B	4.13
1418	FL27B	2.39
1419	FL27B	0.8
1420	FL27B	5.12
Line No.	(a)	(b)
1421	FL27B	0.9
1422	FL27B	3.86
1423	FL27B	3.02
1424	FL27B	1.17
1425	FL27B	3.61
1426	FL27B	1.67
1427	FL27B	1.06
1428	FL27B	0.07
1429	FL27B	3.55
1430	FL27B	0.01
1431	FL27B	6.64
1432	FL27B	2.87
1433	FL27B	5.41
1434	FL27B	0.02
1435	FL27B	2.81
1436	FL27B	0.75
1437	FL27B	3.67
1438	FL27B	0.21
1439	FL27B	8.09
1440	FL27B	5.04

1441	FL27B	2.89
1442	FL27B	0.1
1443	FL27B	3.77
1444	FL27B	3.91
1445	FL27B	3.6
1446	FL27B	3.94
1447	FL27B	5.62
1448	FL27B	2.42
Line No.	(a)	(b)
1449	FL27B	6.94
1450	FL27B	5.42
1451	FL27B	6.15
1452	FL27B	1.98
1453	FL27B	7.1
1454	FL27B	9.36
1455	FL27B	0.59
1456	FL27B	0.22
1457	FL27B	2.08
1458	FL27B	3.11
1459	FL27B	0.01
1460	FL28	0
1461	FL28	0.1
1462	FL28	0.91
1463	FL28	0.02
1464	FL28	0.02
1465	FL28	0.36
1466	FL28	0.33
1467	FL28	0.41
1468	FL28	0.02
1469	FL28	0.21
1470	FL28	2.46
1471	FL28	0.08
1472	FL28	0.01
1473	FL28	0.16
1474	FL28	0.03
1475	FL28	0.32
1476	FL28	0.51
Line No.	(a)	(b)
1477	FL28	0.15
1478	FL28	0.12
1479	FL28	0.17
1480	FL28	0.09
1481	FL28	0
1482	FL28	0.03
1483	FL28	0.02
1484	FL28	0.15
1485	FL28	0.1
1486	FL28	0.29
1487	FL28	0.16
1488	FL28	0.19
1489	FL28	0.06
1490	FL28	0.5
1491	FL28	0.11
1492	FL28	0.22
1493	FL28	0.14
1494	FL28	0.37
1495	FL28	0.27
1496	FL28	0.15
1497	FL28	0.26
1498	FL28	0.1
1499	FL28	0
1500	FL28	0.15
1501	FL28	0.02
1502	FL28	0.94
1503	FL28	0.34
1504	FL28	0.15
Line No.	(a)	(b)
1505	FL28	0.26
1506	FL28	0.02
1507	FL28	0.03
1508	FL28	0.11
1509	FL28	0.28
1510	FL28	0.04
1511	FL28	0.04
1512	FL28	0.73
1513	FL28	0.04
1514	FL28	0.1
1515	FL28	0.02
1516	FL28	0.22

1517	FL28	1.33
1518	FL28	0.08
1519	FL28	0.09
1520	FL28	0.19
1521	FL28	0.07
1522	FL28	0.49
1523	FL28	0.03
1524	FL28	1.35
1525	FL28	0.08
1526	FL28	0.08
1527	FL28	0.2
1528	FL28	0.08
1529	FL28	0.15
1530	FL28	0.25
1531	FL28	0.11
1532	FL28	0.62
Line No.	(a)	(b)
1533	FL28	0.14
1534	FL28	0.07
1535	FL28	0
1536	FL28	0.01
1537	FL28	0.31
1538	FL28	0.21
1539	FL28	0.33
1540	FL28	0.03
1541	FL28	0.33
1542	FL28	0.24
1543	FL28	0.14
1544	FL28	0.3
1545	FL28	0.16
1546	FL28	0.22
1547	FL28	0.1
1548	FL28	1.1
1549	FL28	0.3
1550	FL28	0.42
1551	FL28	1.08
1552	FL28	0.96
1553	FL28	0.13
1554	FL28	0.24
1555	FL28	0.04
1556	FL28	1.72
1557	FL28	0.16
1558	FL28	0.43
1559	FL28	0.23
1560	FL28	0.11
Line No.	(a)	(b)
1561	FL28	1.57
1562	FL28	1.71
1563	FL28	0.75
1564	FL28	0.49
1565	FL28	0.33
1566	FL28	0.25
1567	FL28	0.09
1568	FL28	0.02
1569	FL28	0.3
1570	FL28	0.5
1571	FL28	0.24
1572	FL28	0.5
1573	FL28	1.24
1574	FL28	0.41
1575	FL28	0.08
1576	FL28	0.08
1577	FL28	0.24
1578	FL28	0.15
1579	FL28	0.15
1580	FL28	0.41
1581	FL28	0.35
1582	FL28	1.87
1583	FL28	0.17
1584	FL28	0.02
1585	FL28	0.21
1586	FL28	0.02
1587	FL28	0.13
1588	FL28	2.86
Line No.	(a)	(b)
1589	FL28	0.11
1590	FL28	1.4
1591	FL28	0.5
1592	FL28	0.06

1593	FL28	0.14
1594	FL28	0.36
1595	FL28	2.27
1596	FL28	0.09
1597	FL28	0.08
1598	FL28	1.29
1599	FL28	0.02
1600	FL28	4.31
1601	FL28	0.46
1602	FL28	2.13
1603	FL28	0.49
1604	FL28	0.25
1605	FL28	0.08
1606	FL28	0.21
1607	FL28	3.07
1608	FL28	2.22
1609	FL28	0.97
1610	FL28	0.17
1611	FL28	0.24
1612	FL28	1.18
1613	FL28	0.41
1614	FL28	2.58
1615	FL28	2.18
1616	FL28	0.18
Line No.	(a)	(b)
1617	FL28	0.32
1618	FL28	0.73
1619	FL28	0.95
1620	FL28	0.92
1621	FL28	3.93
1622	FL28	3.93
1623	FL28	2.76
1624	FL28	0.98
1625	FL28	0.65
1626	FL28	3.65
1627	FL28	0.2
1628	FL28	0.44
1629	FL28	1.1
1630	FL28	3.67
1631	FL28	3.92
1632	FL28	0.63
1633	FL28	0.69
1634	FL28	3.44
1635	FL28	1.79
1636	FL28	3.75
1637	FL28	0.72
1638	FL28	0.97
1639	FL28	3.13
1640	FL28	4.54
1641	FL28	0.38
1642	FL28	3.37
1643	FL28	1.46
1644	FL28	3.8
Line No.	(a)	(b)
1645	FL28	0.4
1646	FL28	3.61
1647	FL28	0.08
1648	FL28	0.52
1649	FL28	1.56
1650	FL28	0.38
1651	FL28	2.94
1652	FL28	1.71
1653	FL28	0.31
1654	FL28	3.56
1655	FL28	0.33
1656	FL28	2.22
1657	FL28	3.22
1658	FL28	0.52
1659	FL28	0.46
1660	FL28	3.42
1661	FL28	3.93
1662	FL28	3.63
1663	FL28	2.09
1664	FL28	1.8
1665	FL28	0.93
1666	FL28	0.11
1667	FL28	2.59
1668	FL28	1.62
1669	FL28	0.63

1670	FL28	1.28
1671	FL28	1.11
1672	FL28	0.14
Line No.	(a)	(b)
1673	FL28	3.38
1674	FL28	1.74
1675	FL28	2.29
1676	FL28	3.08
1677	FL28	1.79
1678	FL28	0.95
1679	FL28	1.89
1680	FL28	1.24
1681	FL28	0.98
1682	FL28	2.7
1683	FL28	3.13
1684	FL28	0.94
1685	FL28	0.68
1686	FL28	0.08
1687	FL28	1.76
1688	FL28	2.35
1689	FL28	1.12
1690	FL28	3.56
1691	FL28	0.25
1692	FL28	3.6
1693	FL28	0.28
1694	FL28	0.86
1695	FL28	1.18
1696	FL28	0.71
1697	FL28	0.33
1698	FL28	1.2
1699	FL28	2.8
1700	FL28	3.59
Line No.	(a)	(b)
1701	FL28	0.61
1702	FL28	3.01
1703	FL28	3.63
1704	FL28	3.89
1705	FL28	3.42
1706	FL28	5.25
1707	FL28	2.95
1708	FL28	0.01
1709	FL28	0.27
1710	FL28	0.95
1711	FL28	2.46
1712	FL28	0.9
1713	FL28	3.56
1714	FL28	4.72
1715	FL28	3.61
1716	FL28	2.33
1717	FL28	0.07
1718	FL28	3.04
1719	FL28	2.68
1720	FL28	2.05
1721	FL28	4.44
1722	FL28	4.48
1723	FL28	3.21
1724	FL28	3.87
1725	FL28	3.79
1726	FL28	2.45
1727	FL28	3.47
1728	FL28	1.3
Line No.	(a)	(b)
1729	FL28	4.53
1730	FL28	1.66
1731	FL28	0.36
1732	FL28	1.23
1733	FL28	4.19
1734	FL28	1.69
1735	FL28	0.36
1736	FL28	4.84
1737	FL28	2.81
1738	FL28	0.82
1739	FL28	0.13
1740	FL28	1.16
1741	FL28	2.15
1742	FL28	0.86
1743	FL28	4.68
1744	FL28	2.97
1745	FL28	1.95

1746	FL28	3.16
1747	FL28	3.61
1748	FL28	1.43
1749	FL28	0.85
1750	FL28	1.33
1751	FL28	0.52
1752	FL28	2.8
1753	FL28	1.3
1754	FL28	3.5
1755	FL28	1.66
1756	FL28	3.69
Line No.	(a)	(b)
1757	FL28	0.17
1758	FL28	1.29
1759	FL28	3.56
1760	FL28	3.6
1761	FL28	4.95
1762	FL28	2.72
1763	FL28	1.1
1764	FL28	3.15
1765	FL28	3.75
1766	FL28	1.29
1767	FL28	0.75
1768	FL28	4.6
1769	FL28	1.93
1770	FL28	1.45
1771	FL28	2.67
1772	FL28	2.44
1773	FL28	0.29
1774	FL28	3.09
1775	FL28	3.19
1776	FL28	3.65
1777	FL28	1.03
1778	FL28	2.46
1779	FL28	0.53
1780	FL28	4.08
1781	FL28	2.93
1782	FL28	5.97
1783	FL28	3.12
1784	FL28	1.73
Line No.	(a)	(b)
1785	FL28	4.38
1786	FL28	2.48
1787	FL28	0.33
1788	FL28	4.34
1789	FL28	2.79
1790	FL28	3.67
1791	FL28	2.45
1792	FL28	3.88
1793	FL28	0.83
1794	FL28	1.81
1795	FL28	4.18
1796	FL28	2.11
1797	FL28	2.6
1798	FL28	4.41
1799	FL28	3.02
1800	FL28	2.16
1801	FL28	4.6
1802	FL28	3.66
1803	FL28	4.63
1804	FL28	0
1805	FL28	5.43
1806	FL28	1.32
1807	FL28	3.96
1808	FL28	5.58
1809	FL28	0.33
1810	FL28	0.9
1811	FL28	0.34
1812	FL28	1.86
Line No.	(a)	(b)
1813	FL28	2.98
1814	FL28	3.24
1815	FL28	2.97
1816	FL28	5.3
1817	FL28	2.87
1818	FL28	1.91
1819	FL28	3.66
1820	FL28	4.04
1821	FL28	2.03

1822	FL28	0.28
1823	FL28	0.7
1824	FL28	2.49
1825	FL28	4.91
1826	FL28	4.36
1827	FL28	4.59
1828	FL28	1.64
1829	FL28	2.94
1830	FL28	2.78
1831	FL28	3.82
1832	FL28	0.65
1833	FL28	1.4
1834	FL28	2.35
1835	FL28	3
1836	FL28	1.75
1837	FL28	1.18
1838	FL28	0.33
1839	FL28	1.71
1840	FL28	1.39
Line No.	(a)	(b)
1841	FL28	0.1
1842	FL28	2.69
1843	FL28	0.58
1844	FL28	1.25
1845	FL28	3.2
1846	FL28	3.94
1847	FL28	5.51
1848	FL28	0.2
1849	FL28	5.37
1850	FL28	3.89
1851	FL28	1.7
1852	FL28	5.62
1853	FL28	4.36
1854	FL28	3.06
1855	FL28	3.5
1856	FL28	0.62
1857	FL28	4.37
1858	FL28	3.45
1859	FL28	2.06
1860	FL28	2.96
1861	FL28	2.04
1862	FL28	1.68
1863	FL28	0.8
1864	FL28	3.88
1865	FL28	2.83
1866	FL28	0.15
1867	FL28	2.86
1868	FL28	3.76
Line No.	(a)	(b)
1869	FL28	0.69
1870	FL28	4.95
1871	FL28	2.17
1872	FL28	3.18
1873	FL28	2.97
1874	FL28	1.19
1875	FL28	0.57
1876	FL28	3.42
1877	FL28	3.63
1878	FL28	6.73
1879	FL28	3.49
1880	FL28	1.1
1881	FL28	0.81
1882	FL28	0.44
1883	FL28	1.41
1884	FL28	1.35
1885	FL28	2.1
1886	FL28	2.94
1887	FL28	2.21
1888	FL28	4.13
1889	FL28	2.92
1890	FL28	2.82
1891	FL28	1.2
1892	FL28	5.47
1893	FL28	2.18
1894	FL28	3.74
1895	FL28	1.86
1896	FL28	2.32
Line No.	(a)	(b)
1897	FL28	1.62

1898	FL28	3.78
1899	FL28	3.92
1900	FL28	3.44
1901	FL28	3.31
1902	FL28	6.41
1903	FL28	4.39
1904	FL28	2.44
1905	FL28	3.27
1906	FL28	4.84
1907	FL28	0.18
1908	FL28	4.47
1909	FL28	3.07
1910	FL28	3.99
1911	FL28	0.24
1912	FL28	3.69
1913	FL28	0.54
1914	FL28	5.52
1915	FL28	0.98
1916	FL28	4.56
1917	FL28	4.65
1918	FL28	3.49
1919	FL28	0.07
1920	FL28	1.53
1921	FL28	0.2
1922	FL28	3.07
1923	FL28	3.55
1924	FL28	4.5
Line No.	(a)	(b)
1925	FL28	4.17
1926	FL28	3.74
1927	FL28	3.46
1928	FL28	3.79
1929	FL28	1.01
1930	FL28	4.25
1931	FL28	1.3
1932	FL28	4.88
1933	FL28	3.16
1934	FL28	0.27
1935	FL28	3.34
1936	FL28	1.57
1937	FL28	5
1938	FL28	1.9
1939	FL28	3.85
1940	FL28	3.21
1941	FL28	0.74
1942	FL28	3.99
1943	FL28	4.9
1944	FL28	0.29
1945	FL28	0.45
1946	FL28	1.88
1947	FL28	0.23
1948	FL28	3.29
1949	FL28	5.71
1950	FL28	5.49
1951	FL28	0.02
1952	FL28	3.02
Line No.	(a)	(b)
1953	FL28	0.7
1954	FL28	3.24
1955	FL28	0.5
1956	FL28	1.34
1957	FL28	3.46
1958	FL28	3.84
1959	FL28	2.57
1960	FL28	4.39
1961	FL28	4.63
1962	FL28	2.83
1963	FL28	2.5
1964	FL28	2.66
1965	FL28	2.61
1966	FL28	0.47
1967	FL28	0.86
1968	FL28	6.32
1969	FL28	3.31
1970	FL28	3.03
1971	FL28	5.22
1972	FL28	0.32
1973	FL28	4.46
1974	FL28	4.71

1975	FL28	0.69
1976	FL28	1.03
1977	FL28	4.78
1978	FL28	0.06
1979	FL28	0.1
1980	FL28	3.91
Line No.	(a)	(b)
1981	FL28	2.5
1982	FL28	0.11
1983	FL28	6.49
1984	FL28	1.22
1985	FL28	5.67
1986	FL28	4.24
1987	FL28	2.86
1988	FL28	1.64
1989	FL28	4.24
1990	FL28	1.19
1991	FL28	3.69
1992	FL28	2.07
1993	FL28	3.16
1994	FL28	4.69
1995	FL28	2.63
1996	FL28	4.35
1997	FL28	5.39
1998	FL28	4.36
1999	FL28	1.6
2000	FL28	5.23
2001	FL28	5.17
2002	FL28	3.08
2003	FL28	2.86
2004	FL28	3.33
2005	FL28	5.57
2006	FL28	3.91
2007	FL28	2.26
2008	FL28	2.73
Line No.	(a)	(b)
2009	FL28	3.03
2010	FL28	4.58
2011	FL28	1.06
2012	FL28	4.2
2013	FL28	4.3
2014	FL28	2.47
2015	FL28	1.93
2016	FL28	0.1
2017	FL28	6.16
2018	FL28	5.5
2019	FL28	4.82
2020	FL28	1.36
2021	FL28	0.09
2022	FL28	3.58
2023	FL28	5.45
2024	FL28	3.57
2025	FL28	0.01
2026	FL28	5.87
2027	FL28	0.33
2028	FL28	5.1
2029	FL28	4.89
2030	FL28	6.64
2031	FL28	2.06
2032	FL28	7.1
2033	FL28	0.4
2034	FL28	0.19
2035	FL28	4.75
2036	FL28	5.74
Line No.	(a)	(b)
2037	FL28	4.45
2038	FL28	4.12
2039	FL28	2.85
2040	FL28	3.3
2041	FL28	0.1
2042	FL28	2.4
2043	FL28	0.51
2044	FL28	4.02
2045	FL28	6.55
2046	FL28	3.56
2047	FL28	2.97
2048	FL28	4.56
2049	FL28	3.71
2050	FL28	4.26

2051	FL28	1.41
2052	FL28	5.71
2053	FL28	5.09
2054	FL28	4.57
2055	FL28	0.1
2056	FL28	1.73
2057	FL28	6.65
2058	FL28	5.74
2059	FL28	2.14
2060	FL28	4.18
2061	FL28	2.6
2062	FL28	2.13
2063	FL28	2.27
2064	FL28	1.08
Line No.	(a)	(b)
2065	FL28	4.77
2066	FL28	4.5
2067	FL28	0.05
2068	FL28	3.11
2069	FL28	5.4
2070	FL28	0.78
2071	FL28	3.09
2072	FL28	0.98
2073	FL28	0.5
2074	FL28	3.66
2075	FL28	4.42
2076	FL28	0
2077	FL28	0.29
2078	FL28	2.22
2079	FL28	0.94
2080	FL28	2.37
2081	FL28	4.12
2082	FL28	5.24
2083	FL28	1.38
2084	FL28	4.32
2085	FL28	4.71
2086	FL28	4.07
2087	FL28	0.49
2088	FL28	6.81
2089	FL28	2.17
2090	FL28	0.64
2091	FL28	0.57
2092	FL28	3.63
Line No.	(a)	(b)
2093	FL28	6.15
2094	FL28	4.58
2095	FL28	7.05
2096	FL28	3.02
2097	FL28	1.59
2098	FL28	6.39
2099	FL28	1.3
2100	FL28	4.41
2101	FL28	6.92
2102	FL28	6.16
2103	FL28	6.62
2104	FL28	4.68
2105	FL28	3.75
2106	FL28	1.32
2107	FL28	4.15
2108	FL28	3.89
2109	FL28	3.44
2110	FL28	3.73
2111	FL28	3.99
2112	FL28	4.22
2113	FL28	6.75
2114	FL28	4.34
2115	FL28	4.32
2116	FL28	5.86
2117	FL28	6.3
2118	FL28	10.32
2119	FL28	1.89
2120	FL28	2.96
Line No.	(a)	(b)
2121	FL28	0.21
2122	FL28	5.11
2123	FL28	1.05
2124	FL28	4.9
2125	FL28	3.41
2126	FL28	4.62

2127	FL28	5.86
2128	FL28	4.41
2129	FL28	5.08
2130	FL28	4.71
2131	FL28	5
2132	FL28	1.72
2133	FL28	0.14
2134	FL28	3.28
2135	FL28	6.26
2136	FL28	10.99
2137	FL28	6.64
2138	FL28	1.41
2139	FL28	0.02
2140	FL36	0.84
2141	FL36	1.02
2142	FL36	0.01
2143	FL36	0.06
2144	FL36	0.09
2145	FL36	0.22
2146	FL36	0.58
2147	FL36	0.19
2148	FL36	0.22
Line No.	(a)	(b)
2149	FL36	0.35
2150	FL36	1.12
2151	FL36	0.11
2152	FL36	0.45
2153	FL36	2.32
2154	FL36	0.09
2155	FL36	2.69
2156	FL36	0.44
2157	FL36	3.51
2158	FL36	1.16
2159	FL36	1.4
2160	FL36	0.51
2161	FL36	0.19
2162	FL36	2.05
2163	FL36	0.37
2164	FL36	1.99
2165	FL36	1.72
2166	FL36	0.17
2167	FL36	0.03
2168	FL36	0.35
2169	FL36	0.49
2170	FL36	1.55
2171	FL36	0.11
2172	FL36	0.78
2173	FL36	0.67
2174	FL36	2.56
2175	FL36	1.6
2176	FL36	0.3
Line No.	(a)	(b)
2177	FL36	1.84
2178	FL36	0.62
2179	FL36	1.09
2180	FL36	2.36
2181	FL36	0.6
2182	FL36	3.06
2183	FL36	0.14
2184	FL36	2.31
2185	FL36	2.74
2186	FL36	2.87
2187	FL36	3.17
2188	FL36	1
2189	FL36	2.16
2190	FL36	0.32
2191	FL36	3.22
2192	FL36	1.17
2193	FL36	2.64
2194	FL36	0.58
2195	FL36	2.3
2196	FL36	0.11
2197	FL36	3.17
2198	FL36	2.58
2199	FL36	0.9
2200	FL36	0.17
2201	FL36	0.08
2202	FL36	4.04
2203	FL36	1.78

2204	FL36	3.44
Line No.	(a)	(b)
2205	FL36	0.66
2206	FL36	0.06
2207	FL36	1.24
2208	FL36	2.58
2209	FL36	1.02
2210	FL36	2.76
2211	FL36	1.68
2212	FL36	2.59
2213	FL36	2.2
2214	FL36	0.02
2215	FL36	3.05
2216	FL36	2.62
2217	FL36	1.51
2218	FL36	1.48
2219	FL36	2.12
2220	FL36	2.04
2221	FL36	0.52
2222	FL36	3.01
2223	FL36	0.02
2224	FL36	3.85
2225	FL36	0.39
2226	FL36	2.93
2227	FL36	2.47
2228	FL36	0.29
2229	FL36	0.73
2230	FL36	3.4
2231	FL36	3.7
2232	FL36	0.56
Line No.	(a)	(b)
2233	FL36	2.14
2234	FL36	4.5
2235	FL36	1.86
2236	FL36	1.22
2237	FL36	1.29
2238	FL36	0.08
2239	FL36	3.68
2240	FL36	1.61
2241	FL36	0.77
2242	FL36	5.08
2243	FL37	0.17
2244	FL37	0.88
2245	FL37	0.4
2246	FL37	0.15
2247	FL37	0
2248	FL37	0.37
2249	FL37	2.86
2250	FL37	3.38
2251	FL37	2.27
2252	FL37	0.89
2253	FL37	2.67
2254	FL37	0.22
2255	FL37	8.45
2256	FL37	5.13
2257	FL37	1.01
2258	FL37	2.79
2259	FL37	3.68
2260	FL37	5.95
Line No.	(a)	(b)
2261	FL37	6.27
2262	FL37	5.9
2263	FL37	5.04
2264	FL37	6.08
2265	FL37	4.74
2266	FL37	3.87
2267	FL37	5.52
2268	FL37	7.15
2269	FL37	7.73
2270	FL37	5.67
2271	FL37	6.1
2272	FL37	6.26
2273	FL37	8.71
2274	FL37	0.08
2275	FL37	4.51
2276	FL37	8.16
2277	FL37	7.7
2278	FL37	8.88
2279	FL37	7.44

2280	FL37	7.92
2281	FL37	7.68
2282	FL37	10.61
2283	FL37	10.18
2284	FL37	8.82
2285	FL39	0.41
2286	FL39	0.05
2287	FL39	0.3
2288	FL39	1.95
Line No.	(a)	(b)
2289	FL39	0.47
2290	FL39	0.48
2291	FL39	0.53
2292	FL39	0.5
2293	FL39	0.01
2294	FL39	0.65
2295	FL39	0.23
2296	FL39	0.59
2297	FL39	0.7
2298	FL39	0.46
2299	FL39	1.65
2300	FL41	0.19
2301	FL41	1.77
2302	FL41	0.68
2303	FL41	3.77
2304	FL41	0.5
2305	FL41	0
2306	FL41	0.71
2307	FL41	4.62
2308	FL41	0.34
2309	FL41	1.54
2310	FL41	0.2
2311	FL41	0.6
2312	FL41	0.72
2313	FL41	0.61
2314	FL41	1.91
2315	FL41	2.65
2316	FL41	1.6
Line No.	(a)	(b)
2317	FL41	1.28
2318	FL41	4.57
2319	FL41	2.21
2320	FL41	0.68
2321	FL41	1.83
2322	FL41	3.68
2323	FL41	2.02
2324	FL41	2.75
2325	FL41	1.57
2326	FL41	4.58
2327	FL41	4.96
2328	FL41	4.32
2329	FL41	0.3
2330	FL41	3.52
2331	FL41	2.64
2332	FL41	1.86
2333	FL41	4.8
2334	FL41	3.5
2335	FL41	5.25
2336	FL41	6.75
2337	FL41	1.79
2338	FL41	0.87
2339	FL41	4.61
2340	FL41	5.91
2341	FL41	4.67
2342	FL41	4.07
2343	FL41	3.74
2344	FL41	6.33
Line No.	(a)	(b)
2345	FL41	4.74
2346	FL41	3.22
2347	FL41	4.27
2348	FL41	4.82
2349	FL41	3.01
2350	FL41	6.71
2351	FL41	2.95
2352	FL41	5.68
2353	FL41	5.16
2354	FL41	7.53
2355	FL41	6.34

2356	FL42A	1.1
2357	FL42A	5.48
2358	FL42A	4.14
2359	FL42A	4.62
2360	FL42A	6.31
2361	FL42A	8.17
2362	FL42A	2.71
2363	FL42A	2.44
2364	FL42A	4.91
2365	FL42A	3.68
2366	FL42A	3.24
2367	FL42A	5.44
2368	FL42A	7.91
2369	FL42A	2.13
2370	FL42A	7.16
2371	FL42A	4.88
2372	FL42A	5.64
Line No.	(a)	(b)
2373	FL42A	5.28
2374	FL42A	5.17
2375	FL42A	4.98
2376	FL42A	5.56
2377	FL42A	7.48
2378	FL42A	7.66
2379	FL42A	7.4
2380	FL42A	7.58
2381	FL42A	10.28
2382	FL42A	7.52
2383	FL42A	7.85
2384	FL42A	0.01
2385	FL42B	1.06
2386	FL42B	1.56
2387	FL42B	0.67
2388	FL42B	2.15
2389	FL42B	3.09
2390	FL43	0.16
2391	FL43	2.55
2392	FL43	1.38
2393	FL43	3.81
2394	FL43	0.3
2395	FL43	1.32
2396	FL43	4.7
2397	FL43	2.67
2398	FL43	2.07
2399	FL43	1.33
2400	FL43	0.38
Line No.	(a)	(b)
2401	FL43	2.73
2402	FL43	7.75
2403	FL43	2.97
2404	FL43	0.24
2405	FL43	1.74
2406	FL43	1
2407	FL43	3.59
2408	FL43	3.78
2409	FL43	1.15
2410	FL43	4.92
2411	FL43	5.52
2412	FL43	7.04
2413	FL44	0.53
2414	FL44	2.63
2415	FL44	2.89
2416	FL44	3.33
2417	FL44	2.16
2418	FL44	2.52
2419	FL44	2.06
2420	FL44	3.31
2421	FL44	4.14
2422	FL44	1.82
2423	FL44	2.96
2424	FL44	0
2425	FL44	0.29
2426	FL44	0.22
2427	FL44	2.33
2428	FL44	3.2
Line No.	(a)	(b)
2429	FL44	2.6
2430	FL44	3.62
2431	FL44	4.06

2432	FL44	4.47
2433	FL44	4.27
2434	FL44	6.3
2435	FL44	1.48
2436	FL44	3.62
2437	FL44	3.11
2438	FL44	4.48
2439	FL44	1.97
2440	FL44	3.71
2441	FL44	4.5
2442	FL44	2.55
2443	FL44	3.48
2444	FL44	2.83
2445	FL44	1.38
2446	FL44	7.25
2447	FL44	3.71
2448	FL44	2.64
2449	FL44	2.79
2450	FL44	4.79
2451	FL44	0.34
2452	FL44	4.8
2453	FL44	1.52
2454	FL44	0
2455	FL44	3.4
2456	FL44	2.91
Line No.	(a)	(b)
2457	FL44	5.61
2458	FL44	1.37
2459	FL44	3.96
2460	FL44	5.77
2461	FL44	2.88
2462	FL44	4.11
2463	FL44	4.93
2464	FL44	2.68
2465	FL44	3.34
2466	FL44	7.45
2467	FL44	2.76
2468	FL44	4.5
2469	FL44	7.75
2470	FL44	3.85
2471	FL44	5.42
2472	FL44	1.84
2473	FL44	3.16
2474	FL44	3.88
2475	FL44	1.32
2476	FL44	4.07
2477	FL44	6.19
2478	FL44	5.75
2479	FL44	3.55
2480	FL44	4.2
2481	FL44	2.84
2482	FL44	0.1
2483	FL44	3.15
2484	FL44	5.08
Line No.	(a)	(b)
2485	FL44	7.76
2486	FL44	6.16
2487	FL44	5.19
2488	FL44	4.82
2489	FL44	7.09
2490	FL44	4.87
2491	FL44	5.69
2492	FL44	5.12
2493	FL44	7.33
2494	FL44	0.12
2495	FL44	4.84
2496	FL44	5.52
2497	FL44	5.07
2498	FL44	8.29
2499	FL44	6.06
2500	FL44	1.86
2501	FL44	6.67
2502	FL44	0
2503	FL44	0.13
2504	FL44	3.84
2505	FL44	4.72
2506	FL44	2.19
2507	FL44	5.92
2508	FL44	0

2509	FL44	3.63
2510	FL44	0.41
2511	FL44	5.29
2512	FL44	6.3
Line No.	(a)	(b)
2513	FL44	4.47
2514	FL44	6.95
2515	FL44	4.98
2516	FL44	2.55
2517	FL44	4.79
2518	FL44	5.84
2519	FL44	6.7
2520	FL44	1.36
2521	FL44	6.19
2522	FL44	4.48
2523	FL44	5.66
2524	FL44	8.11
2525	FL44	6.89
2526	FL44	5.91
2527	FL44	5.87
2528	FL44	7.93
2529	FL44	0.37
2530	FL44	6.24
2531	FL44	5.61
2532	FL44	0.81
2533	FL44	2.03
2534	FL44	5.23
2535	FL44	6.79
2536	FL44	8.31
2537	FL44	6.46
2538	FL44	5.25
2539	FL44	2.64
2540	FL44	0.12
Line No.	(a)	(b)
2541	FL44	6.82
2542	FL44	5.91
2543	FL44	5.8
2544	FL44	6.02
2545	FL44	6.6
2546	FL44	4.66
2547	FL44	1.97
2548	FL44	8.77
2549	FL44	0.01
2550	FL44	0.02
2551	FL44	0.01
2552	FL45	0.23
2553	FL45	1.22
2554	FL45	0.53
2555	FL45	0.17
2556	FL45	1.28
2557	FL45	0.19
2558	FL45	0.19
2559	FL45	0.34
2560	FL45	0.31
2561	FL45	0.24
2562	FL45	0.41
2563	FL45	0.08
2564	FL45	0.23
2565	FL45	0.66
2566	FL45	0.17
2567	FL45	0.16
2568	FL45	0.02
Line No.	(a)	(b)
2569	FL45	0.28
2570	FL45	0.42
2571	FL45	2.18
2572	FL45	0.32
2573	FL45	0.53
2574	FL45	0.7
2575	FL45	0.17
2576	FL45	0.45
2577	FL45	0.6
2578	FL45	0.61
2579	FL45	0.3
2580	FL45	0.52
2581	FL45	0.12
2582	FL45	0.39
2583	FL45	0.34
2584	FL45	1.94

2585	FL45	0.14
2586	FL45	0.81
2587	FL45	1.27
2588	FL45	1.32
2589	FL45	3.37
2590	FL45	0.9
2591	FL46	2.44
2592	FL46	0.28
2593	FL54	2.18
2594	FL54	0.05
2595	FL54	3.62
2596	FL54	1.49
Line No.	(a)	(b)
2597	FL54	0.56
2598	FL54	0.02
2599	FL54	3.33
2600	FL54	0.32
2601	FL54	3.57
2602	FL54	5.03
2603	FL54	0.83
2604	FL54	5.14
2605	FL54	2.5
2606	FL54	4.75
2607	FL54	0.59
2608	FL54	2.99
2609	FL54	0.9
2610	FL54	3.36
2611	FL54	0.73
2612	FL54	4.93
2613	FL54	3.11
2614	FL54	2.93
2615	FL54	3.63
2616	FL54	4.38
2617	FL54	3.75
2618	FL54	4.33
2619	FL54	0
2620	FL54	1.32
2621	FL54	0.03
2622	FL54	0.82
2623	FL54	3.15
2624	FL54	1.43
Line No.	(a)	(b)
2625	FL54	1.53
2626	FL54	1.21
2627	FL54	1.15
2628	FL54	8.8
2629	FL54	0.25
2630	FL54	6.2
2631	FL54	2.82
2632	FL54	0.71
2633	FL54	1.57
2634	FL54	1
2635	FL54	2.16
2636	FL54	3.54
2637	FL54	1.68
2638	FL54	0.41
2639	FL54	0.41
2640	FL54	4.09
2641	FL54	4.8
2642	FL54	1.75
2643	FL54	6.33
2644	FL54	5.44
2645	FL54	7.26
2646	FL54	2.17
2647	FL54	3.49
2648	FL54	5.92
2649	FL54	0.03
2650	FL54	1.4
2651	FL54	2.45
2652	FL54	3.07
Line No.	(a)	(b)
2653	FL54	11.25
2654	FL54	4.86
2655	FL54	2.74
2656	FL54	2.31
2657	FL54	2.61
2658	FL54	2.08
2659	FL54	2.61
2660	FL54	4.22

2661	FL54	3.18
2662	FL54	2.82
2663	FL54	1.83
2664	FL54	4.77
2665	FL54	2.47
2666	FL54	4.16
2667	FL54	3.43
2668	FL54	4.04
2669	FL54	3.21
2670	FL54	1.95
2671	FL54	3.41
2672	FL54	3.84
2673	FL54	1.71
2674	FL54	4.46
2675	FL54	1.65
2676	FL54	3.61
2677	FL54	1.21
2678	FL54	3.18
2679	FL54	4.68
2680	FL54	3.13
Line No.	(a)	(b)
2681	FL54	4.18
2682	FL54	2.55
2683	FL54	4.14
2684	FL54	3.66
2685	FL54	3.31
2686	FL54	2.87
2687	FL54	4.25
2688	FL54	0.19
2689	FL54	4.54
2690	FL54	3.71
2691	FL54	4.31
2692	FL54	5.54
2693	FL54	5.91
2694	FL54	4.11
2695	FL54	6.6
2696	FL54	4.22
2697	FL54	3.08
2698	FL54	3.47
2699	FL54	3.78
2700	FL54	5.89
2701	FL54	4.82
2702	FL54	5.05
2703	FL54	3.83
2704	FL54	3.23
2705	FL54	5.41
2706	FL54	6.68
2707	FL54	5.46
2708	FL54	5.51
Line No.	(a)	(b)
2709	FL54	5.62
2710	FL54	3.86
2711	FL54	5.8
2712	FL54	5.21
2713	FL54	4.08
2714	FL54	5.97
2715	FL54	4.14
2716	FL54	4.07
2717	FL54	5.4
2718	FL54	6.77
2719	FL54	5.21
2720	FL54	5.59
2721	FL54	4.97
2722	FL54	6.35
2723	FL54	4.89
2724	FL54	5.76
2725	FL54	7.57
2726	FL54	7.04
2727	FL55	1.23
2728	FL55	0.5
2729	FL55	0.61
2730	FL55	3.43
2731	FL55	1.04
2732	FL55	3.25
2733	FL55	0
2734	FL55	2.83
2735	FL55	3.44
2736	FL55	5.23
Line No.	(a)	(b)

2737	FL55	3.86
2738	FL55	0.76
2739	FL55	0.69
2740	FL55	0
2741	FL57	0.43
2742	FL57	0.59
2743	FL57	0.6
2744	FL57	1.5
2745	FL57	0.52
2746	FL57	0.54
2747	FL57	0.89
2748	FL57	0.47
2749	FL57	1.37
2750	FL57	1.16
2751	FL57	0.6
2752	FL59	0.22
2753	FL59	0.17
2754	FL59	0.73
2755	FL59	2.63
2756	FL59	0.95
2757	FL59	0.09
2758	FL59	2.6
2759	FL59	1.21
2760	FL59	1.17
2761	FL59	1.6
2762	FL59	0.79
2763	FL59	1.66
2764	FL59	3.37
Line No.	(a)	(b)
2765	FL59	0.61
2766	FL59	0.22
2767	FL59	0.2
2768	FL59	1.98
2769	FL59	0.03
2770	FL59	2.41
2771	FL59	2.02
2772	FL59	2.61
2773	FL59	0.71
2774	FL59	3.83
2775	FL59	0.77
2776	FL59	0.17
2777	FL59	2.51
2778	FL59	1.99
2779	FL59	2.45
2780	FL59	0.22
2781	FL59	0.47
2782	FL59	1.53
2783	FL59	1.75
2784	FL59	0.21
2785	FL59	1.49
2786	FL59	5.57
2787	FL59	0.52
2788	FL59	0.76
2789	FL59	1.07
2790	FL59	2.82
2791	FL59	2.01
2792	FL59	0.08
Line No.	(a)	(b)
2793	FL59	2.82
2794	FL59	2.73
2795	FL59	1.72
2796	FL59	0.34
2797	FL59	0.42
2798	FL59	3.98
2799	FL59	3.03
2800	FL59	3.59
2801	FL59	3.07
2802	FL59	4.87
2803	FL59	0.66
2804	FL59	1.47
2805	FL59	2.18
2806	FL59	1.99
2807	FL59	0.5
2808	FL59	3.85
2809	FL59	3.77
2810	FL59	1.3
2811	FL59	6.33
2812	FL59	0.13
2813	FL59	0.24

2814	FL59	0.11
2815	FL59	0.27
2816	FL59	1.13
2817	FL59	1.06
2818	FL59	4.86
2819	FL59	9.35
2820	FL59	8.1
Line No.	(a)	(b)
2821	FL59	1.31
2822	FL59	1.3
2823	FL59	2.16
2824	FL59	6.77
2825	FL59	0.09
2826	FL59	1.82
2827	FL59	0.38
2828	FL59	0.17
2829	FL59	0.99
2830	FL59	1.32
2831	FL59	1.24
2832	FL59	0.2
2833	FL59	1.37
2834	FL59	5.54
2835	FL59	2.77
2836	FL59	1.61
2837	FL59	3.79
2838	FL59	3.85
2839	FL59	1.56
2840	FL59	0.12
2841	FL59	0.21
2842	FL59	0.8
2843	FL59	2.93
2844	FL59	0.24
2845	FL59	0.68
2846	FL59	0.35
2847	FL59	4.57
2848	FL59	1.9
Line No.	(a)	(b)
2849	FL59	2.2
2850	FL59	5.6
2851	FL59	4.11
2852	FL59	1.66
2853	FL59	3.61
2854	FL59	3.02
2855	FL59	3.08
2856	FL59	2.1
2857	FL59	4.94
2858	FL59	4.11
2859	FL59	4.14
2860	FL59	4.43
2861	FL59	2.9
2862	FL59	2.66
2863	FL59	3.9
2864	FL59	5.46
2865	FL59	4.77
2866	FL59	5.39
2867	FL59	5.7
2868	FL59	3.84
2869	FL59	3.82
2870	FL59	6.17
2871	FL59	4.62
2872	FL59	8.05
2873	FL59	7.88
2874	FL60	0.81
2875	FL60	2.38
2876	FL60	1.6
2877	FL60	0.32
Line No.	(a)	(b)
2878	FL60	1.53
2879	FL60	3.27
2880	FL60	0.58
2881	FL60	2.87
2882	FL60	1
2883	FL60	1.77
2884	FL60	3.05
2885	FL60	1.33
2886	FL60	2.18
2887	FL60	3.95
2888	FL60	0.34
2889	FL60	1.92

2890	FL60	2.37
2891	FL60	3.44
2892	FL60	1.71
2893	FL60	3.59
2894	FL60	3.59
2895	FL60	2.82
2896	FL60	4.84
2897	FL60	4.79
2898	FL60	2.58
2899	FL60	1.38
2900	FL60	4.2
2901	FL60	2.85
2902	FL60	2.1
2903	FL60	4.64
2904	FL60	3.14
2905	FL60	3.89
Line No.	(a)	(b)
2906	FL60	1.18
2907	FL60	3.45
2908	FL60	2.68
2909	FL60	4.96
2910	FL60	2.91
2911	FL60	4.61
2912	FL60	1.9
2913	FL60	2.79
2914	FL60	4.99
2915	FL60	1.35
2916	FL60	4.08
2917	FL60	4.06
2918	FL60	3.8
2919	FL60	4.09
2920	FL60	2.43
2921	FL60	5.49
2922	FL60	5.21
2923	FL64	0.74
2924	FL64	1.14
2925	FL64	0.63
2926	FL64	1.01
2927	FL64	0.41
2928	FL64	1.09
2929	FL64	3.04
2930	FL64	0.66
2931	FL64	1.15
2932	FL64	1.47
2933	FL64	1.19
Line No.	(a)	(b)
2934	FL64	1.83
2935	FL64	1.96
2936	FL64	2.12
2937	FL64	1.89
2938	FL64	1.5
2939	FL64	2.1
2940	FL64	3.59
2941	FL64	1.41
2942	FL64	1.94
2943	FL64	2.78
2944	FL64	3.43
2945	FL64	1.37
2946	FL64	3.32
2947	FL64	2.27
2948	FL64	0.5
2949	FL64	1.81
2950	FL64	1.93
2951	FL64	1.57
2952	FL64	2.17
2953	FL64	1.13
2954	FL64	3.87
2955	FL64	2.68
2956	FL64	1.88
2957	FL64	1.42
2958	FL64	1.96
2959	FL64	3.24
2960	FL64	2.31
2961	FL64	0.73
Line No.	(a)	(b)
2962	FL64	2.71
2963	FL64	2.02
2964	FL64	3.48
2965	FL64	1.38

2966	FL64	2.63
2967	FL64	1.45
2968	FL64	0.72
2969	FL64	1.95
2970	FL64	2.48
2971	FL64	1.82
2972	FL64	1.37
2973	FL64	2.79
2974	FL64	1.21
2975	FL64	1.71
2976	FL64	1.71
2977	FL64	1.07
2978	FL64	2.06
2979	FL64	0.92
2980	FL64	1.58
2981	FL64	1.96
2982	FL64	1.61
2983	FL64	2.36
2984	FL64	2.8
2985	FL64	0.4
2986	FL64	2.48
2987	FL64	3.59
2988	FL64	3.81
2989	FL64	3.03
Line No.	(a)	(b)
2990	FL64	3.03
2991	FL64	5.95
2992	FL64	0.32
2993	FL64	2.86
2994	FL64	2.16
2995	FL64	0.05
2996	FL64	3.99
2997	FL64	1.82
2998	FL64	2.42
2999	FL64	3.1
3000	FL64	1.35
3001	FL64	2.28
3002	FL64	0.71
3003	FL64	3.87
3004	FL64	1.07
3005	FL64	0.91
3006	FL64	3.97
3007	FL64	2.38
3008	FL64	2.91
3009	FL64	4.46
3010	FL64	1.6
3011	FL64	3.18
3012	FL64	2.5
3013	FL64	1.74
3014	FL64	2.82
3015	FL64	2.55
3016	FL64	2.9
3017	FL64	3.87
Line No.	(a)	(b)
3018	FL64	1.27
3019	FL64	2.88
3020	FL64	1.76
3021	FL64	1.9
3022	FL64	3.71
3023	FL64	0.99
3024	FL64	2.22
3025	FL64	1.99
3026	FL64	2.32
3027	FL64	0.87
3028	FL64	2.54
3029	FL64	2.1
3030	FL64	3.9
3031	FL64	2.66
3032	FL64	3.7
3033	FL64	1.32
3034	FL64	2.76
3035	FL64	3.43
3036	FL64	4.21
3037	FL64	3.15
3038	FL64	3.86
3039	FL64	3.24
3040	FL64	1.37
3041	FL64	2.21
3042	FL64	3.71

3043	FL64	4.46
3044	FL64	4.63
3045	FL64	3.52
Line No.	(a)	(b)
3046	FL64	0.96
3047	FL64	3.02
3048	FL64	0.6
3049	FL65	4.49
3050	FL65	0.24
3051	FL65	0.59
3052	FL65	2.08
3053	FL65	0.33
3054	FL65	4.93
3055	FL65	3.6
3056	FL67	2.52
3057	FL67	0.78
3058	FL67	0.25
3059	FL67	0.45
3060	FL68	0.74
3061	FL68	1.15
3062	FL68	0.53
3063	FL68	4.87
3064	FL68	1.6
3065	FL68	4.95
3066	FL68	3.05
3067	FL68	5.66
3068	FL68	2.38
3069	FL68	3.2
3070	FL68	4.89
3071	FL68	2.72
3072	FL68	7.85
3073	FL68	3.37
Line No.	(a)	(b)
3074	FL68	3.08
3075	FL68	1.17
3076	FL68	5.04
3077	FL68	5.66
3078	FL68	8.6
3079	FL68	2.42
3080	FL68	3.69
3081	FL68	0.68
3082	FL68	5.42
3083	FL68	2.67
3084	FL68	1.9
3085	FL68	4.87
3086	FL68	5.44
3087	FL68	5.39
3088	FL68	5.63
3089	FL68	3.12
3090	FL68	4.84
3091	FL68	3.48
3092	FL68	6.6
3093	FL68	2.46
3094	FL68	6.33
3095	FL68	2
3096	FL68	4.08
3097	FL68	4.96
3098	FL68	5.34
3099	FL68	5.92
3100	FL68	3.78
3101	FL68	7.47
Line No.	(a)	(b)
3102	FL68	3.9
3103	FL68	3.47
3104	FL68	4.69
3105	FL68	4.87
3106	FL68	5.45
3107	FL68	5.44
3108	FL68	6.46
3109	FL68	5.55
3110	FL68	0.48
3111	FL68	3.66
3112	FL68	5.28
3113	FL68	7.38
3114	FL68	5.59
3115	FL68	6.01
3116	FL68	2.27
3117	FL68	4.97
3118	FL68	6

3119	FL68	5.68
3120	FL68	6.76
3121	FL68	8.05
3122	FL68	6.05
3123	FL68	6.56
3124	FL68	7.32
3125	FL68	5.75
3126	FL68	9.09
3127	FL68	5.14
3128	FL68	7.34
3129	FL68	3.46
Line No.	(a)	(b)
3130	FL75	0
3131	FL75	1.26
3132	FL75	2.61
3133	FL75	0.63
3134	FL75	1.13
3135	FL75	0.83
3136	FL75	0.84
3137	FL75	2.11
3138	FL75	0.91
3139	FL75	1.95
3140	FL75	0.85
3141	FL75	0.55
3142	FL75	0.35
3143	FL75	0.32
3144	FL75	1.8
3145	FL75	0.32
3146	FL75	1.12
3147	FL75	0.49
3148	FL77	0
3149	FL77	0
3150	FL77	0
3151	FL77	1.45
3152	FL77	1.91
3153	FL77	0
3154	FL77	2.51
3155	FL77	3.96
3156	FL77	1.11
3157	FL77	2.69
Line No.	(a)	(b)
3158	FL77	2.24
3159	FL77	0
3160	FL77	3.37
3161	FL77	1.79
3162	FL77	1.79
3163	FL77	1.06
3164	FL77	0.75
3165	FL77	3.44
3166	FL77	2.14
3167	FL77	1.26
3168	FL77	0.92
3169	FL77	0.03
3170	FL77	2.75
3171	FL77	5.73
3172	FL77	5.09
3173	FL77	1.71
3174	FL77	3.9
3175	FL77	5.74
3176	FL77	0.56
3177	FL77	4.04
3178	FL77	3.69
3179	FL77	5.23
3180	FL77	3.1
3181	FL77	1.21
3182	FL77	1.82
3183	FL77	2.56
3184	FL77	4.19
3185	FL77	0.22
Line No.	(a)	(b)
3186	FL77	5.74
3187	FL77	3.45
3188	FL77	4.45
3189	FL77	2.02
3190	FL77	5.7
3191	FL77	5.58
3192	FL77	1.42
3193	FL77	2.57
3194	FL77	6.18

3195	FL77	5.84
3196	FL77	3.27
3197	FL77	2.97
3198	FL77	3.88
3199	FL77	4.1
3200	FL77	2.83
3201	FL77	5.25
3202	FL77	1.26
3203	FL77	5.08
3204	FL77	4.47
3205	FL77	7.54
3206	FL77	1
3207	FL77	1.09
3208	FL77	4.67
3209	FL77	5.41
3210	FL77	3.88
3211	FL77	2.01
3212	FL77	1.96
3213	FL77	1.03
Line No.	(a)	(b)
3214	FL77	3.62
3215	FL77	2.08
3216	FL77	2.09
3217	FL77	4.15
3218	FL77	5.98
3219	FL77	1.33
3220	FL77	0.98
3221	FL77	4.86
3222	FL77	7.55
3223	FL77	4.2
3224	FL77	1.77
3225	FL77	5.88
3226	FL77	0.44
3227	FL77	2.52
3228	FL77	2.26
3229	FL77	6.04
3230	FL77	1.59
3231	FL77	4.42
3232	FL77	5.51
3233	FL77	7.87
3234	FL77	2.2
3235	FL77	4.41
3236	FL77	3.94
3237	FL77	0.98
3238	FL77	3.98
3239	FL77	0.73
3240	FL77	0.83
3241	FL77	4.18
Line No.	(a)	(b)
3242	FL77	0.96
3243	FL77	6.31
3244	FL77	1.73
3245	FL77	3.54
3246	FL77	0.8
3247	FL77	5.72
3248	FL77	0.79
3249	FL77	1.57
3250	FL77	3.18
3251	FL77	1.93
3252	FL77	1.47
3253	FL77	7.6
3254	FL77	3.87
3255	FL77	5.07
3256	FL77	1.71
3257	FL77	1.2
3258	FL77	3.73
3259	FL77	2.5
3260	FL77	2.06
3261	FL77	2.16
3262	FL77	5
3263	FL77	0.3
3264	FL77	8.63
3265	FL77	0.44
3266	FL77	4.48
3267	FL77	0.58
3268	FL77	5.23
3269	FL77	6.87
Line No.	(a)	(b)
3270	FL77	2.96

3271	FL77	6.54
3272	FL77	1.55
3273	FL77	4.23
3274	FL77	3
3275	FL77	3.21
3276	FL77	0.92
3277	FL77	1.64
3278	FL77	2.85
3279	FL77	7.63
3280	FL77	2.35
3281	FL77	4.17
3282	FL77	1.1
3283	FL77	6.75
3284	FL77	3.46
3285	FL77	5.76
3286	FL77	2.08
3287	FL77	2.51
3288	FL77	0.21
3289	FL77	1.56
3290	FL77	0.8
3291	FL77	2.26
3292	FL77	2.53
3293	FL77	6.99
3294	FL77	1.39
3295	FL77	0.63
3296	FL77	2.08
3297	FL77	0.39
Line No.	(a)	(b)
3298	FL77	0
3299	FL77	1.02
3300	FL82	0.43
3301	FL82	0.91
3302	FL82	0.57
3303	FL82	3.42
3304	FL82	2.64
3305	FL82	2.27
3306	FL82	0.34
3307	FL82	1.77
3308	FL82	2.26
3309	FL82	2.93
3310	FL82	0.61
3311	FL82	0.71
3312	FL82	1.88
3313	FL82	2.01
3314	FL82	1.23
3315	FL82	1.75
3316	FL82	3.65
3317	FL82	0.29
3318	FL82	0.71
3319	FL83	0.34
3320	FL83	0.08
3321	FL83	0.29
3322	FL83	0.58
3323	FL83	1.71
3324	FL83	1.95
3325	FL83	1.2
Line No.	(a)	(b)
3326	FL83	0.81
3327	FL83	1.37
3328	FL83	2.57
3329	FL83	0.38
3330	FL83	1.59
3331	FL83	1.06
3332	FL83	2.23
3333	FL83	2.8
3334	FL83	1.58
3335	FL83	0.38
3336	FL83	1.95
3337	FL83	1.37
3338	FL83	1.83
3339	FL83	0.75
3340	FL83	1.97
3341	FL83	4.77
3342	FL83	0.93
3343	FL83	0.66
3344	FL83	1.69
3345	FL83	2.61
3346	FL83	0.76
3347	FL83	0.09

3348	FL83	0.01
3349	FL84	0.07
3350	FL84	0.19
3351	FL84	1.05
3352	FL84	0.2
3353	FL85A	1.46
Line No.	(a)	(b)
3354	FL85A	0.91
3355	FL85A	2.32
3356	FL85A	0.98
3357	FL85A	2.7
3358	FL85A	2.3
3359	FL85A	2.32
3360	FL85A	0.68
3361	FL85A	2.83
3362	FL85A	0.27
3363	FL85A	1.93
3364	FL85A	1.05
3365	FL85A	0.37
3366	FL85A	2.72
3367	FL85A	1.15
3368	FL85A	2.58
3369	FL85A	0.16
3370	FL85A	0.41
3371	FL85A	6.95
3372	FL85A	4.99
3373	FL85A	0.35
3374	FL85A	0.64
3375	FL85A	0.13
3376	FL85A	0.91
3377	FL85A	0.27
3378	FL85A	0.68
3379	FL85A	0.94
3380	FL85A	0.42
3381	FL85A	1.01
Line No.	(a)	(b)
3382	FL85A	0.75
3383	FL85A	0.62
3384	FL85A	1.34
3385	FL85A	1.17
3386	FL85A	1.18
3387	FL85A	0.73
3388	FL85A	0.25
3389	FL86A	0.22
3390	FL86A	0.41
3391	FL86A	0.84
3392	FL86A	1.22
3393	FL86A	0.36
3394	FL86A	0.41
3395	FL86A	0.46
3396	FL86A	0.98
3397	FL86A	1.12
3398	FL86A	2.36
3399	FL86A	2.51
3400	FL86A	0.68
3401	FL86A	2.43
3402	FL86A	2.46
3403	FL86A	0.34
3404	FL86A	5.32
3405	FL86A	0.41
3406	FL86A	3.71
3407	FL86A	0.93
3408	FL86A	0.9
3409	FL86A	2.24
Line No.	(a)	(b)
3410	FL86A	4.71
3411	FL86A	0.84
3412	FL86A	0.48
3413	FL86A	4.74
3414	FL86A	3.58
3415	FL86A	1.96
3416	FL86A	0.52
3417	FL86A	2.76
3418	FL86A	0.26
3419	FL86A	0.62
3420	FL86A	4.11
3421	FL86A	0.38
3422	FL86A	2.48
3423	FL86A	3.58

3424	FL86A	2.06
3425	FL86A	0.86
3426	FL86A	3.34
3427	FL86A	2.74
3428	FL86A	3.8
3429	FL86A	3.21
3430	FL86A	0
3431	FL86B	0.6
3432	FL86B	0.73
3433	FL86B	1.58
3434	FL86B	0.72
3435	FL86B	3.9
3436	FL86B	1.27
3437	FL86B	0.25
Line No.	(a)	(b)
3438	FL86B	1.47
3439	FL86B	4.33
3440	FL86B	7.87
3441	FL89	1.13
3442	FL89	2.3
3443	FL89	0.55
3444	FL89	2.04
3445	FL89	2.42
3446	FL89	4.18
3447	FL89	2.58
3448	FL89	2.45
3449	FL89	3.21
3450	FL89	4.75
3451	FL89	5.29
3452	FL89	3.1
3453	FL89	1.99
3454	FL89	3.7
3455	FL89	5.04
3456	FL89	2.26
3457	FL89	5.17
3458	FL89	5.57
3459	FL89	2.9
3460	FL89	1.84
3461	FL89	2.21
3462	FL89	1.26
3463	FL89	3.22
3464	FL89	1.79
3465	FL89	2.63
Line No.	(a)	(b)
3466	FL89	0.65
3467	FL89	1.71
3468	FL89	0.78
3469	FL89	3.23
3470	FL89	3.27
3471	FL89	5.12
3472	FL89	2.05
3473	FL89	2.86
3474	FL89	4.28
3475	FL89	0.68
3476	FL89	2.49
3477	FL89	1.96
3478	FL89	9.02
3479	FL89	4.13
3480	FL89	1.49
3481	FL89	1.65
3482	FL89	4.18
3483	FL89	3.69
3484	FL89	0.83
3485	FL89	0.33
3486	FL89	7.19
3487	FL89	0.94
3488	FL89	3.08
3489	FL89	2.58
3490	FL89	3.32
3491	FL89	1.17
3492	FL89	4.16
3493	FL89	2.61
Line No.	(a)	(b)
3494	FL89	3.75
3495	FL89	4.11
3496	FL89	2.55
3497	FL89	5.7
3498	FL89	1.54
3499	FL89	2.55

3500	FL89	1.26
3501	FL89	1.91
3502	FL89	3.6
3503	FL89	4.66
3504	FL89	5.11
3505	FL89	2.23
3506	FL89	6.25
3507	FL89	2.7
3508	FL89	3.75
3509	FL89	1.52
3510	FL89	3.3
3511	FL89	2.21
3512	FL89	3.08
3513	FL89	2.13
3514	FL89	0.69
3515	FL89	2.38
3516	FL89	6.24
3517	FL89	2.68
3518	FL89	2.08
3519	FL89	1.12
3520	FL89	3.51
3521	FL89	4.18
Line No.	(a)	(b)
3522	FL89	2.95
3523	FL89	2.33
3524	FL89	4.86
3525	FL89	1.74
3526	FL89	2.44
3527	FL89	1.31
3528	FL89	2.63
3529	FL89	3.17
3530	FL89	2.12
3531	FL89	4.39
3532	FL89	0.23
3533	FL89	5.2
3534	FL89	4.54
3535	FL89	2.34
3536	FL89	3.53
3537	FL89	4.18
3538	FL89	3.46
3539	FL89	1.96
3540	FL89	6.96
3541	FL89	4.27
3542	FL89	5.2
3543	FL89	2.5
3544	FL89	3.75
3545	FL89	5.7
3546	FL89	2.66
3547	FL89	5.71
3548	FL89	4.56
3549	FL89	6.57
Line No.	(a)	(b)
3550	FL89	2.02
3551	FL89	0.28
3552	FL89	0.88
3553	FL89	2.17
3554	FL89	0.77
3555	FL89	3.98
3556	FL89	2.27
3557	FL89	3.74
3558	FL89	2
3559	FL89	3.01
3560	FL89	1.53
3561	FL89	2.87
3562	FL89	2.17
3563	FL89	1.53
3564	FL89	5.59
3565	FL89	2.77
3566	FL89	1.8
3567	FL89	7.11
3568	FL89	2.19
3569	FL89	1.84
3570	FL89	1.53
3571	FL89	1.17
3572	FL89	7.38
3573	FL89	6.35
3574	FL89	5.24
3575	FL89	4.21
3576	FL89	2.78

3577	FL89	3.4
Line No.	(a)	(b)
3578	FL89	1.78
3579	FL89	1.91
3580	FL89	6.62
3581	FL89	4.01
3582	FL89	1.37
3583	FL89	2.76
3584	FL89	2.74
3585	FL89	2.98
3586	FL89	6.36
3587	FL89	1.99
3588	FL89	2.79
3589	FL89	1.6
3590	FL89	1.97
3591	FL89	7.06
3592	FL89	4.34
3593	FL89	4.99
3594	FL89	4.44
3595	FL89	2.97
3596	FL89	0.98
3597	FL89	9.96
3598	FL89	10.43
3599	FL89	4.3
3600	FL89	1.45
3601	FL89	6.6
3602	FL89	6.64
3603	FL89	0.16
3604	FL89	0.68
3605	FL89	0.72
Line No.	(a)	(b)
3606	FL90	0.29
3607	FL90	0.48
3608	FL90	1.13
3609	FL90	1.63
3610	FL90	1.11
3611	FL90	1.24
3612	FL90	0.95
3613	FL90	2.86
3614	FL90	1.07
3615	FL90	0.7
3616	FL90	5.04
3617	FL90	2.45
3618	FL90	0.05
3619	FL90	2.36
3620	FL90	2.79
3621	FL90	3.12
3622	FL90	1.93
3623	FL90	0.72
3624	FL90	3.17
3625	FL90	1.96
3626	FL90	3.45
3627	FL90	2
3628	FL90	1.17
3629	FL90	1.13
3630	FL90	1.21
3631	FL90	0.84
3632	FL90	0.64
3633	FL90	0.61
Line No.	(a)	(b)
3634	FL90	3.27
3635	FL90	0.92
3636	FL90	1.78
3637	FL90	0.77
3638	FL90	0.3
3639	FL90	2.78
3640	FL90	0.27
3641	FL90	2.3
3642	FL90	0.14
3643	FL90	1.16
3644	FL90	1.88
3645	FL90	0
3646	FL90	2.86
3647	FL90	1.52
3648	FL90	2.43
3649	FL90	0.39
3650	FL90	2.58
3651	FL90	0.24
3652	FL90	0.67

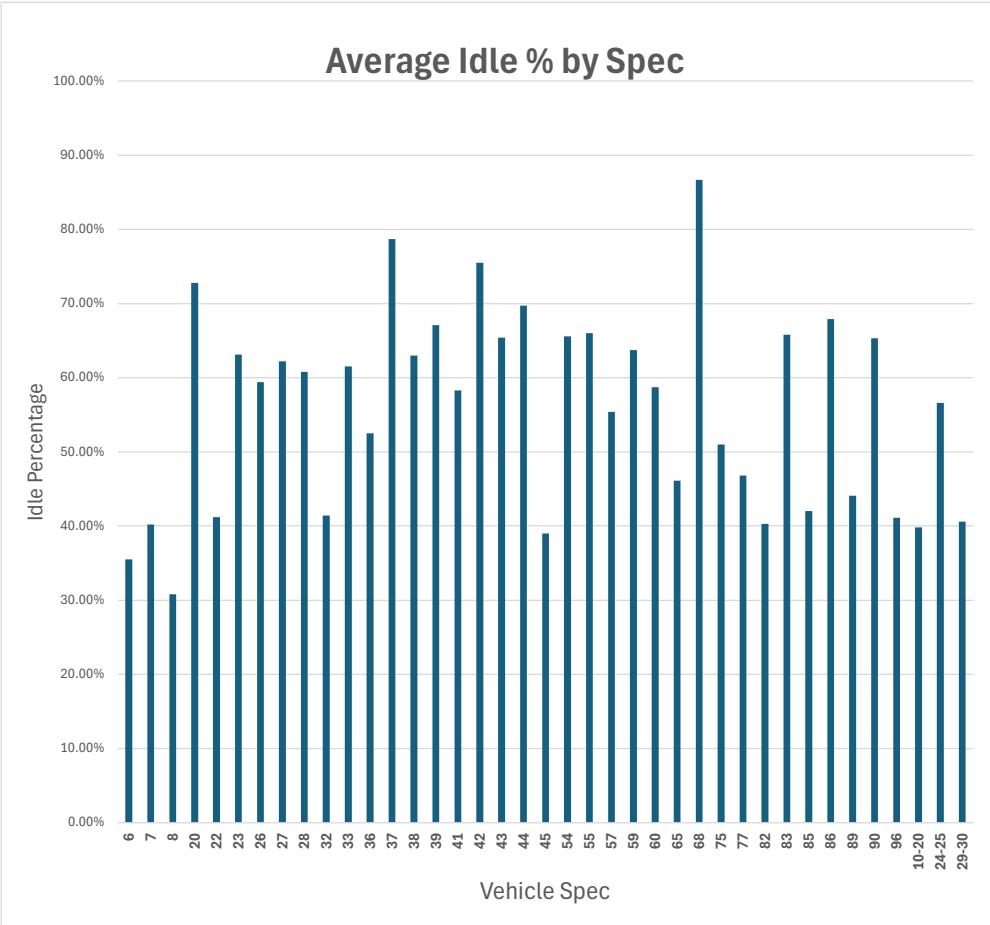
3653	FL90	1.6
3654	FL90	2.73
3655	FL90	4.63
3656	FL90	4.7
3657	FL90	2.31
3658	FL90	0.75
3659	FL90	3.38
3660	FL90	3.47
3661	FL90	3.93
Line No.	(a)	(b)
3662	FL90	7.06
3663	FL90	3.47
3664	FL90	3.09
3665	FL90	0.34
3666	FL90	1.36
3667	FL90	5.04
3668	FL90	4.13
3669	FL90	2.16
3670	FL90	0.32
3671	FL90	3.05
3672	FL90	2.36
3673	FL90	1.29
3674	FL90	3.62
3675	FL90	2.53
3676	FL90	1.13
3677	FL90	5.03
3678	FL90	6.83
3679	FL90	2.29
3680	FL90	1.35
3681	FL90	4.77
3682	FL90	0.23
3683	FL90	5.8
3684	FL90	0.08
3685	FL90	0.55
3686	FL94	2.86
3687	FL94	4.28
3688	FL94	4.63
3689	FL94	3.88
Line No.	(a)	(b)
3690	FL94	0.9
3691	FL94	4.7
3692	FL94	4.2
3693	FL94	2.86
3694	FL96	1.5
3695	FL96	0
3696	FL96	0
3697	FL96	3.33
3698	FL96	3.29
3699	FL96	5.25
3700	FL96	3.84
3701	FL96	3.73
3702	FL96	4
3703	FL96	5.49
3704	FL96	3.28
3705	FL96	2.96
3706	FL96	3.91
3707	FL96	4.55
3708	FL96	4.34
3709	FL96	3.98
3710	FL96	4.04
3711	FL96	4.8
3712	FL96	5.16
3713	FL96	4.24
3714	FL96	4.69
3715	FL96	3.78
3716	FL96	4.5
3717	FL96	1.58
Line No.	(a)	(b)
3718	FL96	6.59
3719	FL96	3.98
3720	FL96	2.26
3721	FL96	5.48
3722	FL96	1.08
3723	FL96	4.39
3724	FL96	4.13
3725	FL96	5.55
3726	FL96	5.72
3727	FL96	3.56
3728	FL96	4.13

3729	FL96	4.23
3730	FL96	2.61
3731	FL96	4.01
3732	FL96	3.2
3733	FL96	1.98
3734	FL96	1.44
3735	FL96	5.52
3736	FL96	3.12
3737	FL96	3.42
3738	FL96	5.39
3739	FL96	5.65
3740	FL96	4.32
3741	FL96	4.37
3742	FL96	2.41
3743	FL96	2.23
3744	FL96	3.97
3745	FL96	5.15
Line No.	(a)	(b)
3746	FL96	3.45
3747	FL96	6.88
3748	FL96	6.34
3749	FL96	2.52
3750	FL96	2.5
3751	FL96	0.19
3752	FL96	3.65
3753	FL96	3.84
3754	FL96	4.05
3755	FL96	3.38
3756	FL96	4.17
3757	FL96	1.67
3758	FL96	2.48
3759	FL96	3.19
3760	FL96	6.7
3761	FL96	3.02
3762	FL96	4.13
3763	FL96	6.53
3764	FL96	4.67
3765	FL96	5.99
3766	FL96	4.03
3767	FL96	4.5
3768	FL96	2.34
3769	FL96	2.38
3770	FL96	6.44
3771	FL96	1.28
3772	FL96	5.79
3773	FL96	4.44
Line No.	(a)	(b)
3774	FL96	3.43
3775	FL96	3.22
3776	FL96	1.23
3777	FL96	4.48
3778	FL96	4.16
3779	FL96	6.88
3780	FL96	1.81
3781	FL96	3.2
3782	FL96	6.44
3783	FL96	6.12
3784	FL96	6.18
3785	FL96	3.29
3786	FL96	0.14
3787	FL96	0.5
3788	FL97	1.25
3789	FL98	0.26
3790	FL98	0.33
3791	FL98	2.62
3792	FL98	0.59
3793	FL98	0.27

Source Data:
Utilimarc

	(a)	(b)
Line No.	Spec	Average Idle W/O PTO % By Spec
1	06	35.5%
2	07	40.2%
3	08	30.8%
4	10-20	39.8%
5	20	72.8%
6	22	41.2%
7	24-25	56.6%
8	23	63.1%
9	26	59.4%
10	27	62.2%
11	28	60.8%
12	29-30	40.6%
13	32	41.4%
14	33	61.5%
15	36	52.5%
16	37	78.7%
17	38	63.0%
18	39	67.1%
19	41	58.3%
20	42	75.5%
21	43	65.4%
22	44	69.7%
23	45	39.0%
24	54	65.6%
25	55	66.0%
26	57	55.4%
27	59	63.7%
28	60	58.7%
29	65	46.1%
30	68	86.7%
31	75	51.0%
32	77	46.8%
33	82	40.3%
34	83	65.8%
35	85	42.0%
36	86	67.9%
37	89	44.1%
38	90	65.3%
39	96	41.1%

Jan 2023 to Sept 2025



Spec 68 highest average idling profile.
Spec 68's used by:
Gas Ops Supply & construction
Gas Ops construction
Gas Ops
Gas construction Resource Management

Idle at Service Centers Type

	(a)	(b)	(c)	(d)
Line No.	Category	Total Units	Total Duration (Hours)	Percent of Total Service Center Idle Hours
1	PICKUP	1,190	9,612.20	39.73%
2	VAN	407	6,379.80	26.37%
3	BUCKET TRUCK	270	1,723.90	7.12%
4	DIGGER DERRICK	164	1,522.60	6.29%
5	GAS SERVICE TRUCK	125	1,285.60	5.31%
6	FLATBED/STAKE RACK	89	682.3	2.82%
7	DUMP TRUCK	65	664.1	2.74%
8	SUV	167	557.3	2.30%
9	SERVICE TRUCK	65	538.6	2.23%
10	SERVICE BUCKET TRUCK	117	376.7	1.56%
11	ELECTRIC SERVICE TRUCK	50	320.2	1.32%
12	OTR TRACTOR	28	179.9	0.74%
13	FLEET SERVICE TRUCK	36	118	0.49%
14	SEDAN	61	68.1	0.28%
15	STREETLIGHT TRUCK	6	60.2	0.25%
16	CRANE	19	47.3	0.20%
17	CARGO VAN	15	43.3	0.18%
18	VACUUM TRUCK	1	10	0.04%
19	CUBE VAN	3	6.3	0.03%

Source: Utilimarc

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
Line No.									
1	2012 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 18	SEDAN	44.2	153.6	28.8%	1105	Average idle time	35.5%
2	2014 Ford Fusion Energi	FIELD OPERATIONS SOUTHEAST ZONE 17	SEDAN	277.3	775.0	35.8%	6934		
3	2012 Chevrolet Impala	EO-CFS WEST B	SEDAN	365.3	1,320.7	27.7%	9134	Idle Metric Tons CO2	47
4	2019 Chevrolet Volt	FIELD OPERATIONS NORTHEAST ZONE 2	SEDAN	286.8	762.8	37.6%	7170		
5	2015 Chevrolet Malibu	GAS OPS-CENTRAL-ZONE 1	SEDAN	263.2	748.2	35.2%	6581	Gallons idled	4913.6
6	2015 Chevrolet Impala	FIELD OPERATIONS SOUTHEAST ZONE 17	SEDAN	177.2	495.6	35.8%	4430		
7	2009 Chevrolet Impala	EO-LVD-CENTRAL ZONE 2-ALMA-B	SEDAN	168.1	575.5	29.2%	4203		
8	2011 Ford Fusion	FIELD OPERATIONS NORTHEAST ZONE 10	SEDAN	80.0	289.2	27.7%	2001		
9	2013 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 18	SEDAN	300.1	477.1	62.9%	7503		
10	2014 Chevrolet Malibu	FIELD OPERATIONS EAST CENTRAL ZONE 16	SEDAN	269.6	790.9	34.1%	6740		
11	2009 Chevrolet Impala	GAS OPS SOUTHEAST A	SEDAN	152.3	394.7	38.6%	3806		
12	2007 Chevrolet Impala	FIELD OPERATIONS EAST CENTRAL ZONE 12	SEDAN	302.5	548.3	55.2%	7562		
13	2019 Chevrolet Volt	WORK INNOVATION & TRANSFORMATION	SEDAN	96.0	242.4	39.6%	2399		
14	2011 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 17	SEDAN	203.3	601.5	33.8%	5082		
15	2013 Chevrolet Impala	FIELD OPERATIONS EAST CENTRAL ZONE 12	SEDAN	469.4	957.5	49.0%	11734		
16	2012 Chevrolet Impala	FIELD OPERATIONS NORTHEAST ZONE 2	SEDAN	171.4	412.4	41.6%	4284		
17	2015 Chevrolet Malibu	FIELD OPERATIONS SOUTHERN ZONE 22	SEDAN	125.7	477.8	26.3%	3143		
18	2013 Chevrolet Impala	GO-MTR RDG Z2-NORTHEAST	SEDAN	253.1	774.7	32.7%	6329		
19	2009 Chevrolet Impala	EO-CFS WEST B	SEDAN	152.1	415.9	36.6%	3802		
20	2011 Chevrolet Volt	EO-LVD-EAST ZONE 3-LANSING-A	SEDAN	45.9	162.0	28.3%	1149		
21	2015 Chevrolet Malibu	EO-CFS WEST C	SEDAN	89.4	350.2	25.5%	2235		
22	2019 Chevrolet Volt	FIELD OPERATIONS NORTHEAST ZONE 10	SEDAN	92.9	368.2	25.2%	2324		
23	2011 Chevrolet Impala	FIELD OPERATIONS SOUTHEAST ZONE 19	SEDAN	584.3	873.5	66.9%	14609		
24	2013 Chevrolet Impala	FIELD OPERATIONS SOUTHWEST ZONE 20	SEDAN	148.9	551.4	27.0%	3724		
25	2014 Chevrolet Malibu	EO-CFS WEST E	SEDAN	81.0	312.7	25.9%	2026		
26	2019 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 19	SEDAN	287.2	637.0	45.1%	7180		
27	2012 Chevrolet Impala	FIELD OPERATIONS NORTHEAST	SEDAN	259.2	971.5	26.7%	6480		
28	2012 Chevrolet Impala	FIELD OPERATIONS SOUTHWEST ZONE 14	SEDAN	73.9	248.0	29.8%	1846		
29	2012 Chevrolet Impala	NDT EAST	SEDAN	543.9	1,642.2	33.1%	13597		
30	2013 Chevrolet Impala	FIELD OPERATIONS EAST CENTRAL ZONE 12	SEDAN	534.6	944.3	56.6%	13365		
31	2013 Chevrolet Impala	FIELD OPERATIONS SOUTHWEST ZONE 14	SEDAN	161.4	645.1	25.0%	4035		
32	2019 Chevrolet Volt	FIELD OPERATIONS EAST CENTRAL ZONE 12	SEDAN	293.6	694.6	42.3%	7341		
	(a)	(b)	(c)	(d)	(e)	(f)	(g)		
33	2013 Chevrolet Impala	EO-CFS EAST B	SEDAN	23.2	92.0	25.2%	581		
34	2013 Chevrolet Impala	WM&CD-NW ZONE-GRN/FRE/BIG/GVL	SEDAN	281.8	1,078.4	26.1%	7045		
35	2019 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 19	SEDAN	118.2	379.0	31.2%	2955		
36	2019 Chevrolet Volt	ELECTRIC GIS	SEDAN	272.7	928.9	29.4%	6816		
37	2019 Chevrolet Volt	FIELD OPERATIONS SOUTHEAST ZONE 18	SEDAN	139.4	367.0	38.0%	3486		
	2023 to Sept 2025			8,189.4					

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2022 Ford Edge	GAS OPS-EAST-ZONE-2E	SUV	524.7	1,634.1	32.1%	13117	Average idle time	40.2%
2	2014 Chevrolet Captiva Sport	GAS OPS-SOUTH-ZONE 1H	SUV	32.8	71.8	45.7%	821		
3	2019 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	565.9	1,331.5	42.5%	14146		433.8
4	2021 Chevrolet Equinox	HYDRO OPS ENGINEERING	SUV	618.0	2,064.1	29.9%	15449	Idle Metric Tons CO2	
5	2022 Ford Edge	GO-TO-PIPELINE & STORAGE-NORTH	SUV	672.9	2,326.0	28.9%	16822		
6	2013 Chevrolet Captiva Sport	GAS OPS-SOUTHEAST B2	SUV	453.8	1,633.8	27.8%	11344		45550.904
7	2018 Ford Edge	LVD DESIGN-MUS/FRE	SUV	97.5	371.2	26.3%	2438	Gallons idled	
8	2021 Chevrolet Equinox	GEP&S/GEP/DIST ENGG W-DES	SUV	1,034.8	1,565.6	66.1%	25871		
9	2022 Ford Edge	EO-FORESTRY OPERATIONS	SUV	368.6	999.3	36.9%	9216		
10	2023 Ford Edge	LVD SYSTEM PLANNING - WEST	SUV	131.7	349.0	37.7%	3292		
11	2021 Chevrolet Equinox	WM&CD-NW ZONE -	SUV	197.5	593.9	33.3%	4937		
12	2022 Ford Edge	EO-LVD-LAKESHORE ZONE 7	SUV	485.5	1,797.7	27.0%	12138		
13	2021 Chevrolet Equinox	GEP&S/GEP/DIST ENGG W-DES	SUV	3,051.3	4,409.5	69.2%	76283		
14	2013 Chevrolet Captiva Sport	FIELD OPERATIONS NORTHEAST ZONE 5	SUV	115.8	434.1	26.7%	2894		
15	2018 Ford Edge	WM&CD-NW ZONE -	SUV	177.7	659.1	27.0%	4442		
16	2013 Chevrolet Captiva Sport	FIELD OPERATIONS SOUTHEAST ZONE 19	SUV	387.2	566.9	68.3%	9680		
17	2023 Ford Edge	LVD DESIGN-GRA/GRE	SUV	97.4	343.9	28.3%	2435		
18	2018 Ford Edge	LVD SYSTEM PLANNING - WEST	SUV	166.0	649.5	25.6%	4150		
19	2020 Ford Edge	S4 WORK & ASSET MANAGEMENT	SUV	399.7	1,195.4	33.4%	9991		
20	2021 Chevrolet Equinox	CAMPBELL-CHEMISTRY/RESULT	SUV	526.7	1,627.3	32.4%	13166		
21	2023 Ford Edge	LVD DESIGN-GRA/GRE	SUV	69.2	245.1	28.2%	1730		
22	2021 Chevrolet Equinox	EO-ELEC METER OPS	SUV	1,291.5	4,463.0	28.9%	32289		
23	2018 Ford Edge	GAS OPS-EAST-ZONE-1B	SUV	1,247.3	2,313.2	53.9%	31182		
24	2020 Ford Edge	METER READING/GAS OPS	SUV	1,358.7	4,146.4	32.8%	33967		
25	2023 Ford Edge	ADVANCED METHANE DETECTION	SUV	1,598.0	4,705.2	34.0%	39950		
26	2020 Ford Edge	GO-GCON-FLINT CONSTRUCTION E	SUV	452.6	1,426.6	31.7%	11315		
27	2020 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	471.9	1,710.8	27.6%	11797		
28	2019 Chevrolet Equinox	WM&CD-NW ZONE -	SUV	262.5	997.4	26.3%	6561		
29	2021 Ford Edge	EO-LVD-EAST ZONE 3-FLINT-A	SUV	854.3	1,597.8	53.5%	21358		
30	2020 Ford Edge	GAS OPS-EAST-ZONE-1E	SUV	1,654.1	2,420.5	68.3%	41352		
31	2021 Ford Edge	GAS OPS-SOUTHWEST A8	SUV	292.4	835.8	35.0%	7310		
32	2018 Ford Edge	GAS OPS - REG-SW	SUV	363.7	1,207.5	30.1%	9092		
33	2020 Ford Edge	GO-GAS OPS-SOUTHWEST A1	SUV	631.1	2,180.9	28.9%	15779		
34	2020 Ford Edge	GAS OPS SOUTHEAST REGION	SUV	375.3	1,484.8	25.3%	9383		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
35	2018 Ford Edge	HVD AND FORESTRY MANAGEMENT	SUV	363.0	1,048.4	34.6%	9076
36	2018 Ford Edge	GAS OPS-EAST-ZONE-2E	SUV	1,105.2	1,625.6	68.0%	27631
37	2019 Chevrolet Equinox	EO-LVD-EAST ZONE 3-FLINT-B	SUV	713.2	1,437.8	49.6%	17829
38	2020 Ford Edge	GAS OPS-EAST-ZONE-2C	SUV	542.3	1,163.6	46.6%	13559
39	2018 Ford Edge	GAS OPS-EAST-ZONE-2B	SUV	1,352.6	1,870.3	72.3%	33816
40	2019 Ford Edge	GAS OPS-EAST-ZONE-1E	SUV	1,801.2	2,558.2	70.4%	45030
41	2020 Ford Edge	GO-GCON-RESOURCE MGMT B I	SUV	196.8	767.1	25.7%	4920
42	2018 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	476.9	1,588.1	30.0%	11924
43	2019 Ford Edge	GAS OPS-EAST-ZONE-2B	SUV	1,350.4	1,777.6	76.0%	33760
44	2020 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	1,852.0	3,773.6	49.1%	46300
45	2019 Ford Edge	GAS OPS-EAST-ZONE-2B	SUV	1,072.5	1,683.5	63.7%	26813
46	2019 Ford Edge	GAS OPS-EAST-ZONE-2B	SUV	1,782.6	2,483.2	71.8%	44565
47	2020 Ford Edge	EO-LVD-GR ZONE-6-EAST KENT-B	SUV	684.5	2,238.4	30.6%	17114
48	2018 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	415.4	791.8	52.5%	10385
49	2019 Ford Edge	GAS OPS-EAST-ZONE-1E	SUV	1,105.8	1,809.0	61.1%	27644
50	2020 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	419.1	1,377.2	30.4%	10477
51	2018 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	465.1	1,380.7	33.7%	11628
52	2020 Ford Edge	GAS OPS-EAST-ZONE-2D	SUV	319.7	1,146.8	27.9%	7993
53	2018 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	1,180.2	2,331.7	50.6%	29506
54	2020 Ford Edge	GO-GCON-FLINT CONSTRUCTION G	SUV	336.7	1,141.6	29.5%	8418
55	2018 Ford Edge	GAS OPS-EAST-ZONE-1E	SUV	2,023.9	2,834.0	71.4%	50596
56	2019 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	731.7	1,227.7	59.6%	18293
57	2020 Ford Edge	GAS OPS-SOUTHEAST C	SUV	497.4	1,060.1	46.9%	12434
58	2020 Ford Edge	GO-MTR RDG Z3-CENTRAL	SUV	884.4	3,464.9	25.5%	22109
59	2019 Ford Edge	WM&CD-SW ZONE-KAZ/HAM	SUV	3.3	11.0	30.3%	83
60	2018 Ford Edge	EO-LVD-EAST ZONE 3-FLINT-B	SUV	919.7	1,819.1	50.6%	22994
61	2019 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	926.9	1,957.5	47.4%	23173
62	2020 Ford Edge	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	SUV	727.1	2,066.6	35.2%	18178
63	2018 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	497.4	1,881.7	26.4%	12434
64	2020 Ford Edge	GAS OPS-EAST-ZONE-1B	SUV	962.9	2,016.5	47.7%	24072
65	2019 Ford Edge	GAS OPS-SOUTH-ZONE-3	SUV	401.8	1,206.0	33.3%	10045
66	2020 Ford Edge	GAS OPS-SOUTHEAST A1	SUV	652.1	2,283.2	28.6%	16303
67	2020 Ford Edge	GO-MTR RDG Z3-CENTRAL	SUV	1,247.9	3,987.9	31.3%	31197
68	2020 Ford Edge	GO-MTR RDG Z2-NORTHEAST	SUV	1,095.2	3,720.7	29.4%	27379
69	2019 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	587.2	1,744.9	33.7%	14679
70	2019 Ford Edge	GAS OPS-SOUTH-ZONE 1C	SUV	545.6	1,780.6	30.6%	13640
71	2019 Ford Edge	EO-SUBSTATION MAINT H-GRAND RAPIDS	SUV	711.5	2,175.3	32.7%	17788
72	2019 Ford Edge	EO-FORESTRY OPERATIONS SOUTH	SUV	968.7	2,899.0	33.4%	24217
73	2019 Ford Edge	GO-GCON-RESOURCE MGMT B	SUV	729.1	1,427.9	51.1%	18228
74	2020 Ford Edge	OCC-STANDARDS ADHERENCE & VERIFICATION	SUV	2,872.7	5,226.9	55.0%	71818

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2013 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 2	PICKUP	1,542.9	3,024.5	51.0%	38573	Average idle time	41.2%
2	2014 Ford F-150	GO-GCON-RESOURCE MGMT B I	PICKUP	360.8	686.8	52.5%	9021		
3	2015 GMC Sierra	NDT MANAGEMENT	PICKUP	825.8	1,929.7	42.8%	20645	Idle Metric Tons CO2	1182.8
4	2016 Ford F-150	GAS OPS SOUTHWEST REGION	PICKUP	2,016.1	2,802.8	71.9%	50401		
5	2018 Ford F-150	HVD LINES OPERATION & MAINT	PICKUP	639.7	2,221.7	28.8%	15992	Gallons idled	124199.21
6	2009 Chevrolet Silverado	EO-LVD-EAST-SE ZONE-COLDWATER-C	PICKUP	465.4	1,162.1	40.0%	11634		
7	2010 Chevrolet Silverado	SUB TRANS & DIST STDS & MATERIALS	PICKUP	83.6	307.3	27.2%	2090		
8	2012 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 10	PICKUP	321.9	884.1	36.4%	8047		
9	2023 Ford F-150	LVD DESIGN	PICKUP	146.7	504.0	29.1%	3668		
10	2014 Ford F-150	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,066.2	2,452.0	43.5%	26655		
11	2015 GMC Sierra	GEP&S/GEP/DIST ENGG W-DES	PICKUP	582.3	1,468.2	39.7%	14557		
12	2017 Ford F-150	FIELD OPERATIONS NORTHWEST ZONE 7	PICKUP	888.9	1,862.6	47.7%	22222		
13	2011 Chevrolet Silverado	CORPORATE FACILITIES ZONE 30	PICKUP	109.8	424.7	25.8%	2744		
14	2012 Chevrolet Silverado	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	81.4	181.1	45.0%	2036		
15	2023 Ford F-150	LVD SYSTEM PLANNING - WEST	PICKUP	194.0	614.4	31.6%	4851		
16	2014 Ford F-150	GO-GCON-RESOURCE MGMT B I	PICKUP	861.9	1,222.7	70.5%	21548		
17	2015 GMC Sierra	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	287.5	896.0	32.1%	7188		
18	2017 Ford F-150	FIELD OPERATIONS SOUTHERN ZONE 22	PICKUP	204.0	799.6	25.5%	5099		
19	2010 Ford F-150	CAMPBELL SITE MAINTENANCE	PICKUP	128.4	322.2	39.9%	3210		
20	2011 Chevrolet Silverado	LVD SYSTEM PLANNING - WEST	PICKUP	422.9	1,077.8	39.2%	10573		
21	2024 Chevrolet Silverado EV	LVD PLANNING - SOUTHEAST	PICKUP	0.0	212.4	28.3%	0		
22	2017 Ford F-150	EO-FORESTRY OPS-BENZIE/CADILLAC	PICKUP	446.7	1,359.2	32.9%	11168		
23	2023 Ford F-150	LVD SYSTEM PLANNING - WEST	PICKUP	695.8	1,069.5	65.1%	17395		
24	2017 Ford F-150	GAS OPS-NORTH-ZONE-2B	PICKUP	676.0	1,963.8	34.4%	16901		
25	2023 Ford F-150	LVD DESIGN	PICKUP	490.4	1,413.3	34.7%	12260		
26	2018 Ford F-150	EO-ELEC FIELD LAB	PICKUP	974.7	2,135.2	45.7%	24369		
27	2011 Chevrolet Silverado	WM&CD-NE ZONE-FLT	PICKUP	241.2	789.3	30.6%	6029		
28	2012 GMC Sierra	WM&CD-NW ZONE-GRN/FRE/BIG/GVL	PICKUP	232.8	871.7	26.7%	5821		
29	2015 GMC Sierra	GAS OPS-SOUTH-ZONE-3	PICKUP	3,200.6	4,005.2	79.9%	80014		
30	2018 Ford F-150	GEP&S/GEP/PRE/TE-TED-I ENG STANDALONE	PICKUP	439.3	1,165.8	37.7%	10983		
31	2011 Chevrolet Silverado	WM&CD-NW ZONE -	PICKUP	86.3	291.0	29.7%	2157		
32	2013 GMC Sierra	GAS OPS-SOUTH-ZONE 1F	PICKUP	1,257.2	2,090.8	60.1%	31429		
33	2010 Ford F-150	LVD DESIGN-LAN/OWS	PICKUP	291.4	966.7	30.1%	7284		
34	2021 Chevrolet Silverado	LVD DESIGN-KAL/COLD/BCK	PICKUP	360.2	967.5	37.2%	9005		
35	2022 Ford F-150	GO-WELDING FIELD OPS Z1 DIST	PICKUP	916.5	2,344.1	39.1%	22912		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2015 GMC Sierra	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,370.1	2,583.2	53.0%	34253
37	2024 Chevrolet Silverado EV	LVD PLANNING - EAST	PICKUP	0.0	79.4	28.8%	0
38	2019 Ford F-150	EO-LVD-NE ZONE 1-BAY CITY-B	PICKUP	782.1	2,216.1	35.3%	19552
39	2022 Ford F-150	EO-LVD-SE ZONE 4-B CREEK-C	PICKUP	92.4	340.2	27.1%	2309
40	2015 GMC Sierra	FIELD OPERATIONS WEST	PICKUP	142.9	324.1	44.1%	3573
41	2013 GMC Sierra	NDT MANAGEMENT	PICKUP	230.7	765.5	30.1%	5769
42	2024 Chevrolet Silverado EV	WM&CD-NE ZONE-FLT	PICKUP	0.0	124.5	30.5%	0
43	2011 Chevrolet Silverado	LVD DESIGN	PICKUP	370.6	1,101.7	33.6%	9264
44	2013 GMC Sierra	GAS OPS-EAST-ZONE-1C	PICKUP	553.1	1,258.1	44.0%	13827
45	2014 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,655.9	3,219.4	82.5%	66398
46	2020 Chevrolet Silverado	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	321.7	805.2	39.9%	8042
47	2014 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,500.5	3,815.1	65.5%	62512
48	2011 Chevrolet Silverado	LVD DESIGN	PICKUP	227.4	634.6	35.8%	5686
49	2022 Ford F-150	EO-LVD-EAST ZONE 3-LANSING B	PICKUP	607.2	1,972.2	30.8%	15180
50	2014 GMC Sierra	GO-GAS EAST O & M COMPRESSION	PICKUP	1,367.9	1,780.6	76.8%	34196
51	2020 Chevrolet Silverado	GEP&S/GEP/DIST ENGG W-DES	PICKUP	857.9	1,899.3	45.2%	21449
52	2014 GMC Sierra	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	980.1	2,256.2	43.4%	24503
53	2020 Chevrolet Silverado	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	406.2	1,071.5	37.9%	10156
54	2011 Chevrolet Silverado	LVD DESIGN	PICKUP	275.6	927.2	29.7%	6891
55	2022 Ford F-150	GEP&S/GEP/DIST ENGG W-DES	PICKUP	196.9	658.8	29.9%	4924
56	2013 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	255.7	752.0	34.0%	6393
57	2014 GMC Sierra	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	992.4	2,232.4	44.5%	24809
58	2015 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 19	PICKUP	1,043.0	1,526.9	68.3%	26076
59	2020 Chevrolet Silverado	WM&CD-NW ZONE -	PICKUP	227.2	698.8	32.5%	5680
60	2014 GMC Sierra	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,237.8	2,552.6	48.5%	30944
61	2015 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	2,826.4	3,766.1	75.0%	70659
62	2019 Ford F-150	GO-CONTRACTOR OVERSITE	PICKUP	768.9	1,631.8	47.1%	19222
63	2020 Chevrolet Silverado	LVD SYSTEM PLANNING - WEST	PICKUP	276.5	684.7	40.4%	6912
64	2011 Chevrolet Silverado	LVD SYSTEM PLANNING - WEST	PICKUP	221.1	747.3	29.6%	5528
65	2022 Ford F-150	SUBS MAINT/METRO-SOUTH	PICKUP	186.5	702.7	26.5%	4663
66	2014 GMC Sierra	NDT MANAGEMENT	PICKUP	641.9	1,811.5	35.4%	16047
67	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	206.2	757.1	27.2%	5155
68	2022 Ford F-150	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,956.1	3,465.2	56.5%	48903
69	2014 GMC Sierra	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	948.3	1,876.0	50.6%	23709
70	2015 GMC Sierra	GAS OPS-SOUTHWEST A7	PICKUP	151.7	573.7	26.5%	3794
71	2011 Chevrolet Silverado	LVD DESIGN-FNT	PICKUP	99.8	344.0	29.0%	2495
72	2012 GMC Sierra	LVD DESIGN-JACK/ADR/SMN	PICKUP	141.4	433.6	32.6%	3535
73	2014 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 22	PICKUP	444.3	1,609.6	27.6%	11107
74	2020 Chevrolet Silverado	WM&CD-NW ZONE-GRW/GRE	PICKUP	95.2	354.9	26.8%	2379
75	2013 GMC Sierra	LVD DESIGN	PICKUP	196.9	594.5	33.1%	4921
76	2014 Ford F-150	FOSSIL GENERATION	PICKUP	256.4	323.4	79.3%	6409

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2015 GMC Sierra	GAS OPS-NORTHEAST A3	PICKUP	359.3	738.3	48.7%	8983
78	2012 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	680.5	1,778.4	38.3%	17014
79	2013 GMC Sierra	GO-GAS C&S PLANNING & TECHNICAL SRVS	PICKUP	460.9	1,339.6	34.4%	11523
80	2024 Ford F-150	EO-SUBSTATION MAINT E-BAY CITY	PICKUP	110.5	331.4	33.4%	2764
81	2014 Ford F-150	EO-SUBSTATION MAINT E-BAY CITY	PICKUP	69.6	254.4	27.4%	1740
82	2015 GMC Sierra	EO-ESS JOINT COMMITTEES AND OQ	PICKUP	1,000.5	1,438.5	69.6%	25014
83	2020 Chevrolet Silverado	LVD DESIGN	PICKUP	298.8	1,082.0	27.6%	7471
84	2011 Chevrolet Silverado	WM&CD-NE ZONE-LAN/OWO	PICKUP	211.6	686.9	30.8%	5291
85	2023 Ford F-150	LVD DESIGN	PICKUP	87.1	260.1	33.5%	2177
86	2014 Ford F-150	GO-TO-PIPELINE & STORAGE-WEST-JACKSON	PICKUP	750.2	1,454.3	51.6%	18754
87	2015 GMC Sierra	EO-ESS JOINT COMMITTEES AND OQ	PICKUP	836.9	1,193.9	70.1%	20922
88	2020 Chevrolet Silverado	WM&CD-NE ZONE-FLT	PICKUP	230.2	854.9	26.9%	5756
89	2012 GMC Sierra	WM&CD-SE ZONE-LIV/HWL	PICKUP	201.4	414.5	48.6%	5036
90	2014 Ford F-150	LVD SOUTH ZONE 4	PICKUP	626.6	2,202.9	28.4%	15664
91	2017 Ford F-150	WM&CD-NW ZONE -	PICKUP	559.3	1,212.3	46.1%	13982
92	2009 Chevrolet Silverado	EPM-CONSTRUCTION MANAGEMENT	PICKUP	1,377.1	1,884.8	73.1%	34429
93	2012 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	329.0	1,163.0	28.3%	8225
94	2023 Ford F-150	LVD DESIGN-SAG/BCY/MDL	PICKUP	234.9	833.6	28.2%	5873
95	2014 Ford F-150	EO-FORESTRY OPERATIONS WEST	PICKUP	968.3	2,153.3	45.0%	24207
96	2017 Ford F-150	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	838.8	2,605.5	32.2%	20970
97	2018 Ford F-150	EO-ELEC METER OPS	PICKUP	697.0	1,755.8	39.7%	17424
98	2020 Chevrolet Silverado	LVD DESIGN	PICKUP	353.7	782.9	45.2%	8842
99	2012 GMC Sierra	LVD DESIGN	PICKUP	200.5	762.1	26.3%	5012
100	2013 Ford F-150	GO-GCON-RESOURCE MGMT B I	PICKUP	1,527.9	2,331.9	65.5%	38197
101	2014 Ford F-150	EO-FORESTRY HVD WEST	PICKUP	532.1	1,947.3	27.3%	13303
102	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	519.3	1,651.2	31.5%	12983
103	2020 Ford F-150	GO-TO-PIPELINE & STORAGE-WEST-KZOO	PICKUP	1,694.8	3,972.9	42.7%	42369
104	2012 GMC Sierra	LVD DESIGN	PICKUP	176.8	552.6	32.0%	4421
105	2013 Ford F-150	GAS OPS-NORTH-ZONE	PICKUP	276.3	673.4	41.0%	6909
106	2014 Ford F-150	CROSS WINDS ENERGY PARK	PICKUP	1,133.8	1,431.9	79.2%	28345
107	2015 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,165.4	2,799.0	41.6%	29135
108	2017 Ford F-150	GEP&S-DAMAGE PREV WEST	PICKUP	2,319.3	3,663.8	63.3%	57982
109	2019 Ford F-150	CAMPBELL SITE MAINTENANCE	PICKUP	481.5	1,060.6	45.4%	12038
110	2014 Ford F-150	LVD DESIGN-GRAY/GRE	PICKUP	133.9	443.5	30.2%	3346
111	2015 GMC Sierra	GO-GCON-ROYAL OAK CONSTRUCTION C	PICKUP	777.4	1,387.4	56.0%	19435
112	2018 Ford F-150	EO-LVD-SE ZONE 4-JACKSON-A	PICKUP	987.6	2,300.8	42.9%	24691
113	2020 Ford F-150	GO-GCON-SAGINAW CONSTRUCTION D	PICKUP	336.5	1,318.3	25.5%	8412
114	2013 Ford F-150	GO-GCON-FLINT CONSTRUCTION C	PICKUP	1,373.0	2,609.7	52.6%	34326
115	2014 Ford F-150	EO-ELEC MTR OPS-ZONE 7	PICKUP	702.7	1,774.5	39.6%	17566
116	2015 GMC Sierra	GO-GCON-FLINT CONSTRUCTION B	PICKUP	874.2	1,913.2	45.7%	21856
117	2017 Ford F-150	EO-SUBSTATION CONSTRUCTION/EERC	PICKUP	311.8	1,053.5	29.6%	7794

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
118	2008 Chevrolet Silverado	EPM-CONSTRUCTION MANAGEMENT	PICKUP	313.8	800.3	39.2%	7844
119	2020 Ford F-150	GAS OPS-CENTRAL-ZONE 1D	PICKUP	328.1	1,121.8	29.2%	8201
120	2011 Chevrolet Silverado	LVD SYSTEM PLANNING - WEST	PICKUP	256.0	611.9	41.8%	6399
121	2013 Ford F-150	LVD PLANNING - SOUTHEAST	PICKUP	307.8	961.6	32.0%	7694
122	2017 Ford F-150	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	443.3	1,556.3	28.5%	11084
123	2020 Ford F-150	GEP&S-DAMAGE PREV EAST	PICKUP	934.8	2,357.3	39.7%	23369
124	2022 Ford F-150	GAS OPS -EAST-ZONE-1D	PICKUP	758.6	1,244.2	61.0%	18964
125	2013 Ford F-150	GO-GCON-RESOURCE MGMT B I	PICKUP	1,275.5	1,841.1	69.3%	31888
126	2014 Ford F-150	GEP&S-DAMAGE PREV EAST	PICKUP	1,375.0	2,685.3	51.2%	34376
127	2023 Ford F-150	LVD DESIGN-FNT	PICKUP	123.8	375.0	33.0%	3094
128	2015 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	364.0	1,268.5	28.7%	9100
129	2013 Ford F-150	GO-GCON-MACOMB CONSTRUCTION A	PICKUP	1,086.8	1,949.7	55.7%	27171
130	2014 Ford F-150	GAS OPS-SOUTH-ZONE 1C	PICKUP	2,917.3	4,656.2	62.7%	72934
131	2015 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	560.9	1,516.7	37.0%	14023
132	2020 Ford F-150	EO-LVD-NE ZONE 1-MIDLAND-B	PICKUP	440.7	1,508.5	29.2%	11018
133	2013 Ford F-150	GO-GCON-LANSING CONSTRUCTION D	PICKUP	328.9	1,301.8	25.3%	8224
134	2015 GMC Sierra	GO-GCON-JACKSON CONSTRUCTION D	PICKUP	663.7	1,578.4	42.0%	16592
135	2012 GMC Sierra	LVD DESIGN-GRG/GRE	PICKUP	307.1	625.6	49.1%	7676
136	2013 Ford F-150	GO-GAS O&M COMPRESSION I	PICKUP	2,241.7	2,788.6	80.4%	56042
137	2015 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	566.9	2,003.9	28.3%	14174
138	2011 Chevrolet Silverado	WM&CD-SE ZONE-GRO/MAC/RYL	PICKUP	117.5	464.8	25.3%	2939
139	2013 Ford F-150	FIELD OPERATIONS SOUTHWEST ZONE 20	PICKUP	94.1	345.3	27.3%	2352
140	2015 GMC Sierra	GO-GCON-CUSTOMER EXP C	PICKUP	914.9	1,939.8	47.2%	22874
141	2018 Ford F-150	CAMPBELL-FUEL HANDLING	PICKUP	580.7	944.4	61.5%	14518
142	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	PICKUP	790.8	2,514.0	31.5%	19769
143	2012 GMC Sierra	GAS OPS-NORTH-ZONE-3	PICKUP	500.3	1,337.9	37.4%	12508
144	2015 GMC Sierra	GO-GCON-SAGINAW CONSTRUCTION E	PICKUP	889.8	1,503.5	59.2%	22246
145	2018 Ford F-150	CAMPBELL-FUEL HANDLING	PICKUP	1,486.8	2,420.8	61.4%	37169
146	2011 Chevrolet Silverado	GEP&S/GEP/DIST ENGG W-DES	PICKUP	230.7	419.3	55.0%	5766
147	2022 Ford F-150	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,158.8	2,298.9	50.4%	28970
148	2023 Ford F-150 Lightning	CX&T-ELECTRIC TRANSPORTATION	PICKUP	125.6	416.9	30.1%	3139
149	2014 Ford F-150	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	714.4	1,265.8	56.4%	17859
150	2015 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	687.9	2,492.5	27.6%	17198
151	2006 Chevrolet Silverado	GO-GAS C&S PLANNING & TECHNICAL SRVS	PICKUP	93.0	358.5	25.9%	2324
152	2023 Ford F-150	CHEMISTRY SERVICES ANALYSTS	PICKUP	270.9	955.0	28.4%	6772
153	2011 Chevrolet Silverado	GAS OPS-EAST-ZONE	PICKUP	1,037.1	1,466.9	70.7%	25928
154	2021 Chevrolet Silverado	LVD DESIGN	PICKUP	312.4	853.7	36.6%	7809
155	2022 Ford F-150	GAS OPS-NE	PICKUP	197.8	656.3	30.1%	4945
156	2019 Ford F-150	CAMPBELL 3 OPERATIONS - UCO B SHIFT	PICKUP	7,364.8	9,249.2	79.6%	184120
157	2022 Ford F-150	WELDING	PICKUP	536.0	1,959.7	27.4%	13399
158	2018 Ford F-150	EO-CFS EAST C	PICKUP	386.0	1,530.9	25.2%	9650

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
159	2011 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-WEST-JACKSON	PICKUP	772.8	1,554.5	49.7%	19320
160	2019 Ford F-150	GEP&S/GEP/DIST ENGG W/DES-ENG	PICKUP	602.8	1,286.4	46.9%	15070
161	2021 Chevrolet Silverado	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,642.7	3,882.3	42.3%	41067
162	2024 Ford F-150	EO-LVD-SW ZONE 5-KALAMAZOO	PICKUP	172.0	502.0	34.3%	4299
163	2019 Ford F-150	GEP&S/GEP/DIST ENGG W-DES	PICKUP	992.1	2,475.6	40.1%	24803
164	2024 Ford F-150	CX&T-RO CREDIT & COLLECTION	PICKUP	413.2	1,075.6	38.4%	10331
165	2024 Ford F-150	EO-SUB CONSTRUCTION/EERC-STATEWIDE	PICKUP	87.4	321.3	27.2%	2184
166	2021 Chevrolet Silverado	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	156.2	508.4	30.7%	3906
167	2012 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 10	PICKUP	223.5	652.8	34.2%	5587
168	2024 Ford F-150	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	199.7	660.1	30.3%	4993
169	2024 Ford F-150	LVD PLANNING - EAST	PICKUP	89.1	223.8	39.8%	2227
170	2012 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	4,404.9	6,574.4	67.0%	110122
171	2024 Ford F-150	EO-FORESTRY OPERATIONS WEST	PICKUP	276.5	692.3	39.9%	6913
172	2006 Chevrolet Silverado	WM&CD-NE- SAG/MID/BAY	PICKUP	75.1	265.8	28.3%	1879
173	2021 Chevrolet Silverado	WM&CD-NW ZONE -	PICKUP	303.0	739.3	41.0%	7575
174	2022 Ford F-150	GAS OPS-SOUTHEAST C	PICKUP	20.3	55.7	36.3%	506
175	2024 Ford F-150	LVD EAST ZONE 3	PICKUP	243.4	833.7	29.2%	6084
176	2006 Chevrolet Silverado	GEP&S/GEP/DIST ENGG W-DES	PICKUP	33.6	72.2	46.5%	840
177	2024 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	388.3	822.7	47.2%	9706
178	2007 Chevrolet Silverado	CAMPBELL-FUEL HANDLING	PICKUP	4,178.2	5,047.9	82.8%	104456
179	2022 Ford F-150	GAS OPS-EAST-ZONE-1F	PICKUP	1,399.1	2,540.8	55.1%	34978
180	2024 Ford F-150	NDT MANAGEMENT	PICKUP	293.4	705.2	41.6%	7336
181	2011 Chevrolet Silverado	ZEELAND GENERATING STATION	PICKUP	171.7	372.8	46.1%	4292
182	2022 Ford F-150	LVD-CONTRACTOR MANAGEMENT	PICKUP	1,792.3	4,141.5	43.3%	44806
183	2024 Ford F-150	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	4.1	15.0	27.4%	103
184	2021 Chevrolet Silverado	LVD DESIGN	PICKUP	232.2	686.5	33.8%	5805
185	2024 Ford F-150	NDT MANAGEMENT	PICKUP	152.4	447.7	34.1%	3811
186	2018 Ford F-150	GAS OPS-CENTRAL-ZONE 1	PICKUP	677.2	1,605.3	42.2%	16931
187	2018 Ford F-150	EO-CFS WEST E	PICKUP	723.6	2,227.3	32.5%	18091
188	2021 Chevrolet Silverado	LVD DESIGN	PICKUP	224.8	864.4	26.0%	5620
189	2024 Ford F-150	WM&CD-NE- SAG/MID/BAY	PICKUP	26.8	89.4	30.0%	669
190	2024 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	732.7	1,494.8	49.0%	18317
191	2012 GMC Sierra	WM&CD-NE ZONE-LAN/OWO	PICKUP	135.2	497.1	27.2%	3379
192	2024 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	472.9	1,058.9	44.7%	11822
193	2008 Chevrolet Silverado	WM&CD-NE- SAG/MID/BAY	PICKUP	188.2	506.2	37.2%	4706
194	2021 Ford F-150	EO-ELECTRIC UG NORTON SHORES	PICKUP	575.4	1,660.0	34.7%	14385
195	2021 Ford F-150	EO-ELECTRIC UNDERGROUND-B	PICKUP	865.8	1,588.8	54.5%	21646
196	2012 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	PICKUP	456.7	1,183.1	38.6%	11418
197	2021 Ford F-150	EO-ELECTRIC UNDERGROUND-A	PICKUP	616.1	1,261.2	48.8%	15402
198	2006 Chevrolet Silverado	FIELD OPERATIONS SOUTHEAST ZONE 19	PICKUP	327.9	636.4	51.5%	8197
199	2008 Chevrolet Silverado	GO-WELDING FIELD OPS Z2 DIST	PICKUP	499.4	819.0	61.0%	12484

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
200	2021 Ford F-150	EO-ELECTRIC UNDERGROUND-A	PICKUP	413.9	983.3	42.1%	10347
201	2018 Ford F-150	EO-LVD-SE ZONE 4-JACKSON	PICKUP	841.0	2,520.0	33.4%	21026
202	2019 Ford F-150	GAS OPS-NORTH-ZONE-3	PICKUP	372.7	1,355.7	27.5%	9316
203	2012 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	1,906.4	2,690.8	70.8%	47660
204	2006 Chevrolet Silverado	EO-CFS WEST B	PICKUP	69.6	136.1	51.1%	1739
205	2021 Ford F-150	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	459.4	1,223.3	37.6%	11485
206	2019 Ford F-150	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	515.9	1,670.0	30.9%	12897
207	2021 Ford F-150	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	201.2	627.1	32.1%	5031
208	2008 Chevrolet Silverado	LVD DESIGN-JACK/ADR/SMN	PICKUP	577.0	1,876.7	30.7%	14424
209	2012 GMC Sierra	WM&CD-NE ZONE-LAN/OWO	PICKUP	350.0	870.4	40.2%	8749
210	2018 Ford F-150	GAS OPS-CENTRAL-ZONE 1	PICKUP	300.2	1,047.3	28.7%	7504
211	2019 Ford F-150	GO-TRANS OPS EAST	PICKUP	974.5	3,110.0	31.3%	24363
212	2021 Ford F-150	LVD DESIGN-WBR/CLR/ALM	PICKUP	255.2	834.9	30.6%	6381
213	2019 Ford F-150	EO-ELEC FIELD LAB G-FLINT	PICKUP	1,051.4	2,244.4	46.8%	26286
214	2018 Ford F-150	SUBS MAINT/METRO-EAST	PICKUP	356.5	1,298.5	27.5%	8913
215	2019 Ford F-150	ELECTRIC FIELD TECHNICAL SERVICES	PICKUP	964.9	2,641.8	36.5%	24122
216	2018 Ford F-150	GO-GCON - MIDLAND CONSTRUCTION D	PICKUP	582.2	1,753.1	33.2%	14556
217	2018 Ford F-150	GO-MTR RDG Z2-NORTHEAST	PICKUP	901.8	2,519.5	35.8%	22545
218	2019 Ford F-150	GAS OPS-EAST-ZONE	PICKUP	1,150.2	3,560.9	32.3%	28755
219	2018 Ford F-150	GAS OPS-NORTH-ZONE	PICKUP	1,376.8	2,482.9	55.5%	34419
220	2019 Ford F-150	EO-LVD-NW ZONE 8-TRAVERSE-A	PICKUP	526.9	1,866.8	28.2%	13171
221	2018 Ford F-150	GEP&S/GEP/MEASUREMENT RELIABILITY & ENGI	PICKUP	584.4	1,736.6	33.7%	14610
222	2019 Ford F-150	EO-LVD-GR ZONE 6-NORTH KENT-A	PICKUP	682.5	2,029.4	33.6%	17061
223	2020 Ford F-150	GO-GCON-FLINT CONSTRUCTION G	PICKUP	434.0	1,403.0	30.9%	10849
224	2021 Chevrolet Silverado	EO-LVD-SE ZONE 4-B CREEK-B	PICKUP	7.3	12.9	56.8%	183
225	2022 Ford F-150	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	34.4	115.5	29.8%	859
226	2019 Ford F-150	GO-GCON-STEEL CONSTRUCTION D	PICKUP	747.2	2,237.0	33.4%	18681
227	2019 Ford F-150	ELECTRIC FIELD TECHNICAL SERVICES	PICKUP	1,261.3	2,868.7	44.0%	31533
228	2019 Ford F-150	GAS OPS-NORTH-ZONE-2C	PICKUP	1,258.4	3,317.4	37.9%	31461
229	2019 Ford F-150	GAS OPS-EAST-ZONE-1B	PICKUP	705.1	1,972.2	35.7%	17626

155,249.0

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2020 Ford Transit Van	GO-GAS OPS-SOUTHWEST A1	VAN	1,996.8	3,333.9	59.9%	49919	Average idle time
2	2021 Ford Transit Van	GO-GAS OPS-SOUTHWEST A1	VAN	3,388.4	4,647.2	72.9%	84710	
3	2013 GMC Savana	GAS OPS-EAST-ZONE	VAN	293.2	513.5	57.1%	7331	Idle Metric Tons CO2
4	2024 Ford Transit Van	GAS OPS-SOUTHEAST C2	VAN	615.8	949.6	64.9%	15396	
5	2025 Ford Transit Van	GAS OPS SOUTHWEST	VAN	185.7	270.8	68.6%	4642	Gallons idled
6	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,761.4	4,261.4	64.8%	69035	732525.06
7	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,522.8	3,468.3	72.7%	63071	
8	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	4,458.5	5,987.1	74.5%	111462	
9	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,911.8	4,355.5	66.9%	72796	
10	2024 Ford Transit Van	GAS OPS-NORTHEAST A11	VAN	521.4	1,026.9	50.8%	13035	
11	2025 Ford Transit Van	GAS OPS SOUTHWEST	VAN	310.2	466.4	66.5%	7755	
12	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,862.2	4,569.8	62.6%	71556	
13	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,319.7	4,597.3	72.2%	82993	
14	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,818.0	2,577.7	70.5%	45451	
15	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,612.6	3,918.5	66.7%	65314	
16	2013 GMC Savana	GAS OPS SOUTHWEST	VAN	1,461.4	2,410.0	60.6%	36535	
17	2014 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	VAN	2,650.5	4,130.8	64.2%	66262	
18	2025 Ford Transit Van	GAS OPS-SOUTHEAST A7	VAN	425.1	617.7	68.8%	10628	
19	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,214.5	2,874.7	77.0%	55362	
20	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	4,417.6	6,107.1	72.3%	110441	
21	2021 Ford Transit Van	GEP&S/GEP/MR&E TECH-EAST	VAN	1,952.6	3,702.2	52.7%	48814	
22	2013 GMC Savana	GAS OPS-SOUTHWEST A6	VAN	1,927.4	2,853.4	67.5%	48184	
23	2024 Ford Transit Van	GAS OPS-SOUTHEAST C7	VAN	192.9	369.3	52.2%	4823	
24	2015 GMC Savana	GAS OPS-EAST-ZONE	VAN	2,006.9	2,877.8	69.7%	50172	
25	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,836.9	4,041.6	70.2%	70922	
26	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,141.0	4,412.3	71.2%	78526	
27	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	4,201.3	5,919.6	71.0%	105033	
28	2021 Ford Transit Van	GEP&S/GEP/MR&E TECH-EAST	VAN	1,305.8	2,922.3	44.7%	32646	
29	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,917.7	4,051.4	72.0%	72942	
30	2024 Ford Transit Van	GAS OPS-SOUTHEAST A7	VAN	1,590.3	2,032.6	78.2%	39758	
31	2025 Ford Transit Van	GAS OPS SOUTHWEST	VAN	507.5	734.3	69.1%	12689	
32	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,893.7	3,419.4	55.4%	47344	
33	2019 Ford Transit Wagon	L&D ELECTRIC TECHNICAL TRAINING	VAN	96.1	210.2	45.7%	2402	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,340.9	3,049.1	44.0%	33522
35	2021 Ford Transit Van	GEP&S/GEP/MR&E TECH WEST	VAN	2,025.3	3,904.6	51.9%	50632
36	2024 Ford Transit Van	EO-CFS WEST C	VAN	448.3	689.0	65.1%	11206
37	2025 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	369.8	517.0	71.5%	9244
38	2017 Ford Transit Van	GAS OPS-SOUTHWEST A8	VAN	1,880.9	3,553.4	52.9%	47023
39	2008 Chevrolet Express	GAS OPS O&M COR CON	VAN	1,582.8	2,286.8	69.2%	39569
40	2009 Chevrolet Express	GAS OPS-SOUTHEAST A7	VAN	416.6	617.7	67.4%	10416
41	2020 Ford Transit Wagon	L&D ELECTRIC TECHNICAL TRAINING	VAN	131.2	380.4	34.5%	3280
42	2021 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,124.6	5,190.2	60.2%	78115
43	2012 GMC Savana	GAS OPS-NORTHEAST	VAN	3,779.8	5,232.9	72.2%	94495
44	2024 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	950.2	1,563.4	60.8%	23754
45	2025 Ford Transit Van	GAS OPS-NORTHEAST	VAN	60.9	138.6	44.0%	1523
46	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,323.1	3,578.9	64.9%	58077
47	2020 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,438.7	4,014.4	60.7%	60967
48	2021 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,104.8	4,492.2	69.1%	77621
49	2023 Ford Transit Van	GAS OPS SOUTHEAST A	VAN	1,865.1	3,022.4	61.7%	46628
50	2024 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,101.5	1,478.2	74.5%	27539
51	2015 GMC Savana	GAS OPS-EAST-ZONE	VAN	2,206.9	2,851.9	77.4%	55172
52	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,266.0	3,231.8	70.1%	56651
53	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,812.3	4,336.4	64.9%	70307
54	2021 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,565.6	2,000.4	78.3%	39140
55	2023 Ram 5500 Chassis	GAS OPS SOUTHWEST	VAN	2,138.3	2,988.5	71.6%	53459
56	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	2,131.5	3,501.5	60.9%	53287
57	2025 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	134.0	235.3	56.9%	3350
58	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,425.1	3,853.8	62.9%	60628
59	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,691.8	4,313.6	62.4%	67296
60	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,995.0	5,150.1	77.6%	99875
61	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,402.9	2,067.0	67.9%	35072
62	2014 GMC Savana	GAS OPS-NORTHEAST A4	VAN	1,349.1	2,681.2	50.3%	33728
63	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,706.7	5,232.4	70.8%	92668
64	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,336.4	3,388.8	68.9%	58410
65	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,681.4	5,142.6	71.6%	92036
66	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,344.0	4,606.8	72.6%	83601
67	2021 Ford Transit Van	GAS OPS-NORTHEAST A11	VAN	2,211.6	3,582.1	61.7%	55291
68	2012 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,389.1	2,275.0	61.1%	34727
69	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	2,018.4	3,397.6	59.4%	50461
70	2024 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	695.2	1,029.1	67.6%	17381
71	2025 Ford Transit Van	GAS OPS-NORTHEAST	VAN	357.7	547.9	65.3%	8942
72	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,886.2	2,824.0	66.8%	47155

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
73	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,571.9	4,006.5	64.2%	64297
74	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,804.6	2,600.6	69.4%	45114
75	2021 Ford Transit Van	GO-GAS EAST O & M COMPRESSION	VAN	602.2	754.5	79.8%	15054
76	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,884.2	5,551.0	70.0%	97106
77	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	3,427.1	4,657.5	73.6%	85678
78	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,928.1	4,457.2	65.7%	73203
79	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,411.2	4,634.1	73.6%	85281
80	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,772.7	3,853.7	71.9%	69318
81	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,806.4	4,012.3	69.9%	70159
82	2021 Ford Transit Van	GAS OPS-SOUTHWEST A8	VAN	3,176.7	5,410.1	58.7%	79418
83	2012 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,767.6	4,317.2	64.1%	69189
84	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,808.0	5,078.3	75.0%	95201
85	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,353.3	3,252.9	72.3%	58832
86	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,179.4	1,821.7	64.7%	29486
87	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,187.2	3,610.5	60.6%	54681
88	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,784.7	5,849.4	64.7%	94617
89	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	629.5	1,060.1	59.4%	15737
90	2021 Ford Transit Van	GAS OPS-SOUTHWEST A2	VAN	4,711.9	7,386.0	63.8%	117797
91	2012 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,471.6	2,330.2	63.2%	36790
92	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,406.1	4,317.1	78.9%	85152
93	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,705.8	2,758.6	61.8%	42646
94	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,179.5	3,481.4	62.6%	54489
95	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,368.4	3,013.8	45.4%	34211
96	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,998.0	3,623.0	55.1%	49951
97	2021 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,326.5	3,787.7	61.4%	58161
98	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,687.3	2,628.8	64.2%	42183
99	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,436.9	4,853.5	70.8%	85924
100	2015 Ford Transit Van	GAS OPS-SOUTHEAST B3	VAN	1,546.8	3,132.4	49.4%	38671
101	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	4,013.8	6,010.5	66.8%	100344
102	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	708.8	1,205.6	58.8%	17720
103	2021 Ford Transit Van	GO-GAS OPS-SOUTHWEST A1	VAN	2,905.9	4,429.4	65.6%	72647
104	2012 GMC Savana	GAS OPS NORTHEAST A9	VAN	432.2	733.0	59.0%	10805
105	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,067.3	1,660.7	64.3%	26684
106	2014 GMC Savana	GAS OPS-SOUTHWEST A6	VAN	2,200.7	3,264.3	67.4%	55017
107	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,302.2	2,069.7	62.9%	32554
108	2009 Chevrolet Express	GAS OPS-SOUTHEAST	VAN	347.1	542.7	64.0%	8677
109	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,980.4	3,595.9	55.1%	49510
110	2021 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,599.1	4,778.2	54.4%	64978
111	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	2,207.5	3,220.6	68.5%	55187

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
112	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,482.3	2,559.8	57.9%	37058
113	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,579.9	3,572.3	72.2%	64498
114	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,626.8	2,587.0	62.9%	40671
115	2019 Ford Transit Van	GAS OPS-SOUTHEAST C3	VAN	3,353.1	4,840.7	69.3%	83827
116	2021 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	VAN	2,080.9	3,746.6	55.5%	52024
117	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,006.8	1,499.7	67.1%	25171
118	2015 Ford Transit Van	FIELD OPERATIONS NORTHEAST ZONE 5	VAN	849.2	1,901.2	44.7%	21230
119	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,928.2	4,461.4	65.6%	73205
120	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,654.9	5,150.6	71.0%	91373
121	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,091.5	3,839.1	54.5%	52288
122	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,472.8	4,082.3	60.6%	61819
123	2012 GMC Savana	GAS OPS-NORTHEAST	VAN	1,209.3	1,824.2	66.3%	30231
124	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	889.1	1,295.0	68.7%	22228
125	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,639.7	4,782.6	76.1%	90993
126	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,324.2	3,892.7	59.7%	58106
127	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,122.6	3,288.3	64.6%	53066
128	2009 Chevrolet Express	GAS OPS O&M COR CON	VAN	207.1	293.8	70.5%	5178
129	2020 Ford Transit Van	FIELD OPERATIONS SOUTHEAST ZONE 19	VAN	242.6	527.9	46.0%	6066
130	2021 Ford Transit Van	GAS OPS-NORTHEAST A	VAN	3,330.1	5,109.5	65.2%	83252
131	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,521.4	2,425.5	62.7%	38036
132	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,889.8	2,614.6	72.3%	47246
133	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,040.8	2,911.9	70.1%	51019
134	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,919.5	5,902.5	66.4%	97987
135	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,437.8	3,483.5	70.0%	60946
136	2021 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	2,547.5	3,782.3	67.4%	63687
137	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	968.0	1,445.4	67.0%	24200
138	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,304.9	2,196.0	59.4%	32622
139	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,937.9	2,746.3	70.6%	48446
140	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,177.0	4,313.1	73.7%	79424
141	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,601.0	4,963.6	72.5%	90025
142	2021 Ford Transit Van	GAS OPS-NE	VAN	2,718.9	3,918.6	69.4%	67973
143	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,467.7	2,048.4	71.7%	36693
144	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,995.7	3,907.1	76.7%	74893
145	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	576.3	1,508.0	38.2%	14408
146	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,565.9	5,435.2	65.6%	89149
147	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,595.1	2,667.5	59.8%	39877
148	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,373.3	3,745.2	63.4%	59332
149	2021 Ford Transit Van	GAS OPS SOUTHEAST A	VAN	3,313.9	4,392.2	75.4%	82847
150	2023 Ford Transit Van	EO-ELEC FIELD LAB-SUPPORT	VAN	637.1	1,430.7	44.5%	15927

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
151	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	33.8	56.0	60.3%	845
152	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	502.0	734.5	68.3%	12549
153	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,632.4	2,776.9	58.8%	40810
154	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,772.6	3,996.3	69.4%	69315
155	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,602.0	2,567.7	62.4%	40049
156	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,439.9	3,366.4	72.5%	60996
157	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	5,058.6	7,614.6	66.4%	126465
158	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,420.5	3,435.2	70.5%	60512
159	2020 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,085.4	2,071.6	52.4%	27134
160	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,735.5	2,828.8	61.4%	43388
161	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,530.0	2,286.3	66.9%	38251
162	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	3,017.9	4,314.2	70.0%	75448
163	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,207.7	4,473.7	71.7%	80193
164	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,767.9	4,872.2	77.3%	94197
165	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,954.9	3,401.2	57.5%	48873
166	2020 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,869.2	4,373.2	65.6%	71731
167	2021 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,074.7	5,368.8	57.3%	76868
168	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,928.3	5,253.8	74.8%	98209
169	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	1,903.8	3,262.8	58.3%	47595
170	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,949.4	3,571.7	54.6%	48735
171	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,597.5	4,567.1	78.8%	89938
172	2019 Ford Transit Van	GO-GAS EAST O & M COMPRESSION	VAN	2,813.1	3,566.6	78.9%	70326
173	2020 Ford Transit Van	GEP&S/GEP/MR&E TECH-EAST	VAN	823.8	2,199.6	37.5%	20595
174	2021 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	4,191.2	5,665.5	74.0%	104779
175	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,822.9	4,130.9	68.3%	70572
176	2024 Ford Transit Van	GAS OPS SOUTHWEST	VAN	698.4	1,164.3	60.0%	17459
177	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,964.3	4,286.2	69.2%	74108
178	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,847.0	3,205.4	57.6%	46174
179	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,149.6	3,208.5	67.0%	53739
180	2021 Ford Transit Van	GAS OPS-NORTHEAST	VAN	4,391.0	5,744.2	76.4%	109776
181	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,529.7	2,121.4	72.1%	38243
182	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,436.3	2,301.9	62.4%	35908
183	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,610.3	2,716.7	59.3%	40257
184	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,670.2	4,953.5	74.1%	91755
185	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,329.8	4,995.7	66.7%	83246
186	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,794.0	5,061.2	75.0%	94850
187	2021 Ford Transit Van	GAS OPS-NORTHEAST A6	VAN	2,373.7	3,480.7	68.2%	59342
188	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,025.4	3,867.7	78.2%	75635
189	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,294.8	2,108.6	61.4%	32371

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
199	2015 Ford Transit Van	GAS OPS-SOUTHEAST A1	VAN	1,321.1	2,330.5	56.7%	33027
200	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,809.1	4,218.0	66.6%	70227
201	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,993.7	2,981.8	66.9%	49843
202	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,795.9	3,072.6	58.4%	44898
203	2021 Ford Transit Van	GAS OPS-CENTRAL-ZONE 1	VAN	2,978.1	4,409.6	67.5%	74452
204	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,314.6	4,807.6	68.9%	82865
205	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	4,030.4	5,417.9	74.4%	100761
206	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,129.2	2,148.6	52.6%	28231
207	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,968.8	3,199.0	61.5%	49220
208	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,501.1	3,627.7	68.9%	62527
209	2021 Ford Transit Van	GO-GCON-RESOURCE MGMT B I	VAN	2,230.9	2,600.9	85.8%	55772
210	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,772.3	3,977.2	69.7%	69307
211	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	2,492.1	3,484.6	71.5%	62301
212	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,262.3	3,508.8	64.5%	56557
213	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,708.2	3,385.6	50.5%	42706
214	2009 Chevrolet Express	GAS OPS-SOUTHEAST	VAN	304.4	487.8	62.4%	7611
215	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,483.5	3,540.3	41.9%	37086
216	2021 Ford Transit Van	GO-GCON-RESOURCE MGMT B I	VAN	1,948.9	2,298.1	84.8%	48722
217	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,565.3	2,515.6	62.2%	39132
218	2014 GMC Savana	GAS OPS SUPPLY & CONSTRUCTION	VAN	1,808.8	2,114.5	85.5%	45220
219	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,817.5	3,264.8	55.7%	45438
220	2017 Ford Transit Van	GAS OPS O&M COR CON	VAN	1,944.2	3,312.0	58.7%	48606
221	2009 Chevrolet Express	GAS OPS-NORTHEAST A2	VAN	300.5	503.8	59.6%	7512
222	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,567.7	5,025.1	71.0%	89193
223	2021 Ford Transit Van	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,851.0	3,511.8	81.2%	71276
224	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,185.9	2,272.8	52.2%	29647
225	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,126.9	3,021.0	70.4%	53172
226	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,985.5	3,036.6	65.4%	49638
227	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,309.9	3,523.0	65.6%	57748
228	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,611.3	3,440.9	46.8%	40283
229	2021 Ford Transit Van	GAS OPS SUPPLY & CONSTRUCTION	VAN	1,756.4	2,222.4	79.0%	43909
230	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	VAN	2,733.5	4,630.2	59.0%	68337
231	2014 GMC Savana	GO-GAS OPS-SOUTHWEST A1	VAN	220.5	397.6	55.5%	5513
232	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,500.0	2,487.8	60.3%	37500
233	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,685.2	2,794.0	60.3%	42130
234	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,793.1	4,797.8	79.1%	94829
235	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	4,431.9	6,323.7	70.1%	110798
236	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,924.5	2,796.7	68.8%	48113
237	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,295.8	3,185.1	72.1%	57395

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
238	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,225.3	4,102.3	78.6%	80632
239	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	2,517.4	3,848.3	65.4%	62935
240	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,767.5	5,532.7	68.1%	94188
241	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,083.3	3,194.8	65.2%	52083
242	2021 Ford Transit Van	EO-ELEC FIELD LAB	VAN	893.4	2,391.1	37.4%	22334
243	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,126.8	3,993.0	78.3%	78169
244	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,393.4	2,396.9	58.1%	34836
245	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,460.4	5,139.1	67.3%	86510
246	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,965.8	5,365.7	73.9%	99144
247	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,149.9	4,968.2	63.4%	78746
248	2021 Ford Transit Van	EO-ELEC FIELD LAB STATEWIDE	VAN	1,173.8	2,559.5	45.9%	29345
249	2013 GMC Savana	GAS OPS-SOUTHWEST A6	VAN	892.5	1,505.3	59.3%	22312
250	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	728.9	1,981.8	36.8%	18223
251	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,488.4	5,515.2	63.3%	87210
252	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,258.0	3,423.3	66.0%	56449
253	2009 Chevrolet Express	GAS OPS-SOUTHEAST A7	VAN	375.8	520.2	72.2%	9395
254	2020 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,279.4	5,270.4	62.2%	81986
255	2021 Ford Transit Van	EO-ELEC FIELD LAB STATEWIDE	VAN	939.3	2,727.7	34.4%	23483
256	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,139.9	2,454.9	46.4%	28497
257	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,210.4	4,489.3	71.5%	80261
258	2017 Ford Transit Van	GAS OPS NORTHEAST A9	VAN	1,876.0	3,257.4	57.6%	46899
259	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,400.1	2,628.8	53.3%	35003
260	2021 Ford Transit Van	EO-ELEC FIELD LAB B-TRAVERSE CITY	VAN	576.4	2,124.0	27.1%	14411
261	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,851.4	3,865.5	73.8%	71284
262	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,825.2	3,758.0	75.2%	70631
263	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,866.2	5,207.3	74.2%	96656
264	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,918.9	4,122.5	70.8%	72971
265	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,203.9	4,490.7	71.3%	80098
266	2021 Ford Transit Van	EO-ELEC FIELD LAB F-BATTLE CREEK	VAN	1,001.5	2,508.1	39.9%	25038
267	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	924.4	1,813.3	51.0%	23111
268	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	1,300.1	2,145.4	60.6%	32503
269	2025 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	278.1	395.0	70.4%	6953
270	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,618.1	2,461.0	65.7%	40452
271	2019 Ford Transit Van	GAS OPS-SOUTHWEST A7	VAN	3,185.5	5,029.1	63.3%	79637
272	2020 Ford Transit Van	GAS OPS-NE	VAN	2,770.5	4,915.9	56.4%	69262
273	2021 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,597.4	3,199.5	49.9%	39934
274	2023 Ford Transit Van	EO-ELEC FIELD LAB G-FLINT	VAN	1,020.5	2,311.9	44.1%	25513
275	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,694.1	2,614.9	64.8%	42352
276	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,294.4	3,429.2	66.9%	57361

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
277	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	754.1	1,102.7	68.4%	18853
278	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,045.6	4,290.3	71.0%	76140
279	2020 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,798.7	3,215.2	55.9%	44966
280	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,373.2	3,179.2	43.2%	34330
281	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,412.2	2,350.9	60.1%	35305
282	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	2,231.7	3,649.0	61.2%	55793
283	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	848.7	2,367.7	35.8%	21219
284	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,805.5	3,051.0	59.2%	45137
285	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,971.9	4,115.5	47.9%	49298
286	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,832.7	2,880.4	63.6%	45818
287	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,826.0	4,009.3	70.5%	70650
288	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,313.2	2,105.0	62.4%	32831
289	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,826.0	3,423.9	53.3%	45650
290	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,830.7	5,921.5	64.7%	95766
291	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,132.0	3,103.1	36.5%	28300
292	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,965.5	2,884.1	68.2%	49138
293	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,495.4	1,974.9	75.7%	37385
294	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,640.2	3,275.1	50.1%	41006
295	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,868.7	4,140.5	69.3%	71718
296	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,705.4	4,018.6	67.3%	67634
297	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	949.0	2,173.1	43.7%	23724
298	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,208.6	2,241.1	53.9%	30215
299	2014 GMC Savana	GAS OPS-NORTHEAST A	VAN	910.1	1,308.9	69.5%	22753
300	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,988.5	5,941.4	67.1%	99712
301	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,987.4	3,159.8	62.9%	49684
302	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,507.4	3,827.3	65.5%	62684
303	2022 Ford Transit Van	EO-ELEC FIELD LAB H-GRAND RAPIDS EAST	VAN	956.1	2,161.4	44.2%	23901
304	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,080.3	4,673.8	65.9%	77006
305	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,891.3	4,517.6	64.0%	72283
306	2017 Ford Transit Van	GO-GAS OPS-SOUTHWEST A1	VAN	3,008.6	4,225.5	71.2%	75214
307	2019 Ford Transit Van	GAS OPS-SOUTHWEST A7	VAN	3,050.5	4,572.0	66.7%	76262
308	2020 Ford Transit Van	GO-GAS EAST O & M COMPRESSION	VAN	3,093.1	3,817.9	81.0%	77327
309	2022 Ford Transit Van	EO-ELEC FIELD LAB F-BATTLE CREEK	VAN	424.7	1,543.9	27.5%	10617
310	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,252.9	3,334.7	67.6%	56323
311	2024 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	707.3	929.1	76.1%	17681
312	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,588.7	3,564.2	72.6%	64716
313	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,363.3	3,172.2	74.5%	59082
314	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,318.2	4,622.0	50.2%	57955
315	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	4,438.2	6,060.1	73.2%	110956

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
316	2013 GMC Savana	GAS OPS SOUTHWEST	VAN	2,236.6	3,450.7	64.8%	55914
317	2014 GMC Savana	GAS OPS-NE	VAN	4,152.7	6,908.7	60.1%	103817
318	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,957.7	2,924.2	66.9%	48941
319	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,581.9	4,167.6	62.0%	64548
320	2020 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,662.0	5,102.4	71.8%	91549
321	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	2,888.8	4,218.5	68.5%	72221
322	2014 GMC Savana	GAS OPS NORTHEAST A9	VAN	1,152.0	1,730.7	66.6%	28800
323	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,972.3	4,083.5	72.8%	74308
324	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,706.9	4,645.3	58.3%	67673
325	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,448.8	3,380.7	72.4%	61221
326	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,641.8	4,845.0	75.2%	91045
327	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,870.2	3,793.9	75.7%	71754
328	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,468.5	2,336.1	62.9%	36711
329	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,138.0	2,414.3	47.1%	28449
330	2019 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,781.2	2,975.0	59.9%	44531
331	2020 Ford Transit Van	GEP&S/GEP/MR&E TECH-EAST	VAN	814.3	2,734.0	29.8%	20357
332	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,326.2	2,650.2	50.0%	33155
333	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	2,937.8	4,627.9	63.5%	73446
334	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,611.3	2,481.4	64.9%	40282
335	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,865.0	3,120.2	59.8%	46624
336	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,107.5	3,517.0	59.9%	52688
337	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,087.7	2,279.0	47.7%	27192
338	2013 GMC Savana	NDT PROJECTS	VAN	448.0	901.0	49.7%	11200
339	2014 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	VAN	1,720.2	2,767.7	62.2%	43006
340	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,867.5	2,653.8	70.4%	46688
341	2017 Ford Transit Van	GAS OPS-NORTH-ZONE	VAN	2,234.2	2,956.5	75.6%	55855
342	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,956.0	4,358.0	67.8%	73900
343	2022 Ford Transit Van	EO-ELEC FIELD LAB	VAN	2,099.5	3,606.4	58.2%	52487
344	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,418.7	2,390.1	59.4%	35467
345	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,408.7	2,132.9	66.0%	35218
346	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	4,067.7	5,638.5	72.1%	101692
347	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,239.1	5,524.4	58.6%	80978
348	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,226.5	2,951.5	41.6%	30662
349	2022 Ford Transit Van	EO-ELEC FIELD LAB STATEWIDE	VAN	1,064.4	2,743.1	38.8%	26609
350	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,238.1	4,720.7	68.6%	80952
351	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	2,562.5	3,573.3	71.7%	64062
352	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,124.2	1,740.2	64.6%	28105
353	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,864.2	3,112.3	59.9%	46605
354	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,696.7	2,927.5	58.0%	42417

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
355	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,561.1	4,829.2	73.7%	89028
356	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,601.1	3,639.1	71.5%	65028
357	2015 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,141.8	4,042.0	53.0%	53545
358	2017 Ford Transit Van	GAS OPS-NORTH-ZONE-3D	VAN	1,194.1	1,954.6	61.1%	29851
359	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,245.0	3,986.0	56.3%	56125
360	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,349.1	2,404.3	56.1%	33728
361	2014 GMC Savana	GAS OPS NE ZONE 2-SPAN 13	VAN	2,784.4	3,606.2	77.2%	69610
362	2015 Ford Transit Van	GAS OPS-NORTHEAST B	VAN	3,491.9	4,655.8	75.0%	87297
363	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	2,224.7	3,347.5	66.5%	55617
364	2019 Ford Transit Van	GAS OPS NORTHEAST A9	VAN	2,503.9	3,770.5	66.4%	62597
365	2013 GMC Savana	GAS OPS-NORTHEAST A11	VAN	1,178.9	2,059.4	57.2%	29473
366	2014 GMC Savana	GAS OPS-SOUTHEAST A7	VAN	354.4	527.7	67.2%	8860
367	2015 Ford Transit Van	GAS OPS-NORTHEAST	VAN	1,938.4	2,830.1	68.5%	48460
368	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,511.1	4,274.9	58.7%	62779
369	2019 Ford Transit Van	CAMPBELL-FUEL HANDLING	VAN	2,527.4	2,856.7	88.5%	63184
370	2013 GMC Savana	GAS OPS SOUTHWEST	VAN	1,250.5	1,649.1	75.8%	31263
371	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	1,608.3	2,368.9	67.9%	40207
372	2025 Ford Transit Van	GAS OPS-NORTHEAST	VAN	344.7	521.0	66.2%	8617
373	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	3,339.0	4,599.7	72.6%	83476
374	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,735.8	5,458.6	68.4%	93394
375	2021 Ford F-250	GAS OPS SOUTHWEST	VAN	901.1	2,059.4	43.8%	22528
376	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	3,324.8	4,390.1	75.7%	83121
377	2025 Ford Transit Van	GAS OPS SOUTHWEST	VAN	534.2	714.8	74.7%	13355
378	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,877.4	4,151.8	69.3%	71934
379	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,624.8	5,161.9	70.2%	90621
380	2014 GMC Savana	GAS OPS SOUTHWEST REGION	VAN	688.5	1,239.4	55.5%	17212
381	2025 Ford Transit Van	GAS OPS-NORTHEAST	VAN	198.0	385.4	51.4%	4951
382	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,520.1	2,385.7	63.7%	38003
383	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,598.4	5,179.8	69.5%	89960
384	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,013.8	1,598.4	63.4%	25344
385	2014 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	VAN	2,765.0	3,920.9	70.5%	69126
386	2025 Ford Transit Van	CROSS WINDS ENERGY PARK	VAN	43.9	66.9	65.5%	1097
387	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,073.2	2,159.5	49.7%	26831
388	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,042.8	3,878.0	52.7%	51069
389	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	1,062.8	1,845.9	57.6%	26569
390	2014 GMC Savana	GAS OPS-SOUTHWEST A6	VAN	1,251.5	2,372.9	52.7%	31287
391	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,182.5	4,329.6	73.5%	79563
392	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,906.2	5,718.4	68.3%	97654
393	2013 GMC Savana	GAS OPS-SOUTHWEST A8	VAN	1,280.8	1,972.2	64.9%	32021

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
394	2014 GMC Savana	FIELD OPERATIONS SOUTHWEST ZONE 20	VAN	425.5	1,259.8	33.8%	10636
395	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	3,081.6	4,467.9	69.0%	77041
396	2009 Chevrolet Express	GAS OPS-NORTHEAST A	VAN	14.3	32.3	44.1%	356
397	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	4,129.8	5,328.8	77.5%	103245
398	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	816.1	1,121.5	72.8%	20404
399	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,357.9	3,567.6	66.1%	58946
400	2019 Ford Transit Van	GAS OPS-NORTHEAST A7	VAN	2,455.0	3,982.3	61.6%	61375
401	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,960.6	2,622.7	74.8%	49014
402	2017 Ford Transit Van	GAS OPS-EAST-ZONE	VAN	2,369.5	3,264.5	72.6%	59237
403	2019 Ford Transit Van	GAS OPS SOUTHWEST	VAN	1,303.3	1,903.7	68.5%	32583
404	2021 Ram ProMaster 2500	PUBLIC AFFAIRS B	VAN	16.1	47.7	33.7%	403
405	2013 GMC Savana	GAS OPS-SOUTHEAST	VAN	3,108.4	4,421.4	70.3%	77710
406	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,640.9	3,677.8	71.8%	66023
407	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	967.7	1,473.6	65.7%	24194
408	2019 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,387.9	4,444.0	76.2%	84698
409	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,764.5	4,422.9	62.5%	69114
410	2017 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	2,058.1	3,261.0	63.1%	51452
411	2019 Ford Transit Van	NDT EAST	VAN	186.3	720.6	25.9%	4657
412	2013 GMC Savana	FIELD OPERATIONS EAST CENTRAL ZONE 9	VAN	772.5	1,343.3	57.5%	19313
413	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,431.2	2,158.2	66.3%	35781
414	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	2,344.8	3,359.3	69.8%	58620
415	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,841.7	3,183.8	57.8%	46042
416	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,290.8	2,178.5	59.3%	32270
417	2013 GMC Savana	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	1,050.2	1,439.2	73.0%	26256
418	2014 GMC Savana	GAS OPS-SOUTHEAST C2	VAN	1,936.9	2,841.1	68.2%	48422
419	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	3,100.9	4,370.1	71.0%	77522
420	2013 GMC Savana	GAS OPS-NORTHEAST	VAN	3,314.4	4,686.9	70.7%	82859
421	2017 Ford Transit Van	GAS OPS-NE	VAN	1,129.8	1,783.1	63.4%	28245
422	2023 Ford Transit Van	EO-ELEC FIELD LAB	VAN	610.6	1,244.8	49.1%	15264
423	2014 GMC Savana	GAS OPS-SOUTHWEST A6	VAN	51.6	86.0	60.0%	1289
424	2017 Ford Transit Van	GAS OPS-NORTHEAST	VAN	2,793.8	4,186.5	66.7%	69845
425	2023 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,191.2	2,419.0	49.2%	29779
426	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,599.1	3,844.6	67.6%	64978
427	2017 Ford Transit Van	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	VAN	2,574.2	3,439.8	74.8%	64356
428	2014 GMC Savana	GAS OPS-SOUTHEAST C	VAN	940.2	1,754.1	53.6%	23506
429	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	3,964.2	5,957.7	66.5%	99104
430	2023 Ford Transit Van	EO-ELEC FIELD LAB	VAN	1,185.9	2,426.7	48.9%	29648
431	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,991.6	2,777.6	71.7%	49790
432	2017 Ford Transit Van	GAS OPS SOUTHWEST	VAN	2,375.1	3,321.6	71.5%	59377

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
433	2023 Ford Transit Van	GEP&S/GEP/MR&E TECH-EAST	VAN	1,057.0	2,534.7	41.7%	26426
434	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	4,876.5	6,308.9	77.3%	121912
435	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,874.2	3,009.8	62.3%	46854
436	2023 Ford Transit Van	EO-ELEC FIELD LAB-SUPPORT	VAN	357.5	1,030.3	34.7%	8937
437	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,214.1	1,811.1	67.0%	30354
438	2023 Ford Transit Van	EO-ELEC FIELD LAB H-GRAND RAPIDS EAST	VAN	994.7	1,977.2	50.3%	24868
439	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	1,556.4	2,155.2	72.2%	38909
440	2014 GMC Savana	GAS OPS-SOUTHEAST	VAN	2,979.1	4,534.1	65.7%	74478
441	2014 GMC Savana	GAS OPS-NORTHEAST	VAN	3,059.9	4,791.6	63.9%	76497
442	2014 GMC Savana	GAS OPS SOUTHWEST	VAN	954.9	1,330.4	71.8%	23873
443	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	411.2	1,359.6	30.2%	10279
444	2013 Ford Econoline Wagon	GO-GCON-RESOURCE MGMT B I	VAN	233.5	565.5	41.3%	5836
445	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	384.8	894.8	43.0%	9621
446	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	262.1	512.6	51.1%	6552
447	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	347.1	737.2	47.1%	8678
448	2023 Ford Transit Van	GAS OPS O&M COR CON	VAN	2,717.0	3,961.4	68.6%	67924
449	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	303.1	637.6	47.5%	7578
450	2023 Ford Transit Van	EO-ELEC FIELD LAB STATEWIDE	VAN	291.5	988.4	29.5%	7287
451	2024 Ford Transit Van	EO-ELEC FIELD LAB G-FLINT	VAN	104.0	232.9	44.6%	2600
452	2019 Ford Transit Wagon	GO-GCON-RESOURCE MGMT B I	VAN	173.4	426.0	40.7%	4336
453	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	480.9	856.7	56.1%	12023
454	2019 Chevrolet Express	GAS OPS SUPPLY & CONSTRUCTION	VAN	384.9	507.2	75.9%	9623
455	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	300.2	912.2	32.9%	7506
456	2024 Ford Transit Van	EO-ELEC FIELD LAB	VAN	290.1	1,007.4	28.8%	7252
457	2020 Chevrolet Express	GO-TO-M&R-EAST	VAN	59.9	118.5	50.5%	1496
458	2024 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	687.1	1,065.9	64.5%	17179
459	2024 Ford Transit Van	GAS OPS-NORTHEAST A4	VAN	734.0	1,208.0	60.8%	18351
460	2024 Ford Transit Van	GAS OPS-SOUTHEAST	VAN	1,241.7	1,729.3	71.8%	31041

915,656.3

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Ford F-350	GAS OPS-EAST-ZONE	PICKUP	2,718.9	3,360.1	80.9%	67973	Average idle time	59.4%
2	2021 Ford F-350	HYDRO OPERS-OFFICE OF MANAGER	PICKUP	481.6	916.8	52.5%	12039		
3	2022 Ford F-350	LUDINGTON PUMP STRG MAINT	PICKUP	218.3	583.6	37.4%	5459	Idle Metric Tons CO2	716.4
4	2023 Ford F-350	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	482.9	585.9	82.4%	12072		
5	2024 Ford F-350	GO-TRANS OPS EAST	PICKUP	3.3	9.3	35.6%	83	Gallons idled	75227.249
6	2016 Ford F-350	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	1,930.4	3,679.1	52.5%	48261		
7	2017 Ford F-350	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	3,264.1	4,698.0	69.5%	81603		
8	2019 Ford F-350	EO-SUBSTATION OPS C-MIDLAND	PICKUP	2,884.0	4,301.0	67.1%	72100		
9	2020 Ford F-350	GAS OPS-EAST-ZONE	PICKUP	2,124.0	2,713.8	78.3%	53100		
10	2021 Ford F-350	EO-SUBSTATION OPS D-FLINT	PICKUP	2,363.8	3,905.3	60.5%	59094		
11	2022 Ford F-350	LVD NE ZONE 1	PICKUP	3,192.4	4,987.4	64.0%	79811		
12	2023 Ford F-350	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	580.7	1,479.6	39.2%	14517		
13	2016 Ford F-350	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	1,782.3	2,602.4	68.5%	44557		
14	2019 Ford F-350	EO-SUBS OPS/MAINT/METRO	PICKUP	1,167.0	1,990.3	58.6%	29176		
15	2020 Ford F-350	GAS OPS-EAST-ZONE-2B	PICKUP	4,138.3	5,254.8	78.8%	103457		
16	2022 Ford F-350	LVD CENTRAL ZONE 2	PICKUP	2,171.4	3,953.0	54.9%	54286		
17	2023 Ford F-350	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,088.2	1,301.5	83.6%	27205		
18	2024 Ford F-350	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	0.2	0.7	25.6%	4		
19	2016 Ford F-350	EO-SUBSTATION OPS D-FLINT	PICKUP	2,909.3	4,230.7	68.8%	72731		
20	2019 Ford F-350	EO-SUBS OPS/MAINT/METRO	PICKUP	1,438.4	2,383.2	60.4%	35959		
21	2021 Ford F-350	HYDRO OPERS-OFFICE OF MANAGER	PICKUP	548.2	1,108.7	49.4%	13705		
22	2022 Ford F-350	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	PICKUP	3,499.3	5,257.3	66.6%	87483		
23	2023 Ford F-350	GAS OPS-NORTH-ZONE	PICKUP	1,489.2	2,278.9	65.4%	37231		
24	2024 Ford F-350	GAS OPS-CENTRAL-ZONE-2B	PICKUP	97.5	158.2	61.6%	2437		
25	2016 Ford F-350	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	3,027.0	4,269.2	70.9%	75676		
26	2020 Ford F-350	GAS OPS-CENTRAL-ZONE-2A	PICKUP	631.0	1,032.8	61.1%	15775		
27	2021 Ford F-350	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	1,937.2	3,225.2	60.1%	48430		
28	2022 Ford F-350	EO-LVD-LAKESHORE ZONE 7	PICKUP	2,574.7	4,078.1	63.1%	64369		
29	2023 Ford F-350	EO-SUBS OPS/MAINT/METRO	PICKUP	183.3	348.0	52.7%	4583		
30	2024 Ford F-350	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	1.5	4.0	38.4%	38		
31	2020 Ford F-350	GAS OPS-NORTH-ZONE-3D	PICKUP	46.7	140.3	33.3%	1168		
32	2021 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,128.4	2,109.1	53.5%	28211		
33	2022 Ford F-350	LVD NE ZONE 1	PICKUP	3,363.1	5,290.6	63.6%	84078		
34	2020 Ford F-350	GAS OPS-EAST-ZONE	PICKUP	1,254.5	1,744.9	71.9%	31362		
35	2021 Ford F-350	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	1,536.1	2,829.2	54.3%	38403		
36	2022 Ford F-350	LVD NE ZONE 1	PICKUP	1,754.8	3,339.6	52.5%	43870		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
37	2020 Ford F-350	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	PICKUP	3,027.4	5,456.1	55.5%	75684
38	2021 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,115.5	3,318.1	63.8%	52888
39	2022 Ford F-350	LVD CENTRAL ZONE 2	PICKUP	1,996.4	3,700.6	53.9%	49911
40	2024 Ford F-350	EO-LVD-NW ZONE 8-TRAVERSE-B	PICKUP	14.3	35.7	40.0%	357
41	2020 Ford F-350	FIELD OPERATIONS NORTHWEST ZONE 1	PICKUP	399.4	1,213.4	32.9%	9985
42	2021 Ford F-350	GAS OPS-CENTRAL-ZONE 1	PICKUP	76.2	143.7	53.0%	1904
43	2022 Ford F-350	EO-LVD-LAKESHORE ZONE 7	PICKUP	1,725.2	2,392.1	72.1%	43131
44	2024 Ford F-350	EO-SUBSTATION OPS D-FLINT	PICKUP	0.6	1.7	32.4%	14
45	2021 Ford F-350	CAMPBELL-FUEL HANDLING	PICKUP	31.6	48.8	64.8%	790
46	2022 Ford F-350	LVD NE ZONE 1	PICKUP	3,951.0	5,830.8	67.8%	98776
47	2024 Ford F-350	GAS OPS-CENTRAL-ZONE 1	PICKUP	30.0	37.4	80.4%	751
48	2020 Ford F-350	GAS OPS-EAST-ZONE	PICKUP	1,221.2	1,772.0	68.9%	30530
49	2022 Ford F-350	LVD NE ZONE 1	PICKUP	3,143.3	5,125.8	61.3%	78582
50	2020 Ford F-350	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	3,660.7	4,854.7	75.4%	91516
51	2022 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,091.1	4,195.5	49.8%	52278
52	2020 Ford F-350	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	2,577.6	4,133.9	62.4%	64440
53	2020 Ford F-350	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	1,810.6	3,718.0	48.7%	45264
54	2020 Ford F-350	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	3,507.4	5,633.6	62.3%	87686
55	2017 Ford F-250	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,385.0	2,087.3	66.4%	34626
56	2017 Ford F-250	LVD EAST ZONE 3	PICKUP	3,257.3	4,254.4	76.6%	81432
				94,034.1			
	2023 to Sept 2025						

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2010 Chevrolet Silverado	GAS OPS-SE	PICKUP	1,467.2	2,298.4	63.8%	36681	Average idle time	62.2%
2	2021 Ford F-350	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	3,227.4	4,582.5	70.4%	80685		
3	2012 GMC Sierra	GAS OPS-SE	PICKUP	3,420.4	4,386.3	78.0%	85511		
4	2013 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,512.4	3,132.7	48.3%	37809	Idle Metric Tons CO2	2188.1
5	2024 Ford F-450	GAS OPS SOUTHWEST	PICKUP	1,376.9	2,284.1	60.3%	34423		
6	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	2,419.0	3,257.1	74.3%	60474		
7	2017 Ford F-350	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	1,663.9	2,645.8	62.9%	41597	Gallons idled	229753.993
8	2009 Chevrolet Silverado	GAS OPS-NE	PICKUP	584.7	1,234.9	47.3%	14618		
9	2020 Ford F-350	GO-TO-PIPELINE & STORAGE-NORTH-WELL SERV	PICKUP	3,243.8	5,062.8	64.1%	81096		
10	2012 GMC Sierra	GO-TO-M&R-EAST	PICKUP	2,002.8	2,835.2	70.6%	50071		
11	2013 GMC Sierra	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	1,530.6	2,576.4	59.4%	38266		
12	2004 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	826.8	1,222.6	67.6%	20671		
13	2015 GMC Sierra	GAS OPS-NORTHEAST	PICKUP	2,001.0	3,025.5	66.1%	50025		
14	2017 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,009.7	2,214.7	45.6%	25242		
15	2019 Ford F-350	GAS OPS-SOUTHWEST A7	PICKUP	2,068.7	3,387.8	61.1%	51718		
16	2020 Ford F-350	GAS OPS-SE	PICKUP	1,287.2	1,597.3	80.6%	32181		
17	2021 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,119.6	3,460.7	61.2%	52990		
18	2013 GMC Sierra	GO-TO-M&R-NORTH	PICKUP	1,504.6	3,632.8	41.4%	37616		
19	2015 GMC Sierra	GAS OPS NE ZONE 2-SPAN 13	PICKUP	2,776.7	3,780.4	73.4%	69417		
20	2017 Ford F-350	GAS OPS-SE	PICKUP	3,105.4	4,235.1	73.3%	77635		
21	2019 Ford F-350	GAS OPS-NORTHEAST A6	PICKUP	2,226.0	3,881.8	57.3%	55650		
22	2020 Ford F-350	GAS OPS-SE	PICKUP	351.7	473.1	74.3%	8792		
23	2011 Chevrolet Silverado	GO-TO-M&R-WEST	PICKUP	1,254.8	1,985.1	63.2%	31371		
24	2012 GMC Sierra	GO-TO-M&R-WEST	PICKUP	1,230.6	2,237.5	55.0%	30764		
25	2013 GMC Sierra	GAS OPS-NORTH-ZONE-3D	PICKUP	914.4	3,051.2	30.0%	22859		
26	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	2,577.4	3,994.0	64.5%	64435		
27	2017 Ford F-350	GAS OPS-NE	PICKUP	566.1	881.3	64.2%	14152		
28	2019 Ford F-350	GAS OPS SOUTHWEST	PICKUP	1,004.9	2,730.0	36.8%	25123		
29	2010 Chevrolet Silverado	GO-TO-M&R-EAST	PICKUP	1,039.3	1,587.3	65.5%	25982		
30	2011 Chevrolet Silverado	GAS OPS-NE	PICKUP	1,808.3	2,668.6	67.8%	45209		
31	2012 GMC Sierra	GO-TO-M&R-WEST	PICKUP	1,663.9	2,468.8	67.4%	41598		
32	2013 GMC Sierra	GO-GAS EAST O & M COMPRESSION	PICKUP	284.0	406.8	69.8%	7099		
33	2024 Ford F-450	GAS OPS SOUTHWEST	PICKUP	1,034.7	1,520.9	68.0%	25868		
34	2015 GMC Sierra	GAS OPS NE ZONE 2-SPAN 13	PICKUP	2,905.8	3,763.4	77.2%	72645		
35	2017 Ford F-350	GAS OPS-NORTHEAST	PICKUP	2,587.3	4,198.7	61.6%	64682		
36	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	2,303.4	4,009.3	57.5%	57585		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
37	2021 Ford F-450	GAS OPS-NORTHEAST	PICKUP	2,292.4	3,472.9	66.0%	57311
38	2012 GMC Sierra	GO-TO-M&R-WEST	PICKUP	2,007.4	2,925.9	68.6%	50184
39	2013 GMC Sierra	GAS OPS NE ZONE 2-SPAN 13	PICKUP	2,346.5	3,442.7	68.2%	58662
40	2024 Ford F-450	GAS OPS SOUTHWEST	PICKUP	942.4	1,613.0	58.4%	23561
41	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	2,747.7	4,430.4	62.0%	68692
42	2017 Ford F-350	GO-TO-M&R-EAST	PICKUP	2,176.7	3,792.1	57.4%	54417
43	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	1,373.9	2,654.4	51.8%	34347
44	2023 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,195.2	2,124.6	56.3%	29880
45	2024 Ford F-450	GAS OPS NORTHEAST A9	PICKUP	138.2	218.0	63.4%	3456
46	2015 GMC Sierra	GAS OPS-NORTHEAST	PICKUP	2,140.6	2,919.2	73.3%	53514
47	2021 Ford F-450	GAS OPS-NORTHEAST	PICKUP	1,270.3	2,081.7	61.0%	31758
48	2023 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,604.4	2,450.9	65.5%	40110
49	2024 Ford F-450	GAS OPS SOUTHWEST	PICKUP	259.8	598.7	43.4%	6495
50	2015 GMC Sierra	GAS OPS SOUTHEAST A	PICKUP	3,727.7	5,106.7	73.0%	93192
51	2017 Ford F-350	GO-TO-M&R-WEST	PICKUP	3,837.0	5,323.3	72.1%	95926
52	2023 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,189.5	2,715.8	80.6%	54739
53	2024 Ford F-450	GAS OPS-SOUTHWEST A2	PICKUP	952.0	1,262.6	75.4%	23801
54	2015 GMC Sierra	CAMPBELL SITE MAINTENANCE	PICKUP	1,246.7	2,185.3	57.0%	31168
55	2010 Chevrolet Silverado	GO-GAS EAST O & M COMPRESSION	PICKUP	1,679.8	2,088.1	80.4%	41995
56	2021 Ford F-450	GAS OPS-SOUTHEAST	PICKUP	2,903.4	4,231.0	68.6%	72585
57	2023 Ford F-450	GAS OPS-SOUTHEAST	PICKUP	698.2	1,384.2	50.4%	17456
58	2015 GMC Sierra	GAS OPS-SOUTHWEST A7	PICKUP	3,021.0	4,709.5	64.1%	75524
59	2017 Ford F-350	GAS OPS-SE	PICKUP	1,319.5	2,005.9	65.8%	32988
60	2009 Chevrolet Silverado	GAS OPS-NE	PICKUP	1,868.3	3,001.6	62.2%	46708
61	2010 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	3,609.1	5,074.5	71.1%	90229
62	2021 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	PICKUP	1,261.1	2,540.7	49.6%	31527
63	2012 GMC Sierra	GAS OPS-SE	PICKUP	2,457.2	3,258.4	75.4%	61431
64	2023 Ford F-450	GAS OPS-OUTSTATE 6	PICKUP	920.2	1,417.3	64.9%	23006
65	2015 GMC Sierra	GAS OPS-NORTHEAST	PICKUP	3,462.3	4,800.1	72.1%	86558
66	2017 Ford F-350	FIELD OPERATIONS SOUTHWEST ZONE 13	PICKUP	192.2	471.9	40.7%	4806
67	2009 Chevrolet Silverado	GAS OPS - REG-SW	PICKUP	300.4	615.0	48.8%	7510
68	2010 Chevrolet Silverado	GO-TRANS OPS EAST	PICKUP	1,270.1	2,466.1	51.5%	31752
69	2021 Ford F-450	GAS OPS-SOUTHEAST	PICKUP	3,224.4	4,336.8	74.4%	80610
70	2012 GMC Sierra	GO-TO-M&R-NORTH	PICKUP	688.3	1,636.9	42.0%	17206
71	2015 GMC Sierra	GAS OPS-SE	PICKUP	2,101.1	3,522.9	59.6%	52527
72	2010 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	1,877.9	3,244.1	57.9%	46947
73	2021 Ford F-450	GAS OPS-NE	PICKUP	1,115.0	1,521.1	73.3%	27874
74	2012 GMC Sierra	GO-TRANS OPS EAST	PICKUP	2,940.5	3,941.1	74.6%	73512
75	2015 GMC Sierra	GAS OPS-SE	PICKUP	1,934.3	2,925.4	66.1%	48357
76	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,229.4	3,835.1	58.1%	55734
77	2021 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	PICKUP	2,766.5	3,746.1	73.9%	69163
78	2012 GMC Sierra	GO-TO-M&R-WEST	PICKUP	2,742.9	4,759.3	57.6%	68571

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
79	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	1,164.4	2,240.3	52.0%	29111
80	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,362.9	3,572.4	66.1%	59072
81	2021 Ford F-450	GAS OPS-NE	PICKUP	1,964.0	2,965.1	66.2%	49101
82	2022 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	PICKUP	2,393.8	3,448.1	69.4%	59846
83	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	2,717.0	4,085.9	66.5%	67926
84	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	1,275.6	2,820.6	45.2%	31891
85	2020 Ford F-350	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	1,531.8	2,321.0	66.0%	38294
86	2021 Ford F-450	GO-TO-M&R-NORTH	PICKUP	753.5	2,368.4	31.8%	18837
87	2022 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	PICKUP	1,916.4	2,803.8	68.4%	47911
88	2015 GMC Sierra	GO-GAS EAST O & M COMPRESSION	PICKUP	390.4	603.5	64.7%	9761
89	2009 Chevrolet Silverado	GAS OPS-SOUTHEAST	PICKUP	2,288.5	3,386.6	67.6%	57212
90	2020 Ford F-350	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	1,684.2	2,439.5	69.0%	42105
91	2021 Ford F-450	GO-TO-M&R-NORTH	PICKUP	2,082.6	3,115.8	66.8%	52065
92	2022 Ford F-450	GAS OPS NORTHEAST A9	PICKUP	2,424.7	3,692.3	65.7%	60618
93	2015 GMC Sierra	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	2,523.0	3,573.1	70.6%	63075
94	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,824.7	3,339.2	54.6%	45618
95	2021 Ford F-450	GAS OPS-NE	PICKUP	2,711.7	4,280.5	63.3%	67793
96	2022 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON NE	PICKUP	2,801.4	3,687.6	76.0%	70036
97	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	1,425.6	2,750.1	51.8%	35639
98	2019 Ford F-350	GAS OPS-SOUTHEAST	PICKUP	1,451.4	2,785.1	52.1%	36285
99	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,160.0	3,509.2	61.6%	54001
100	2021 Ford F-450	GO-TO-M&R-WEST	PICKUP	1,698.3	2,440.4	69.6%	42457
101	2022 Ford F-450	GO-GAS SYS ENHANCE-GAS O&M COR CON SW	PICKUP	2,953.8	4,248.8	69.5%	73844
102	2015 GMC Sierra	GAS OPS - REG-SW	PICKUP	2,546.1	3,786.9	67.2%	63652
103	2020 Ford F-350	GAS OPS-NORTHEAST	PICKUP	1,851.1	4,275.7	43.3%	46278
104	2021 Ford F-450	GAS OPS - REG-SW	PICKUP	1,572.6	2,550.6	61.7%	39315
105	2022 Ford F-450	GAS OPS-SOUTHWEST A	PICKUP	2,087.8	3,180.9	65.6%	52196
106	2015 GMC Sierra	GAS OPS - REG-SW	PICKUP	3,224.6	4,923.2	65.5%	80615
107	2020 Ford F-350	GO-TO-M&R-WEST	PICKUP	948.3	1,744.6	54.4%	23708
108	2021 Ford F-450	GAS OPS-NORTHEAST	PICKUP	2,266.2	3,516.0	64.5%	56655
109	2015 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 6	PICKUP	359.6	1,083.1	33.2%	8989
110	2009 Chevrolet Silverado	GAS OPS-SE	PICKUP	1,633.5	2,341.4	69.8%	40838
111	2020 Ford F-350	GAS OPS-NORTHEAST	PICKUP	3,021.6	4,814.8	62.8%	75540
112	2021 Ford F-450	GAS OPS-NORTHEAST A6	PICKUP	906.6	2,440.9	37.1%	22665
113	2015 GMC Sierra	GAS OPS-NORTHEAST	PICKUP	2,334.5	4,139.6	56.4%	58362
114	2019 Ford F-350	GO-TO-M&R-WEST	PICKUP	1,071.9	2,669.4	40.2%	26799
115	2021 Ford F-450	GAS OPS-SOUTHWEST A6	PICKUP	3,490.1	4,732.7	73.7%	87252
116	2015 GMC Sierra	GAS OPS NE ZONE 2-SPAN 13	PICKUP	2,878.0	3,998.0	72.0%	71951
117	2019 Ford F-350	GO-TRANS OPS EAST	PICKUP	1,840.0	3,045.4	60.4%	46000
118	2020 Ford F-350	GO-TO-M&R-WEST	PICKUP	2,292.7	3,031.3	75.6%	57318
119	2021 Ford F-450	GAS OPS-NORTHEAST	PICKUP	786.0	1,686.8	46.6%	19651
120	2015 GMC Sierra	GAS OPS SOUTHWEST	PICKUP	3,086.3	4,162.7	74.1%	77158

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
121	2020 Ford F-350	GAS OPS-NE	PICKUP	1,923.4	3,173.9	60.6%	48086
122	2021 Ford F-450	GAS OPS-SOUTHWEST A7	PICKUP	2,850.1	4,479.4	63.6%	71252
123	2025 Ford F-450	GAS OPS O&M COR CON	PICKUP	1.6	3.6	46.0%	41
124	2020 Ford F-350	GAS OPS-NE	PICKUP	2,324.7	3,424.5	67.9%	58118
125	2025 Ford F-450	GAS OPS-NORTHEAST	PICKUP	0.4	1.0	41.4%	11
126	2009 Chevrolet Silverado	GO-GAS O&M COMPRESSION I	PICKUP	1,121.7	1,362.1	82.3%	28041
127	2020 Ford F-350	GO-TO-M&R-NORTH	PICKUP	1,227.5	2,803.0	43.8%	30687
128	2021 Ford F-450	GAS OPS-SOUTHEAST	PICKUP	3,859.8	5,055.3	76.4%	96496
129	2020 Ford F-350	GAS OPS-NORTH-ZONE	PICKUP	1,591.1	2,412.4	66.0%	39778
130	2021 Ford F-350	GEP&S/SI/TIMP/DIRECT ASSESS & COR CNTRL	PICKUP	1,060.7	2,746.5	38.6%	26518
131	2025 Ford F-450	GAS OPS-NORTHEAST	PICKUP	0.3	0.7	46.6%	8
132	2009 Chevrolet Silverado	GO-TO-M&R-WEST	PICKUP	1,048.3	1,725.1	60.8%	26208
133	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	3,094.3	4,187.0	73.9%	77359
134	2020 Ford F-350	GO-TRANS OPS EAST	PICKUP	3,180.8	4,646.0	68.5%	79521
135	2025 Ford F-450	GAS OPS SOUTHWEST	PICKUP	393.4	712.1	55.2%	9835
136	2020 Ford F-350	GO-TO-M&R-WEST	PICKUP	4,408.6	6,073.1	72.6%	110216
137	2019 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,452.8	4,168.9	58.8%	61319
138	2020 Ford F-350	GAS OPS-NE	PICKUP	3,298.8	4,956.0	66.6%	82469
139	2019 Ford F-350	GAS OPS - REG-SW	PICKUP	2,330.1	4,015.2	58.0%	58252
140	2020 Ford F-350	GAS OPS SOUTHWEST	PICKUP	1,435.7	2,048.6	70.1%	35892
141	2019 Ford F-350	GAS OPS-NE	PICKUP	2,499.4	4,851.0	51.5%	62485
142	2020 Ford F-350	GAS OPS-NORTHEAST	PICKUP	3,673.1	6,003.4	61.2%	91828
143	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	1,097.7	1,958.1	56.1%	27443
144	2020 Ford F-350	GAS OPS-NORTHEAST	PICKUP	3,868.6	6,419.9	60.3%	96715
145	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	2,312.5	3,216.8	71.9%	57812
146	2025 Ford F-450	GAS OPS SOUTHWEST	PICKUP	9.9	20.1	49.0%	247
147	2019 Ford F-350	GAS OPS-NORTHEAST	PICKUP	2,263.5	3,700.6	61.2%	56587
148	2025 Ford F-450	GAS OPS-SOUTHWEST A7	PICKUP	23.9	37.6	63.7%	598
149	2019 Ford F-350	GAS OPS-NE	PICKUP	3,118.1	4,307.5	72.4%	77953
150	2019 Ford F-350	GAS OPS-SOUTHEAST B5	PICKUP	1,492.1	2,196.6	67.9%	37303
151	2020 Ford Edge	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	375.7	900.5	41.7%	9392
152	2021 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	186.0	235.8	78.9%	4650
153	2020 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	236.0	286.8	82.3%	5901
154	2024 Ram 2500	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	44.9	87.2	51.5%	1122
155	2024 Ram 2500	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	16.3	23.3	70.0%	409
156	2021 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND-D	PICKUP	443.4	599.2	74.0%	11084
157	2024 Ram 2500	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,216.5	1,767.4	68.8%	30411

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
158	2020 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	157.6	198.4	79.4%	3939
159	2021 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND-A	PICKUP	747.0	1,005.5	74.3%	18676
160	2021 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND	PICKUP	547.9	1,037.5	52.8%	13698
161	2021 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND-B	PICKUP	504.3	1,031.1	48.9%	12607
162	2020 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	123.0	248.5	49.5%	3075
163				287,192.5			
164	2023 to Sept 2025						

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2010 Chevrolet Silverado	CAMPBELL 3 MAINTENANCE E	PICKUP	220.1	336.6	65.4%	5503	Average idle time
2	2014 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	16.0	32.1	49.8%	399	
3	2015 GMC Sierra	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	2,148.3	3,160.9	68.0%	53707	Idle Metric Tons CO2
4	N/A	COVERT GENERATING STATION	PICKUP	79.0	98.6	80.1%	1974	6354.0
5	2019 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	4,043.5	5,343.8	75.7%	101087	Gallons idled
6	2011 Chevrolet Silverado	GAS OPS SOUTHWEST REGION	PICKUP	693.7	1,507.2	46.0%	17343	667172.24
7	2013 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	8.3	12.4	67.5%	209	
8	2014 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	2,127.2	2,678.1	79.4%	53181	
9	2007 GMC Sierra Classic	CROSS WINDS ENERGY PARK	PICKUP	55.2	142.2	38.8%	1380	
10	2008 Chevrolet Silverado	WM&CD-NE ZONE-LAN/OWO	PICKUP	706.1	1,563.9	45.1%	17652	
11	2020 Ford F-250	JACKSON GENERATING STATION	PICKUP	46.4	157.2	29.5%	1159	
12	2013 GMC Sierra	WM&CD-NW ZONE-GRN/FRE/BIG/GVL	PICKUP	396.4	1,007.6	39.3%	9909	
13	2014 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	3,806.7	4,278.2	89.0%	95167	
14	2020 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 6	PICKUP	470.7	1,388.3	33.9%	11769	
15	2011 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 6	PICKUP	106.3	356.6	29.8%	2657	
16	2022 Ford F-250	GEP&S/SYSTEM INTEGRITY	PICKUP	1,332.2	2,733.9	48.7%	33305	
17	2014 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	3,113.8	3,650.6	85.3%	77844	
18	2016 GMC Sierra	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	2,593.6	4,012.8	64.6%	64841	
19	2019 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	3,743.6	4,687.1	79.9%	93590	
20	2020 Ford F-250	FIELD OPERATIONS NORTHWEST ZONE 1	PICKUP	250.0	859.6	29.1%	6249	
21	2011 Chevrolet Silverado	GAS OPS-NORTH-ZONE	PICKUP	429.0	1,032.1	41.6%	10724	
22	2012 Chevrolet Silverado	CAMPBELL SITE MAINTENANCE	PICKUP	187.4	397.3	47.2%	4684	
23	2014 Ford F-250	GO-GCON-RESOURCE MGMT B I	PICKUP	2,593.4	3,189.1	81.3%	64835	
24	2015 GMC Sierra	EO-LVD-EAST ZONE 3-FLINT	PICKUP	4,287.9	5,633.4	76.1%	107197	
25	2017 Ford F-250	GAS OPS-WELDING	PICKUP	2,128.7	3,405.0	62.5%	53217	
26	2019 Ford F-250	EPM-CONSTRUCTION MANAGEMENT	PICKUP	538.5	1,073.1	50.2%	13463	
27	2010 Chevrolet Silverado	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	21.3	62.4	34.1%	531	
28	2013 GMC Sierra	WM&CD-SE ZONE-LIV/HWL	PICKUP	43.8	137.2	31.9%	1094	
29	2014 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,387.3	4,609.3	73.5%	84684	
30	2005 GMC Sierra	EO-LVD-NW ZONE 8-TRAVERSE-B	PICKUP	414.4	851.9	48.6%	10359	
31	2019 Ford F-250	EPM-CONSTRUCTION MANAGEMENT	PICKUP	1,008.9	1,862.3	54.2%	25223	
32	2012 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,392.7	3,334.2	71.8%	59818	
33	2013 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	PICKUP	48.0	132.9	36.1%	1201	
34	2014 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	2,677.9	3,161.9	84.7%	66948	
35	2016 GMC Sierra	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	1,699.6	3,640.5	46.7%	42491	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,252.9	2,827.0	79.7%	56324
37	2014 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,199.1	3,742.4	85.5%	79978
38	2017 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	1,624.6	2,585.7	62.8%	40616
39	2018 Ford F-250	KARN COMPLEX PRODUCTION	PICKUP	474.7	788.5	60.2%	11867
40	2022 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	1,872.9	3,172.2	59.0%	46822
41	2014 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	2,814.0	3,587.2	78.4%	70350
42	2016 GMC Sierra	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	2,212.2	3,600.1	61.4%	55304
43	2017 Ford F-250	CX&T SCC-GRAND RAPIDS VCC TEAM 9	PICKUP	232.9	903.2	25.8%	5824
44	2019 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,656.7	3,854.2	68.9%	66418
45	2021 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	2,213.0	3,133.3	70.6%	55326
46	2022 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	2,100.5	3,493.3	60.1%	52513
47	2014 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,560.0	4,140.5	86.0%	89000
48	2025 Ford F-250	EO-SUBSTATION MAINT I-FLINT	PICKUP	20.6	35.7	57.7%	515
49	2016 GMC Sierra	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	4,183.0	5,291.2	79.1%	104575
50	2017 Ford F-250	GAS OPS-NORTH-ZONE-2C	PICKUP	3,242.2	4,435.9	73.1%	81054
51	2008 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	421.5	909.6	46.3%	10538
52	2011 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-WELL SERV	PICKUP	1,642.3	2,834.8	57.9%	41057
53	2022 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,891.2	5,239.7	74.3%	97279
54	2014 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,756.0	3,184.6	86.5%	68901
55	2015 GMC Sierra	EO-SUBSTATION MAINT I-FLINT	PICKUP	393.8	634.5	62.1%	9844
56	2025 Ford F-250	EO-SUBSTATION MAINT I-FLINT	PICKUP	12.3	25.2	48.8%	308
57	2016 GMC Sierra	EO-SUBS OPS/MAINT/METRO	PICKUP	1,403.8	2,252.0	62.3%	35094
58	2017 Ford F-250	GAS OPS-NORTH-ZONE-2C	PICKUP	4,017.7	5,468.6	73.5%	100442
59	2020 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 5	PICKUP	70.5	278.4	25.3%	1762
60	2011 Chevrolet Silverado	GAS OPS SOUTHWEST REGION	PICKUP	1,751.0	2,398.8	73.0%	43774
61	2022 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	4,083.1	5,276.1	77.4%	102077
62	2014 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,309.4	1,907.2	68.7%	32734
63	2015 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,918.3	3,242.0	59.2%	47958
64	2016 GMC Sierra	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	903.4	1,801.0	50.2%	22585
65	2017 Ford F-250	LVD DESIGN-CAD/LUD/BIG	PICKUP	722.1	1,444.2	50.0%	18053
66	2019 Ford F-250	CAMPBELL-CHEMISTRY/RESULT	PICKUP	65.0	197.2	33.0%	1626
67	2020 Ford F-250	FIELD OPERATIONS NORTHWEST ZONE 4	PICKUP	794.5	1,435.2	55.4%	19863
68	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,868.9	2,301.4	81.2%	46722
69	2014 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,043.4	2,167.4	48.1%	26086
70	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,199.6	2,765.5	79.5%	54990
71	2016 GMC Sierra	EO-LVD-WEST-ZONE 3-G RAPIDS-B	PICKUP	816.7	1,909.8	42.8%	20417
72	2017 Ford F-250	CAMPBELL SITE MAINTENANCE	PICKUP	2,480.9	3,400.0	73.0%	62023
73	2019 Ford F-250	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,998.1	5,524.2	54.3%	74953
74	2022 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	1,164.7	1,884.0	61.8%	29118
75	2023 Ford F-250	GAS OPS-SOUTH-ZONE 1C	PICKUP	95.3	158.0	60.3%	2383
76	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	1,963.2	2,992.2	65.6%	49081

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2016 Ford F-250	EO-SUBSTATION OPS C-MIDLAND	PICKUP	268.4	419.5	64.0%	6709
78	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,474.3	3,007.8	82.3%	61856
79	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	3,196.0	5,215.4	61.3%	79899
80	2010 Chevrolet Silverado	EO-SUBSTATION OPS D-FLINT	PICKUP	473.9	851.8	55.6%	11848
81	2022 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	2,371.1	3,573.3	66.4%	59278
82	2023 Ford F-250	EO-LVD-SW ZONE 5-HAMILTON-B	PICKUP	1,394.5	1,989.2	70.1%	34862
83	2024 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	1,202.6	2,039.4	59.0%	30066
84	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE-2C	PICKUP	1,659.6	2,280.5	72.8%	41491
85	2017 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	1,278.6	1,748.7	73.1%	31966
86	2019 Ford F-250	GO-TRANS OPS EAST	PICKUP	1,912.0	2,623.7	72.9%	47799
87	2022 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	2,351.1	3,514.4	66.9%	58779
88	2023 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	717.9	1,539.8	46.6%	17948
89	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,658.1	2,470.3	67.1%	41452
90	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,931.4	4,553.5	86.3%	98286
91	2020 Ford F-250	FIELD OPERATIONS SOUTHERN ZONE 15	PICKUP	104.7	379.0	27.6%	2616
92	2012 Chevrolet Silverado	GAS OPS-EAST-ZONE	PICKUP	381.5	603.7	63.2%	9539
93	2023 Ford F-250	EO-LVD-EAST ZONE 3-LANSING B	PICKUP	1,316.8	2,425.0	54.3%	32921
94	2024 Ford F-250	GAS DIST - PRESS CONTROL & TAPPING - A	PICKUP	352.7	768.1	45.9%	8818
95	2015 GMC Sierra	GAS OPS-WELDING	PICKUP	1,727.4	2,357.2	73.3%	43186
96	2017 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	2,402.3	3,206.3	74.9%	60058
97	2021 Ford F-250	EO-LVD-NE ZONE 1-BAY CITY-A	PICKUP	2,502.0	4,501.3	55.6%	62549
98	2022 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	2,659.3	3,941.9	67.5%	66484
99	2023 Ford F-250	GO-TRANS OPS EAST	PICKUP	1,314.5	2,039.4	64.5%	32863
100	2024 Ford F-250	EO-LVD-NW ZONE 8-TRAVERSE-A	PICKUP	1,196.2	2,125.4	56.3%	29905
101	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,061.1	3,987.9	76.8%	76527
102	2017 Ford F-250	GO-GAS CONSTRUCTION	PICKUP	1,933.7	2,423.5	79.8%	48344
103	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	2,718.6	3,711.0	73.3%	67966
104	2020 Ford F-250	FIELD OPERATIONS SOUTHERN ZONE 22	PICKUP	176.8	469.1	37.7%	4420
105	2022 Ford F-250	LVD NE ZONE 1	PICKUP	1,839.8	3,392.9	54.2%	45995
106	2023 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	1,057.7	1,939.3	54.5%	26441
107	2024 Ford F-250	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	1,197.6	1,955.5	61.2%	29941
108	2015 GMC Sierra	EO-SUBSTATION OPS D-FLINT	PICKUP	961.5	2,305.1	41.7%	24039
109	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,195.1	3,620.7	88.2%	79878
110	2019 Ford F-250	EO-LVD-NW ZONE 8-BOYNE-A	PICKUP	3,215.5	5,335.6	60.3%	80387
111	2020 Ford F-250	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,210.8	1,743.0	69.5%	30271
112	2011 Chevrolet Silverado	EO-LVD-LAKESHORE ZONE 7	PICKUP	1,076.8	1,669.1	64.5%	26920
113	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	3,336.9	5,325.8	62.7%	83423
114	2023 Ford F-250	EO-LVD-SE ZONE 4-COLDWATER-B	PICKUP	96.6	353.4	27.3%	2414
115	2024 Ford F-250	EO-LVD-NW ZONE 8-BOYNE-A	PICKUP	1,538.6	2,644.0	58.2%	38466
116	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,370.4	3,287.2	72.1%	59261
117	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,768.3	3,492.4	79.3%	69208

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
118	2008 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 10	PICKUP	213.4	615.3	34.7%	5335
119	2020 Ford F-250	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	2,603.6	4,507.5	57.8%	65091
120	2021 Ford F-250	EO-LVD-NW ZONE 8-CADILLAC-A	PICKUP	2,471.6	3,858.2	64.1%	61789
121	2022 Ford F-250	LVD NE ZONE 1	PICKUP	3,005.2	4,626.7	65.0%	75131
122	2023 Ford F-250	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	586.8	1,111.9	52.8%	14670
123	2024 Ford F-250	GAS OPS-CENTRAL-ZONE-2B	PICKUP	153.8	257.4	59.8%	3845
124	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,148.0	3,689.5	85.3%	78700
125	2008 Chevrolet Silverado	EO-LVD-CENTRAL ZONE 2-ALMA-B	PICKUP	217.5	752.2	28.9%	5438
126	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	2,462.6	3,551.3	69.3%	61565
127	2020 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	1,559.1	3,147.5	49.5%	38978
128	2022 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	925.3	2,214.2	41.8%	23132
129	2024 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,821.1	2,463.9	73.9%	45529
130	2015 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 21	PICKUP	358.1	1,141.0	31.4%	8952
131	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,872.2	4,495.1	86.1%	96806
132	2008 Chevrolet Silverado	FIELD OPERATIONS EAST CENTRAL ZONE 9	PICKUP	177.8	346.4	51.3%	4444
133	2019 Ford F-250	GAS OPS-CENTRAL-ZONE 1	PICKUP	3,544.1	4,509.2	78.6%	88601
134	2020 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	4,005.6	5,264.0	76.1%	100140
135	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	3,466.2	5,159.4	67.2%	86654
136	2023 Ford F-250	GAS OPS-NORTH-ZONE-3C	PICKUP	578.7	1,305.1	44.3%	14467
137	2024 Ford F-250	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	131.8	255.5	51.6%	3296
138	2015 GMC Sierra	GO-GAS EAST O & M COMPRESSION	PICKUP	1,108.6	1,505.8	73.6%	27715
139	2017 Ford F-250	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,962.0	3,495.2	84.7%	74049
140	2019 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	2,898.3	4,259.2	68.0%	72458
141	2020 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-B	PICKUP	2,738.5	4,194.4	65.3%	68463
142	2021 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	1,335.5	1,753.3	76.2%	33387
143	2023 Ford F-250	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	1,592.7	2,720.5	58.5%	39817
144	2024 Ford F-250	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	1,004.7	1,432.4	70.1%	25118
145	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,682.0	2,366.5	71.1%	42050
146	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	3,361.0	4,065.0	82.7%	84026
147	2019 Ford F-250	LAND SERVICES SURVEY	PICKUP	1,037.6	2,479.6	41.8%	25940
148	2020 Ford F-250	EO-ELEC FIELD LAB G-FLINT	PICKUP	957.1	2,402.1	39.8%	23928
149	2022 Ford F-250	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	2,338.0	3,788.4	61.7%	58449
150	2024 Ford F-250	EO-SUBSTATION OPS D-FLINT	PICKUP	2,500.1	3,083.9	81.1%	62503
151	2015 GMC Sierra	FIELD OPERATIONS NORTHWEST ZONE 4	PICKUP	186.6	666.5	28.0%	4664
152	2017 Ford F-250	CAMPBELL SITE MAINTENANCE	PICKUP	458.1	1,106.1	41.4%	11452
153	2019 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,254.5	3,059.5	73.7%	56362
154	2020 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	216.1	416.3	51.9%	5402
155	2021 Ford F-250	GO-TRANS OPS EAST	PICKUP	3,530.4	5,437.2	64.9%	88260
156	2022 Ford F-250	EO-LVD-WEST-ZONE 3-G RAPIDS-B	PICKUP	1,602.2	3,273.8	48.9%	40054
157	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,563.6	3,084.0	83.1%	64090
158	2024 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	521.5	872.6	59.8%	13038

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
159	2015 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,871.6	2,879.4	65.0%	46789
160	2017 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	126.0	254.8	49.5%	3151
161	2019 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	3,681.1	4,400.3	83.7%	92027
162	2020 Ford F-250	EO-ESS JOINT COMMITTEES AND OQ	PICKUP	912.4	1,315.8	69.3%	22811
163	2021 Ford F-250	EO-SUBSTATION OPS D-FLINT	PICKUP	1,303.4	2,228.0	58.5%	32585
164	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,293.6	2,746.4	83.5%	57341
165	2015 GMC Sierra	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,673.3	4,751.3	77.3%	91833
166	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,964.7	3,914.1	75.7%	74118
167	2018 Ford F-250	GRATIOT HEARTLAND A	PICKUP	538.2	812.0	66.3%	13455
168	2019 Ford F-250	CAMPBELL-CHEMISTRY/RESULT	PICKUP	172.6	622.2	27.7%	4316
169	2020 Ford F-250	LUDINGTON PUMP STRG MAINT	PICKUP	153.4	612.6	25.0%	3836
170	2021 Ford F-250	NDT MANAGEMENT	PICKUP	956.7	2,551.2	37.5%	23917
171	2013 GMC Sierra	LVD DESIGN-HAM/HST	PICKUP	135.9	511.3	26.6%	3398
172	2017 Ford F-250	KARN PRODUCTION GROUP B	PICKUP	1,391.2	1,732.1	80.3%	34781
173	2021 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	128.3	246.5	52.1%	3209
174	2013 GMC Sierra	GO-GAS CONSTRUCTION	PICKUP	2,717.2	3,168.8	85.8%	67931
175	2024 Ford F-250	EO-LVD-SW ZONE 5-HASTINGS-A	PICKUP	1,378.7	2,348.8	58.7%	34468
176	2015 GMC Sierra	RENEWABLES GEN- SOLAR & BATTERY	PICKUP	124.6	389.5	32.0%	3116
177	2017 Ford F-250	GO-TRANS OPS EAST	PICKUP	716.7	1,888.3	38.0%	17917
178	2020 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	931.8	1,850.5	50.4%	23295
179	2021 Ford F-250	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	2,840.6	4,756.2	59.7%	71016
180	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	2,499.9	4,317.9	57.9%	62497
181	2013 GMC Sierra	GO-GAS CONSTRUCTION	PICKUP	2,950.1	3,470.0	85.0%	73752
182	2024 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	208.2	362.2	57.5%	5205
183	2015 GMC Sierra	EO-SUBS OPS/MAINT/METRO	PICKUP	1,070.1	1,901.4	56.3%	26752
184	2017 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	123.2	337.9	36.4%	3079
185	2019 Ford F-250	GO-TRANS OPS EAST	PICKUP	2,163.0	3,291.3	65.7%	54075
186	2020 Ford F-250	EO-LVD-NE ZONE 1-W BRANCH-B	PICKUP	1,238.9	2,661.4	46.6%	30972
187	2021 Ford F-250	EO-ESS JOINT COMMITTEES AND OQ	PICKUP	890.5	1,544.6	57.7%	22263
188	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,396.0	4,265.5	56.2%	59900
189	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,893.8	3,389.1	85.4%	72344
190	2024 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	648.1	894.9	72.4%	16201
191	2015 GMC Sierra	EO-SUBS OPS/MAINT/METRO	PICKUP	981.5	1,668.1	58.8%	24537
192	2017 Ford F-250	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,423.1	2,553.8	55.7%	35579
193	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	3,372.6	4,411.4	76.5%	84316
194	2021 Ford F-250	CAMPBELL SITE MAINTENANCE	PICKUP	427.0	925.0	46.2%	10675
195	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	3,055.9	5,039.7	60.6%	76398
196	2013 GMC Sierra	GO-GAS CONSTRUCTION	PICKUP	2,881.0	3,451.3	83.5%	72026
197	2024 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	209.4	573.3	36.5%	5235
198	2015 GMC Sierra	GO-GAS EAST O & M COMPRESSION	PICKUP	2,970.0	3,548.1	83.7%	74251
199	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	1,748.7	2,182.8	80.1%	43719

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
200	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	2,337.7	3,710.1	63.0%	58443
201	2020 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,547.0	2,470.1	62.6%	38674
202	2021 Ford F-250	GO-GAS O&M COMPRESSION J	PICKUP	341.2	569.5	59.9%	8531
203	2022 Ford F-250	EO-LVD-NE ZONE 1-BAY CITY-A	PICKUP	2,169.0	3,868.3	56.1%	54224
204	2013 GMC Sierra	GO-GAS CONSTRUCTION	PICKUP	2,670.2	3,279.1	81.4%	66754
205	2024 Ford F-250	GO-TRANS OPS EAST	PICKUP	317.8	409.0	77.7%	7945
206	2019 Ford F-250	GO-TRANS OPS EAST	PICKUP	2,726.4	3,861.7	70.6%	68159
207	2020 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	1,633.9	2,269.3	72.0%	40847
208	2022 Ford F-250	EO-LVD-WEST-ZONE 3-G RAPIDS-B	PICKUP	1,453.4	3,390.2	42.9%	36336
209	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,504.3	3,011.0	83.2%	62608
210	2024 Ford F-250	GAS OPS-NORTH-ZONE-3E	PICKUP	430.8	606.7	71.0%	10770
211	2017 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 21	PICKUP	257.7	579.7	44.5%	6442
212	2019 Ford F-250	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	843.7	2,680.0	31.5%	21092
213	2020 Ford F-250	EO-LVD-SW ZONE 5-HAMILTON-B	PICKUP	3,905.1	5,657.2	69.0%	97628
214	2022 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	3,291.2	4,588.8	71.7%	82280
215	2013 GMC Sierra	GO-GAS CONSTRUCTION	PICKUP	2,629.9	2,946.9	89.2%	65747
216	2024 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	756.8	984.6	76.9%	18919
217	2015 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,858.8	2,380.5	78.1%	46470
218	2019 Ford F-250	GAS OPS-SOUTHEAST	PICKUP	3,043.5	3,767.7	80.8%	76088
219	2020 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	4,522.3	5,848.0	77.3%	113058
220	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,399.8	1,856.9	75.4%	34994
221	2015 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	2,352.0	3,199.6	73.5%	58799
222	2017 Ford F-250	CAMPBELL-FUEL HANDLING	PICKUP	627.3	1,027.7	61.0%	15682
223	2019 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,486.9	3,194.6	77.8%	62172
224	2020 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	661.4	1,643.5	40.2%	16536
225	2022 Ford F-250	EO-LVD-NE ZONE 1-BAY CITY-A	PICKUP	2,053.0	3,802.1	54.0%	51325
226	2013 GMC Sierra	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,044.4	1,543.3	67.7%	26111
227	2024 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	597.9	846.8	70.6%	14949
228	2015 GMC Sierra	RIVER HYDRO OPERS	PICKUP	572.3	1,268.6	45.1%	14307
229	2017 Ford F-250	CAMPBELL-FUEL HANDLING	PICKUP	1,260.4	2,210.2	57.0%	31509
230	2019 Ford F-250	GAS OPS-SOUTHEAST	PICKUP	4,453.3	5,707.9	78.0%	111333
231	2020 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,480.8	4,725.9	73.7%	87021
232	2021 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	2,054.0	3,203.1	64.1%	51350
233	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	3,375.6	5,043.2	66.9%	84390
234	2013 GMC Sierra	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	2,730.3	3,849.7	70.9%	68257
235	2024 Ford F-250	GO-TO-PIPELINE & STORAGE-EAST-NORTHVILLE	PICKUP	184.3	362.3	50.9%	4606
236	2017 Ford F-250	GO-TRANS OPS EAST	PICKUP	2,869.5	3,872.0	74.1%	71737
237	2008 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	714.5	1,253.2	57.0%	17862
238	2019 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	2,175.0	3,461.5	62.8%	54375
239	2021 Ford F-250	RIVER HYDRO OPERS	PICKUP	141.7	514.1	27.6%	3542
240	2013 GMC Sierra	L&D ELECTRIC TECHNICAL TRAINING	PICKUP	541.5	804.0	67.4%	13537

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
241	2015 GMC Sierra	GAS OPS-SOUTHEAST	PICKUP	816.9	1,632.3	50.0%	20424
242	2017 Ford F-250	GO-TRANS OPS EAST	PICKUP	1,050.5	1,490.4	70.5%	26262
243	2019 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	1,667.6	2,536.2	65.8%	41690
244	2020 Ford F-250	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,003.6	3,007.0	66.6%	50090
245	2021 Ford F-250	FIELD OPERATIONS SOUTHWEST ZONE 20	PICKUP	138.5	508.1	27.3%	3462
246	2013 GMC Sierra	LAND SERVICES SURVEY	PICKUP	319.6	894.3	35.7%	7990
247	2024 Ford F-250	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	227.4	443.4	51.3%	5685
248	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,933.6	2,503.1	77.2%	48340
249	2017 Ford F-250	EO-ELEC MTR OPS-ZONE 6	PICKUP	743.6	1,822.1	40.8%	18589
250	2008 Chevrolet Silverado	CAMPBELL-FUEL HANDLING	PICKUP	2,303.4	3,103.5	74.2%	57585
251	2021 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 5	PICKUP	176.1	500.2	35.2%	4402
252	2022 Ford F-250	LVD NE ZONE 1	PICKUP	2,556.8	4,026.1	63.5%	63920
253	2013 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	3,300.9	4,527.8	72.9%	82524
254	2024 Ford F-250	FIELD OPERATIONS SOUTHEAST ZONE 18	PICKUP	37.4	104.0	35.9%	934
255	2015 GMC Sierra	FIELD OPERATIONS MDC ZONE 27	PICKUP	168.0	632.7	26.5%	4199
256	2018 Ford F-250	FIELD OPERATIONS SOUTHWEST ZONE 8	PICKUP	72.1	209.8	34.4%	1803
257	2019 Ford F-250	EO-LVD-NE ZONE 1-W BRANCH-B	PICKUP	2,080.6	3,337.4	62.3%	52015
258	2020 Ford F-250	EO-LVD-SW ZONE 5-HAMILTON-B	PICKUP	2,824.6	4,296.4	65.7%	70616
259	2022 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	716.0	1,565.1	45.7%	17899
260	2013 GMC Sierra	GAS OPS-SOUTH-ZONE 2A	PICKUP	2,123.1	3,190.2	66.5%	53077
261	2024 Ford F-250	GAS OPS-NORTH-ZONE-3D	PICKUP	179.4	388.4	46.2%	4484
262	2015 GMC Sierra	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	580.1	1,163.1	49.9%	14503
263	2019 Ford F-250	EO-LVD-NE ZONE 1-W BRANCH-B	PICKUP	2,758.7	4,635.0	59.5%	68967
264	2020 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	1,932.0	3,510.4	55.0%	48300
265	2024 Ford F-250	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	733.3	1,206.2	60.8%	18332
266	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,634.0	4,784.4	76.0%	90849
267	2019 Ford F-250	EPM-CONSTRUCTION FOSSIL GENERATION	PICKUP	646.2	1,118.2	57.8%	16154
268	2020 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-B	PICKUP	1,884.2	3,434.0	54.9%	47106
269	2022 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	4,860.8	6,369.7	76.3%	121521
270	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	1,023.4	2,087.1	49.0%	25586
271	2020 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-B	PICKUP	1,819.3	3,509.1	51.8%	45482
272	2013 GMC Sierra	EO-SUBSTATION OPS C-MIDLAND	PICKUP	430.7	666.4	64.6%	10768
273	2015 GMC Sierra	LUDINGTON PUMP STORAGE MAINTENANCE	PICKUP	865.4	3,034.8	28.5%	21634
274	2017 Ford F-250	EO-SUBSTATION MAINT H-GRAND RAPIDS	PICKUP	887.7	1,563.1	56.8%	22193
275	2019 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	1,226.2	2,004.3	61.2%	30656
276	2020 Ford F-250	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	2,259.6	4,180.7	54.0%	56491
277	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	3,285.4	5,547.6	59.2%	82136
278	2013 GMC Sierra	EO-SUBSTATION OPS C-MIDLAND	PICKUP	231.4	390.0	59.3%	5785
279	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,832.3	3,480.5	81.4%	70809
280	2019 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	1,883.2	2,638.7	71.4%	47079
281	2010 Chevrolet Silverado	RIVER HYDRO OPERS	PICKUP	470.1	993.9	47.3%	11754

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
282	2015 GMC Sierra	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	1,288.3	2,492.2	51.7%	32207
283	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	3,171.3	4,123.4	76.9%	79282
284	2008 Chevrolet Silverado	GAS OPS-NORTH-ZONE-3D	PICKUP	559.2	1,244.6	44.9%	13981
285	2019 Ford F-250	FIELD OPERATIONS NORTHWEST ZONE 4	PICKUP	174.3	563.0	31.0%	4358
286	2020 Ford F-250	EO-LVD-NE ZONE 1-W BRANCH-B	PICKUP	3,245.2	5,350.4	60.7%	81130
287	2022 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	2,286.2	3,561.9	64.2%	57155
288	2013 GMC Sierra	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	1,016.6	1,387.1	73.3%	25416
289	2015 GMC Sierra	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	2,440.6	3,561.9	68.5%	61014
290	2017 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	1,108.7	1,598.8	69.3%	27717
291	2008 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 2	PICKUP	442.4	959.5	46.1%	11059
292	2019 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,841.9	2,772.0	66.4%	46049
293	2010 Chevrolet Silverado	CAMPBELL-FUEL HANDLING	PICKUP	1,869.7	2,583.1	72.4%	46741
294	2022 Ford F-250	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	3,178.7	5,057.6	62.8%	79466
295	2013 GMC Sierra	GAS OPS-SOUTH-ZONE 1C	PICKUP	1,641.4	2,465.7	66.6%	41035
296	2017 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	493.3	1,330.2	37.1%	12332
297	2019 Ford F-250	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	2,607.8	4,155.8	62.8%	65195
298	2020 Ford F-250	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	3,167.5	4,991.7	63.5%	79188
299	2021 Ford F-250	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	PICKUP	2,968.9	4,613.6	64.4%	74222
300	2022 Ford F-250	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	2,714.7	4,703.2	57.7%	67868
301	2015 GMC Sierra	CROSS WINDS ENERGY PARK	PICKUP	1,582.0	2,070.7	76.4%	39549
302	2017 Ford F-250	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	1,392.3	2,350.8	59.2%	34808
303	2008 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 2	PICKUP	202.8	669.2	30.3%	5069
304	2019 Ford F-250	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	2,179.6	3,619.5	60.2%	54489
305	2020 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	2,219.6	3,409.4	65.1%	55489
306	2021 Ford F-250	LUDINGTON PUMP STRG MAINT	PICKUP	100.2	396.7	25.3%	2506
307	2013 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 19	PICKUP	708.4	1,356.6	52.2%	17711
308	2015 GMC Sierra	GEP&S/GEP/MEASUREMENT RELIABILITY & ENGI	PICKUP	595.8	2,010.2	29.6%	14895
309	2017 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,168.9	2,068.5	56.5%	29223
310	2008 Chevrolet Silverado	FIELD OPERATIONS SOUTHWEST ZONE 14	PICKUP	126.0	343.6	36.7%	3150
311	2019 Ford F-250	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	1,121.8	2,425.9	46.2%	28045
312	2011 Chevrolet Silverado	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	2,648.1	4,270.6	62.0%	66201
313	2013 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,779.3	3,626.7	76.6%	69483
314	2015 GMC Sierra	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,419.4	4,487.7	76.2%	85485
315	2017 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	614.0	1,166.1	52.7%	15351
316	2019 Ford F-250	EO-SUBSTATION OPS D-FLINT	PICKUP	2,727.9	4,177.4	65.3%	68197
317	2020 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	4,104.2	5,403.7	76.0%	102605
318	2022 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	2,381.4	3,641.1	65.4%	59536
319	2013 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	3,596.8	4,112.1	87.5%	89921
320	2015 GMC Sierra	EO-CFS WEST C	PICKUP	546.4	1,132.1	48.3%	13660
321	2019 Ford F-250	EO-SUBSTATION OPS D-FLINT	PICKUP	2,405.2	3,990.1	60.3%	60131
322	2020 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	119.9	318.2	37.7%	2998

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
323	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,878.3	4,985.7	57.7%	71957
324	2015 GMC Sierra	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	82.6	319.2	25.9%	2064
325	2017 Ford F-250	EO-SUBSTATION MAINT H-GRAND RAPIDS	PICKUP	889.9	1,469.9	60.5%	22248
326	2019 Ford F-250	EO-SUBSTATION OPS H-JACKSON & ADRIAN	PICKUP	3,400.4	4,952.0	68.7%	85010
327	2020 Ford F-250	KARN WEADOCK-SITE PRODUCTION MGMT	PICKUP	173.6	300.3	57.8%	4341
328	2021 Ford F-250	FIELD OPERATIONS EAST CENTRAL ZONE 11	PICKUP	51.4	169.7	30.3%	1286
329	2013 GMC Sierra	GAS OPS-CENTRAL-ZONE-2C	PICKUP	1,453.2	2,006.2	72.4%	36331
330	2015 GMC Sierra	EO-LVD-NW ZONE 8-TRAVERSE-A	PICKUP	1,150.5	2,237.9	51.4%	28762
331	2017 Ford F-250	EO-SUBSTATION MAINT E-BAY CITY	PICKUP	578.3	1,177.5	49.1%	14458
332	2019 Ford F-250	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	1,763.8	3,362.1	52.5%	44094
333	2020 Ford F-250	GAS OPS-NORTH-ZONE-3E	PICKUP	2,264.9	3,073.0	73.7%	56624
334	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	3,045.0	5,213.2	58.4%	76126
335	2013 GMC Sierra	CROSS WINDS ENERGY PARK	PICKUP	422.1	677.8	62.3%	10553
336	2015 GMC Sierra	EO-CFS EAST B	PICKUP	957.0	1,838.5	52.1%	23925
337	2017 Ford F-250	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	PICKUP	3,249.2	4,915.1	66.1%	81229
338	2019 Ford F-250	EO-SUBSTATION OPS C-MIDLAND	PICKUP	3,982.4	5,286.3	75.3%	99560
339	2020 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	3,065.4	4,576.5	67.0%	76635
340	2021 Ford F-250	CAMPBELL SITE MAINTENANCE	PICKUP	412.7	883.6	46.7%	10318
341	2013 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	801.5	1,218.7	65.8%	20037
342	2015 GMC Sierra	EO-LVD-SE ZONE 4-JACKSON-B	PICKUP	2,179.0	3,937.3	55.3%	54476
343	2017 Ford F-250	EO-LVD-WEST-ZONE 3-G RAPIDS-B	PICKUP	2,218.6	3,710.7	59.8%	55465
344	2019 Ford F-250	EO-SUBSTATION OPS C-MIDLAND	PICKUP	2,721.2	3,997.2	68.1%	68029
345	2020 Ford F-250	EO-LVD-NE ZONE 1-TAWAS-A	PICKUP	2,876.9	5,011.5	57.4%	71924
346	2012 GMC Sierra	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	1,949.3	3,193.1	61.0%	48733
347	2013 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	2,451.3	3,246.8	75.5%	61281
348	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,178.4	2,871.5	75.9%	54459
349	2017 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	2,673.1	3,605.1	74.1%	66828
350	2019 Ford F-250	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	1,762.6	3,532.2	49.9%	44064
351	2020 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	76.1	178.4	42.7%	1904
352	2022 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	3,313.7	4,795.3	69.1%	82844
353	2013 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	3,563.2	4,550.4	78.3%	89081
354	2015 GMC Sierra	EO-LVD-NW ZONE 8-BOYNE-A	PICKUP	2,484.7	4,252.6	58.4%	62118
355	2017 Ford F-250	EO-LVD-LAKESHORE ZONE 7-FREMONT	PICKUP	1,797.4	3,062.0	58.7%	44934
356	2019 Ford F-250	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	4,155.6	5,754.9	72.2%	103890
357	2013 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,397.3	2,433.4	57.4%	34933
358	2015 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 24	PICKUP	120.5	332.8	36.2%	3011
359	2017 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,146.5	2,245.2	51.1%	28662
360	2019 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,266.4	4,477.1	73.0%	81659
361	2020 Ford F-250	GO-TO-PIPELINE & STORAGE-WEST-OVERISEL	PICKUP	1,619.7	2,588.9	62.6%	40493
362	2022 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	604.9	1,411.7	42.8%	15122
363	2013 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	2,859.9	3,710.7	77.1%	71498

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
364	2017 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 10	PICKUP	190.8	565.4	33.7%	4769
365	2019 Ford F-250	LVD EAST ZONE 3	PICKUP	1,643.1	3,122.0	52.6%	41078
366	2020 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	821.6	2,155.5	38.1%	20541
367	2013 GMC Sierra	GO-TRANS OPS EAST	PICKUP	725.0	1,573.4	46.1%	18124
368	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,043.7	3,144.3	65.0%	51092
369	2017 Ford F-250	SUBS MAINT/METRO-SOUTH	PICKUP	647.5	1,069.8	60.5%	16188
370	2019 Ford F-250	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	2,603.2	3,873.5	67.2%	65080
371	2020 Ford F-250	LAKE WINDS ENERGY PARK	PICKUP	674.4	1,025.5	65.8%	16861
372	2011 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-WEST	PICKUP	1,014.2	1,477.4	68.6%	25355
373	2013 GMC Sierra	GAS OPS-WELDING	PICKUP	2,005.9	2,632.4	76.2%	50147
374	2015 GMC Sierra	GAS OPS-SOUTH-ZONE 1H	PICKUP	1,238.6	1,921.7	64.5%	30966
375	2017 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,207.0	3,135.5	70.4%	55176
376	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	2,821.5	4,582.7	61.6%	70537
377	2022 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,826.7	4,966.7	77.0%	95667
378	2013 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	4,083.1	4,941.3	82.6%	102078
379	2015 GMC Sierra	GAS OPS-SOUTH-ZONE 1C	PICKUP	1,248.2	2,307.5	54.1%	31206
380	2017 Ford F-250	EO-LVD-EAST ZONE 3-FLINT	PICKUP	3,776.9	5,035.9	75.0%	94423
381	2019 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,156.0	3,892.1	55.4%	53899
382	2020 Ford F-250	EO-LVD-SE ZONE 4-COLDWATER-B	PICKUP	1,754.6	3,455.0	50.8%	43865
383	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	2,774.8	4,684.6	59.2%	69370
384	2013 GMC Sierra	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	1,608.4	2,689.4	59.8%	40210
385	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,762.0	3,576.7	77.2%	69050
386	2019 Ford F-250	EO-LVD-NE ZONE 1-BAY CITY-A	PICKUP	2,705.4	3,956.7	68.4%	67634
387	2013 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	1,754.3	3,366.0	52.1%	43859
388	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	1,567.7	2,482.4	63.2%	39194
389	2020 Ford F-250	EO-LVD-NE ZONE 1-W BRANCH-A	PICKUP	439.2	905.0	48.5%	10980
390	2015 GMC Sierra	GAS OPS-SOUTH-ZONE 1C	PICKUP	2,672.1	4,238.6	63.0%	66803
391	2017 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	701.5	1,690.2	41.5%	17538
392	2019 Ford F-250	EO-LVD-NW ZONE 8-CADILLAC-A	PICKUP	3,117.9	4,587.4	68.0%	77947
393	2002 GMC Sierra	CAMPBELL SITE MAINTENANCE	PICKUP	1,549.0	2,151.2	72.0%	38726
394	2013 GMC Sierra	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	PICKUP	2,738.7	4,069.6	67.3%	68467
395	2015 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	PICKUP	110.9	245.8	45.1%	2774
396	2017 Ford F-250	EO-LVD-GR ZONE-6-EAST KENT-B	PICKUP	393.2	910.5	43.2%	9831
397	2019 Ford F-250	EO-LVD-NE ZONE 1-TAWAS-A	PICKUP	1,998.3	3,529.8	56.6%	49958
398	2020 Ford F-250	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	3,476.0	5,727.0	60.7%	86900
399	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,833.6	3,421.2	82.8%	70839
400	2017 Ford F-250	EO-LVD-NW ZONE 8-TRAVERSE-B	PICKUP	2,700.5	4,224.2	63.9%	67513
401	2019 Ford F-250	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	1,626.2	3,102.5	52.4%	40654
402	2020 Ford F-250	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	3,009.6	4,092.2	73.5%	75240
403	2022 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	1,983.4	3,028.8	65.5%	49585
404	2015 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	276.8	914.3	30.3%	6919

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
404	2017 Ford F-250	CROSS WINDS ENERGY PARK	PICKUP	1,016.4	1,434.0	70.9%	25409
405	2010 Chevrolet Silverado	CAMPBELL-FUEL HANDLING	PICKUP	3,217.8	4,082.6	78.8%	80444
406	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	3,191.8	4,767.3	67.0%	79796
407	2013 GMC Sierra	LVD EAST ZONE 3	PICKUP	1,942.6	3,021.0	64.3%	48565
408	2015 GMC Sierra	GAS OPS-NORTH-ZONE-2C	PICKUP	2,675.6	3,639.6	73.5%	66891
409	2019 Ford F-250	GAS OPS-WELDING	PICKUP	1,117.7	1,917.5	58.3%	27943
410	2020 Ford F-250	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	2,871.1	4,168.8	68.9%	71778
411	2022 Ford F-250	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	PICKUP	2,351.6	3,496.6	67.3%	58790
412	2013 GMC Sierra	LVD PLANNING - NORTHWEST	PICKUP	291.9	726.1	40.2%	7297
413	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,590.2	3,106.5	83.4%	64756
414	2019 Ford F-250	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	2,005.7	3,127.7	64.1%	50143
415	2020 Ford F-250	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	2,537.7	3,965.8	64.0%	63443
416	2013 GMC Sierra	LVD DESIGN-CAD/LUD/BIG	PICKUP	1,357.8	2,337.4	58.1%	33945
417	2015 GMC Sierra	GAS OPS-SOUTH-ZONE 1F	PICKUP	2,708.2	3,795.3	71.4%	67704
418	2017 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,190.8	2,084.0	57.1%	29771
419	2020 Ford F-250	EO-SUBSTATION OPS B-MIDLAND	PICKUP	4,098.8	5,675.6	72.2%	102471
420	2015 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	198.2	663.7	29.9%	4955
421	2017 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	589.9	732.7	80.5%	14748
422	2019 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	1,732.4	3,120.8	55.5%	43310
423	2020 Ford F-250	EO-SUBSTATION OPS B-MIDLAND	PICKUP	2,651.4	4,374.2	60.6%	66286
424	2015 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	362.3	1,145.5	31.6%	9057
425	2017 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	907.4	1,196.4	75.8%	22684
426	2019 Ford F-250	EO-SUBS OPS/MAINT/METRO	PICKUP	1,204.0	2,076.1	58.0%	30101
427	2020 Ford F-250	LAKE WINDS ENERGY PARK	PICKUP	556.7	960.8	57.9%	13917
428	2002 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	PICKUP	66.1	217.5	30.4%	1653
429	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,510.8	4,252.1	82.6%	87771
430	2017 Ford F-250	GO-GAS EAST O & M COMPRESSION	PICKUP	224.4	323.4	69.4%	5611
431	2019 Ford F-250	EO-LVD-NW ZONE 8-TRAVERSE-B	PICKUP	3,783.7	5,608.9	67.5%	94592
432	2020 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 6	PICKUP	529.6	1,256.0	42.2%	13240
433	2015 GMC Sierra	GAS OPS-SOUTHEAST	PICKUP	3,897.2	5,363.6	72.7%	97430
434	2008 Chevrolet Silverado	GO-GAS EAST O & M COMPRESSION	PICKUP	52.7	102.5	51.4%	1317
435	2019 Ford F-250	LVD DESIGN-TRA/BNC/BEN	PICKUP	199.6	795.6	25.1%	4990
436	2010 Chevrolet Silverado	CAMPBELL SITE MAINTENANCE	PICKUP	2,659.0	3,340.7	79.6%	66475
437	2012 GMC Sierra	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	470.5	934.1	50.4%	11763
438	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,744.5	4,606.6	59.6%	68613
439	2015 GMC Sierra	GAS OPS-SOUTH-ZONE 1F	PICKUP	109.4	134.3	81.5%	2735
440	2022 Ford F-250	EO-LVD-GR ZONE 6-WEST KENT-A	PICKUP	3,125.3	4,364.4	71.6%	78132
441	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE-2B	PICKUP	3,217.4	4,472.4	71.9%	80435
442	2019 Ford F-250	LVD EAST ZONE 3	PICKUP	2,484.6	3,639.9	68.3%	62114
443	2012 GMC Sierra	FIELD OPERATIONS EAST CENTRAL ZONE 12	PICKUP	1,335.2	1,920.2	69.5%	33379
444	2019 Ford F-250	CRESCENT WIND PARK	PICKUP	963.8	1,551.5	62.1%	24094

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
445	2008 Chevrolet Silverado	GO-GAS EAST O & M COMPRESSION	PICKUP	594.0	856.1	69.4%	14849
446	2017 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,934.3	2,215.8	87.3%	48356
447	2019 Ford F-250	CRESCENT WIND PARK	PICKUP	901.1	1,559.1	57.8%	22528
448	2020 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 5	PICKUP	267.6	501.9	53.3%	6689
449	2022 Ram 2500	EO-ELECTRIC UNDERGROUND-C	PICKUP	167.5	232.2	72.1%	4188
450	2018 Ford F-250	GAS OPS-NORTH-ZONE	PICKUP	3,816.6	4,685.5	81.5%	95415
451	2020 Chevrolet Silverado	CRESCENT WIND PARK	PICKUP	1,571.7	2,254.8	69.7%	39293
452	2022 Ford F-250	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,441.1	3,927.4	62.2%	61028
453	2008 Chevrolet Silverado	GO-GAS EAST O & M COMPRESSION	PICKUP	218.6	482.4	45.3%	5464
454	2020 Chevrolet Silverado	CRESCENT WIND PARK	PICKUP	851.1	1,610.4	52.9%	21278
455	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,057.3	4,024.7	51.1%	51432
456	2011 Chevrolet Silverado	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	956.1	1,843.5	51.9%	23902
457	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,351.2	4,062.1	57.9%	58780
458	2020 Ford Edge	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	338.8	1,006.3	33.7%	8471
459	2021 Ford F-250	GO-TO-PIPELINE & STORAGE-EAST-NORTHVILLE	PICKUP	1,899.0	2,924.3	64.9%	47476
460	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,654.7	4,765.3	55.7%	66367
461	2015 GMC Sierra	CHEMISTRY SERVICES ANALYSTS	PICKUP	708.9	1,838.9	38.5%	17721
462	2021 Ford F-250	GO-TO-PIPELINE & STORAGE-EAST-NORTHVILLE	PICKUP	1,460.3	2,445.1	59.7%	36509
463	2015 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,804.8	3,347.1	53.9%	45119
464	2021 Ford F-250	EO-ELECTRIC UNDERGROUND-C	PICKUP	608.2	814.1	74.7%	15206
465	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	2,266.2	3,411.0	66.4%	56655
466	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE-2A	PICKUP	2,971.4	4,695.6	63.3%	74284
467	2008 Chevrolet Silverado	CAMPBELL SITE MAINTENANCE	PICKUP	176.4	406.3	43.4%	4409
468	2019 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	107.2	161.9	66.2%	2680
469	2022 Ford F-250	LVD SW ZONE 5	PICKUP	3,000.4	4,866.2	61.7%	75010
470	2011 Chevrolet Silverado	EO-SUBSTATION OPS C-MIDLAND	PICKUP	1,950.3	2,952.9	66.0%	48758
471	2022 Ford F-250	LVD SW ZONE 5	PICKUP	2,614.1	4,565.9	57.3%	65352
472	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE-2B	PICKUP	2,715.8	3,830.8	70.9%	67894
473	2019 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	216.3	250.5	86.4%	5407
474	2021 Ford F-250	GAS OPS -SOUTH-ZONE 2B	PICKUP	1,060.8	1,977.4	53.6%	26520
475	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	2,751.0	4,255.4	64.6%	68774
476	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,684.3	3,636.6	73.8%	67109
477	2022 Ford F-250	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	3,069.8	5,725.5	53.6%	76746
478	2021 Ford F-250	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	541.3	832.7	65.0%	13532
479	2015 GMC Sierra	GO-TRANS OPS EAST	PICKUP	1,990.0	2,995.1	66.4%	49750
480	2019 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	189.8	230.2	82.5%	4745
481	2021 Ford F-250	GAS OPS SOUTHWEST REGION	PICKUP	3,362.2	4,421.8	76.0%	84054
482	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,483.1	4,291.6	57.9%	62077
483	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	3,822.2	4,724.9	80.9%	95554
484	2019 Chevrolet Silverado	GAS OPS -SOUTH-ZONE 2B	PICKUP	675.2	1,045.0	64.6%	16880
485	2022 Ford F-250	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,275.2	3,832.1	59.4%	56881

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
486	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	1,540.9	2,476.5	62.2%	38524
	2023 to Sept 2025			833,965.3			

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2021 Ford F-350	NDT MANAGEMENT	PICKUP	577.3	862.5	66.9%	14433	Average idle time	40.6%
2	2014 Ford F-350	GAS OPS-SOUTHEAST A1	PICKUP	1,690.4	2,478.7	68.2%	42261		
3	2019 Ford F-350	FIELD OPERATIONS NORTHEAST ZONE 2	PICKUP	184.1	629.4	29.2%	4602		
4	2019 Ford F-350	NDT MANAGEMENT	PICKUP	356.3	868.2	41.0%	8908	Idle Metric Tons CO2	589.1
5	2017 Chevrolet Silverado	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,192.0	3,648.6	60.1%	54801		
6	2017 Chevrolet Silverado	GO-GAS CONSTRUCTION	PICKUP	282.0	828.4	34.0%	7051		
7	2017 Chevrolet Silverado	GO-GCON-RESOURCE MGMT B	PICKUP	279.9	480.4	58.3%	6998	Gallons idled	61855.7
8	2019 Ford F-150	GEP&S/GEP/DIST ENGG W-DES	PICKUP	239.8	843.9	28.4%	5994		
9	2019 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,988.3	4,181.2	47.6%	49709		
10	2019 Ford F-150	GAS OPS-NORTH-ZONE-3	PICKUP	802.1	1,900.1	42.2%	20053		
11	2019 Ford F-150	EO-CFS WEST C	PICKUP	929.5	2,125.9	43.7%	23238		
12	2019 Ford F-150	GO-GCON-RESOURCE MGMT B	PICKUP	1,096.2	2,300.6	47.6%	27405		
13	2019 Ford F-150	GO-TO-M&R-WEST	PICKUP	988.4	2,347.9	42.1%	24711		
14	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7	PICKUP	580.3	1,857.2	31.2%	14509		
15	2019 Ford F-150	GEP&S/GEP/MEASUREMENT RELIABILITY & ENGI	PICKUP	539.3	1,959.8	27.5%	13483		
16	2019 Ford F-150	GEP&S/SI/TIMP/DACC/INTERNAL CORROSION CO	PICKUP	833.6	2,898.8	28.8%	20839		
17	2019 Ford F-150	EO-LVD-GR ZONE 6-WEST KENT-D	PICKUP	1,631.8	3,664.9	44.5%	40796		
18	2019 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,864.0	3,759.0	49.6%	46600		
19	2019 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,642.2	3,894.6	42.2%	41054		
20	2019 Ford F-150	HVD LINES OPERATION & MAINT	PICKUP	813.9	2,403.4	33.9%	20347		
21	2019 Ford F-150	EO-LVD-NW ZONE 8-BOYNE-A	PICKUP	922.5	2,602.2	35.5%	23064		
22	2019 Ford F-150	EO-ELECTRIC UNDERGROUND - F	PICKUP	529.9	1,688.4	31.4%	13247		
23	2019 Ford F-150	EO-LVD-WEST-ZONE 3-G RAPIDS-B	PICKUP	504.9	1,606.7	31.4%	12623		
24	2019 Ford F-150	LVD-CONTRACTOR MANAGEMENT	PICKUP	1,124.7	2,720.7	41.3%	28118		
25	2019 Ford F-150	EO-CFS EAST D	PICKUP	511.8	1,858.8	27.5%	12796		
26	2019 Ford F-150	GAS OPS-NORTH-ZONE-2	PICKUP	1,102.9	3,048.1	36.2%	27573		
27	2019 Ford F-150	GO-TRANS OPS EAST	PICKUP	934.3	2,562.2	36.5%	23358		
28	2019 Ford F-150	WORK INNOVATION & TRANSFORMATION	PICKUP	1,552.4	3,426.1	45.3%	38810		
29	2019 Ford F-150	GO-TO-PIPELINE & STORAGE-EAST-ST CLAIR-P	PICKUP	708.2	1,807.1	39.2%	17704		
30	2019 Ford F-150	GAS OPS-NORTHEAST A2	PICKUP	588.9	1,600.4	36.8%	14724		
31	2019 Ford F-150	TRAVERSE CITY - ZONE 8	PICKUP	1,472.2	3,207.3	45.9%	36804		
32	2019 Ford F-150	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	414.6	999.2	41.5%	10366		
33	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	PICKUP	514.7	1,741.0	29.6%	12867		
34	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	PICKUP	1,128.4	2,663.5	42.4%	28210		
35	2019 Ford F-150	GEP&S-DAMAGE PREV EAST	PICKUP	1,972.6	3,387.8	58.2%	49315		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2019 Ford F-150	ELECTRIC FIELD TECHNICAL SERVICES	PICKUP	460.3	1,261.8	36.5%	11508
37	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-B	PICKUP	1,078.1	3,241.3	33.3%	26953
38	2019 Ford F-150	EO-LVD-NE ZONE 1-W BRANCH-B	PICKUP	1,065.6	2,808.5	37.9%	26641
39	2019 Ford F-150	GAS OPS-SOUTH-ZONE 1F	PICKUP	825.5	2,222.0	37.1%	20637
40	2019 Ford F-150	GO-GCON-RESOURCE MGMT B I	PICKUP	363.5	1,396.9	26.0%	9088
41	2019 Ford F-150	LVD SOUTH ZONE 4	PICKUP	1,100.4	3,220.5	34.2%	27511
42	2019 Ford F-150	GEP&S-DAMAGE PREV EAST	PICKUP	1,083.7	2,205.5	49.1%	27093
43	2019 Ford F-150	EO-LVD-NE ZONE 1-BAY CITY-A	PICKUP	765.3	2,107.6	36.3%	19133
44	2019 Ford F-150	EO-SUB CONSTRUCTION/EERC-STATEWIDE	PICKUP	636.6	1,849.7	34.4%	15916
45	2019 Ford F-150	GEP&S-DAMAGE PREV WEST	PICKUP	762.6	2,611.1	29.2%	19065
46	2019 Ford F-150	ELECTRIC FIELD TECHNICAL SERVICES	PICKUP	622.0	1,634.2	38.1%	15549
47	2019 Ford F-150	GEP&S/GEP/MEASUREMENT RELIABILITY & ENGI	PICKUP	887.6	2,392.7	37.1%	22189
48	2019 Ford F-150	EO-LVD-CENTRAL ZONE 2-ALMA-B	PICKUP	928.1	2,554.9	36.3%	23203
49	2019 Ford F-150	EO-ELECTRIC UNDERGROUND-A	PICKUP	486.8	1,709.4	28.5%	12171
50	2019 Ford F-150	EO-ELECTRIC UNDERGROUND-B	PICKUP	984.4	2,187.8	45.0%	24611
51	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	PICKUP	1,036.4	2,398.6	43.2%	25910
52	2019 Ford F-150	GO-TO-M&R-EAST	PICKUP	1,163.6	2,475.1	47.0%	29090
53	2019 Ford F-150	SUBS MAINT/METRO-SOUTH	PICKUP	526.2	1,417.1	37.1%	13154
54	2019 Ford F-150	EO-FORESTRY OPS-BATTLE/BRONSON	PICKUP	1,049.4	2,521.1	41.6%	26235
55	2019 Ford F-150	EO-FORESTRY OPS-LANS/OWOSSO	PICKUP	1,239.4	3,452.8	35.9%	30984
56	2019 Ford F-150	EO-LVD-SE ZONE 4-B CREEK-B	PICKUP	531.4	1,562.2	34.0%	13286
57	2019 Ford F-150	LVD EAST ZONE 3	PICKUP	246.9	872.2	28.3%	6172
58	2019 Ford F-150	GAS OPS-SOUTH-ZONE 2A	PICKUP	1,129.2	3,367.8	33.5%	28229
59	2019 Ford F-150	EO-SUBSTATION MAINT-BATTLE CREEK	PICKUP	467.8	1,788.7	26.2%	11696
60	2019 Ford F-150	GAS OPS-SOUTHWEST A	PICKUP	852.1	1,583.2	53.8%	21304
61	2019 Ford F-150	EO-FORESTRY OPS-MUSK/FREMONT/LUD	PICKUP	1,094.7	2,187.2	50.1%	27369
62	2019 Ford F-150	GO-GCON-RESOURCE MGMT B	PICKUP	2,329.7	4,222.6	55.2%	58243
63	2019 Ford F-150	EO-FORESTRY OPS-MUSK/FREMONT/LUD	PICKUP	320.6	1,276.6	25.1%	8015
64	2019 Ford F-150	GEP&S-DAMAGE PREV EAST	PICKUP	1,262.7	2,832.0	44.6%	31568
65	2019 Ford F-150	EO-LVD-SW ZONE 5-KALAMAZOO	PICKUP	851.5	2,047.1	41.6%	21289
66	2019 Ford F-150	GAS OPS-NORTHEAST A11	PICKUP	522.4	1,960.3	26.6%	13060
67	2019 Ford F-150	EO-LVD-SW ZONE 5-KALAMAZOO	PICKUP	801.8	2,277.8	35.2%	20045
68	2019 Ford F-150	EO-FORESTRY OPS-W.BOYNE/TRVERSE	PICKUP	637.5	1,961.0	32.5%	15937
69	2019 Ford F-150	GAS OPS-SOUTHWEST B	PICKUP	574.0	2,284.0	25.1%	14350
70	2019 Ford F-150	GO-GCON-RESOURCE MGMT B	PICKUP	687.8	1,782.0	38.6%	17194
71	2019 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	742.6	2,641.1	28.1%	18564
72	2019 Ford F-150	GEP&S/GEP/DIST ENGG W/DES-ENG	PICKUP	927.4	2,035.2	45.6%	23186
73	2019 Ford F-150	LVD-CONTRACTOR MANAGEMENT	PICKUP	1,323.7	3,077.7	43.0%	33094
74	2019 Ford F-150	GEP&S/GEP/DIST ENGG W/DES-ENG	PICKUP	1,084.1	2,311.5	46.9%	27104
75	2014 Ford F-450	EO-SUBSTATION OPS I-TRAVERSE CITY	PICKUP	19.6	47.6	41.3%	491
76	2019 Ford F-150	GO-GCON - MIDLAND CONSTRUCTION E	PICKUP	1,885.5	3,066.0	61.5%	47138

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2019 Ford F-150	JACKSON/KALAMAZOO T&S	PICKUP	770.3	1,635.2	47.1%	19258
78	2019 Ford F-150	EO-LVD-NE ZONE 1-W BRANCH-A	PICKUP	833.1	2,572.9	32.4%	20827
79	2019 Ford F-150	LVD PLANNING - NORTHWEST	PICKUP	536.5	2,124.1	25.3%	13411
80	2019 Ford F-150	LVD-CONTRACTOR MANAGEMENT	PICKUP	1,772.1	2,956.0	59.9%	44302
81	2019 Chevrolet Silverado	GRATIOT HEARTLAND A	PICKUP	978.3	1,571.6	62.2%	24457
82	2019 Chevrolet Silverado	GRATIOT HEARTLAND A	PICKUP	826.5	1,523.5	54.3%	20663
83	2019 Chevrolet Silverado	GRATIOT HEARTLAND A	PICKUP	415.4	773.2	53.7%	10386
84	2019 Chevrolet Silverado	LAKE WINDS ENERGY PARK	PICKUP	853.9	1,256.6	68.0%	21349
85	2019 Chevrolet Silverado	GRATIOT HEARTLAND A	PICKUP	166.0	498.6	33.3%	4150
86	2019 Chevrolet Silverado	LAKE WINDS ENERGY PARK	PICKUP	786.5	1,852.3	42.5%	19663
87	2019 Chevrolet Silverado	GRATIOT HEARTLAND A	PICKUP	527.2	1,103.0	47.8%	13181
				77,319.6			
2023 to Sept 2025							

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2018 Ford F-150	EO-LVD-SE ZONE 4-JACKSON	PICKUP	928.2	2,093.1	44.3%	23206	Average idle time
2	2019 Chevrolet Silverado	OCC-CONTR OVERSIGHT	PICKUP	1,613.6	3,408.3	47.3%	40341	
3	2018 Ford F-150	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	1,118.9	2,736.0	40.9%	27973	Idle Metric Tons CO2
4	2018 Ford F-150	LAKE WINDS ENERGY PARK	PICKUP	800.0	1,129.2	70.8%	20001	
5	2018 Ford F-150	EO-LVD-SE ZONE 4-JACKSON-B	PICKUP	620.8	1,636.4	37.9%	15521	Gallons idled
6	2019 Chevrolet Silverado	OCC-CONTR OVERSIGHT	PICKUP	151.3	510.8	29.6%	3782	
7	2018 Ford F-150	CRESCENT WIND PARK	PICKUP	440.2	1,007.8	43.7%	11005	
8	2017 Ford F-550	GO-CONTRACTOR OVERSITE	PICKUP	192.4	545.6	35.3%	4811	
9	2018 Ford F-150	CROSS WINDS ENERGY PARK	PICKUP	1,265.6	1,828.3	69.2%	31641	
10	2019 Chevrolet Volt	GO-GCON-SAGINAW CONSTRUCTION B	PICKUP	229.8	455.9	50.4%	5744	
11	2019 Chevrolet Silverado	OCC-CONTR OVERSIGHT	PICKUP	171.4	462.8	37.0%	4285	
12	2019 Chevrolet Silverado	GO-TO-M&R-NORTH	PICKUP	1,015.3	2,409.2	42.1%	25383	
13	2019 Ford Transit Van	GO-GCON-RESOURCE MGMT A III	PICKUP	86.3	115.2	74.9%	2158	
14	2019 Chevrolet Silverado	GO-GCON-JACKSON CONSTRUCTION C	PICKUP	679.9	1,599.2	42.5%	16997	
15	2015 GMC Sierra	GO-GCON-ROYAL OAK CONSTRUCTION D	PICKUP	441.1	1,184.0	37.3%	11029	
16	2019 Chevrolet Silverado	GO-GCON - MIDLAND CONSTRUCTION C	PICKUP	138.4	241.4	57.3%	3461	
17	2019 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND-C	PICKUP	219.3	339.8	64.5%	5481	
18	2019 Chevrolet Silverado	GO-GCON-SAGINAW CONSTRUCTION C	PICKUP	58.0	113.4	51.2%	1450	
19	2019 Chevrolet Silverado	GO-GCON - MIDLAND CONSTRUCTION B	PICKUP	225.3	427.1	52.8%	5633	
20	2019 Chevrolet Express	GO-GCON-LIVONIA CONSTRUCTION B	PICKUP	269.3	493.2	54.6%	6734	
21	2015 Ford F-450	OCC-JOINT GAS CERTIFICATION COMMITTEE	PICKUP	68.5	163.3	41.9%	1711	
22	2019 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	6.9	8.0	85.9%	171	
23	2019 Chevrolet Silverado		PICKUP	136.3	299.9	45.4%	3407	
24	2019 Chevrolet Silverado	EPM-CONSTRUCTION RENEWABLES	PICKUP	130.2	357.4	36.4%	3254	
25	2019 Chevrolet Silverado	EPM-CONSTRUCTION RENEWABLES	PICKUP	215.6	488.7	44.1%	5391	
26	2017 Ford F-250	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	196.1	489.9	40.0%	4904	
27	2019 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	20.7	55.4	37.4%	518	
28	2019 Chevrolet Silverado	CLEAN ENERGY ENGINEERING	PICKUP	127.5	465.9	27.4%	3188	
29	2019 Chevrolet Silverado	GEP&S/GEP/PRE-MEASUREMENT RELIABILITY-AN	PICKUP	298.4	927.8	32.2%	7459	
30	2019 Chevrolet Silverado	GO-GCON-JACKSON CONSTRUCTION A	PICKUP	107.3	390.1	27.5%	2681	
31	2019 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	288.1	459.0	62.8%	7203	
32	2019 Ford F-150	EO-LVD-SE ZONE 4-JACKSON	PICKUP	1,147.9	2,817.5	40.7%	28697	
33	2019 Ford F-150	EO-LVD-SW ZONE 5-KALAMAZOO-A	PICKUP	952.8	2,994.9	31.8%	23819	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2019 Ford F-150	EO-CFS EAST B	PICKUP	1,316.8	3,191.4	41.3%	32921
35	2019 Ford F-150	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,835.8	3,745.9	49.0%	45894
36	2019 Ford F-150	GEP&S/GEP/DIST ENGG W-DES	PICKUP	188.3	412.0	45.7%	4709
37	2019 Ford F-150	GAS OPS-SOUTH-ZONE 1E	PICKUP	953.3	2,557.2	37.3%	23833
38	2019 Ford F-150	EO-LVD-NE ZONE 1-TAWAS-A	PICKUP	572.3	2,068.5	27.7%	14308
39	2019 Ford F-150	GAS OPS O&M COR CON	PICKUP	317.9	1,215.3	26.2%	7948
40	2019 Ford F-150	GO-GCON-CUSTOMER EXP B	PICKUP	584.2	1,997.9	29.2%	14606
41	2019 Ford F-150	EO-CFS EAST D	PICKUP	966.6	2,451.1	39.4%	24164
42	2019 Ford F-150	EO-FORESTRY OPERATIONS SOUTH	PICKUP	785.9	2,772.3	28.3%	19648
43	2019 Ford F-150	EO-LVD-SW ZONE 5-HAMILTON-A	PICKUP	792.1	2,522.6	31.4%	19803
44	2019 Ford F-150	EO-SUB CONSTRUCTION/EERC-STATEWIDE	PICKUP	617.2	1,895.2	32.6%	15430
45	2019 Ford F-150	EO-LVD-EAST ZONE 3-LANSING-C	PICKUP	705.6	1,784.5	39.5%	17639
46	2019 Ford F-150	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	PICKUP	1,099.3	3,072.2	35.8%	27482
47	2019 Ford F-150	EO-LVD-NW ZONE 8	PICKUP	1,162.5	3,182.7	36.5%	29062
48	2019 Ford F-150	EO-LVD-SW ZONE 5-HAMILTON-B	PICKUP	956.3	2,398.0	39.9%	23906
49	2019 Ford F-150	GEP&S-DAMAGE PREV WEST	PICKUP	1,201.1	2,715.0	44.2%	30028
50	2019 Ford F-150	EO-FORESTRY OPS WEST-HAMILTON	PICKUP	674.6	2,231.8	30.2%	16865
51	2019 Ford F-150	EO-LVD-SW ZONE 5-HASTINGS-A	PICKUP	1,006.2	2,388.5	42.1%	25154
52	2020 Ford F-150	EO-ELEC FIELD LAB G-FLINT	PICKUP	298.1	965.7	30.9%	7452
53	2017 Ford F-550	GO-GCON-LANSING CONSTRUCTION B	PICKUP	94.4	356.1	26.5%	2360
54	2019 Ford F-150	GAS OPS-EAST-ZONE-2	PICKUP	410.8	1,345.0	30.5%	10270
55	2019 Ford F-150	GAS OPS-SOUTH-ZONE-3A	PICKUP	630.4	2,434.1	25.9%	15760
56	2019 Ford F-150	GAS OPS-CENTRAL-ZONE-2B	PICKUP	1,115.5	2,234.5	49.9%	27887
57	2019 Ford F-150	EO-LVD-GR ZONE 6-WEST KENT-C	PICKUP	850.5	2,066.0	41.2%	21263
58	2019 Ford F-150	EO-FORESTRY OPS-JACKSON	PICKUP	689.3	2,107.4	32.7%	17232
59	2019 Ford F-150	EO-FORESTRY HVD CONSTRUCTION/SPRAY	PICKUP	663.5	2,327.4	28.5%	16588
60	2019 Ford F-150	EO-LINES CONST & MAIN SOUTH & EAST	PICKUP	1,577.5	3,005.8	52.5%	39437
61	2019 Ford F-150	EO-HVD LINES MAINTENANCE	PICKUP	822.0	2,324.4	35.4%	20550
62	2019 Ford F-150	GAS OPS-NORTHEAST A	PICKUP	443.4	1,593.8	27.8%	11086
63	2019 Ford F-150	EO-LVD-CENTRAL ZONE 2-CLARE-A	PICKUP	1,482.0	3,539.7	41.9%	37049
64	2019 Ford F-150	EO-FORESTRY OPERATIONS SOUTH	PICKUP	742.6	2,278.5	32.6%	18565
65	2019 Ford F-150	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	937.9	2,371.0	39.6%	23448
66	2019 Ford F-150	LVD-CONTRACTOR MANAGEMENT	PICKUP	1,058.7	2,999.7	35.3%	26468
67	2019 Ford F-150	CX&T-RO-REVENUE RECOVERY THEFT	PICKUP	1,222.6	2,402.1	50.9%	30565

43,136.7

2023 to Sept 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2010 Chevrolet Silverado	GAS OPS-NORTH-ZONE-2A	PICKUP	2,840.5	3,531.2	80.4%	71013	Average idle time	52.5%
2	2012 GMC Sierra	EO-ELEC MTR OPS-ZONE 2	PICKUP	127.9	239.7	53.4%	3198		
3	2013 GMC Sierra	EO-ELEC MTR OPS-ZONE 4	PICKUP	203.6	537.3	37.9%	5090	Idle Metric Tons CO2	1072.5
4	2024 Ford F-350	EO-ELEC METER OPS	PICKUP	215.5	328.0	65.7%	5388		
5	2015 GMC Sierra	EO-ELEC METER OPS	PICKUP	1,174.0	2,124.8	55.3%	29351	Gallons idled	112617.14
6	2017 Ford F-350	EO-ELEC METER OPS	PICKUP	2,395.4	3,796.0	63.1%	59884		
7	2010 Chevrolet Silverado	EO-ELEC METER OPS	PICKUP	8.8	14.4	60.6%	219		
8	2012 GMC Sierra	EO-ELEC METER OPS	PICKUP	2,660.8	4,098.9	64.9%	66519		
9	2013 GMC Sierra	EO-ELEC MTR OPS-ZONE 6	PICKUP	419.2	890.2	47.1%	10481		
10	2024 Ford F-350	EO-ELEC MTR OPS-ZONE 2	PICKUP	73.1	162.0	45.1%	1827		
11	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 3	PICKUP	1,503.4	2,717.3	55.3%	37585		
12	2017 Ford F-350	EO-ELEC METER OPS	PICKUP	86.5	178.2	48.5%	2161		
13	2019 Ford F-350	GO-TRANS OPS EAST	PICKUP	2,054.2	3,058.8	67.2%	51355		
14	2010 Chevrolet Silverado	EO-LVD-EAST ZONE 3-OWOSSO-A	PICKUP	1,546.7	2,701.6	57.3%	38668		
15	2013 GMC Sierra	EO-ELEC METER OPS	PICKUP	1,686.6	2,880.0	58.6%	42166		
16	2024 Ford F-350	EO-ELEC MTR OPS-ZONE 4	PICKUP	113.9	225.4	50.5%	2847		
17	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 2	PICKUP	2,089.5	3,517.8	59.4%	52236		
18	2017 Ford F-350	EO-ELEC METER OPS	PICKUP	2,133.7	3,768.2	56.6%	53342		
19	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,992.5	4,619.0	64.8%	74812		
20	2013 GMC Sierra	EO-ELEC METER OPS	PICKUP	419.4	899.1	46.6%	10484		
21	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 6	PICKUP	392.6	1,013.6	38.7%	9816		
22	2017 Ford F-350	EO-ELEC METER OPS	PICKUP	1,121.1	3,319.7	33.8%	28027		
23	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,220.7	2,987.6	40.9%	30518		
24	2010 Chevrolet Silverado	GAS OPS NE ZONE 2-SPAN 13	PICKUP	1,501.9	2,093.6	71.7%	37548		
25	2013 GMC Sierra	EO-ELEC MTR OPS-ZONE 2	PICKUP	434.4	846.7	51.3%	10860		
26	2024 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	228.0	403.0	56.6%	5699		
27	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,532.5	2,726.2	56.2%	38313		
28	2024 Ford F-350	EO-ELEC MTR OPS-ZONE 6	PICKUP	189.0	344.9	54.8%	4726		
29	2015 GMC Sierra	EO-ELEC METER OPS	PICKUP	1,545.2	2,752.1	56.1%	38631		
30	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	816.6	1,614.9	50.6%	20415		
31	2013 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	1,209.8	2,055.6	58.9%	30245		
32	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 3	PICKUP	1,898.5	3,220.0	59.0%	47463		
33	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,487.2	3,408.0	43.6%	37180		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2020 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	567.2	1,829.7	31.0%	14180
35	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	1,564.6	3,255.2	48.1%	39114
36	2013 GMC Sierra	EO-ELEC METER OPS	PICKUP	2,186.1	3,980.2	54.9%	54652
37	2024 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	132.9	248.8	53.4%	3323
38	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,047.3	3,239.0	63.2%	51184
39	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	648.0	1,131.7	57.3%	16200
40	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	1,944.8	3,505.3	55.5%	48621
41	2013 GMC Sierra	EO-ELEC MTR OPS-ZONE 2	PICKUP	125.7	234.8	53.6%	3144
42	2024 Ford F-350	EO-ELEC METER OPS	PICKUP	94.1	166.5	56.5%	2353
43	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,584.8	3,238.6	48.9%	39621
44	2015 GMC Sierra	EO-ELEC METER OPS	PICKUP	1,903.3	3,010.3	63.2%	47583
45	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,573.4	3,275.7	48.0%	39335
46	2011 Chevrolet Silverado	EO-ELEC METER OPS	PICKUP	202.2	357.1	56.6%	5055
47	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,585.1	3,209.8	49.4%	39629
48	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,342.3	3,094.7	43.4%	33557
49	2011 Chevrolet Silverado	EO-ELEC MTR OPS-ZONE 6	PICKUP	1,315.5	2,313.2	56.9%	32888
50	2023 Ford F-350	EO-ELEC MTR OPS-ZONE 1	PICKUP	940.2	2,378.0	39.5%	23505
51	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	870.4	1,984.1	43.9%	21760
52	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	2,369.4	4,070.8	58.2%	59236
53	2012 GMC Sierra	EO-ELEC MTR OPS-ZONE 7	PICKUP	391.6	708.7	55.3%	9791
54	2023 Ford F-350	EO-ELEC METER OPS	PICKUP	1,013.3	1,975.1	51.3%	25332
55	2024 Ford F-350	EO-ELEC METER OPS	PICKUP	0.3	0.4	73.0%	7
56	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 1	PICKUP	995.8	2,180.5	45.7%	24896
57	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	2,372.0	4,313.0	55.0%	59300
58	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,335.3	3,209.8	41.6%	33383
59	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	1,920.0	3,716.5	51.7%	47999
60	2023 Ford F-350	EO-ELEC MTR OPS-ZONE 3	PICKUP	1,191.6	2,201.0	54.1%	29790
61	2015 GMC Sierra	EO-ELEC METER OPS	PICKUP	115.6	332.7	34.8%	2890
62	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	2,605.8	4,268.7	61.0%	65145
63	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,837.6	3,458.8	53.1%	45940
64	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	1,690.3	3,906.1	43.3%	42258
65	2024 Ford F-350	EO-ELEC METER OPS	PICKUP	0.1	0.2	49.9%	2
66	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 4	PICKUP	1,122.9	3,476.4	32.3%	28074
67	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,823.9	3,444.9	52.9%	45597
68	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	2,267.6	5,056.5	44.8%	56690
69	2015 GMC Sierra	EO-ELEC MTR OPS-ZONE 4	PICKUP	372.0	784.8	47.4%	9300
70	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,363.3	4,055.6	58.3%	59082
71	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	2,569.2	4,676.8	54.9%	64229
72	2021 Ford F-350	EO-ELEC METER OPS	PICKUP	1,506.0	2,868.5	52.5%	37649

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
73	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	2,449.7	4,046.4	60.5%	61243
74	2021 Ford F-350	EO-ELEC MTR OPS-ZONE 1	PICKUP	2,475.9	4,606.7	53.7%	61898
75	2012 GMC Sierra	EO-ELEC METER OPS	PICKUP	169.9	352.5	48.2%	4247
76	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,457.7	2,965.4	49.2%	36442
77	2021 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,351.8	2,545.2	53.1%	33794
78	2012 GMC Sierra	GO-TO-PIPELINE & STORAGE-NORTH-MAF	PICKUP	617.5	1,289.6	47.9%	15439
77	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	2,664.6	4,915.6	54.2%	66614
78	2021 Ford F-350	EO-ELEC MTR OPS-ZONE 4	PICKUP	1,731.7	3,232.0	53.6%	43293
79	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	2,012.4	3,355.7	60.0%	50309
80	2012 GMC Sierra	EO-ELEC MTR OPS-ZONE 3	PICKUP	1,075.2	1,883.1	57.1%	26881
81	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,084.8	2,159.1	50.2%	27120
82	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	717.8	1,213.7	59.1%	17946
83	2012 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	15.3	21.0	72.6%	382
84	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	977.0	2,096.7	46.6%	24426
85	2020 Ford F-350	EO-ELEC MTR OPS-ZONE 5	PICKUP	925.7	2,294.6	40.3%	23144
86	2020 Ford F-350	EO-ELEC METER OPS	PICKUP	1,250.7	2,949.6	42.4%	31266
87	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 1	PICKUP	731.2	1,716.3	42.6%	18281
88	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,133.4	2,050.7	55.3%	28335
89	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 1	PICKUP	1,832.7	4,006.5	45.7%	45816
90	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	826.5	2,494.0	33.1%	20663
91	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,775.8	4,641.1	59.8%	69396
92	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,970.0	4,077.1	48.3%	49250
93	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,028.4	3,802.8	53.3%	50711
94	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,674.0	3,013.4	55.6%	41849
95	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,803.7	4,796.2	58.5%	70094
96	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,743.9	3,164.2	55.1%	43598
97	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 2	PICKUP	2,290.4	3,821.6	59.9%	57260
98	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 2	PICKUP	1,258.1	2,499.3	50.3%	31452
99	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,557.1	3,818.9	40.8%	38928
100	2019 Ford F-350	EO-ELEC MTR OPS-ZONE 7	PICKUP	1,493.8	3,092.6	48.3%	37345
101	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,249.9	3,761.4	59.8%	56247
102	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	2,125.3	4,159.1	51.1%	53132
103	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,043.5	2,455.0	42.5%	26088
104	2019 Ford F-350	EO-ELEC METER OPS	PICKUP	1,441.4	2,556.4	56.4%	36035

140,771.4

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2021 Ford F-450	GAS OPS SOUTHEAST REGION	SERVICE TRUCK	1,357.6	2,063.1	65.8%	33939	Average idle time	78.7%
2	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,311.5	3,793.8	87.3%	82787		
3	2015 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	2,082.2	2,633.4	79.1%	52056	Idle Metric Tons CO2	729.9
4	2016 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	2,537.0	3,113.0	81.5%	63424		
5	2008 GMC Sierra	GAS OPS-NORTH-ZONE	SERVICE TRUCK	1,273.9	1,651.3	77.1%	31848	Gallons idled	76641.2
6	2009 GMC Sierra	GAS OPS-EAST-ZONE	SERVICE TRUCK	204.7	272.8	75.0%	5117		
7	N/A	GAS OPS-SOUTHEAST	SERVICE TRUCK	3,516.7	4,854.2	72.4%	87917		
8	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	SERVICE TRUCK	3,352.7	3,829.6	87.5%	83817		
9	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	2,703.6	3,507.7	77.1%	67591		
10	2016 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,955.6	4,600.6	86.0%	98889		
11	2009 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	SERVICE TRUCK	624.9	1,144.1	54.6%	15621		
12	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,327.9	3,874.3	85.9%	83197		
13	2015 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	2,116.4	2,674.6	79.1%	52910		
14	2016 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,179.0	3,860.5	82.3%	79476		
15	2009 GMC Sierra	GAS OPS-SOUTHEAST	SERVICE TRUCK	442.5	811.3	54.5%	11063		
16	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	4,329.4	4,852.9	89.2%	108234		
17	2016 Ford F-450	GO-GCON-RESOURCE MGMT B I	SERVICE TRUCK	2,357.2	2,799.3	84.2%	58930		
18	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	2,978.8	3,537.8	84.2%	74471		
19	2015 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,509.7	4,058.6	86.5%	87743		
20	2008 Chevrolet Silverado	GAS OPS-SOUTHEAST	SERVICE TRUCK	265.1	367.9	72.1%	6628		
21	2009 Chevrolet Silverado	EO-LVD-NE ZONE 1-MIDLAND-A	SERVICE TRUCK	1,086.7	1,544.1	70.4%	27168		
22	2014 Ford F-450	GAS OPS-SE	SERVICE TRUCK	2,440.6	3,001.3	81.3%	61016		
23	2015 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,261.8	3,900.1	83.6%	81545		
24	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,155.3	3,696.8	85.4%	78883		
25	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	901.8	1,427.9	63.2%	22546		
26	2014 Ford F-450	GAS OPS-EAST-ZONE	SERVICE TRUCK	2,332.0	2,981.8	78.2%	58299		
27	2014 Ford F-450	GO-TO-M&R-WEST	SERVICE TRUCK	2,366.7	3,081.0	76.8%	59166		
28	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	3,081.7	3,438.6	89.6%	77044		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
29	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,071.2	3,671.8	83.6%	76780
30	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	3,208.4	3,622.5	88.6%	80211
31	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	2,882.1	3,397.7	84.8%	72053
32	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	2,279.0	2,714.8	83.9%	56974
33	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	2,172.3	2,831.2	76.7%	54307
34	2014 Ford F-450	GAS OPS-SE	SERVICE TRUCK	1,510.6	2,449.3	61.7%	37764
35	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,877.6	2,418.3	77.6%	46939
36	2014 Ford F-450	GAS OPS-CENTRAL-ZONE 1	SERVICE TRUCK	3,424.2	4,464.1	76.7%	85606
37	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	4,066.1	4,461.0	91.1%	101652
38	2014 Ford F-450	GO-GAS CONSTRUCTION	SERVICE TRUCK	3,485.4	3,979.3	87.6%	87134
39	2014 Ford F-450	GAS OPS-EAST-ZONE	SERVICE TRUCK	1,436.2	1,826.1	78.6%	35905
40	2015 Ford F-350	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	335.4	509.0	65.9%	8386

95,801.5

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2022 Ford F-250	LVD CENTRAL ZONE 2	PICKUP	2,021.8	4,033.7	50.1%	50544	Average idle time 63%
2	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,862.2	4,025.4	71.1%	71556	
3	2019 Chevrolet Silverado	GAS OPS-SOUTH ZONE	PICKUP	2,879.1	3,564.0	80.8%	71977	Idle Metric Tons CO2 1884.1
4	2002 GMC Sierra	CAMPBELL-FUEL HANDLING	PICKUP	3,562.3	4,452.7	80.0%	89058	
5	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,816.4	4,690.0	81.4%	95410	Gallons idled 197835.676
6	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	1,910.8	3,522.5	54.2%	47771	
7	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	1,843.6	2,708.9	68.1%	46090	
8	2019 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,269.7	3,240.5	70.0%	56743	
9	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,485.3	4,442.3	55.9%	62132	
10	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,860.8	5,078.6	76.0%	96521	
11	2019 Ford F-250	FIELD OPERATIONS NORTHEAST ZONE 5	PICKUP	359.0	817.2	43.9%	8976	
12	2011 Chevrolet Silverado	GAS OPS-SOUTH-ZONE 1H	PICKUP	1,343.3	2,515.8	53.4%	33584	
13	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	2,523.0	4,002.9	63.0%	63074	
14	2015 GMC Sierra	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,436.0	3,427.2	71.1%	60900	
15	2019 Ford F-250	GRATIOT HEARTLAND A	PICKUP	213.0	395.5	53.9%	5324	
16	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,293.2	4,339.1	75.9%	82330	
17	2019 Ford F-250	GRATIOT HEARTLAND A	PICKUP	689.0	1,125.3	61.2%	17224	
18	2022 Ford F-250	LVD SW ZONE 5	PICKUP	2,900.7	5,012.0	57.9%	72517	
19	2019 Ford F-250	GRATIOT HEARTLAND A	PICKUP	603.2	1,071.4	56.3%	15080	
20	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	1,721.4	2,722.6	63.2%	43035	
21	2019 Ford F-250	GRATIOT HEARTLAND A	PICKUP	520.3	822.6	63.3%	13008	
22	2022 Ford F-250	EO-LVD-EAST ZONE 3-LANSING-A	PICKUP	2,927.9	4,412.9	66.3%	73197	
23	2015 GMC Sierra	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,299.7	4,120.2	55.8%	57492	
24	2019 Ford F-250	CROSS WINDS ENERGY PARK	PICKUP	1,223.6	1,809.8	67.6%	30590	
25	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	3,143.6	4,687.8	67.1%	78590	
26	2015 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	1,891.7	3,494.8	54.1%	47292	
27	2019 Ford F-250	CROSS WINDS ENERGY PARK	PICKUP	805.3	1,130.7	71.2%	20133	
28	2015 GMC Sierra	LVD SOUTH ZONE 4	PICKUP	1,337.6	2,654.7	50.4%	33441	
29	2019 Ford F-250	CROSS WINDS ENERGY PARK	PICKUP	1,090.2	1,538.7	70.9%	27255	
30	2022 Ford F-250	EO-LVD-GR ZONE 6-NORTH KENT-A	PICKUP	2,204.1	3,818.2	57.7%	55104	
31	2015 GMC Sierra	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	2,400.2	3,454.6	69.5%	60006	
32	2019 Ford F-250	CROSS WINDS ENERGY PARK	PICKUP	1,805.4	2,275.1	79.4%	45134	
33	2022 Ford F-250	EO-LVD-SE ZONE 4-ADRIAN-B	PICKUP	2,997.8	5,166.5	58.0%	74945	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2019 Ford F-250	LAKE WINDS ENERGY PARK	PICKUP	469.3	866.8	54.1%	11731
35	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,715.3	4,793.1	56.7%	67883
36	2015 GMC Sierra	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	2,489.1	3,744.0	66.5%	62228
37	2019 Ford F-250	LAKE WINDS ENERGY PARK	PICKUP	612.0	952.6	64.2%	15299
38	2015 GMC Sierra	FIELD OPERATIONS NORTHWEST ZONE 7	PICKUP	142.9	537.5	26.6%	3573
39	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,605.6	4,310.5	60.4%	65140
40	2015 GMC Sierra	FIELD OPERATIONS EAST CENTRAL ZONE 16	PICKUP	282.3	591.9	47.7%	7058
41	2022 Ford F-250	LVD SOUTH ZONE 4	PICKUP	2,613.2	4,677.1	55.9%	65329
42	2015 GMC Sierra	LVD SYSTEM PLANNING - WEST	PICKUP	310.6	859.1	36.2%	7766
43	2022 Ford F-250	LVD SW ZONE 5	PICKUP	2,922.7	4,593.3	63.6%	73067
44	2015 GMC Sierra	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	2,595.7	3,912.5	66.3%	64892
45	2022 Ford F-250	EO-LVD-GR ZONE 6-NORTH KENT-A	PICKUP	1,806.4	3,421.6	52.8%	45160
46	2022 Ford F-250	EO-LVD-LAKESHORE ZONE 7	PICKUP	3,518.7	5,332.4	66.0%	87968
47	2015 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 5	PICKUP	373.2	679.2	54.9%	9329
48	2022 Ford F-250	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	3,398.1	4,753.6	71.5%	84952
49	2015 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	254.7	395.4	64.4%	6366
50	2012 GMC Sierra	WM&CD-NE ZONE-WBR/CLR/ALM	PICKUP	114.1	314.5	36.3%	2852
51	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	4,383.9	5,172.7	84.8%	109597
52	2008 Chevrolet Silverado	CAMPBELL-FUEL HANDLING	PICKUP	7,725.0	9,088.0	85.0%	193126
53	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	2,361.5	3,275.2	72.1%	59037
54	2011 Chevrolet Silverado	GAS OPS-EAST-ZONE	PICKUP	1,453.6	2,135.3	68.1%	36340
55	2022 Ford F-250	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	2,028.5	3,600.6	56.3%	50712
56	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,152.0	4,331.3	72.8%	78801
57	2022 Ford F-250	EO-SUBSTATION OPS C-MIDLAND	PICKUP	3,250.6	4,707.0	69.1%	81265
58	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	3,406.1	4,495.6	75.8%	85152
59	2015 GMC Sierra	EO-SUBSTATION OPS-KALAMAZOO	PICKUP	881.9	1,447.5	60.9%	22048
60	2022 Ford F-250	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	2,804.9	4,546.4	61.7%	70123
61	2015 GMC Sierra	EO-SUBSTATION OPS C-MIDLAND	PICKUP	3,451.3	5,100.8	67.7%	86283
62	2022 Ford F-250	EO-SUBSTATION OPS F-MUSKEGON	PICKUP	2,219.1	4,022.6	55.2%	55477
63	2015 GMC Sierra	EO-SUBSTATION OPS C-MIDLAND	PICKUP	1,401.6	2,279.4	61.5%	35041
64	2011 Chevrolet Silverado	FIELD OPERATIONS NORTHWEST ZONE 7	PICKUP	224.0	592.7	37.8%	5599
65	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	2,462.9	3,289.9	74.9%	61572
66	2015 GMC Sierra	EO-LVD-NW ZONE 8-BOYNE-A	PICKUP	2,679.8	4,530.7	59.1%	66995
67	2022 Ford F-250	LVD SW ZONE 5	PICKUP	2,670.8	4,168.5	64.1%	66769
68	2015 GMC Sierra	EO-SUBSTATION OPS B-MIDLAND	PICKUP	2,270.8	3,839.0	59.1%	56769
69	2015 GMC Sierra	LVD DESIGN	PICKUP	227.7	755.6	30.1%	5693
70	2008 Chevrolet Silverado	GAS OPS - REG-SW	PICKUP	1,156.5	2,008.1	57.6%	28912
71	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	1,504.2	2,721.8	55.3%	37605
72	2015 GMC Sierra	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	620.0	1,139.7	54.4%	15500

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
73	2022 Ford F-250	LVD EAST ZONE 3	PICKUP	667.2	1,321.4	50.5%	16680
74	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,123.1	3,408.3	62.3%	53078
75	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	2,135.2	3,181.2	67.1%	53380
76	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,430.4	2,137.3	66.9%	35759
77	2012 GMC Sierra	LVD DESIGN-WBR/CLR/ALM	PICKUP	127.7	469.6	27.2%	3192
78	2015 GMC Sierra	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,949.0	2,704.1	72.1%	48724
79	2015 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,138.9	3,221.9	66.4%	53473
80	2012 GMC Sierra	EO-LVD-NW ZONE 8-CADILLAC-A	PICKUP	1,805.3	2,766.4	65.3%	45132
81	2015 GMC Sierra	GAS OPS-EAST-ZONE	PICKUP	4,581.3	5,863.9	78.1%	114533
82	2012 GMC Sierra	EO-LVD-NE ZONE 1-MIDLAND-A	PICKUP	1,481.3	2,327.5	63.6%	37033
83	2015 GMC Sierra	GAS OPS-EAST-ZONE-2E	PICKUP	965.9	1,306.6	73.9%	24146
84	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	1,081.5	1,485.6	72.8%	27037
85	2015 GMC Sierra	WM&CD-NW ZONE -	PICKUP	305.3	917.6	33.3%	7634
86	2012 GMC Sierra	EO-LVD-SW ZONE 5-HASTINGS-A	PICKUP	1,147.7	2,025.9	56.7%	28693
87	2015 GMC Sierra	GAS OPS SOUTHWEST REGION	PICKUP	2,527.8	3,633.4	69.6%	63195
88	2015 GMC Sierra	GAS OPS-NORTH-ZONE-2C	PICKUP	2,317.7	3,208.6	72.2%	57943
89	2012 GMC Sierra	EO-SUBSTATION OPS D-FLINT	PICKUP	3,040.0	4,170.6	72.9%	75999
90	2012 GMC Sierra	EO-SUBSTATION OPS G-BATTLE CRK & LANSING	PICKUP	2,109.8	4,057.7	52.0%	52744
91	2012 GMC Sierra	EO-SUBSTATION OPS K-GRAND RAPIDS	PICKUP	3,273.7	4,526.4	72.3%	81843
92	2012 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 24	PICKUP	92.6	328.3	28.2%	2316
93	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	2,990.5	3,931.0	76.1%	74763
94	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	1,880.1	2,677.9	70.2%	47002
95	2022 Ford F-250	EO-ELECTRIC UNDERGROUND	PICKUP	3,165.8	4,610.9	68.7%	79145
96	2012 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,344.4	3,087.4	75.9%	58610
97	2012 GMC Sierra	GAS OPS-NORTH-ZONE-2C	PICKUP	2,488.6	3,284.0	75.8%	62216
98	2012 GMC Sierra	GAS OPS-NORTH-ZONE-3A	PICKUP	1,527.9	2,536.2	60.2%	38197
99	2012 GMC Sierra	CAMPBELL SITE MAINTENANCE	PICKUP	262.0	502.0	52.2%	6549
100	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	1,343.0	1,802.1	74.5%	33575
101	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-B	PICKUP	2,388.3	3,676.7	65.0%	59706
102	2022 Ford F-250	EO-ELECTRIC UNDERGROUND	PICKUP	2,784.8	3,922.0	71.0%	69621
103	2018 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,613.9	2,329.9	69.3%	40347
104	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,730.4	2,478.8	69.8%	43260
105	2012 GMC Sierra	GAS OPS-NORTH-ZONE	PICKUP	2,092.2	2,833.7	73.8%	52304
106	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	2,266.7	3,332.8	68.0%	56666
107	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	2,589.5	3,899.6	66.4%	64738
108	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,966.2	2,776.2	70.8%	49156
109	2021 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	814.3	1,260.3	64.6%	20357
110	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,568.4	2,192.5	71.5%	39210
111	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	2,124.8	3,439.2	61.8%	53120

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
112	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,521.8	2,208.4	68.9%	38044
113	2022 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	166.0	257.3	64.5%	4151
114	2019 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	2,318.9	3,436.2	67.5%	57973
115	2019 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	3,419.1	4,639.3	73.7%	85476
116	2018 Chevrolet Silverado	GAS OPS-NORTH-ZONE	PICKUP	316.5	733.0	43.2%	7913
117	2019 Chevrolet Silverado	GAS OPS-CENTRAL-ZONE 1	PICKUP	3,681.3	5,092.5	72.3%	92033
118	2021 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	234.2	397.4	58.9%	5856
119	2021 Ford F-250	GO-TO-PIPELINE & STORAGE-EAST-NORTHVILLE	PICKUP	1,565.5	2,545.6	61.5%	39137
120	2021 Ford F-250	GAS OPS-EAST-ZONE-2B	PICKUP	1,966.5	2,993.8	65.7%	49162
121	2022 Ford F-250	GEP&S/SI/TIMP/DACC/EXTERNAL CORROSION DA	PICKUP	971.4	2,897.7	33.5%	24285
122	2021 Chevrolet Silverado	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,288.4	2,059.5	62.6%	32211
123	2021 Ford F-250	GAS OPS-EAST-ZONE-2B	PICKUP	4,170.5	5,325.4	78.3%	104261
124	2021 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	441.7	632.0	69.9%	11042
125	2021 Ford F-250	GO-TO-PIPELINE & STORAGE-NORTH-MARION	PICKUP	519.6	779.6	66.6%	12990
126	2021 Ford F-250	GAS OPS-EAST-ZONE	PICKUP	2,488.9	3,300.7	75.4%	62222
127	2021 Ford F-250	EO-ELECTRIC UNDERGROUND-A	PICKUP	1,179.6	1,924.9	61.3%	29489

247,294.6

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2019 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	2,099.3	2,987.3	70.3%	52482	Average idle time	67.1%
2	2020 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	88.7	129.7	68.4%	2218		
3	2023 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	923.1	1,317.1	70.1%	23077	Idle Metric Tons CO2	105.5
4	2018 Ford Transit Van	EO-LVD-GR ZONE 6-WEST KENT-B	CARGO VAN	726.8	1,059.2	68.6%	18170		
5	2019 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	969.7	1,302.6	74.4%	24242	Gallons idled	11082.001
6	2020 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	882.3	1,548.4	57.0%	22057		
7	2023 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	991.1	1,444.8	68.6%	24777		
8	2015 Ford Transit Van	LVD EAST ZONE 3	CARGO VAN	397.9	535.6	74.3%	9946		
9	2020 Ford Transit Van	EO-SUBS OPS/MAINT/METRO	CARGO VAN	252.1	338.0	74.6%	6303		
10	2015 Ford Transit Van	EO-LVD-SW ZONE 5-KALAMAZOO-A	CARGO VAN	414.6	557.6	74.4%	10366		
11	2020 Ford Transit Van	EO-LVD-EAST ZONE 3-FLINT	CARGO VAN	1,291.8	1,729.1	74.7%	32296		
12	2020 Ford Transit Van	EO-LVD-NE ZONE 1-W BRANCH-A	CARGO VAN	533.5	807.9	66.0%	13338		
13	2020 Ford Transit Van	EO-LVD-WEST-ZONE 3-G RAPIDS-B	CARGO VAN	472.3	672.7	70.2%	11807		
14	2020 Ford Transit Van	EO-LVD-GR ZONE-6-EAST KENT-B	CARGO VAN	392.8	568.3	69.1%	9819		
15	2020 Ford Transit Van	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	CARGO VAN	753.9	1,060.8	71.1%	18849		
16	2019 Ford F-550	EO-LVD-NW ZONE 8-TRAVERSE-B	CARGO VAN	792.0	1,251.6	63.3%	19799		
17	2020 Ford Transit Van	LVD SOUTH ZONE 4	CARGO VAN	131.9	236.7	55.7%	3297		
18	2020 Ford Transit Van	EO-LVD-GR ZONE 6-WEST KENT-B	CARGO VAN	1,043.8	1,458.2	71.6%	26094		
19	2020 Ford Transit Van	GEP&S/GEP/MRC-CONTROLS ENGINEERING	CARGO VAN	470.5	987.0	47.7%	11762		
20	2024 Ram ProMaster 2500	GEP&S/GEP/MRC-CONTROLS ENGINEERING	CARGO VAN	224.5	440.0	51.0%	5614		
				13,852.5					
2023 to Sept 2025									

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2020 Ford F-450	GAS OPS-WELDING	PICKUP	754.3	1,443.7	52.3%	18858	Average idle time
2	2021 Ford F-550	GO-WELDING FIELD OPS Z1 DIST	PICKUP	2,091.4	4,372.1	47.8%	52286	
3	2012 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,022.5	1,748.3	58.5%	25563	Idle Metric Tons CO2
4	2013 Ford F-450	GO-WELDING FIELD OPS Z5 DIST	PICKUP	1,721.4	2,751.6	62.6%	43036	
5	2015 Ford F-450	GO-WELDING FIELD OPS Z2 DIST	PICKUP	659.1	1,330.6	49.5%	16476	Gallons idled
6	2016 Ford F-450	GAS OPS -WELDING FIELD	PICKUP	1,112.9	1,809.5	61.5%	27822	
7	2017 Ford F-450	GAS OPS-WELDING	PICKUP	998.8	2,224.4	44.9%	24969	
8	2020 Ford F-450	GAS OPS-WELDING	PICKUP	1,172.3	2,616.6	44.8%	29308	
9	2011 Ford F-450	GO-WELDING FIELD OPS Z3 DIST	PICKUP	1,807.7	2,643.7	68.4%	45192	
10	2012 Ford F-450	GO-WELDING FIELD OPS Z3 DIST	PICKUP	572.9	1,381.1	41.5%	14322	
11	2013 Ford F-450	GO-WELDING FIELD OPS Z5 DIST	PICKUP	1,851.2	2,629.2	70.4%	46280	
12	2024 Ford F-550	GO-WELDING FIELD OPS Z1 DIST	PICKUP	74.7	129.8	57.6%	1869	
13	2016 Ford F-450	GAS OPS-EAST-ZONE	PICKUP	3,460.3	4,304.3	80.4%	86508	
14	2017 Ford F-450	GAS OPS-WELDING	PICKUP	1,136.9	1,870.0	60.8%	28422	
15	2020 Ford F-450	GAS OPS-WELDING	PICKUP	1,139.8	2,562.3	44.5%	28494	
16	2021 Ford F-550	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,164.0	1,942.9	59.9%	29100	
17	2013 Ford F-450	GAS OPS -WELDING FIELD	PICKUP	892.6	2,007.6	44.5%	22315	
18	2024 Ford F-550	GO-WELDING FIELD OPS Z1 DIST	PICKUP	29.3	57.3	51.1%	733	
19	2016 Ford F-450	GAS OPS-WELDING	PICKUP	1,653.8	3,346.9	49.4%	41346	
20	2017 Ford F-450	GAS OPS-WELDING	PICKUP	2,652.5	3,730.8	71.1%	66312	
21	2020 Ford F-450	GO-TRANS OPS EAST	PICKUP	649.9	1,486.1	43.7%	16246	
22	2021 Ford F-550	GAS OPS-NORTH-ZONE	PICKUP	1,108.4	2,312.5	47.9%	27709	
23	2013 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	1,567.1	2,326.8	67.4%	39179	
24	2014 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,524.1	2,668.7	57.1%	38103	
25	2016 Ford F-450	GAS OPS-CENTRAL-ZONE 1	PICKUP	1,242.4	1,984.2	62.6%	31060	
26	2017 Ford F-450	GAS OPS-WELDING	PICKUP	1,560.2	2,735.1	57.0%	39005	
27	2019 Ford F-450	GAS OPS-WELDING	PICKUP	771.0	1,884.6	40.9%	19275	
28	2020 Ford F-450	GAS OPS-WELDING	PICKUP	821.6	1,864.0	44.1%	20540	
29	2013 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	1,695.9	2,505.7	67.7%	42397	
30	2014 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,727.8	2,908.8	59.4%	43195	
31	2016 Ford F-450	GAS OPS-WELDING	PICKUP	2,290.2	3,213.2	71.3%	57255	
32	2017 Ford F-450	GAS OPS-WELDING	PICKUP	3,046.1	4,590.0	66.4%	76152	
33	2008 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-EAST-NORTHVILLE	PICKUP	1,052.9	1,647.2	63.9%	26321	
34	2020 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,090.0	1,894.0	57.5%	27250	
35	N/A	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,524.5	3,513.6	43.4%	38111	

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	574.5	1,710.8	33.6%	14362
37	2013 Ford F-450	GO-WELDING FIELD OPS Z3 DIST	PICKUP	2,237.9	2,834.9	78.9%	55949
38	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	1,415.8	1,930.4	73.3%	35394
39	2016 Ford F-450	GAS OPS-WELDING	PICKUP	676.7	1,588.4	42.6%	16916
40	2017 Ford F-450	GO-WELDING FIELD OPS Z3 DIST	PICKUP	974.5	1,771.7	55.0%	24363
41	2020 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	1,304.8	2,251.2	58.0%	32620
42	2021 Ford F-550	GAS OPS-WELDING	PICKUP	845.3	1,830.7	46.2%	21132
43	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	2,509.5	3,358.4	74.7%	62738
44	2016 Ford F-450	GAS OPS-WELDING	PICKUP	813.3	2,265.8	35.9%	20331
45	2017 Ford F-450	GAS OPS-EAST-ZONE	PICKUP	2,262.2	3,582.8	63.1%	56555
46	2009 Chevrolet Silverado	GO-TO-PIPELINE & STORAGE-NORTH-SAGINAW	PICKUP	1,103.6	1,899.1	58.1%	27590
47	2014 Ford F-450	GAS OPS -WELDING FIELD	PICKUP	2,415.9	3,292.1	73.4%	60396
48	2017 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	65.8	98.4	66.9%	1645
49	2011 Ford F-450	GO-WELDING FIELD OPS Z3 DIST	PICKUP	649.3	1,284.9	50.5%	16234
50	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	2,070.9	3,258.9	63.5%	51773
51	2017 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	1,586.8	2,607.5	60.9%	39671
52	2011 Ford F-450	GAS OPS-EAST-ZONE	PICKUP	827.4	1,166.6	70.9%	20684
53	2014 Ford F-450	WELDING	PICKUP	1,883.4	2,949.9	63.8%	47086
54	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	2,724.6	3,519.7	77.4%	68114
55	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	1,904.7	2,405.4	79.2%	47618
56	2014 Ford F-450	GO-WELDING FIELD OPS Z1 DIST	PICKUP	2,129.1	3,041.7	70.0%	53227
57	2014 Ford F-450	GAS OPS -WELDING FIELD	PICKUP	1,703.1	2,418.1	70.4%	42578
58	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	PICKUP	2,242.3	3,165.1	70.8%	56059
59	2024 Ford F-550	GAS OPS-WELDING	PICKUP	27.9	89.7	31.1%	698

82,589.8

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Ford F-550	GAS OPS SOUTHWEST	PICKUP	1,892.2	3,031.0	62.4%	47306	Average idle time	75.5%
2	2021 Ford F-550	GAS OPS-SOUTHEAST	PICKUP	2,052.1	3,029.2	67.7%	51302		
3	2012 Ford F-450	GAS OPS-NORTHEAST	PICKUP	1,836.2	2,827.9	64.9%	45905	Idle Metric Tons CO2	587.9
4	2013 Ford F-450	GAS OPS-NE	PICKUP	2,838.1	3,974.7	71.4%	70951		
5	2020 Ford F-550	GEP&S/SYSTEM INTEGRITY	PICKUP	725.6	1,793.7	40.5%	18140	Gallons idled	61728.6986
6	2021 Ford F-550	GAS OPS-SOUTHWEST A2	PICKUP	1,111.3	2,444.7	45.5%	27782		
7	2012 Ford F-450	GAS OPS NE ZONE 2-SPAN 13	PICKUP	2,443.0	3,268.2	74.8%	61075		
8	2013 Ford F-450	GAS OPS SOUTHWEST	PICKUP	2,483.9	4,357.8	57.0%	62098		
9	2013 Ford F-450	GAS OPS-SOUTHEAST	PICKUP	1,504.1	2,178.1	69.1%	37603		
10	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	2,079.4	2,523.3	82.4%	51986		
11	2013 Ford F-450	GAS OPS-NORTHEAST	PICKUP	2,061.0	3,144.5	65.5%	51524		
12	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	1,934.0	2,336.9	82.8%	48351		
13	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,187.0	1,670.8	71.0%	29674		
14	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,616.4	4,086.0	88.5%	90411		
15	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,735.6	2,170.1	80.0%	43390		
16	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	3,313.6	3,787.0	87.5%	82839		
17	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	3,656.5	4,193.9	87.2%	91411		
18	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	2,538.2	2,961.6	85.7%	63456		
19	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	3,321.5	3,778.4	87.9%	83037		
20	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	3,592.4	4,043.5	88.8%	89809		
21	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,846.1	2,492.0	74.1%	46153		
22	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	3,772.8	4,264.6	88.5%	94321		
23	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,023.3	2,451.8	82.5%	50583		
24	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	4,060.5	4,636.5	87.6%	101514		
25	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,951.0	2,782.5	70.1%	48775		
26	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	2,571.2	3,025.4	85.0%	64281		
27	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	1,663.1	2,260.9	73.6%	41578		
28	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	1,847.9	2,209.4	83.6%	46198		
29	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	566.0	1,117.9	50.6%	14150		
30	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	2,814.4	3,346.4	84.1%	70359		
31	2012 Ford F-450	GO-GAS CONSTRUCTION	PICKUP	2,748.2	3,261.3	84.3%	68706		
32	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,643.1	3,209.7	82.3%	66078		
33	2012 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	PICKUP	2,731.1	3,223.2	84.7%	68278		
				77,160.9					
	2023 to Sept 2025								

(a)		(b)		(c)		(d)		(e)		(f)		(g)		(h)		(i)		
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven											
1	2021 Ford F-550	LVD SOUTH ZONE 4	DUMP TRUCK	2,159.5	3,381.7	63.9%	53986	Average idle time										65.4%
2	2014 Ford F-450	GAS OPS-NORTH-ZONE	DUMP TRUCK	867.0	1,439.0	60.3%	21675											
3	2015 Ford F-450	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	2,070.2	2,578.4	80.3%	51754	Idle Metric Tons CO2										209.4
4	2016 Ford F-450	RIVER HYDRO OPERS	DUMP TRUCK	235.3	498.6	47.2%	5881											
5	2019 Ford F-550	GAS OPS SOUTHWEST REGION	DUMP TRUCK	1,019.0	1,613.8	63.1%	25475	Gallons idled										21988.404
6	2020 Ford F-550	EO-LVD-EAST ZONE 3-LANSING-A	DUMP TRUCK	1,991.4	3,146.2	63.3%	49786											
7	2021 Ford F-550	LVD SOUTH ZONE 4	DUMP TRUCK	1,640.6	2,957.5	55.5%	41014											
8	2012 Ford F-450	EO-LVD-GR ZONE 6-NORTH KENT-A	DUMP TRUCK	150.9	331.7	45.5%	3773											
9	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,166.7	1,690.4	69.0%	29167											
10	2016 Ford F-450	GAS OPS-NORTH-ZONE-3A	DUMP TRUCK	1,135.4	1,810.6	62.7%	28385											
11	2019 Ford F-550	EO-LVD-EAST ZONE 3-LANSING-A	DUMP TRUCK	1,582.4	2,510.4	63.0%	39561											
12	2021 Ford F-550	EO-ELECTRIC UNDERGROUND-A	DUMP TRUCK	480.3	826.0	58.2%	12008											
13	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,558.5	1,883.6	82.7%	38963											
14	2016 Ford F-450	GAS OPS-NORTH-ZONE-3A	DUMP TRUCK	1,195.3	1,931.1	61.9%	29883											
15	2021 Ford F-550	EO-ELECTRIC UNDERGROUND-C	DUMP TRUCK	495.2	722.2	68.6%	12380											
16	2015 Ford F-450	GO-GAS CONSTRUCTION	DUMP TRUCK	1,084.3	1,425.8	76.0%	27108											
17	2016 Ford F-450	LVD EAST ZONE 3	DUMP TRUCK	520.1	898.1	57.9%	13003											
18	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	685.3	962.8	71.2%	17133											
19	2015 Ford F-450	EO-LVD-SE ZONE 4-ADRIAN-B	DUMP TRUCK	3,143.3	4,544.7	69.2%	78583											
20	2015 Ford F-450	GO-GAS CONSTRUCTION	DUMP TRUCK	1,520.9	2,004.0	75.9%	38023											
21	2015 Ford F-450	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	724.9	932.5	77.7%	18123											
22	2015 Ford F-450	GO-GAS CONSTRUCTION	DUMP TRUCK	2,005.3	2,418.8	82.9%	50132											
23	2020 Ford F-550	EO-LVD-GR ZONE 6-WEST KENT-B	DUMP TRUCK	53.6	111.4	48.1%	1340											
				27,485.5														
2023 to Sept 2025																		

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2022 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 2A	GAS SERVICE TRUCK	467.9	816.6	57.3%	11697	Average idle time
2	2014 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,004.9	2,044.9	49.1%	25123	
3	2016 Freightliner M2 112 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,085.6	1,566.3	69.3%	27139	Idle Metric Tons CO2
4	2017 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 1C	GAS SERVICE TRUCK	1,501.8	2,247.3	66.8%	37546	
5	2008 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	294.0	460.5	63.9%	7351	Gallons idled
6	2009 International 4300	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	87.5	147.9	59.1%	2186	
7	2020 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,943.0	2,709.1	71.7%	48574	
8	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,134.0	1,963.8	57.7%	28350	
9	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,195.7	1,994.3	60.0%	29892	
10	N/A	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,884.7	2,395.1	78.7%	47116	
11	2017 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,918.2	2,440.4	78.6%	47955	
12	2014 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,708.9	2,386.3	71.6%	42724	
13	2015 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE-3	GAS SERVICE TRUCK	809.5	1,186.2	68.2%	20236	
14	2017 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	2,115.1	3,189.2	66.3%	52877	
15	2008 International 4300	GAS OPS-NORTH-ZONE-3E	GAS SERVICE TRUCK	39.2	57.0	68.8%	981	
16	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3	GAS SERVICE TRUCK	725.4	1,685.1	43.0%	18135	
17	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,501.2	2,096.4	71.6%	37530	
18	2017 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,281.4	1,651.3	77.6%	32034	
19	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,358.5	2,045.6	66.4%	33963	
20	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,942.3	2,702.6	71.9%	48557	
21	2017 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,102.4	2,065.4	53.4%	27561	
22	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,130.5	3,083.7	69.1%	53263	
23	2017 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,390.9	3,160.6	75.6%	59773	
24	2015 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,110.8	2,803.0	75.3%	52770	
25	2017 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,581.3	2,270.1	69.7%	39532	
26	2008 International 4300	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	569.2	833.8	68.3%	14231	
27	2009 International 4300	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	140.5	266.1	52.8%	3512	
28	2022 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH ZONE	GAS SERVICE TRUCK	1,250.9	1,829.7	68.4%	31272	
29	2015 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,788.2	2,356.1	75.9%	44706	
30	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,975.7	2,486.2	79.5%	49391	
31	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	624.3	804.8	77.6%	15607	
32	2022 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	3,443.8	4,380.2	78.6%	86095	
33	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,406.6	2,129.3	66.1%	35165	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2008 International 4300	GAS OPS-SOUTH-ZONE 1C	GAS SERVICE TRUCK	98.4	178.8	55.0%	2461
35	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,560.7	2,269.5	68.8%	39018
36	2009 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,871.3	2,436.7	76.8%	46781
37	2022 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,806.0	3,776.4	74.3%	70151
38	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3A	GAS SERVICE TRUCK	1,062.6	1,730.6	61.4%	26565
39	2016 Freightliner M2 112 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,071.6	1,530.4	70.0%	26789
40	2008 International 4300	GAS OPS-SOUTH-ZONE 1E	GAS SERVICE TRUCK	526.4	916.0	57.5%	13161
41	2009 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,068.9	2,800.7	73.9%	51722
42	2022 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,560.7	2,322.0	67.2%	39018
43	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	975.0	1,631.2	59.8%	24376
44	2009 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	737.3	968.0	76.2%	18432
45	2022 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 1C	GAS SERVICE TRUCK	1,164.7	1,992.6	58.5%	29117
46	2015 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,534.7	1,908.9	80.4%	38367
47	2008 International 4300	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	544.0	789.7	68.9%	13600
48	2009 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	235.3	317.1	74.2%	5882
49	2022 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,044.4	2,624.3	77.9%	51110
50	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,547.5	3,447.5	73.9%	63687
51	2022 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,637.6	3,410.0	77.3%	65939
52	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	851.3	1,325.6	64.2%	21281
53	2008 International 4300	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,085.9	1,812.2	59.9%	27148
54	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,026.6	2,858.9	70.9%	50665
55	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,481.4	2,265.4	65.4%	37036
56	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,160.1	2,721.7	79.4%	54003
57	2008 International 4300	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	709.9	1,011.9	70.2%	17748
58	2015 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,493.9	3,166.5	78.8%	62347
59	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,984.7	2,808.1	70.7%	49616
60	2022 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,641.1	3,328.9	79.3%	66028
61	2015 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,278.5	2,861.2	79.6%	56962
62	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,779.7	4,041.0	68.8%	69492
63	2022 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	3,215.9	4,094.8	78.5%	80397
64	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,761.0	2,313.4	76.1%	44025
65	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	3,204.4	3,973.9	80.6%	80111
66	2009 International 4300	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	319.0	497.3	64.2%	7976
67	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,575.2	2,283.9	69.0%	39381
68	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	675.3	1,059.2	63.8%	16884
69	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,435.5	3,291.6	74.0%	60887
70	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,102.4	1,892.3	58.3%	27560
71	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,255.4	2,943.6	76.6%	56386
72	2018 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,941.1	2,942.6	66.0%	48528

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
73	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,817.4	3,685.6	76.4%	70434
74	2015 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	941.6	1,657.5	56.8%	23540
75	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,315.4	3,187.1	72.6%	57885
76	2009 International 4300	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	760.2	1,292.9	58.8%	19004
77	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,874.1	2,684.1	69.8%	46853
78	2015 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,069.1	1,566.7	68.2%	26728
79	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	3,426.0	4,382.9	78.2%	85650
80	2009 International 4300	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,590.2	2,411.2	66.0%	39754
81	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,624.1	2,542.4	63.9%	40603
82	2015 International DuraStar 4300	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	309.0	454.4	68.0%	7725
83	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,507.3	2,392.9	63.0%	37683
84	2009 International 4300	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,181.4	1,594.4	74.1%	29535
85	2023 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,046.2	1,618.0	64.7%	26155
86	2025 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	518.0	713.1	72.6%	12950
87	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,300.4	2,904.8	79.2%	57511
88	2023 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,375.8	2,222.1	61.9%	34395
89	2025 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	675.2	966.2	69.9%	16880
90	2016 Freightliner M2 112 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,498.2	2,227.2	67.3%	37456
91	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,266.4	3,028.0	74.8%	56659
92	2009 International 4300	GAS OPS-NORTH-ZONE-3A	GAS SERVICE TRUCK	512.8	876.6	58.5%	12821
93	2023 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,179.5	1,619.0	72.9%	29487
94	2025 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 1C	GAS SERVICE TRUCK	246.4	361.0	68.3%	6160
95	2016 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,853.5	3,722.0	76.7%	71337
96	2018 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,428.0	2,061.5	69.3%	35699
97	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,639.4	3,347.2	78.9%	65985
98	2025 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	481.0	700.4	68.7%	12025
99	2016 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,392.7	2,791.6	49.9%	34818
100	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,601.8	3,432.8	75.8%	65045
101	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,258.1	3,052.6	74.0%	56452
102	N/A	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	372.8	487.1	76.5%	9320
103	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,020.7	2,840.7	71.1%	50517
104	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,731.9	3,370.1	81.1%	68297
105	2023 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,167.2	2,723.3	79.6%	54180
106	2016 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,504.7	3,229.2	77.6%	62618
107	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,907.1	2,744.0	69.5%	47678
108	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,809.1	3,847.3	73.0%	70228
109	2025 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	325.7	506.8	64.3%	8142
110	2016 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,137.6	2,935.2	72.8%	53439
111	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,136.5	1,690.7	67.2%	28412

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
112	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,955.3	3,623.3	81.6%	73882
113	2025 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	239.3	308.6	77.6%	5983
114	2016 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3A	GAS SERVICE TRUCK	1,315.0	1,960.7	67.1%	32875
115	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,612.7	2,489.8	64.8%	40316
116	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,315.2	3,016.8	76.7%	57879
117	2025 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 1C	GAS SERVICE TRUCK	33.8	58.4	57.9%	846
118	2016 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,802.0	3,644.6	76.9%	70050
119	2018 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 1H	GAS SERVICE TRUCK	1,579.9	2,133.1	74.1%	39499
120	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,745.8	3,359.2	81.7%	68646
121	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,240.8	2,879.4	77.8%	56021
122	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	1,798.4	2,507.4	71.7%	44961
123	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,142.3	2,723.8	78.7%	53557
124	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,140.4	2,816.1	76.0%	53510
125	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,583.1	3,286.2	78.6%	64577
126	2016 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	713.5	865.6	82.4%	17838
127	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	959.1	1,415.6	67.8%	23978
128	2023 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,156.0	3,031.5	71.1%	53900
129	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	919.5	1,927.6	47.7%	22988
130	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,273.6	2,199.0	57.9%	31839
131	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3B	GAS SERVICE TRUCK	1,147.2	1,920.3	59.7%	28679
132	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	4,087.4	5,010.2	81.6%	102184
133	2023 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,701.3	2,384.0	71.4%	42532
134	2025 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	688.6	870.8	79.1%	17215
135	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,586.4	3,355.5	77.1%	64661
136	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	2,261.2	2,921.2	77.4%	56531
137	2018 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,614.1	2,386.4	67.6%	40353
138	2023 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3	GAS SERVICE TRUCK	1,071.3	1,803.6	59.4%	26783
139	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	2,096.7	2,725.4	76.9%	52417
140	2018 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	GAS SERVICE TRUCK	1,195.2	2,136.7	55.9%	29881
141	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	GAS SERVICE TRUCK	2,268.8	3,153.7	71.9%	56719
142	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	GAS SERVICE TRUCK	1,562.9	2,419.3	64.6%	39073
143	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	GAS SERVICE TRUCK	1,197.4	1,866.2	64.2%	29934

227,345.9

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2021 Ford F-550	FIELD OPERATIONS NORTHWEST ZONE 1	FLEET SERVICE TRUCK	280.4	923.6	30.4%	7010	Average idle time
2	2024 Ford F-550	FIELD OPERATIONS SOUTHEAST ZONE 19	FLEET SERVICE TRUCK	72.4	162.0	44.7%	1810	
3	2015 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	FLEET SERVICE TRUCK	249.8	618.5	40.4%	6245	Idle Metric Tons CO2
4	2019 Ford F-550	FIELD OPERATIONS SOUTHERN ZONE 24	FLEET SERVICE TRUCK	307.6	1,088.8	28.2%	7689	
5	2020 Ford F-550	FIELD OPERATIONS EAST CENTRAL ZONE 12	FLEET SERVICE TRUCK	431.2	1,010.4	42.7%	10779	Gallons idled
6	2021 Ford F-550	FIELD OPERATIONS SOUTHWEST ZONE 8	FLEET SERVICE TRUCK	269.3	698.1	38.6%	6734	
7	2024 Ford F-550	FIELD OPERATIONS NORTHWEST ZONE 1	FLEET SERVICE TRUCK	260.7	474.2	55.0%	6518	
8	2015 GMC Sierra	FIELD OPERATIONS NORTHWEST ZONE 4	FLEET SERVICE TRUCK	177.1	518.6	34.2%	4428	
9	2017 Ford F-350	FIELD OPERATIONS NORTHEAST ZONE 2	FLEET SERVICE TRUCK	593.4	1,438.9	41.2%	14836	
10	2015 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 10	FLEET SERVICE TRUCK	265.3	790.9	33.5%	6632	
11	2009 Chevrolet Silverado	FIELD OPERATIONS EAST CENTRAL ZONE 11	FLEET SERVICE TRUCK	114.7	254.8	45.0%	2868	
12	2021 Ford F-550	FIELD OPERATIONS NORTHWEST ZONE 7	FLEET SERVICE TRUCK	261.9	677.7	38.6%	6547	
13	2012 GMC Sierra	FIELD OPERATIONS SOUTHWEST ZONE 13	FLEET SERVICE TRUCK	289.0	743.7	38.9%	7225	
14	2015 Freightliner M2 106 Medium Duty	FIELD OPERATIONS SOUTHERN ZONE 15	FLEET SERVICE TRUCK	187.8	521.3	36.0%	4694	
15	2009 Chevrolet Silverado	FIELD OPERATIONS SOUTHERN ZONE 15	FLEET SERVICE TRUCK	161.8	587.5	27.5%	4045	
16	2015 GMC Sierra	FIELD OPERATIONS SOUTHERN ZONE 21	FLEET SERVICE TRUCK	873.3	2,505.2	34.9%	21833	
17	2009 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 10	FLEET SERVICE TRUCK	22.7	72.8	31.2%	567	
18	2011 Chevrolet Silverado	FIELD OPERATIONS SOUTHERN ZONE 22	FLEET SERVICE TRUCK	285.9	1,040.5	27.5%	7147	
19	2012 GMC Sierra	FIELD OPERATIONS SOUTHEAST ZONE 17	FLEET SERVICE TRUCK	211.5	614.1	34.4%	5288	
20	2015 GMC Sierra	FIELD OPERATIONS SOUTHWEST ZONE 14	FLEET SERVICE TRUCK	269.7	722.0	37.4%	6742	
21	2021 Ford F-550	FIELD OPERATIONS NORTHEAST ZONE 10	FLEET SERVICE TRUCK	319.0	932.9	34.2%	7974	
22	2012 GMC Sierra	FIELD OPERATIONS NORTHEAST ZONE 5	FLEET SERVICE TRUCK	1,278.0	2,262.5	56.5%	31949	
23	2015 GMC Sierra	FIELD OPERATIONS SOUTHWEST ZONE 14	FLEET SERVICE TRUCK	63.8	181.5	35.2%	1596	
24	2009 Chevrolet Silverado	FIELD OPERATIONS SOUTHERN ZONE 15	FLEET SERVICE TRUCK	87.9	313.2	28.1%	2197	
25	2012 GMC Sierra	FIELD OPERATIONS EAST CENTRAL ZONE 12	FLEET SERVICE TRUCK	756.4	1,304.9	58.0%	18910	
26	2009 Chevrolet Silverado	FIELD OPERATIONS NORTHEAST ZONE 6	FLEET SERVICE TRUCK	61.9	215.4	28.7%	1548	
27	2019 Ford F-550	FIELD OPERATIONS EAST CENTRAL ZONE 16	FLEET SERVICE TRUCK	329.3	852.7	38.6%	8232	
28	2017 Freightliner M2 106 Medium Duty	FIELD OPERATIONS SOUTHERN ZONE 22	FLEET SERVICE TRUCK	281.3	836.0	33.7%	7033	
29	2018 Peterbilt 337	FIELD OPERATIONS SOUTHWEST ZONE 14	FLEET SERVICE TRUCK	701.4	996.6	70.4%	17535	
30	2019 Ford F-550	FIELD OPERATIONS NORTHEAST ZONE 10	FLEET SERVICE TRUCK	158.3	490.1	32.3%	3956	
31	2018 Peterbilt 337	FIELD OPERATIONS SOUTHERN ZONE 15	FLEET SERVICE TRUCK	75.9	170.8	44.4%	1897	
32	2017 Ford F-550	FIELD OPERATIONS NORTHWEST ZONE 1	FLEET SERVICE TRUCK	349.7	1,145.9	30.5%	8742	
33	2018 Ford F-550	FIELD OPERATIONS NORTHEAST ZONE 6	FLEET SERVICE TRUCK	167.7	518.4	32.3%	4191	
34	2017 Ford F-550	FIELD OPERATIONS EAST CENTRAL ZONE 9	FLEET SERVICE TRUCK	509.4	934.8	54.5%	12735	
35	2018 Ford F-550	FIELD OPERATIONS NORTHEAST ZONE 2	FLEET SERVICE TRUCK	365.6	785.7	46.5%	9139	
2023 to Sept 2025				11,090.9				

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2022 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-2	DUMP TRUCK	2,455.2	3,395.9	72.3%	61379	Average idle time	65.6%
2	2003 International 7400	RIVER HYDRO OPERS	DUMP TRUCK	31.0	81.3	38.1%	775		
3	2024 Freightliner M2 106 Medium Duty	LVD SOUTH ZONE 4	DUMP TRUCK	2.3	6.4	36.3%	58	Idle Metric Tons CO2	1250.2
4	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3D	DUMP TRUCK	583.1	1,109.7	52.5%	14578		
5	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,218.1	1,695.6	71.8%	30451	Gallons idled	131274.794
6	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	895.0	1,340.1	66.8%	22375		
7	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,047.3	2,596.7	78.8%	51183		
8	2019 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,578.2	2,618.5	60.3%	39454		
9	2013 International WorkStar 7400	GAS OPS-EAST-ZONE	DUMP TRUCK	1,057.7	1,775.8	59.6%	26442		
10	2015 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	DUMP TRUCK	992.5	1,680.2	59.1%	24813		
11	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,433.4	2,337.3	61.3%	35835		
12	2017 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	DUMP TRUCK	371.2	625.3	59.4%	9280		
13	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,506.3	2,002.2	75.2%	37658		
14	2019 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE-2	DUMP TRUCK	1,771.4	2,755.7	64.3%	44284		
15	2013 International WorkStar 7400	GAS OPS-NORTH-ZONE	DUMP TRUCK	465.7	799.0	58.3%	11642		
16	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,060.1	1,938.3	54.7%	26501		
17	2017 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-3	DUMP TRUCK	328.8	573.3	57.4%	8221		
18	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE-2	DUMP TRUCK	3,066.7	4,420.7	69.4%	76667		
19	2013 International WorkStar 7400	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,181.9	1,635.2	72.3%	29548		
20	2015 Freightliner 108SD	GO-TRANS OPS EAST	DUMP TRUCK	262.0	613.4	42.7%	6549		
21	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE-2	DUMP TRUCK	1,646.6	2,541.3	64.8%	41166		
22	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,327.4	2,848.4	81.7%	58185		
23	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,372.2	1,946.1	70.5%	34305		
24	2013 International WorkStar 7400	GAS OPS-SOUTH-ZONE 1E	DUMP TRUCK	708.2	1,511.5	46.9%	17705		
25	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	998.0	1,597.8	62.5%	24951		
26	2015 Freightliner 108SD	GO-TRANS OPS EAST	DUMP TRUCK	175.4	394.9	44.4%	4384		
27	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	993.5	1,561.5	63.6%	24838		
28	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,252.3	1,847.4	67.8%	31307		
29	2013 International WorkStar 7400	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	149.9	242.0	61.9%	3747		
30	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,392.4	1,803.1	77.2%	34810		
31	2015 International DuraStar 4400	GAS OPS SOUTHWEST REGION	DUMP TRUCK	1,227.3	2,059.7	59.6%	30682		
32	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	515.1	977.3	52.7%	12876		
33	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	DUMP TRUCK	477.3	884.9	53.9%	11933		
34	2012 International WorkStar 7400	GAS OPS-SOUTH-ZONE-3A	DUMP TRUCK	430.6	751.6	57.3%	10765		
35	2013 International WorkStar 7400	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,040.2	1,448.4	71.8%	26006		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,185.3	1,704.0	69.6%	29632
37	2017 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-2B	DUMP TRUCK	1,830.4	2,658.1	68.9%	45761
38	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	ATBED/STAKE RA	2,094.7	3,662.7	57.2%	52367
39	2012 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	DUMP TRUCK	296.8	520.7	57.0%	7419
40	2013 International WorkStar 7400	GAS OPS-EAST-ZONE-1	DUMP TRUCK	1,476.3	2,493.3	59.2%	36908
41	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,166.3	1,573.3	74.1%	29157
42	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,217.6	1,799.8	67.7%	30441
43	2012 International WorkStar 7400	GO-TRANS OPS EAST	DUMP TRUCK	68.9	155.9	44.2%	1722
44	2013 International WorkStar 7400	GO-GAS CONSTRUCTION	DUMP TRUCK	1,367.4	1,858.5	73.6%	34185
45	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,563.1	2,296.9	68.1%	39076
46	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,057.3	2,638.3	78.0%	51432
47	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	2,273.4	2,851.4	79.7%	56834
48	2022 Western Star Trucks 4700	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	365.8	487.3	75.1%	9146
49	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	DUMP TRUCK	2,010.6	3,262.1	61.6%	50265
50	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,205.4	1,892.4	63.7%	30135
51	2014 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE-2C	DUMP TRUCK	1,537.3	2,366.8	65.0%	38432
52	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE-2	DUMP TRUCK	1,999.2	3,128.3	63.9%	49981
53	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,692.9	2,416.7	70.1%	42322
54	2014 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	1,209.5	1,630.7	74.2%	30238
55	2017 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	DUMP TRUCK	1,761.7	3,483.2	50.6%	44042
56	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,300.7	1,751.1	74.3%	32518
57	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	684.9	1,058.7	64.7%	17122
58	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,234.1	1,855.8	66.5%	30852
59	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,199.3	1,790.4	67.0%	29982
60	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	730.0	1,174.9	62.1%	18250
61	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	884.5	1,411.3	62.7%	22113
62	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	719.9	1,084.4	66.4%	17998
63	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,536.5	2,137.7	71.9%	38413
64	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	DUMP TRUCK	3,109.1	4,511.5	68.9%	77726
65	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,778.4	2,315.9	76.8%	44460
66	2014 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE-3	DUMP TRUCK	879.4	1,434.8	61.3%	21984
67	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,828.6	2,548.0	71.8%	45714
68	2014 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	DUMP TRUCK	522.7	971.5	53.8%	13068
69	2014 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-2	DUMP TRUCK	1,523.7	2,217.3	68.7%	38092
70	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	920.4	1,600.6	57.5%	23011
71	2014 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,423.8	2,321.0	61.3%	35596
72	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,350.4	1,963.1	68.8%	33760
73	2014 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE-3	DUMP TRUCK	731.3	1,376.1	53.1%	18284
74	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	980.6	1,596.6	61.4%	24516
75	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,029.6	2,570.1	79.0%	50740
76	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	DUMP TRUCK	1,640.5	2,645.4	62.0%	41013

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2014 Freightliner M2 106 Medium Duty	GO-TRANS OPS EAST	DUMP TRUCK	84.9	177.6	47.8%	2123
78	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,157.2	1,668.6	69.4%	28930
79	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,488.5	2,090.3	71.2%	37212
80	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE-1C	DUMP TRUCK	850.6	1,313.0	64.8%	21265
81	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	947.9	1,307.6	72.5%	23698
82	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,259.9	1,718.9	73.3%	31498
83	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,803.2	2,239.7	80.5%	45079
84	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,697.1	2,378.2	71.4%	42427
85	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,492.0	2,166.2	68.9%	37300
86	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	751.4	1,407.9	53.4%	18784
87	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	2,246.9	2,893.2	77.7%	56172
88	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,451.7	1,969.3	73.7%	36292
89	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,373.4	1,899.7	72.3%	34336
90	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	754.3	1,137.7	66.3%	18857
91	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,168.0	1,690.3	69.1%	29199
92	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	840.3	1,489.0	56.4%	21007
93	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	861.3	1,393.2	61.8%	21532
94	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	904.5	1,486.9	60.8%	22612
95	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	912.6	1,488.4	61.3%	22815
96	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,644.9	2,143.8	76.7%	41123
97	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,698.1	2,360.2	71.9%	42453
98	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,365.8	2,005.4	68.1%	34144
99	2013 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	1,203.3	1,739.0	69.2%	30082
100	2016 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	196.2	307.0	63.9%	4906
101	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,025.0	1,593.7	64.3%	25625
102	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,471.4	2,162.9	68.0%	36785
103	2016 Freightliner M2 106 Medium Duty	L&D GAS TECHNICAL TRAINING	DUMP TRUCK	215.2	293.9	73.2%	5379
104	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,918.6	2,574.5	74.5%	47966
105	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	DUMP TRUCK	453.4	792.3	57.2%	11335
106	2019 Peterbilt 337	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	1,307.7	1,725.1	75.8%	32691
107	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,567.6	2,269.1	69.1%	39189
108	2018 Freightliner M2 106 Medium Duty	GAS OPS - REG-SW	DUMP TRUCK	236.7	445.9	53.1%	5917
109	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,685.5	2,244.7	75.1%	42138
110	2017 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,276.5	1,837.8	69.5%	31912
111	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	904.3	1,457.3	62.1%	22609
112	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	746.3	1,205.9	61.9%	18657
113	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,634.1	2,670.9	61.2%	40853
114	2017 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	2,132.6	2,866.7	74.4%	53316
115	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,423.7	1,994.4	71.4%	35593
116	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	2,383.4	2,944.3	81.0%	59586
117	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,124.4	1,736.8	64.7%	28111

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
118	2016 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,363.0	1,890.5	72.1%	34076
119	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	994.1	1,442.4	68.9%	24852
120	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,070.6	2,692.9	76.9%	51765
121	2016 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,072.1	2,600.9	79.7%	51803
122	2018 Freightliner M2 106 Medium Duty	GO-TRANS OPS EAST	DUMP TRUCK	230.7	393.1	58.7%	5767
123	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	2,317.5	2,776.8	83.5%	57939
124	2023 Ford F-750	EO-ELECTRIC UNDERGROUND-A	DUMP TRUCK	447.0	581.2	76.9%	11175
125	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,662.8	2,191.8	75.9%	41570
126	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE-1	DUMP TRUCK	2,781.2	4,734.8	58.7%	69531
127	2023 Ford F-750	EO-ELECTRIC UNDERGROUND-A	DUMP TRUCK	296.7	461.1	64.4%	7419
128	2016 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,363.1	1,933.9	70.5%	34078
129	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,877.6	2,414.1	77.8%	46940
130	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,060.8	1,601.1	66.3%	26519
131	2022 Freightliner M2 106 Medium Duty	GO-TRANS OPS EAST	DUMP TRUCK	204.5	515.9	39.6%	5113
132	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	DUMP TRUCK	1,083.0	1,650.3	65.6%	27075
133	2016 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	997.7	1,464.2	68.1%	24942
134	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	DUMP TRUCK	1,208.2	2,226.3	54.3%	30206

164,093.5

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE	1,043.5	1,609.2	64.8%	26087	Average idle time	66%
2	2019 Freightliner 108SD	CAMPBELL-FUEL HANDLING	DUMP TRUCK	182.4	403.7	45.2%	4560		
3	2022 Freightliner 108SD	GO-TRANS OPS EAST	DUMP TRUCK	135.2	276.0	49.0%	3380	Idle Metric Tons CO2	187.4
4	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE	1,558.0	2,102.0	74.1%	38951		
5	2014 Freightliner M2 106 Medium Duty	GO-GCON-FLINT CONSTRUCTION C	FLATBED/STAKE	1,890.2	2,346.9	80.5%	47255	Gallons idled	19679.9
6	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE	1,523.7	2,113.5	72.1%	38091		
7	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE	1,594.5	2,077.4	76.8%	39862		
8	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE	1,608.2	2,242.4	71.7%	40204		
9	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE	1,031.6	1,649.8	62.5%	25790		
10	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE	987.1	1,508.6	65.4%	24677		
11	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE	2,218.1	2,734.6	81.1%	55451		
12	2014 International WorkStar 7400	CAMPBELL-FUEL HANDLING	DUMP TRUCK	187.6	397.6	47.2%	4690		
13	2020 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	DUMP TRUCK	624.5	985.0	63.4%	15613		
14	2020 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,069.4	1,650.1	64.8%	26734		
15	2020 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	588.0	1,050.0	56.0%	14700		
16	2022 Western Star Trucks 4700	GAS OPS-SOUTH-ZONE-3	DUMP TRUCK	69.5	131.3	52.9%	1738		
17	2022 Western Star Trucks 4700	ELECTRIC UNDERGROUND CONSTRUCTION F	DUMP TRUCK	139.2	196.9	70.7%	3481		
18	2020 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,671.3	2,226.7	75.1%	41783		
19	2021 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	DUMP TRUCK	1,060.6	1,519.2	69.8%	26516		
20	2020 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,003.2	1,606.2	62.5%	25080		
21	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	DUMP TRUCK	1,540.5	2,189.2	70.4%	38512		
22	2018 Freightliner 114SD	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	928.3	1,301.7	71.3%	23206		
23	2020 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	DUMP TRUCK	1,296.5	1,767.1	73.4%	32412		
24	2022 Ford F-750	EO-ELECTRIC UNDERGROUND-C	DUMP TRUCK	28.9	39.1	74.0%	723		
25	2018 Freightliner 114SD	EO-ELECTRIC UNDERGROUND-A	DUMP TRUCK	509.5	873.8	58.3%	12736		
26	2020 International HV607	GAS OPS-NORTH-ZONE-2C	DUMP TRUCK	110.6	176.8	62.5%	2764		
				24,599.9					
2023 to Sept 2025									

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	171.6	346.2	49.6%	4289	Average idle time	55.4%
2	2014 International WorkStar 7400	GAS OPS-CENTRAL-ZONE 1	CRANE	602.5	927.2	65.0%	15062		
3	2017 International WorkStar 7400	EO-SUBS OPS/MAINT/METRO	CRANE	231.9	649.8	35.7%	5797	Idle Metric Tons CO2	48.2
4	2020 Freightliner M2 106 Medium Duty	GO-TRANS OPS EAST	CRANE	112.3	267.4	42.0%	2808		
5	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	239.2	472.5	50.6%	5981	Gallons idled	5062.2
6	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	194.3	312.7	62.1%	4857		
7	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	257.0	587.6	43.7%	6424		
8	2012 International WorkStar 7400	GAS OPS-EAST-ZONE	CRANE	962.7	1,219.9	78.9%	24069		
9	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	106.3	289.8	36.7%	2658		
10	2012 International WorkStar 7400	GAS OPS-NORTH-ZONE	CRANE	717.9	1,079.5	66.5%	17946		
11	2020 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-2	CRANE	839.2	1,393.7	60.2%	20980		
12	2012 International WorkStar 7400	GAS OPS-EAST-ZONE	CRANE	845.6	1,122.3	75.3%	21140		
13	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	CRANE	202.9	418.1	48.5%	5072		
14	2012 International WorkStar 7400	GAS OPS SOUTHWEST REGION	CRANE	197.6	458.4	43.1%	4939		
15	2012 International WorkStar 7400	GAS OPS-EAST-ZONE	CRANE	646.8	882.1	73.3%	16171		
				6,327.7					
	2023 to Sept 2025								

(a)		(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven			
1	2010 Chevrolet Silverado	GO-TRANS OPS EAST	DRIP TRUCK	105.3	168.0	62.7%	2633	Average idle time		63.7%
2	N/A	GO-TRANS OPS EAST	FLATBED/STAKE RACK	2,341.0	2,497.9	93.7%	58525			
3	2015 Ford F-450	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	686.2	1,327.9	51.7%	17156	Idle Metric Tons CO2		1097.8
4	2017 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	113.7	265.9	42.8%	2843			
5	2009 International 7400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	203.0	403.0	50.4%	5075	Gallons idled		115274.13
6	2020 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	356.8	596.6	59.8%	8921			
7	2022 Ford F-550	LVD NE ZONE 1	FLATBED/STAKE RACK	1,613.5	2,993.6	53.9%	40338			
8	2013 International WorkStar 7400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	143.4	337.5	42.5%	3584			
9	2014 Ford F-350	GO-GAS EAST O & M COMPRESSION	FLEET SERVICE TRUCK	368.5	500.4	73.6%	9212			
10	2015 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	678.7	1,527.3	44.4%	16967			
11	2009 International 7400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	100.5	209.6	47.9%	2512			
12	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,250.2	2,248.4	55.6%	31255			
13	2016 Ford F-450	GAS OPS-NORTH-ZONE-2	FLATBED/STAKE RACK	62.6	105.3	59.4%	1565			
14	2019 Ford F-550	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,558.7	1,829.4	85.2%	38969			
15	2024 Ford Transit Van	GAS OPS-CENTRAL-ZONE 1	FLATBED/STAKE RACK	936.1	1,350.7	69.3%	23403			
16	2012 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	2,491.0	2,896.7	86.0%	62274			
17	2014 Ford F-450	GO-GCON-RESOURCE MGMT B	FLATBED/STAKE RACK	351.6	846.7	41.5%	8790			
18	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	2,933.9	3,633.6	80.7%	73348			
19	2019 Ford F-450	FIELD OPERATIONS MDC ZONE 28	FLATBED/STAKE RACK	511.4	1,851.7	27.6%	12784			
20	2020 Ford F-450	GO-TO-PIPELINE & STORAGE-EAST	FLATBED/STAKE RACK	291.0	552.4	52.7%	7274			
21	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	804.9	1,034.2	77.8%	20122			
22	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	267.6	911.9	29.3%	6691			
23	2016 Ford F-450	EO-LVD-NE ZONE 1-W BRANCH-A	FLATBED/STAKE RACK	1,544.0	2,726.8	56.6%	38600			
24	2019 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	425.4	683.6	62.2%	10634			
25	2010 Chevrolet Silverado	GO-TRANS OPS EAST	FLATBED/STAKE RACK	75.3	170.2	44.2%	1882			
26	2014 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	2,925.1	3,477.4	84.1%	73127			
27	2015 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	2,414.4	2,886.5	83.6%	60359			
28	2019 Ford F-450	EO-LVD-NW ZONE 8-TRAVERSE-B	FLATBED/STAKE RACK	2,227.6	3,591.6	62.0%	55689			
29	2010 Chevrolet Silverado	GO-TRANS OPS EAST	FLATBED/STAKE RACK	1,619.2	2,810.2	57.6%	40479			
30	2021 Freightliner M2 106 Medium Duty	GO-TO-PIPELINE & STORAGE-EAST	FLATBED/STAKE RACK	335.8	541.1	62.1%	8394			
31	2012 International DuraStar 4400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	85.4	152.3	56.1%	2136			
32	2014 Ford F-450	GO-TO-PIPELINE & STORAGE-NORTH-MARION	FLATBED/STAKE RACK	140.1	236.2	59.3%	3503			
33	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,215.5	1,746.3	69.6%	30388			
34	2010 Ford F-450	GAS OPS-EAST-ZONE	FLATBED/STAKE RACK	368.4	632.7	58.2%	9211			
35	2022 Ford F-550	LVD NE ZONE 1	FLATBED/STAKE RACK	1,570.7	2,850.2	55.1%	39268			

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2014 Ford F-450	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,303.2	1,605.5	81.2%	32581
37	2015 Ford F-450	GO-GCON-RESOURCE MGMT B	FLATBED/STAKE RACK	530.8	1,296.0	41.0%	13270
38	2010 Ford F-450	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	54.1	92.6	58.5%	1354
39	2014 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,800.9	2,456.0	73.3%	45021
40	2010 Ford F-450	GAS OPS-EAST-ZONE	FLATBED/STAKE RACK	199.6	294.6	67.8%	4990
41	2014 Ford F-450	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	2,376.6	2,851.9	83.3%	59414
42	2015 Ford F-450	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,312.5	2,149.6	61.1%	32813
43	2019 Ford F-450	EO-LVD-NW ZONE 8-TRAVERSE-B	FLATBED/STAKE RACK	4,510.5	6,072.3	74.3%	112763
44	2020 Ford F-450	FIELD OPERATIONS NORTHWEST ZONE 1	FLATBED/STAKE RACK	93.8	329.2	28.5%	2345
45	2012 International WorkStar 7400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	392.9	603.7	65.1%	9821
46	2014 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,130.6	1,531.4	73.8%	28265
47	2016 Ford F-550	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,299.2	1,621.4	80.1%	32479
48	2012 International WorkStar 7400	GO-TRANS OPS EAST	FLATBED/STAKE RACK	96.9	171.5	56.5%	2422
49	2014 Ford F-450	EO-SUBSTATION CONSTRUCTION/EERC	FLATBED/STAKE RACK	367.9	1,404.1	26.2%	9198
50	2015 Ford F-450	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	676.9	1,643.9	41.2%	16924
51	2016 Ford F-550	GASOPS - REG-CENTRAL	FLATBED/STAKE RACK	1,748.7	2,702.7	64.7%	43717
52	2019 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	1,046.5	1,679.9	62.3%	26161
53	2012 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	70.5	200.0	35.3%	1763
54	2015 Ford F-450	FIELD OPERATIONS NORTHWEST ZONE 1	FLATBED/STAKE RACK	261.9	700.2	37.4%	6547
55	2016 Ford F-550	GAS OPS SOUTHWEST REGION	FLATBED/STAKE RACK	1,477.2	2,195.8	67.3%	36931
56	2019 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	548.7	871.7	62.9%	13717
57	2012 Ford F-450	GAS OPS-SOUTHEAST A1	FLATBED/STAKE RACK	2,487.8	3,170.6	78.5%	62194
58	2015 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	242.7	507.9	47.8%	6068
59	2016 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,390.0	1,765.6	78.7%	34751
60	2012 Ford F-450	GO-TRANS OPS EAST	FLATBED/STAKE RACK	78.4	172.6	45.4%	1961
61	2016 Ford F-550	GAS OPS-NE	FLATBED/STAKE RACK	2,406.8	3,377.4	71.3%	60170
62	2009 Ford F-450	GAS OPS-EAST-ZONE	FLATBED/STAKE RACK	236.2	326.2	72.4%	5904
63	2012 Ford F-450	GO-TO-PIPELINE & STORAGE-WEST	FLATBED/STAKE RACK	95.9	158.4	60.6%	2398
64	2015 Ford F-450	FIELD OPERATIONS MDC ZONE 27	FLATBED/STAKE RACK	327.3	1,040.4	31.5%	8183
65	2016 Ford F-550	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	3,101.5	3,948.9	78.5%	77538
66	2012 Ford F-450	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	2,477.1	2,931.6	84.5%	61927
67	2016 Ford F-550	GAS OPS NE ZONE 2-SPAN 13	FLATBED/STAKE RACK	1,208.1	1,740.1	69.4%	30203
68	2012 Ford F-450	GO-TO-M&R-EAST	FLATBED/STAKE RACK	256.8	475.6	54.0%	6420
69	2015 Ford F-750	GO-TRANS OPS EAST	FLATBED/STAKE RACK	93.4	133.6	69.9%	2336
70	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,524.5	1,944.6	78.4%	38111
71	1991 International 4700	EO-SUBSTATION CONSTRUCTION/EERC	FLATBED/STAKE RACK	88.7	230.3	38.5%	2218
72	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	1,805.8	2,614.0	69.1%	45144
73	2023 Ram 5500 Chassis	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	534.2	940.3	56.8%	13355
74	2024 Ram 5500 Chassis	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	1,571.4	2,104.2	74.7%	39286
75	2017 Ford F-550	GAS OPS NE ZONE 2-SPAN 13	FLATBED/STAKE RACK	1,786.2	2,938.0	60.8%	44654
76	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	2,279.2	3,116.9	73.1%	56979

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	32.1	60.2	53.3%	803
78	2017 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,287.5	1,554.0	82.9%	32187
79	2017 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,711.1	2,076.0	82.4%	42777
80	2020 Ford F-550	GAS OPS - REG-SW	FLATBED/STAKE RACK	1,027.3	1,965.6	52.3%	25682
81	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,492.5	1,834.8	81.3%	37313
82	2017 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	2,148.7	2,604.8	82.5%	53718
83	2019 Ford F-550	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	229.1	503.4	45.5%	5728
84	2020 Ford F-550	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	2,889.8	3,846.7	75.1%	72244
85	2023 Ram 5500 Chassis	GAS OPS-CENTRAL-ZONE 1	FLATBED/STAKE RACK	433.4	640.0	67.7%	10835
86	2017 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,596.4	2,026.6	78.8%	39909
87	2020 Ford F-550	GAS OPS - REG-SW	FLATBED/STAKE RACK	1,794.6	3,468.0	51.7%	44864
88	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	868.4	1,504.4	57.7%	21711
89	2017 Ford F-550	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	3,172.0	3,726.8	85.1%	79300
90	2018 Ford F-550	GAS OPS - REG-SW	FLATBED/STAKE RACK	1,597.9	2,725.7	58.6%	39949
91	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	298.8	373.4	80.0%	7471
92	2017 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	3,546.5	3,981.5	89.1%	88662
93	2018 Ford F-550	GAS OPS-NE	FLATBED/STAKE RACK	1,426.6	2,559.7	55.7%	35666
94	2018 Ford F-550	GAS OPS-NE	FLATBED/STAKE RACK	1,503.2	2,879.6	52.2%	37581
95	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	806.8	1,140.5	70.7%	20170
96	2017 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,517.3	1,942.3	78.1%	37933
97	2016 Ford F-550	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,706.7	2,064.4	82.7%	42667
98	2017 Ford F-550	GAS OPS-SOUTHEAST C6	FLATBED/STAKE RACK	1,733.8	2,499.9	69.4%	43344
99	2020 Ford F-550	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	1,823.0	2,757.4	66.1%	45576
100	2016 Ford F-550	GAS OPS NE ZONE 2-SPAN 13	FLATBED/STAKE RACK	2,950.4	4,186.6	70.5%	73761
101	2017 Ford F-550	GO-TRANS OPS EAST	FLATBED/STAKE RACK	1,000.8	1,645.2	60.8%	25021
102	2020 Ford F-550	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	2,720.4	3,872.8	70.2%	68010
103	2022 Chevrolet Silverado 4500HD / Silverado 5500HD	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	1,206.9	1,623.5	74.3%	30172
104	2022 Ford F-550	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	481.4	669.1	71.9%	12034
105	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	2,314.2	2,672.9	86.6%	57856
106	2017 Ford F-550	GO-TRANS OPS EAST	FLATBED/STAKE RACK	1,771.1	2,741.4	64.6%	44277
107	2022 Chevrolet Silverado 4500HD / Silverado 5500HD	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	1,077.8	1,462.8	73.7%	26945
108	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,938.1	2,328.8	83.2%	48453
109	2017 Ford F-550	GO-TRANS OPS EAST	FLATBED/STAKE RACK	640.3	1,045.8	61.2%	16008
110	2024 Ram 5500 Chassis	GAS OPS SOUTHWEST REGION	FLATBED/STAKE RACK	382.7	907.9	42.2%	9568
111	2016 Ford F-550	GAS OPS NE ZONE 2-SPAN 13	FLATBED/STAKE RACK	2,922.4	3,880.0	75.3%	73059
112	2016 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	2,240.0	2,691.2	83.2%	56000
113	2023 Ram 5500 Chassis	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	761.1	1,317.6	57.8%	19028
114	2024 Ram 5500 Chassis	GAS OPS SOUTHWEST REGION	FLATBED/STAKE RACK	793.7	1,552.8	51.1%	19843
115	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	978.6	1,540.5	63.5%	24465
116	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	600.5	1,195.6	50.2%	15013
117	2016 Ford F-550	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,543.9	1,893.7	81.5%	38598
118	2016 Ford F-550	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,074.1	1,629.6	65.9%	26851
119	2016 Ford F-550	GO-TO-PIPELINE & STORAGE-NORTH-SAGINAW	FLATBED/STAKE RACK	861.5	1,708.2	50.4%	21537
120	2024 Ram 5500 Chassis	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	1,284.9	1,837.7	69.9%	32122
121	2016 Ford F-550	GAS OPS SOUTHWEST	FLATBED/STAKE RACK	1,496.1	2,115.5	70.7%	37403
2023 to Sept 2025				144,092.7			

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2020 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	464.7	1,092.5	42.5%	11618	Average idle time
2	2013 Ford F-450	EO-SUBSTATION MAINT-SAGINAW	ELECTRIC SERVICE TRUCK	986.8	1,687.2	58.5%	24670	
3	2016 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	781.0	1,183.9	66.0%	19524	Idle Metric Tons CO2
4	2011 Ford F-350	GAS OPS-NORTH-ZONE-2	ELECTRIC SERVICE TRUCK	3,437.1	4,174.1	82.3%	85928	
5	2015 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,451.0	2,750.8	52.8%	36276	Gallons idled
6	2016 Ford F-450	ELECTRIC UNDERGROUND CONSTRUCTION F	ELECTRIC SERVICE TRUCK	1,002.6	1,415.9	70.8%	25065	52719.3
7	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,391.3	3,485.2	68.6%	59783	
8	2007 GMC Sierra	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	513.0	940.5	54.5%	12825	
9	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,582.1	2,457.1	64.4%	39554	
10	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	492.9	1,456.0	33.9%	12323	
11	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	936.4	2,320.9	40.3%	23411	
12	2012 Ford F-450	L&D ELECTRIC TECHNICAL TRAINING	ELECTRIC SERVICE TRUCK	326.7	519.5	62.9%	8167	
13	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	574.9	1,872.4	30.7%	14373	
14	2011 Ford F-350	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	828.3	1,303.9	63.5%	20707	
15	2012 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,622.0	2,369.4	68.5%	40550	
16	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,648.2	2,214.4	74.4%	41204	
17	2012 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,784.0	2,784.4	64.1%	44601	
18	2012 Ford F-450	EO-SUBSTATION MAINT H-GRAND RAPIDS	ELECTRIC SERVICE TRUCK	588.5	1,226.5	48.0%	14711	
19	2015 Ford F-450	EO-SUBSTATION MAINT-SAGINAW	ELECTRIC SERVICE TRUCK	2,311.2	3,264.5	70.8%	57781	
20	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,420.2	2,419.1	58.7%	35505	
21	2011 Ford F-350	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	552.3	902.0	61.2%	13807	
22	2012 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	822.1	1,463.2	56.2%	20552	
23	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,223.1	2,084.2	58.7%	30577	
24	2012 Ford F-450	EO-ELECTRIC UNDERGROUND-A	ELECTRIC SERVICE TRUCK	1,661.3	2,309.4	71.9%	41532	
25	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,071.0	3,107.6	66.6%	51776	
26	2022 Ford F-450	EO-SUBSTATION MAINT E-BAY CITY	ELECTRIC SERVICE TRUCK	1,342.3	2,729.3	49.2%	33558	
27	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,513.6	2,240.8	67.5%	37839	
28	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,578.8	2,803.8	56.3%	39470	
29	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,032.8	1,758.9	58.7%	25820	
30	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	731.8	1,995.2	36.7%	18295	
31	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,429.7	3,376.3	72.0%	60743	
32	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,042.2	3,107.7	65.7%	51056	
33	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	450.9	768.2	58.7%	11272	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
34	2022 Ford F-450	EO-SUBSTATION MAINT E-BAY CITY	ELECTRIC SERVICE TRUCK	1,081.3	2,013.4	53.7%	27034
35	2019 Ford F-450	SUBS MAINT/METRO-EAST	ELECTRIC SERVICE TRUCK	2,251.1	2,950.8	76.3%	56279
36	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	896.5	2,439.8	36.7%	22413
37	2019 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,030.3	1,810.0	56.9%	25758
38	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,101.6	2,541.8	43.3%	27539
39	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	836.6	1,937.2	43.2%	20914
40	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,838.6	4,030.0	45.6%	45964
41	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,069.5	3,024.4	68.4%	51737
42	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,543.3	2,125.6	72.6%	38584
43	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	554.6	1,418.0	39.1%	13865
44	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,383.1	2,241.3	61.7%	34577
45	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,154.3	3,126.7	68.9%	53857
46	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,229.7	2,124.4	57.9%	30743
47	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,178.7	1,803.4	65.4%	29467
48	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	1,378.6	2,275.7	60.6%	34465
49	2022 Ford F-450	EO-SUBS OPS/MAINT/METRO	ELECTRIC SERVICE TRUCK	2,776.4	3,863.3	71.9%	69409

65,899.2

2023 to Sept 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2021 International MV607	EO-CFS WEST B	STREETLIGHT TRUCK	1,563.2	3,741.5	41.8%	39079	Average idle time	46.1%
2	2012 International DuraStar 4300	EO-CFS EAST D	STREETLIGHT TRUCK	1,920.6	3,218.3	59.7%	48014		
3	2012 International DuraStar 4300	EO-CFS WEST C	STREETLIGHT TRUCK	222.2	740.8	30.0%	5554	Idle Metric Tons CO2	52.3
4	2012 International DuraStar 4300	EO-CFS WEST C	STREETLIGHT TRUCK	656.1	2,374.4	27.6%	16402		
5	2012 International DuraStar 4300	EO-CFS EAST D	STREETLIGHT TRUCK	190.2	439.9	43.2%	4756	Gallons idled	5488.2
6	2012 International DuraStar 4300	EO-CFS EAST D	STREETLIGHT TRUCK	2,013.6	3,413.8	59.0%	50341		
7	2012 International DuraStar 4300	EO-CFS EAST C	STREETLIGHT TRUCK	294.4	478.3	61.6%	7360		
				6,860.3					
	2023 to Sept 2025								

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,386.5	3,982.6	85.0%	84663	Average idle time
2	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	4,185.2	4,689.3	89.3%	104631	
3	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	1,485.8	1,746.0	85.1%	37146	Idle Metric Tons CO2
4	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,288.2	3,675.5	89.5%	82206	
5	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,980.5	3,444.6	86.5%	74512	Gallons idled
6	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,103.9	2,483.0	84.7%	52598	
7	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	4,129.1	4,580.7	90.1%	103227	
8	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,636.8	4,071.5	89.3%	90919	
9	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,504.3	3,875.5	90.4%	87609	
10	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,116.5	1,299.7	85.9%	27912	
11	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,407.5	2,778.3	86.7%	60186	
12	2014 Ford E-450 Super Duty	GO-GAS OPS-SOUTHWEST A1	VAN	1,599.8	2,133.7	75.0%	39996	
13	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,077.4	3,421.0	90.0%	76936	
14	2014 Ford E-450 Super Duty	GO-GCON-RESOURCE MGMT B I	VAN	4,255.1	4,710.8	90.3%	106377	
15	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,929.9	3,322.9	88.2%	73247	
16	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,112.4	3,496.7	89.0%	77809	
17	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,619.4	4,072.3	88.9%	90485	
18	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,102.5	1,270.2	86.8%	27563	
19	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	4,068.3	4,491.2	90.6%	101708	
20	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,135.4	3,534.1	88.7%	78384	
21	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,014.3	1,179.0	86.0%	25358	
22	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	4,251.2	4,705.5	90.3%	106279	
23	2014 Ford E-450 Super Duty	GO-GCON-RESOURCE MGMT B I	VAN	3,170.2	3,520.2	90.1%	79254	
24	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,850.5	4,267.6	90.2%	96263	
25	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,500.9	3,958.5	88.4%	87522	
26	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,032.5	3,369.9	90.0%	75812	
27	2014 Ford E-450 Super Duty	GO-GCON-MACOMB CONSTRUCTION E	VAN	3,751.2	4,073.8	92.1%	93779	
28	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,884.7	4,406.8	88.2%	97117	
29	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,769.9	3,190.7	86.8%	69246	
30	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	1,860.5	2,236.5	83.2%	46513	
31	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,504.4	3,891.8	90.0%	87609	
32	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,487.6	3,958.7	88.1%	87189	
33	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,315.2	2,744.5	84.4%	57880	
34	2014 Ford E-450 Super Duty	GAS OPS-CENTRAL-ZONE 1	VAN	405.2	499.2	81.2%	10129	
35	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,378.6	2,811.4	84.6%	59465	
36	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,228.8	2,512.4	88.7%	55720	
37	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,877.2	4,360.2	88.9%	96931	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
38	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,051.0	2,369.9	86.5%	51276
39	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	1,968.0	2,261.1	87.0%	49201
40	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,669.7	3,081.3	86.6%	66742
41	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,049.8	2,301.8	89.1%	51245
42	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,352.7	3,754.7	89.3%	83818
43	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,616.1	4,126.0	87.6%	90403
44	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,970.3	3,496.0	85.0%	74259
45	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	4,028.7	4,466.7	90.2%	100716
46	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	4,253.1	4,730.7	89.9%	106327
47	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,766.3	4,304.2	87.5%	94158
48	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	4,314.0	4,730.2	91.2%	107850
49	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,017.7	3,388.5	89.1%	75442
50	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,408.3	1,613.3	87.3%	35208
51	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,321.4	3,844.7	86.4%	83034
52	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,193.9	3,827.7	83.4%	79847
53	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,470.8	1,677.9	87.7%	36769
54	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,127.9	2,455.2	86.7%	53199
55	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	1,152.2	1,335.7	86.3%	28806
56	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,413.4	2,865.1	84.2%	60335
57	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,885.4	4,443.8	87.4%	97135
58	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,084.0	3,473.3	88.8%	77101
59	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,968.6	3,319.1	89.4%	74216
60	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,375.5	3,959.2	85.3%	84389
61	2014 Ford E-450 Super Duty	GO-GCON-RESOURCE MGMT B I	VAN	2,937.2	3,348.8	87.7%	73431
62	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,938.7	3,348.3	87.8%	73469
63	2014 Ford E-450 Super Duty	GO-GCON-RESOURCE MGMT B I	VAN	2,450.1	2,773.2	88.3%	61252
64	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	2,512.2	2,882.0	87.2%	62805
65	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	74.4	285.3	26.1%	1861
66	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,407.2	2,717.1	88.6%	60181
67	2014 Ford E-450 Super Duty	GAS OPS SUPPLY & CONSTRUCTION	VAN	3,096.1	3,417.7	90.6%	77402
68	2014 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	2,612.0	3,003.5	87.0%	65300
69	2015 Ford E-450 Super Duty	GO-GAS CONSTRUCTION	VAN	3,561.1	4,001.9	89.0%	89027

197,455.3

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2020 International HV607	LVD SOUTH ZONE 4	DIGGER DERRICK	1,220.3	2,995.5	40.7%	30507	Average idle time
2	2011 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	1,602.2	2,568.7	62.4%	40055	
3	2012 International WorkStar 7400	EO-LVD-GR ZONE-6-EAST KENT-B	DIGGER DERRICK	266.5	579.6	46.0%	6663	Idle Metric Tons CO2
4	2013 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	1,023.8	2,180.2	47.0%	25595	
5	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	1,420.9	2,630.1	54.0%	35523	Gallons idled
6	2015 International WorkStar 7400	LVD EAST ZONE 3	DIGGER DERRICK	823.4	2,089.8	39.4%	20584	
7	2006 International 7400	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	14.9	28.8	51.9%	373	
8	2007 International 7400	LVD SOUTH ZONE 4	DIGGER DERRICK	57.1	122.0	46.8%	1429	
9	2010 International 7400	EO-LVD-NE ZONE 1-W BRANCH-B	DIGGER DERRICK	1,066.1	2,447.2	43.6%	26653	
10	2020 International HV607	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	DIGGER DERRICK	1,491.1	3,785.3	39.4%	37276	
11	2021 International HV607	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	DIGGER DERRICK	1,504.9	3,774.7	39.9%	37622	
12	2012 International WorkStar 7400	EO-LVD-GR ZONE 6-WEST KENT-A	DIGGER DERRICK	186.8	482.8	38.7%	4670	
13	2022 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	2,618.4	4,354.0	60.1%	65459	
14	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	DIGGER DERRICK	694.7	1,789.1	38.8%	17368	
15	2015 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	DIGGER DERRICK	1,048.5	2,603.2	40.3%	26212	
16	2020 International HV607	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	DIGGER DERRICK	1,104.8	3,111.9	35.5%	27620	
17	2021 International HV607	EO-LVD-NW ZONE 8-CADILLAC-A	DIGGER DERRICK	1,366.1	3,695.5	37.0%	34153	
18	2012 International WorkStar 7400	EO-LVD-GR ZONE-6-EAST KENT-B	DIGGER DERRICK	217.3	768.5	28.3%	5434	
19	2022 International HV607	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	771.3	1,173.8	65.7%	19282	
20	2014 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	DIGGER DERRICK	965.2	2,404.2	40.1%	24129	
21	N/A	EO-ELECTRIC UNDERGROUND-B	DIGGER DERRICK	203.6	361.8	56.3%	5089	
22	2020 International HV607	EO-LVD-LAKESHORE ZONE 7-FREMONT	DIGGER DERRICK	735.4	2,069.8	35.5%	18386	
23	2021 International HV607	EO-LVD-NE ZONE 1-W BRANCH-A	DIGGER DERRICK	951.3	2,685.5	35.4%	23783	
24	2022 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	1,284.0	2,554.3	50.3%	32099	
25	2025 International HV607	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	189.3	521.8	36.3%	4732	
26	2020 International HV607	EO-LVD-WEST-ZONE 3-G RAPIDS-B	DIGGER DERRICK	1,342.9	2,399.4	56.0%	33572	
27	2021 International HV607	EO-LVD-NE ZONE 1-MIDLAND-A	DIGGER DERRICK	2,149.3	3,360.3	64.0%	53732	
28	2022 International HV507	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	2,716.6	4,071.3	66.7%	67916	
29	2022 International HV607	LVD SOUTH ZONE 4	DIGGER DERRICK	1,577.1	2,508.9	62.9%	39428	
30	2014 International WorkStar 7400	EO-LVD-SW ZONE 5-HASTINGS-A	DIGGER DERRICK	789.8	1,408.1	56.1%	19746	
31	2020 International HV607	EO-LVD-NW ZONE 8-BOYNE-A	DIGGER DERRICK	1,124.8	2,906.6	38.7%	28119	
32	2021 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	DIGGER DERRICK	701.4	2,142.2	32.7%	17536	
33	2022 International HV607	LVD NE ZONE 1	DIGGER DERRICK	1,575.7	3,242.9	48.6%	39392	
34	2014 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	703.9	2,037.2	34.5%	17596	
35	2025 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	310.5	857.6	36.2%	7763	
36	2020 International HV607	EO-LVD-SE ZONE 4-COLDWATER-B	DIGGER DERRICK	1,203.4	2,992.6	40.2%	30086	
37	2021 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	DIGGER DERRICK	723.6	2,422.7	29.9%	18089	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
38	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	1,380.5	2,611.6	52.9%	34513
39	2025 International HV607	EO-LVD-NE ZONE 1-W BRANCH-B	DIGGER DERRICK	57.2	172.1	33.2%	1429
40	2007 International 7400	L&D LEARNING SOLUTIONS SUPPORT	DIGGER DERRICK	48.4	90.9	53.2%	1210
41	2020 International HV607	LVD SOUTH ZONE 4	DIGGER DERRICK	1,420.0	3,215.4	44.2%	35501
42	2021 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	DIGGER DERRICK	764.7	2,371.2	32.3%	19118
43	2012 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	1,244.4	2,149.9	57.9%	31111
44	2014 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	DIGGER DERRICK	1,248.7	2,681.4	46.6%	31218
45	2017 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	DIGGER DERRICK	963.2	2,369.5	40.7%	24081
46	2020 International HV607	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	4,082.6	5,364.3	76.1%	102065
47	2021 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	1,469.2	3,955.7	37.1%	36729
48	2012 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	1,032.4	2,318.0	44.5%	25810
49	2007 International 7400	EO-LVD-SE ZONE 4-COLDWATER-A	DIGGER DERRICK	889.7	2,164.2	41.1%	22242
50	2010 International 7400	EO-LVD-CENTRAL ZONE 2-ALMA-B	DIGGER DERRICK	943.0	1,987.3	47.4%	23574
51	2021 International HV607	EO-LVD-NE ZONE 1-W BRANCH-B	DIGGER DERRICK	616.6	1,906.8	32.3%	15416
52	2012 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	DIGGER DERRICK	710.4	1,794.9	39.6%	17761
53	2025 International HV607	EO-LVD-NE ZONE 1-MIDLAND-A	DIGGER DERRICK	88.3	223.8	39.4%	2206
54	2006 International 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	341.9	554.5	61.7%	8548
55	2010 International 7400	EO-LVD-NE ZONE 1-BAY CITY-A	DIGGER DERRICK	416.5	1,247.2	33.4%	10413
56	2020 International HV607	EO-LVD-NE ZONE 1-W BRANCH-B	DIGGER DERRICK	891.0	2,757.9	32.3%	22275
57	2021 International HV607	EO-LVD-WEST-ZONE 3-G RAPIDS-B	DIGGER DERRICK	518.3	2,031.0	25.5%	12956
58	2012 International WorkStar 7400	EO-LVD-NE ZONE 1-BAY CITY-A	DIGGER DERRICK	650.5	1,347.4	48.3%	16261
59	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	989.4	2,343.0	42.2%	24735
60	2005 International 7400	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	425.4	961.8	44.2%	10635
61	2006 International 7400	EO-LVD-NE ZONE 1-W BRANCH-A	DIGGER DERRICK	169.3	369.1	45.9%	4233
62	2007 International 7400	EO-LVD-NE ZONE 1-MIDLAND-A	DIGGER DERRICK	431.5	710.0	60.8%	10788
63	2010 International 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	827.1	1,657.6	49.9%	20676
64	2020 International HV607	EO-LVD-CENTRAL ZONE 2-CLARE-A	DIGGER DERRICK	843.8	2,693.6	31.3%	21096
65	2021 International HV607	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	1,685.2	2,938.9	57.3%	42131
66	2022 International HV607	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	1,929.6	3,311.1	58.3%	48240
67	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	1,930.7	3,249.4	59.4%	48268
68	2015 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-FREMONT	DIGGER DERRICK	986.5	1,681.8	58.7%	24662
69	2020 Freightliner M2 106 Medium Di	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	885.3	2,372.8	37.3%	22133
70	2021 International HV607	EO-LVD-NW ZONE 8-TRAVERSE-B	DIGGER DERRICK	1,546.0	3,146.3	49.1%	38649
71	2015 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	753.2	1,505.8	50.0%	18829
72	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	DIGGER DERRICK	986.4	2,409.3	40.9%	24660
73	2020 Freightliner M2 106 Medium Di	EO-LVD-CENTRAL ZONE 2-CLARE-A	DIGGER DERRICK	859.3	2,840.3	30.3%	21483
74	2021 International HV607	EO-LVD-NE ZONE 1-BAY CITY-A	DIGGER DERRICK	1,287.4	2,305.4	55.8%	32184
75	2013 International WorkStar 7400	EO-LVD-NW ZONE 8-BOYNE-A	DIGGER DERRICK	465.2	1,119.9	41.5%	11629
76	2015 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	DIGGER DERRICK	582.6	1,545.8	37.7%	14566
77	2017 International WorkStar 7400	LVD EAST ZONE 3	DIGGER DERRICK	715.8	1,879.0	38.1%	17896
78	2020 Freightliner M2 106 Medium Di	EO-LVD-NE ZONE 1-TAWAS-A	DIGGER DERRICK	893.1	2,910.4	30.7%	22327
79	2021 International HV607	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	DIGGER DERRICK	913.1	2,847.3	32.1%	22828
80	2015 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	1,102.4	2,232.5	49.4%	27561

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
81	2010 International 7400	EO-LVD-EAST ZONE 3-LANSING-C	DIGGER DERRICK	1,578.9	3,037.9	52.0%	39473
82	2020 Freightliner M2 106 Medium Di	EO-LVD-NE ZONE 1-W BRANCH-B	DIGGER DERRICK	1,009.8	3,100.0	32.6%	25244
83	2021 International HV507	EO-LVD-CENTRAL ZONE 2-CLARE-A	DIGGER DERRICK	782.5	2,425.9	32.3%	19563
84	2013 International WorkStar 7400	EO-LVD-NE ZONE 1-MIDLAND-A	DIGGER DERRICK	1,192.1	1,923.8	62.0%	29802
85	2015 International WorkStar 7400	LVD EAST ZONE 3	DIGGER DERRICK	914.4	2,302.8	39.7%	22861
86	2010 International 7400	EO-LVD-SE ZONE 4-B CREEK-B	DIGGER DERRICK	531.8	1,187.9	44.8%	13296
87	2020 International HV607	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	609.5	1,708.0	35.7%	15239
88	2021 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	872.2	1,799.8	48.5%	21805
89	2013 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	765.8	1,607.5	47.6%	19146
90	2014 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	1,027.5	2,126.4	48.3%	25688
91	2015 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	DIGGER DERRICK	1,772.9	3,033.0	58.5%	44323
92	2010 International 7400	L&D LEARNING SOLUTIONS SUPPORT	DIGGER DERRICK	143.6	256.8	55.9%	3589
93	2020 International HV607	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	1,375.9	3,320.0	41.4%	34397
94	2021 International HV507	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	DIGGER DERRICK	1,863.3	4,586.3	40.6%	46581
95	2015 International WorkStar 7400	LVD EAST ZONE 3	DIGGER DERRICK	289.6	766.9	37.8%	7241
96	2020 International HV607	LVD EAST ZONE 3	DIGGER DERRICK	830.6	2,189.1	37.9%	20764
97	2021 International HV507	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	DIGGER DERRICK	1,771.4	4,274.8	41.4%	44285
98	2022 International HV607	LVD SOUTH ZONE 4	DIGGER DERRICK	2,440.2	4,738.2	51.5%	61005
99	2013 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-CLARE-B	DIGGER DERRICK	743.8	1,962.9	37.9%	18594
100	2014 International WorkStar 7400	EO-LVD-GR ZONE-6-EAST KENT-B	DIGGER DERRICK	169.8	409.2	41.5%	4245
101	2015 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	1,160.5	2,518.5	46.1%	29014
102	2021 International HV507	EO-LVD-CENTRAL ZONE 2-ALMA-B	DIGGER DERRICK	809.2	2,425.5	33.4%	20231
103	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	1,751.6	2,874.2	60.9%	43790
104	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING B	DIGGER DERRICK	975.2	2,101.3	46.4%	24381
105	2015 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	DIGGER DERRICK	1,282.3	2,327.2	55.1%	32057
106	2021 International HV507	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	979.2	2,866.4	34.2%	24479
107	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	1,228.1	2,250.8	54.6%	30702
108	2015 International WorkStar 7400	EO-LVD-NW ZONE 8-CADILLAC-A	DIGGER DERRICK	1,210.1	2,047.7	59.1%	30254
109	2019 Freightliner M2 106 Medium Di	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	2,098.4	4,452.3	47.1%	52459
110	2021 International HV507	LVD EAST ZONE 3	DIGGER DERRICK	935.5	2,530.1	37.0%	23386
111	2022 International HV607	EO-LVD-GR ZONE 6-WEST KENT-A	DIGGER DERRICK	290.6	876.3	33.2%	7265
112	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	1,339.8	2,319.9	57.8%	33495
113	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	1,107.9	2,268.0	48.8%	27697
114	2019 Freightliner M2 106 Medium Di	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	DIGGER DERRICK	1,193.2	3,206.8	37.2%	29830
115	2014 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	DIGGER DERRICK	1,166.6	2,536.3	46.0%	29166
116	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	354.6	749.8	47.3%	8864
117	2019 Freightliner M2 106 Medium Di	LVD SOUTH ZONE 4	DIGGER DERRICK	1,155.9	2,898.6	39.9%	28897
118	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	1,243.2	2,171.4	57.3%	31080
119	2019 Freightliner M2 106 Medium Di	EO-LVD-CENTRAL ZONE 2-ALMA-B	DIGGER DERRICK	661.8	2,503.0	26.4%	16544
120	2022 International HV607	LVD EAST ZONE 3	DIGGER DERRICK	2,379.4	3,981.2	59.8%	59485
121	2015 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	DIGGER DERRICK	585.9	1,487.3	39.4%	14647
122	2019 Freightliner M2 106 Medium Di	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	1,089.1	3,176.5	34.3%	27228
123	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	355.2	907.6	39.1%	8880

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
124	2019 Freightliner M2 106 Medium Di	EO-LVD-EAST ZONE 3-OWOSSO-A	DIGGER DERRICK	748.5	2,559.5	29.2%	18713
125	2015 International WorkStar 7400	LVD SOUTH ZONE 4	DIGGER DERRICK	392.1	838.3	46.8%	9803
126	2019 Freightliner M2 106 Medium Di	EO-LVD-NE ZONE 1-W BRANCH-A	DIGGER DERRICK	675.3	1,987.9	34.0%	16884
127	2019 Freightliner M2 106 Medium Di	LVD EAST ZONE 3	DIGGER DERRICK	496.9	1,433.7	34.7%	12424
128	2022 International HV607	LVD SOUTH ZONE 4	DIGGER DERRICK	673.7	1,144.8	58.9%	16843
129	2025 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	DIGGER DERRICK	118.1	293.0	40.3%	2953
130	2022 International HV507	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	593.3	947.8	62.6%	14833
131	2025 International HV607	EO-LVD-CENTRAL ZONE 2-ALMA-B	DIGGER DERRICK	143.8	444.4	32.4%	3594
132	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	2,493.9	3,641.2	68.5%	62347
133	2025 International HV607	EO-ELECTRIC UNDERGROUND-B	DIGGER DERRICK	122.5	214.5	57.1%	3063
134	2025 International HV607	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	153.4	404.9	37.9%	3834
135	2022 International HV607	EO-LVD-NW ZONE 8-CADILLAC-A	DIGGER DERRICK	1,270.9	3,450.1	36.8%	31772
136	2025 International HV607	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	187.0	338.2	55.3%	4676
137	2025 International HV607	EO-LVD-SE ZONE 4-ADRIAN-B	DIGGER DERRICK	141.4	363.5	38.9%	3534
138	2022 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	2,034.6	3,442.4	59.1%	50866
139	2022 International HV607	EO-LVD-NW ZONE 8-TRAVERSE-A	DIGGER DERRICK	1,913.7	3,477.8	55.0%	47842
140	2022 International HV607	EO-LVD-NW ZONE 8-BOYNE-A	DIGGER DERRICK	1,920.3	3,861.6	49.7%	48008
141	2022 International HV607	EO-LVD-NW ZONE 8-BOYNE-A	DIGGER DERRICK	1,473.6	3,224.5	45.7%	36841
142	2022 International HV607	EO-LVD-SW ZONE 5-HASTINGS-A	DIGGER DERRICK	2,256.7	3,669.7	61.5%	56417
143	2022 International HV607	EO-LVD-GR ZONE 6-WEST KENT-A	DIGGER DERRICK	417.4	1,114.0	37.5%	10436
144	2025 Freightliner M2 106 Medium Di	EO-LVD-SE ZONE 4-COLDWATER-B	DIGGER DERRICK	315.8	451.2	70.0%	7894
145	2025 International MV607	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	908.3	1,252.8	72.5%	22708
146	2025 Freightliner M2 106 Medium Di	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	DIGGER DERRICK	740.9	2,838.6	26.1%	18523
147	2023 Freightliner M2 106 Medium Di	EO-LVD-SW ZONE 5-HASTINGS-A	DIGGER DERRICK	242.9	409.5	59.3%	6071
148	2025 International MV607	EO-LVD-EAST ZONE 3-FLINT	DIGGER DERRICK	783.5	1,072.7	73.0%	19586
149	2025 Freightliner M2 106 Medium Di	EO-LVD-WEST-ZONE 4-N SHORES-B	DIGGER DERRICK	968.4	2,401.4	40.3%	24210
150	2025 Freightliner M2 106 Medium Di	EO-LVD-EAST-NE ZONE-MIDLAND	DIGGER DERRICK	1,083.2	1,670.5	64.8%	27081
151	2023 Freightliner M2 106 Medium Di	EO-LVD-SW ZONE 5-HAMILTON-B	DIGGER DERRICK	254.3	445.5	57.1%	6359
152	2025 Freightliner M2 106 Medium Di	EO-LVD-EAST ZONE 3-LANSING-A	DIGGER DERRICK	351.7	593.2	59.3%	8792
153	2024 Freightliner M2 106 Medium Di	EO-LVD-NW ZONE 8-TRAVERSE-A	DIGGER DERRICK	76.2	110.8	68.8%	1905
154	2023 Freightliner M2 106 Medium Di	EO-LVD-NW ZONE 8-TRAVERSE-A	DIGGER DERRICK	127.4	269.0	47.4%	3186
155	2025 Freightliner M2 106 Medium Di	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	DIGGER DERRICK	506.4	761.1	66.5%	12660
156	2023 Freightliner M2 106 Medium Di	EO-LVD-WEST-ZONE 3-G RAPIDS-B	DIGGER DERRICK	89.9	168.2	53.4%	2247
157	2023 Freightliner M2 106 Medium Di	EO-LVD-EAST-SE ZONE-JACKSON-A	DIGGER DERRICK	670.3	1,180.1	56.8%	16757
158	2025 Freightliner M2 106 Medium Di	EO-LVD-LAKESHORE ZONE 7-MUSKOGON-B	DIGGER DERRICK	642.6	987.4	65.1%	16064
159	2021 Freightliner M2 106 Medium Di	EO-LVD-SE ZONE 4-JACKSON-B	DIGGER DERRICK	141.3	272.8	51.8%	3532
160	2023 Freightliner M2 106 Medium Di	EO-LVD-SW ZONE 5-KALAMAZOO-A	DIGGER DERRICK	195.8	364.0	53.8%	4895
161	2022 Freightliner M2 106 Medium Di	EO-LVD-GR ZONE 6-WEST KENT-C	DIGGER DERRICK	172.7	308.7	55.9%	4317
162	2015 Freightliner M2 106 Medium Di	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	DIGGER DERRICK	459.0	753.9	60.9%	11474
163	2023 Freightliner M2 106 Medium Di	EO-LVD-EAST-SE ZONE-B CREEK/COLDWATER	DIGGER DERRICK	325.5	705.4	46.1%	8138
164	2023 Freightliner M2 106 Medium Di	EO-LVD-NW ZONE 8-TRAVERSE-A	DIGGER DERRICK	201.1	418.4	48.1%	5028
165	2020 Freightliner M2 106 Medium Di	EO-ELECTRIC UNDERGROUND-A	DIGGER DERRICK	179.4	300.9	59.6%	4486

152,435.4

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2013 International WorkStar 7300	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	588.8	1,385.0	42.5%	14721	Average idle time
2	2015 International WorkStar 7300	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	763.8	2,296.8	33.3%	19094	
3	2015 International WorkStar 7300	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	450.4	1,128.7	39.9%	11260	Idle Metric Tons CO2
4	2015 International WorkStar 7300	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	770.2	1,907.1	40.4%	19256	
5	2010 International 7300	EO-CFS EAST B	BUCKET TRUCK	813.0	1,934.7	42.0%	20325	Gallons idled
6	2015 International WorkStar 7300	EO-ESS JOINT COMMITTEES AND OQ	BUCKET TRUCK	192.7	382.8	50.3%	4817	
7	2015 International WorkStar 7300	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	775.7	2,019.7	38.4%	19393	
8	2015 International WorkStar 7300	LVD SOUTH ZONE 4	BUCKET TRUCK	521.3	1,522.6	34.2%	13032	
9	2015 International WorkStar 7300	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	212.3	685.7	31.0%	5307	
10	2015 International WorkStar 7300	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	356.1	830.1	42.9%	8904	
11	2015 International WorkStar 7300	EO-LVD-NE ZONE 1-TAWAS-B	BUCKET TRUCK	406.3	1,215.5	33.4%	10159	
12	2010 International 7300	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	207.8	605.3	34.3%	5194	
13	2010 International 7300	EO-LVD-GR ZONE-6-EAST KENT-B	BUCKET TRUCK	160.0	603.4	26.5%	4000	
14	2020 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-CADILLAC-A	BUCKET TRUCK	850.8	2,729.1	31.2%	21269	
15	2021 Freightliner M2 106 Medium Duty	LVD EAST ZONE 3	BUCKET TRUCK	818.7	1,418.5	57.7%	20468	
16	2018 Freightliner M2 106 Medium Duty	L&D ELECTRIC TECHNICAL TRAINING	BUCKET TRUCK	669.6	1,108.8	60.4%	16740	
17	2019 Freightliner M2 106 Medium Duty	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	808.0	2,648.3	30.5%	20200	
18	2024 International MV607	L&D ELECTRIC TECHNICAL TRAINING	BUCKET TRUCK	63.4	111.0	57.1%	1586	
2023 to Sept 2025				9,429.0				

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2013 Freightliner M2 106 Medium Duty	FIELD OPERATIONS MDC ZONE 27	FLATBED/STAKE RACK	181.7	461.0	39.4%	4544	Average idle time	65.8%
2	2005 GMC C8500	FIELD OPERATIONS MDC ZONE 27	FLATBED/STAKE RACK	117.8	332.8	35.4%	2946		
3	2007 GMC C8500	FIELD OPERATIONS MDC ZONE 27	FLATBED/STAKE RACK	213.2	519.9	41.0%	5329	Idle Metric Tons CO2	127.9
4	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE-2E	FLATBED/STAKE RACK	1,049.6	1,407.1	74.6%	26240		
5	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,048.7	1,270.8	82.5%	26217	Gallons idled	13427.1
6	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	375.6	749.0	50.1%	9390		
7	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	828.7	1,111.6	74.5%	20718		
8	2018 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	24.1	41.3	58.2%	602		
9	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	829.1	1,177.8	70.4%	20728		
10	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	919.4	1,169.5	78.6%	22985		
11	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	11.9	26.0	45.8%	298		
12	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	356.1	498.4	71.4%	8901		
13	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	262.6	365.9	71.8%	6565		
14	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,640.3	1,979.8	82.9%	41008		
15	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	703.6	901.4	78.1%	17589		
16	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,149.6	1,520.6	75.6%	28741		
17	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	676.2	1,057.5	63.9%	16905		
18	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	387.5	517.3	74.9%	9688		
19	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	123.8	153.0	80.9%	3095		
20	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	123.0	329.7	37.3%	3075		
21	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	14.9	27.4	54.4%	372		
22	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	1,098.0	1,405.3	78.1%	27449		
23	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	308.8	440.8	70.1%	7720		
24	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE-2	FLATBED/STAKE RACK	215.5	649.4	33.2%	5387		
25	2018 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	473.7	577.9	82.0%	11842		
26	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	895.8	1,170.3	76.5%	22395		
27	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	118.2	178.4	66.3%	2956		
28	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	294.3	381.7	77.1%	7358		
29	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	FLATBED/STAKE RACK	1,145.0	1,715.4	66.7%	28626		
30	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UG NORTON SHORES	FLATBED/STAKE RACK	573.4	798.4	71.8%	14336		
31	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	FLATBED/STAKE RACK	365.9	502.0	72.9%	9148		
32	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	FLATBED/STAKE RACK	257.9	369.1	69.9%	6447		
				16,783.9					
	2023 to Sept 2025								

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Freightliner Coronado 12	EO-SUBSTATION CONSTRUCTION/EERC	OTR TRACTOR	357.6	1,041.6	34.3%	8940	Average idle time	42%
2	2013 Freightliner Cascadia 113	FIELD OPERATIONS MDC ZONE 28	OTR TRACTOR	614.8	1,921.3	32.0%	15369		
3	2014 International ProStar	FIELD OPERATIONS MDC ZONE 27	OTR TRACTOR	422.2	1,427.5	29.6%	10555	Idle Metric Tons CO2	71.6
4	2025 Freightliner Cascadia 126	FIELD OPERATIONS MDC ZONE 28	OTR TRACTOR	427.5	1,586.6	26.9%	10687		
5	2012 Freightliner Coronado 12	EO-SUBSTATION CONSTRUCTION/EERC	OTR TRACTOR	184.5	505.4	36.5%	4614	Gallons idled	7518.0
6	2013 Freightliner Cascadia 125	L&D ELECTRIC TECHNICAL TRAINING	OTR TRACTOR	158.3	383.9	41.2%	3957		
7	2014 Freightliner Coronado 12	GAS OPS SUPPLY & CONSTRUCTION	OTR TRACTOR	822.3	2,743.8	30.0%	20558		
8	2015 Freightliner Coronado 12	GO-GAS CONSTRUCTION	OTR TRACTOR	408.8	983.0	41.6%	10221		
9	2006 International 9400i	EO-SUBSTATION MAINT-BATTLE CREEK	OTR TRACTOR	71.6	178.4	40.1%	1790		
10	2012 Freightliner Coronado 12	EO-SUBSTATION CONSTRUCTION/EERC	OTR TRACTOR	196.1	528.1	37.1%	4903		
11	2013 Freightliner Cascadia 125	L&D ELECTRIC TECHNICAL TRAINING	OTR TRACTOR	144.0	412.7	34.9%	3601		
12	2014 Freightliner Coronado 12	GO-GAS CONSTRUCTION	OTR TRACTOR	536.2	1,113.6	48.2%	13405		
13	2006 International 5600i	EO-SUBSTATION CONSTRUCTION/EERC	OTR TRACTOR	139.8	224.3	62.3%	3494		
14	2014 Freightliner Coronado 12	EO-LVD-NW ZONE 8-TRAVERSE-B	OTR TRACTOR	174.8	334.2	52.3%	4369		
15	2022 Western Star Trucks 4900	FIELD OPERATIONS MDC ZONE 28	OTR TRACTOR	816.4	2,846.7	28.7%	20410		
16	2014 Freightliner Coronado 12	LVD SOUTH ZONE 4	OTR TRACTOR	201.3	539.5	37.3%	5034		
17	2014 Freightliner Coronado 12	EO-LVD-EAST ZONE 3-FLINT	OTR TRACTOR	199.4	387.1	51.5%	4985		
18	2017 Freightliner Coronado 12	FIELD OPERATIONS MDC ZONE 27	OTR TRACTOR	723.3	2,191.7	33.0%	18081		
19	2014 Freightliner Coronado 12	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	OTR TRACTOR	202.0	391.8	51.6%	5051		
20	2017 Freightliner Coronado 12	GO-TO-PIPELINE & STORAGE-NORTH-SAGINAW	OTR TRACTOR	309.4	558.3	55.4%	7735		
21	2022 Western Star Trucks 4900	GO-TRANS OPS EAST	OTR TRACTOR	211.1	443.4	47.6%	5277		
22	2014 Freightliner Coronado 12	GO-GCON-RESOURCE MGMT B I	OTR TRACTOR	220.1	642.2	34.3%	5503		
23	2017 Freightliner Coronado 12	GO-TO-PIPELINE & STORAGE-WEST-JACKSON	OTR TRACTOR	102.4	217.4	47.1%	2559		
24	2022 Western Star Trucks 4900	GO-TRANS OPS EAST	OTR TRACTOR	38.6	61.9	62.3%	964		
25	2014 Freightliner Coronado 12	EO-LVD-SW ZONE 5-KALAMAZOO-A	OTR TRACTOR	133.9	353.4	37.9%	3348		
26	2014 Freightliner Coronado 12	EO-LVD-CENTRAL ZONE 2-ALMA-B	OTR TRACTOR	28.7	55.9	51.4%	717		
27	2014 Freightliner Coronado 12	LVD EAST ZONE 3	OTR TRACTOR	230.3	474.9	48.5%	5757		
28	2014 Freightliner Coronado 12	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	OTR TRACTOR	251.9	501.0	50.3%	6297		
29	2014 Freightliner Coronado 12	EO-LVD-NE ZONE 1-W BRANCH-B	OTR TRACTOR	161.4	316.3	51.0%	4034		
30	2014 Freightliner Coronado 12	EO-LVD-WEST-ZONE 3-G RAPIDS-B	OTR TRACTOR	148.7	298.0	49.9%	3718		
31	2014 Freightliner Cascadia 125	L&D ELECTRIC TECHNICAL TRAINING	OTR TRACTOR	163.8	511.0	32.0%	4094		
32	2014 Freightliner Cascadia 125	L&D ELECTRIC TECHNICAL TRAINING	OTR TRACTOR	183.8	496.5	37.0%	4594		
33	2024 Western Star Trucks 49X	FIELD OPERATIONS MDC ZONE 28	OTR TRACTOR	298.4	797.8	37.4%	7460		
34	2024 Western Star Trucks 49X	FIELD OPERATIONS EAST CENTRAL ZONE 11	OTR TRACTOR	114.3	306.6	37.3%	2858		
2023 to Sept 2025				9,397.5					

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	FLATBED/STAKE RACK	69.3	103.6	66.9%	1734	Average idle time	67.9%
2	2013 Freightliner M2 106 Medium Duty	EO-SUBSTATION CONSTRUCTION/EERC	FLATBED/STAKE RACK	255.2	984.3	25.9%	6380		
3	2016 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	FLATBED/STAKE RACK	1,449.4	1,896.1	76.4%	36236		
4	2017 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	950.6	1,234.8	77.0%	23766	Idle Metric Tons CO2	252.6
5	2018 Freightliner 108SD	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	2,338.4	3,176.8	73.6%	58459		
6	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	654.7	985.2	66.5%	16367		
7	2014 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	FLATBED/STAKE RACK	203.2	454.0	44.8%	5081	Gallons idled	26519.503
8	2016 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	955.3	1,227.7	77.8%	23884		
9	2017 Freightliner M2 106 Medium Duty	GAS OPS-SOUTH-ZONE 2A	FLATBED/STAKE RACK	1,307.9	2,023.8	64.6%	32698		
10	2018 Freightliner 108SD	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	260.5	347.7	74.9%	6511		
11	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	600.6	1,020.5	58.9%	15016		
12	2017 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	1,957.4	2,696.8	72.6%	48934		
13	2018 Freightliner 108SD	GAS OPS-NORTH-ZONE	FLATBED/STAKE RACK	1,071.3	1,400.8	76.5%	26782		
14	2019 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	141.4	395.7	35.7%	3534		
15	2013 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	226.0	336.8	67.1%	5651		
16	2014 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	128.2	252.2	50.8%	3205		
17	2017 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	FLATBED/STAKE RACK	1,200.5	1,701.6	70.5%	30011		
18	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	254.5	399.9	63.6%	6363		
19	2013 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	578.7	725.3	79.8%	14468		
20	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	629.9	842.5	74.8%	15747		
21	2017 Freightliner M2 106 Medium Duty	EO-SUBS OPS/MAINT/METRO	FLATBED/STAKE RACK	162.9	271.7	59.9%	4071		
22	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	1,267.2	1,521.8	83.3%	31680		
23	2013 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1D	FLATBED/STAKE RACK	506.8	682.7	74.2%	12670		
24	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	494.8	836.0	59.2%	12369		
25	2017 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	251.4	441.6	56.9%	6285		
26	2018 Freightliner 108SD	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	1,103.1	1,442.6	76.5%	27577		
27	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	698.4	878.9	79.5%	17461		
28	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	967.2	1,178.7	82.1%	24179		
29	2017 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	FLATBED/STAKE RACK	846.4	1,449.2	58.4%	21159		
30	2018 Freightliner 108SD	GAS OPS-CENTRAL-ZONE 1	FLATBED/STAKE RACK	691.2	931.7	74.2%	17279		
31	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	402.6	515.2	78.2%	10066		
32	2018 Freightliner 108SD	GAS OPS-EAST-ZONE	FLATBED/STAKE RACK	1,693.1	2,277.6	74.3%	42328		
33	2018 Freightliner 108SD	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	225.9	540.6	41.8%	5647		
34	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	91.4	142.5	64.1%	2285		
35	2018 Freightliner 108SD	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	254.3	346.3	73.4%	6357		
36	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	436.0	576.2	75.7%	10900		
37	2018 Freightliner 108SD	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	250.2	359.1	69.7%	6256		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
38	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	78.2	135.4	57.8%	1955
39	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	421.8	582.6	72.4%	10545
40	2014 Freightliner M2 106 Medium Duty	ELECTRIC UNDERGROUND CONSTRUCTION F	FLATBED/STAKE RACK	402.6	633.0	63.6%	10065
41	2018 Freightliner 108SD	EO-ELECTRIC UNDERGROUND-B	FLATBED/STAKE RACK	1,107.6	1,446.6	76.6%	27689
42	2014 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE-2C	FLATBED/STAKE RACK	1,464.4	2,002.7	73.1%	36609
43	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	212.6	308.9	68.8%	5314
44	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	848.8	1,154.8	73.5%	21220
45	2018 Freightliner 108SD	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	671.6	829.1	81.0%	16790
46	2014 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	FLATBED/STAKE RACK	220.1	444.1	49.6%	5502
47	2018 Freightliner 108SD	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	692.1	840.5	82.3%	17303
48	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	285.6	390.2	73.2%	7139
49	2018 Freightliner 108SD	GO-GAS CONSTRUCTION	FLATBED/STAKE RACK	300.9	465.5	64.6%	7523
50	2018 Freightliner 108SD	GAS OPS SUPPLY & CONSTRUCTION	FLATBED/STAKE RACK	867.3	1,116.4	77.7%	21682

33,149.4

2023 to Sept 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 International HV607	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	812.3	2,974.5	27.3%	20308	Average idle time	44.1%
2	2021 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	2,254.0	3,894.6	57.9%	56349		
3	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	2,592.8	3,841.0	67.5%	64821		
4	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	1,080.3	2,360.2	45.8%	27007	Idle Metric Tons CO2	1178.2
5	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	680.1	1,510.6	45.0%	17003		
6	2017 International WorkStar 7400	L&D ELECTRIC TECHNICAL TRAINING	BUCKET TRUCK	148.4	231.7	64.0%	3710		
7	2018 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	1,693.0	2,540.9	66.6%	42325	Gallons idled	123707.99
8	2010 International 7400	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	1,180.8	1,924.1	61.4%	29520		
9	2020 International HV607	LVD EAST ZONE 3	BUCKET TRUCK	1,403.0	3,738.5	37.5%	35075		
10	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	2,770.9	3,639.7	76.1%	69273		
11	2014 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	250.0	739.8	33.8%	6251		
12	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,227.1	2,433.6	50.4%	30676		
13	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	1,787.6	3,176.8	56.3%	44690		
14	2019 Freightliner M2 106 Medium Duty	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	285.2	1,078.5	26.4%	7129		
15	2020 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	2,023.4	3,581.3	56.5%	50586		
16	2021 International HV607	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	BUCKET TRUCK	1,561.8	4,475.5	34.9%	39046		
17	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	967.7	2,080.9	46.5%	24192		
18	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	377.5	1,001.9	37.7%	9437		
19	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-BAY CITY-A	BUCKET TRUCK	367.9	1,230.4	29.9%	9199		
20	2018 Freightliner M2 106 Medium Duty	EO-LVD-WEST-ZONE 3-G RAPIDS-B	BUCKET TRUCK	652.9	2,134.5	30.6%	16322		
21	2019 Freightliner M2 106 Medium Duty	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	559.3	1,907.7	29.3%	13983		
22	2020 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	473.5	1,479.9	32.0%	11838		
23	2021 International HV607	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	1,903.4	2,969.5	64.1%	47585		
24	2022 International HV607	LVD SOUTH ZONE 4	BUCKET TRUCK	1,404.2	2,222.9	63.2%	35105		
25	2014 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-B	BUCKET TRUCK	523.1	1,430.1	36.6%	13078		
26	2015 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	362.5	1,392.1	26.0%	9062		
27	2017 International WorkStar 7400	L&D LEARNING SOLUTIONS SUPPORT	BUCKET TRUCK	497.0	665.0	74.7%	12424		
28	2018 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	1,533.6	3,811.5	40.2%	38340		
29	2019 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-FLINT-C	BUCKET TRUCK	672.2	1,777.7	37.8%	16806		
30	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	3,068.4	4,354.3	70.5%	76711		
31	2014 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	799.2	2,403.1	33.3%	19981		
32	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	510.2	1,235.3	41.3%	12756		
33	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	BUCKET TRUCK	1,032.2	2,990.4	34.5%	25804		
34	2018 Freightliner M2 106 Medium Duty	EO-LVD-WEST-ZONE 3-G RAPIDS-B	BUCKET TRUCK	472.5	1,761.5	26.8%	11813		
35	2019 Freightliner M2 106 Medium Duty	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	1,052.1	3,120.0	33.7%	26302		
36	2020 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,439.6	3,214.5	44.8%	35990		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
37	2021 International HV607	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	1,759.4	4,168.8	42.2%	43984
38	2022 International HV607	EO-LVD-LAKESHORE ZONE 7	BUCKET TRUCK	1,103.5	3,158.1	34.9%	27588
39	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,427.2	2,144.1	66.6%	35680
40	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	666.6	1,815.8	36.7%	16665
41	2017 International WorkStar 7400	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	1,006.7	1,544.2	65.2%	25168
42	2018 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	524.3	1,822.9	28.8%	13109
43	2019 Freightliner M2 106 Medium Duty	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	1,344.5	2,108.2	63.8%	33613
44	2014 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	643.9	2,405.3	26.8%	16097
45	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,599.8	2,604.6	61.4%	39994
46	2017 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	773.7	1,908.7	40.5%	19342
47	2018 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	547.9	1,830.6	29.9%	13697
48	2019 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	2,464.1	3,552.2	69.4%	61603
49	2021 International HV607	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	2,170.4	3,183.2	68.2%	54261
50	2014 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	1,089.1	3,133.1	34.8%	27227
51	2015 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	BUCKET TRUCK	538.7	1,712.4	31.5%	13468
52	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	BUCKET TRUCK	847.2	2,485.8	34.1%	21181
53	2018 Freightliner M2 106 Medium Duty	LVD EAST ZONE 3	BUCKET TRUCK	843.9	2,654.9	31.8%	21098
54	2019 Freightliner M2 106 Medium Duty	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	327.6	1,234.1	26.5%	8190
55	2021 International HV607	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	1,271.4	2,855.9	44.5%	31785
56	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	2,436.8	4,246.5	57.4%	60919
57	2014 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	1,638.6	3,257.2	50.3%	40966
58	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	561.4	1,492.3	37.6%	14035
59	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	BUCKET TRUCK	902.6	2,283.0	39.5%	22566
60	2019 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	1,260.7	3,564.9	35.4%	31518
61	2021 International HV607	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	BUCKET TRUCK	886.5	2,319.3	38.2%	22162
62	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	3,845.0	5,188.6	74.1%	96125
63	2014 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	1,108.3	3,052.5	36.3%	27709
64	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	1,635.7	2,744.0	59.6%	40893
65	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	BUCKET TRUCK	686.0	2,211.6	31.0%	17150
66	2010 International 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	868.9	1,460.4	59.5%	21723
67	2021 International HV607	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	922.5	3,183.5	29.0%	23063
68	2022 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	1,897.8	3,813.9	49.8%	47445
69	2014 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	BUCKET TRUCK	815.9	2,325.6	35.1%	20397
70	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	3,015.7	4,733.9	63.7%	75392
71	2022 International HV607	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	593.0	1,641.3	36.1%	14825
72	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	2,425.4	3,830.0	63.3%	60634
73	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,810.1	2,945.7	61.4%	45252
74	2017 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	744.0	2,187.8	34.0%	18599
75	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	3,585.3	4,738.7	75.7%	89632
76	2017 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	1,153.2	3,230.2	35.7%	28830
77	2010 International 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	1,064.6	2,536.7	42.0%	26614
78	2022 International HV607	LVD EAST ZONE 3	BUCKET TRUCK	1,196.8	2,374.4	50.4%	29920

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
79	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	584.0	1,598.7	36.5%	14600
80	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	BUCKET TRUCK	1,123.8	3,152.4	35.6%	28095
81	2022 International HV607	EO-LVD-SW ZONE 5-HAMILTON-A	BUCKET TRUCK	605.6	1,495.8	40.5%	15140
82	2014 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	497.4	1,403.2	35.4%	12434
83	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	349.2	1,238.7	28.2%	8729
84	2017 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-B	BUCKET TRUCK	573.1	1,443.2	39.7%	14329
85	2022 International HV607	LVD EAST ZONE 3	BUCKET TRUCK	919.8	3,095.0	29.7%	22995
86	2014 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	766.1	1,862.4	41.1%	19152
87	2015 International WorkStar 7400	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	926.4	1,806.1	51.3%	23159
88	2017 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	978.0	1,922.0	50.9%	24451
89	2022 International HV607	LVD SOUTH ZONE 4	BUCKET TRUCK	2,387.6	3,552.0	67.2%	59689
90	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	707.3	1,541.3	45.9%	17683
91	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	929.4	1,690.4	55.0%	23234
92	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	633.0	1,931.6	32.8%	15825
93	2022 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,820.2	3,460.7	52.6%	45506
94	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	446.0	1,590.3	28.0%	11150
95	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	596.3	2,010.0	29.7%	14907
96	2014 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	835.9	2,143.5	39.0%	20898
97	2015 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	492.8	1,542.1	32.0%	12320
98	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-W BRANCH-A	BUCKET TRUCK	687.4	2,029.6	33.9%	17184
99	2014 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	641.0	2,114.7	30.3%	16024
100	2015 International WorkStar 7400	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	388.9	1,351.5	28.8%	9722
101	2017 International WorkStar 7400	EO-LVD-GR ZONE-6-EAST KENT-B	BUCKET TRUCK	458.1	1,530.8	29.9%	11453
102	2014 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	401.4	1,067.8	37.6%	10036
103	2015 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	328.5	720.0	45.6%	8213
104	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	635.6	2,433.0	26.1%	15890
105	2014 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-SAGINAW-B	BUCKET TRUCK	307.0	861.5	35.6%	7676
106	2015 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,298.9	2,150.6	60.4%	32473
107	2017 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	571.6	1,938.1	29.5%	14291
108	2014 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	BUCKET TRUCK	632.7	2,103.1	30.1%	15819
109	2025 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	750.8	1,268.1	59.2%	18769
110	2017 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	479.9	1,434.1	33.5%	11997
111	2015 International WorkStar 7400	EO-LVD-SE ZONE 4-ADRIAN-B	BUCKET TRUCK	437.6	1,381.1	31.7%	10939
112	2017 International WorkStar 7400	EO-LVD-GR ZONE-6-EAST KENT-B	BUCKET TRUCK	360.4	1,423.5	25.3%	9011
113	2014 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	507.7	1,417.3	35.8%	12692
114	2025 International HV607	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	BUCKET TRUCK	239.9	809.1	29.6%	5997
115	2017 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	1,714.1	3,346.3	51.2%	42852
116	2015 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	485.6	1,649.6	29.4%	12140
117	2017 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	501.2	1,625.6	30.8%	12530
118	2014 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	492.7	1,375.8	35.8%	12317
119	2025 International HV607	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	599.1	1,000.8	59.9%	14977
120	2017 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	265.0	814.7	32.5%	6625

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
121	2014 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	721.4	2,364.1	30.5%	18035
122	2017 International WorkStar 7400	EO-LVD-WEST-ZONE 3-G RAPIDS-B	BUCKET TRUCK	344.5	1,161.3	29.7%	8612
123	2017 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,579.3	2,497.5	63.2%	39484
124	2017 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	871.6	2,107.7	41.4%	21790
125	2017 International WorkStar 7400	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,705.1	3,124.4	54.6%	42626
126	2017 International WorkStar 7400	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	558.0	1,272.5	43.9%	13951
127	2017 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	689.7	1,831.8	37.7%	17242
128	2017 International WorkStar 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	1,125.2	3,699.2	30.4%	28130
129	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-W BRANCH-A	BUCKET TRUCK	1,971.8	3,463.6	56.9%	49294
130	2017 International WorkStar 7400	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	808.0	1,499.2	53.9%	20201
131	2017 International WorkStar 7400	L&D ELECTRIC TECHNICAL TRAINING	BUCKET TRUCK	187.3	266.5	70.3%	4682
132	2017 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	BUCKET TRUCK	888.5	1,961.6	45.3%	22212
133	2017 International WorkStar 7400	LVD EAST ZONE 3	BUCKET TRUCK	781.0	2,886.4	27.1%	19524
134	2017 International WorkStar 7400	EO-LVD-SE ZONE 4-B CREEK-C	BUCKET TRUCK	286.5	599.5	47.8%	7163
135	2017 International WorkStar 7400	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	725.0	2,158.2	33.6%	18126
136	2013 International WorkStar 7400	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	391.2	885.1	44.2%	9781
137	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,292.5	2,262.1	57.1%	32313
138	2013 International WorkStar 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	783.5	2,008.6	39.0%	19588
139	2013 International WorkStar 7400		BUCKET TRUCK	1,564.6	2,375.7	65.9%	39115
140	2013 International WorkStar 7400	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	894.5	1,768.0	50.6%	22364
141	2013 International WorkStar 7400	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	1,231.5	2,393.5	51.5%	30788
142	2013 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	BUCKET TRUCK	1,336.3	2,700.2	49.5%	33408
143	2013 International WorkStar 7400	EO-LVD-NW ZONE 8-CADILLAC-A	BUCKET TRUCK	253.8	781.6	32.5%	6345
144	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	475.1	1,197.0	39.7%	11877
145	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	572.8	1,202.0	47.7%	14319
146	2013 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	BUCKET TRUCK	852.2	2,483.1	34.3%	21306
147	2013 International WorkStar 7400	EO-LVD-LAKESHORE ZONE 7-GREENVILLE-A	BUCKET TRUCK	852.5	2,984.5	28.6%	21312
148	2020 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,100.1	2,565.5	42.9%	27502
149	2020 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	1,102.8	2,343.4	47.1%	27571
150	2024 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	296.7	560.1	53.0%	7418
151	2023 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-C	BUCKET TRUCK	118.2	207.9	56.8%	2955
152	2021 Freightliner M2 106 Medium Duty	EO-LVD-SE ZONE 4-JACKSON-A	BUCKET TRUCK	349.6	673.1	51.9%	8741
153	2023 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-A	BUCKET TRUCK	107.7	238.9	45.1%	2692
154	2020 Freightliner M2 106 Medium Duty	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	896.1	1,759.1	50.9%	22404
155	2024 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-A	BUCKET TRUCK	281.4	441.1	63.8%	7034
156	2023 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-A	BUCKET TRUCK	584.6	1,069.2	54.7%	14614
157	2024 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-C	BUCKET TRUCK	96.9	183.3	52.9%	2424
158	2023 Freightliner M2 106 Medium Duty	EO-LVD-WEST-ZONE 5-TRAVERSE-A	BUCKET TRUCK	175.9	304.9	57.7%	4397

154,635.0

2023 to Sept 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven	
1	2022 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-KALAMAZOO-A	SERVICE TRUCK	695.4	1,231.6	56.5%	17385	Average idle time
2	2013 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	804.1	1,132.0	71.0%	20103	
3	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	SERVICE TRUCK	2,047.9	2,696.9	75.9%	51199	Idle Metric Tons CO2
4	2010 International 4300	EO-LVD-EAST ZONE 3-FLINT	SERVICE TRUCK	620.3	1,031.4	60.1%	15508	
5	2021 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-HASTINGS-A	SERVICE TRUCK	673.0	1,187.8	56.7%	16824	Gallons idled
6	2013 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	1,005.5	1,402.6	71.7%	25137	
7	2015 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	853.6	1,279.9	66.7%	21339	
8	2016 International DuraStar 4400	GO-GAS CONSTRUCTION	SERVICE TRUCK	614.5	911.0	67.4%	15361	
9	2018 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	SERVICE TRUCK	2,248.3	3,068.2	73.3%	56209	
10	2022 Freightliner M2 106 Medium Duty	LVD SW ZONE 5	SERVICE TRUCK	691.2	1,349.3	51.2%	17279	
11	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	316.6	431.7	73.3%	7914	
12	2014 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	SERVICE TRUCK	679.2	952.2	71.3%	16981	
13	2015 International DuraStar 4400	EO-LVD-GR ZONE 6-WEST KENT-B	SERVICE TRUCK	180.1	273.5	65.8%	4503	
14	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	SERVICE TRUCK	288.3	498.8	57.8%	7207	
15	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	1,421.9	1,893.3	75.1%	35549	
16	2013 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	SERVICE TRUCK	519.8	771.4	67.4%	12995	
17	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,091.6	1,418.0	77.0%	27290	
18	2018 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	929.6	1,633.8	56.9%	23239	
19	2010 International 4300	EO-LVD-GR ZONE 6-WEST KENT-B	SERVICE TRUCK	128.0	265.1	48.3%	3201	
20	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	2,463.6	3,323.5	74.1%	61591	
21	2013 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	SERVICE TRUCK	267.2	379.5	70.4%	6680	
22	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	259.1	428.1	60.5%	6478	
23	2018 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,687.0	2,064.6	81.7%	42174	
24	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	3,091.1	4,083.4	75.7%	77278	
25	2013 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	SERVICE TRUCK	695.5	965.1	72.1%	17388	
26	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	177.9	300.4	59.2%	4448	
27	2018 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	SERVICE TRUCK	1,034.6	1,505.5	68.7%	25866	
28	2010 International 4300	EO-LVD-NW ZONE 8-TRAVERSE-B	SERVICE TRUCK	291.1	624.8	46.6%	7277	
29	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	2,158.7	2,855.8	75.6%	53969	
30	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,137.4	1,568.0	72.5%	28434	
31	2014 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	SERVICE TRUCK	506.4	765.8	66.1%	12660	
32	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	SERVICE TRUCK	29.9	67.6	44.2%	747	
33	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	1,472.9	2,013.3	73.2%	36824	
34	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	506.8	856.2	59.2%	12670	
35	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	467.5	815.1	57.4%	11688	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
36	2018 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	SERVICE TRUCK	109.5	259.5	42.2%	2739
37	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	1,971.0	2,600.0	75.8%	49275
38	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	466.0	595.1	78.3%	11650
39	2014 Freightliner M2 106 Medium Duty	GAS OPS SOUTHWEST REGION	SERVICE TRUCK	329.2	512.3	64.2%	8229
40	2018 Freightliner M2 106 Medium Duty	GAS OPS-CENTRAL-ZONE 1	SERVICE TRUCK	36.6	70.2	52.1%	915
41	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	849.1	1,632.1	52.0%	21229
42	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	338.5	605.8	55.9%	8462
43	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,036.1	1,402.8	73.9%	25903
44	2018 Freightliner M2 106 Medium Duty	GO-TRANS OPS EAST	SERVICE TRUCK	919.9	1,435.5	64.1%	22998
45	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	1,040.8	1,877.7	55.4%	26020
46	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,241.1	1,665.7	74.5%	31028
47	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	988.2	1,305.7	75.7%	24704
48	2018 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-LANSING-A	SERVICE TRUCK	737.4	1,259.2	58.6%	18434
49	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	2,017.2	2,998.2	67.3%	50429
50	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-C	SERVICE TRUCK	298.7	493.4	60.6%	7469
51	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	435.2	826.1	52.7%	10881
52	2018 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE-6-EAST KENT-B	SERVICE TRUCK	258.7	485.7	53.3%	6467
53	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	1,630.0	2,472.6	65.9%	40750
54	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND	SERVICE TRUCK	402.8	652.4	61.7%	10070
55	2014 Freightliner M2 106 Medium Duty	GAS OPS-NORTH-ZONE	SERVICE TRUCK	78.2	123.8	63.1%	1954
56	2018 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	1,068.4	1,400.6	76.3%	26711
57	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	1,082.2	2,033.4	53.2%	27056
58	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	728.2	996.9	73.1%	18206
59	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	382.9	583.6	65.6%	9572
60	2022 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	826.7	1,458.7	56.7%	20667
61	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	934.2	1,365.0	68.4%	23354
62	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	SERVICE TRUCK	1,157.7	1,608.1	72.0%	28942
63	2013 Freightliner M2 106 Medium Duty	ELECTRIC UNDERGROUND CONSTRUCTION F	SERVICE TRUCK	570.1	949.2	60.1%	14252
64	2014 Freightliner M2 106 Medium Duty	GAS OPS-EAST-ZONE	SERVICE TRUCK	957.9	1,387.3	69.0%	23947
65	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	202.8	447.9	45.3%	5070
66	2014 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-B	SERVICE TRUCK	303.4	437.2	69.4%	7584
67	2013 Freightliner M2 106 Medium Duty	GO-GCON-RESOURCE MGMT B I	SERVICE TRUCK	490.5	748.2	65.6%	12263
68	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	843.9	1,123.1	75.1%	21098
69	2013 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	703.6	993.6	70.8%	17589
70	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	289.5	496.1	58.3%	7236
71	2013 Freightliner M2 106 Medium Duty	EO-ELECTRIC UNDERGROUND-A	SERVICE TRUCK	708.0	1,117.6	63.3%	17699
72	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	816.0	1,264.0	64.6%	20399
73	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	333.7	432.0	77.2%	8344
74	2014 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	396.8	613.4	64.7%	9920
75	2013 Freightliner M2 106 Medium Duty	GO-GAS CONSTRUCTION	SERVICE TRUCK	558.9	761.9	73.3%	13971
76	2014 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	1,519.8	1,887.8	80.5%	37996

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
77	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	144.0	234.9	61.3%	3600
78	N/A	EO-ELECTRIC UG NORTON SHORES	SERVICE TRUCK	995.0	1,318.5	75.5%	24876
79	2013 Freightliner M2 106 Medium Duty	GAS OPS SUPPLY & CONSTRUCTION	SERVICE TRUCK	204.7	288.6	70.9%	5119
				63,458.9			

2023 to Sept 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	Year Make Model	Department	Category	Total Idle Excluding PTO Hours	Total Engine Hours	Percentage: Idle Excluding PTO	Idle Time Equivalent Approximate Miles Driven		
1	2020 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	873.4	3,087.0	28.3%	21834	Average idle time	41.1%
2	2022 International HV607	EO-LVD-NE ZONE 1-W BRANCH-B	BUCKET TRUCK	1,991.0	3,942.2	50.5%	49776		
3	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	629.2	1,596.6	39.4%	15729	Idle Metric Tons CO2	745.2
4	2010 International 7400	EO-LVD-SE ZONE 4-COLDWATER-B	BUCKET TRUCK	497.7	1,198.1	41.5%	12442		
5	2020 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-SAGINAW-B	BUCKET TRUCK	1,857.0	3,130.4	59.3%	46426	Gallons idled	78240.8
6	2011 International WorkStar 7400	LVD SOUTH ZONE 4	BUCKET TRUCK	1,286.2	2,490.6	51.6%	32154		
7	2013 International WorkStar 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	584.1	1,563.8	37.4%	14603		
8	2015 International WorkStar 7400	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	540.3	2,143.3	25.2%	13507		
9	2010 International 7400	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	548.1	1,250.3	43.8%	13703		
10	2020 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-FLINT	BUCKET TRUCK	2,740.0	4,040.7	67.8%	68499		
11	2012 International WorkStar 7400	EO-ESS JOINT COMMITTEES AND OQ	BUCKET TRUCK	88.5	164.6	53.8%	2212		
12	2010 International 7400	EO-LVD-LAKESHORE ZONE 7	BUCKET TRUCK	482.2	1,501.8	32.1%	12054		
13	2020 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-FREMONT	BUCKET TRUCK	955.4	2,901.9	32.9%	23885		
14	2010 International 7400	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	468.3	1,512.9	31.0%	11709		
15	2020 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	550.6	2,066.8	26.6%	13766		
16	2020 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	658.0	2,239.1	29.4%	16449		
17	2020 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	846.4	2,722.3	31.1%	21161		
18	2010 International 7400	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	541.8	1,121.9	48.3%	13545		
19	2020 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	1,668.5	2,660.0	62.7%	41714		
20	2010 International 7400	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	741.0	1,132.4	65.4%	18524		
21	2020 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	725.7	2,327.1	31.2%	18142		
22	2020 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	1,506.7	2,286.6	65.9%	37667		
23	2010 International 7400	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	426.1	947.3	45.0%	10651		
24	2020 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-SAGINAW-B	BUCKET TRUCK	1,705.7	2,988.3	57.1%	42642		
25	2020 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	BUCKET TRUCK	1,116.0	3,431.3	32.5%	27899		
26	2020 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-CADILLAC-A	BUCKET TRUCK	1,995.7	3,537.8	56.4%	49893		
27	2020 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	1,224.6	3,890.5	31.5%	30615		
28	2020 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	932.3	2,422.1	38.5%	23308		
29	2010 International 7400	EO-LVD-SE ZONE 4-B CREEK-B	BUCKET TRUCK	1,091.5	2,243.2	48.7%	27289		
30	2020 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-LUDINGTON	BUCKET TRUCK	1,289.7	4,013.8	32.1%	32243		
31	2010 International 7400	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	789.6	1,832.1	43.1%	19740		
32	2020 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,072.0	2,957.8	36.2%	26800		
33	2006 International 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	630.9	1,934.4	32.6%	15772		
34	2020 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	1,000.4	3,670.9	27.3%	25011		
35	2020 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	761.5	2,771.6	27.5%	19038		
36	2022 International HV607	EO-LVD-GR ZONE 6-WEST KENT-A	BUCKET TRUCK	534.3	1,943.4	27.5%	13357		

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
37	2020 International HV607	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	677.8	1,876.7	36.1%	16944
38	2010 International 7400	EO-ESS JOINT COMMITTEES AND OQ	BUCKET TRUCK	83.5	193.4	43.2%	2087
39	2020 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	1,567.4	3,995.8	39.2%	39185
40	2022 International HV607	EO-LVD-LAKESHORE ZONE 7	BUCKET TRUCK	598.4	2,036.6	29.4%	14959
41	2020 International HV607	EO-LVD-EAST ZONE 3-OWOSSO-A	BUCKET TRUCK	837.2	2,647.2	31.6%	20930
42	2022 International HV607	EO-LVD-LAKESHORE ZONE 7	BUCKET TRUCK	1,624.4	3,001.8	54.1%	40610
43	2010 International 7400	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	770.9	1,572.0	49.0%	19272
44	2020 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	673.3	2,614.7	25.7%	16832
45	2022 International HV607	EO-LVD-NE ZONE 1-WV BRANCH-A	BUCKET TRUCK	2,512.1	4,227.8	59.4%	62803
46	2020 International HV607	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	1,053.5	3,445.4	30.6%	26336
47	2022 International HV607	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	BUCKET TRUCK	3,037.4	4,922.2	61.7%	75936
48	2019 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-FREMONT	BUCKET TRUCK	656.3	2,530.8	25.9%	16407
49	2022 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	705.1	2,607.6	27.0%	17628
50	2019 Freightliner M2 106 Medium Duty	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	581.7	1,815.2	32.0%	14541
51	2020 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	1,459.5	3,642.3	40.1%	36488
52	2022 International HV607	EO-LVD-NE ZONE 1-BAY CITY-A	BUCKET TRUCK	1,436.5	2,488.8	57.7%	35913
53	2019 Freightliner M2 106 Medium Duty	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	459.9	1,294.6	35.5%	11498
54	2020 International HV607	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,126.7	2,953.3	38.2%	28167
55	2022 International HV607	EO-LVD-NE ZONE 1-BAY CITY-A	BUCKET TRUCK	509.3	1,775.4	28.7%	12731
56	2020 International HV607	EO-LVD-NW ZONE 8-TRAVERSE-B	BUCKET TRUCK	863.2	3,342.0	25.8%	21581
57	2022 International HV607	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	742.9	1,770.4	42.0%	18573
58	2021 International HV607	EO-LVD-NW ZONE 8-CADILLAC-A	BUCKET TRUCK	746.8	2,615.4	28.6%	18670
59	2022 International HV607	EO-LVD-GR ZONE 6-WEST KENT-A	BUCKET TRUCK	719.2	1,580.4	45.5%	17979
60	2019 Freightliner M2 106 Medium Duty	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	390.8	1,559.0	25.1%	9769
61	2021 International HV607	EO-LVD-GR ZONE 6-EAST KENT-B	BUCKET TRUCK	696.5	2,507.3	27.8%	17413
62	2022 International HV607	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-A	BUCKET TRUCK	1,215.5	3,749.2	32.4%	30387
63	2019 Freightliner M2 106 Medium Duty	LVD EAST ZONE 3	BUCKET TRUCK	501.8	1,453.7	34.5%	12545
64	2021 International HV607	EO-LVD-NW ZONE 8-CADILLAC-A	BUCKET TRUCK	1,151.2	3,442.5	33.4%	28780
65	2022 International HV607	EO-LVD-NE ZONE 1-TAWAS-A	BUCKET TRUCK	1,701.2	3,359.3	50.6%	42530
66	2019 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-BIG RAPIDS-A	BUCKET TRUCK	805.1	3,185.1	25.3%	20128
67	2021 International HV607	EO-LVD-CENTRAL ZONE 2-SAGINAW-A	BUCKET TRUCK	1,902.8	2,985.8	63.7%	47570
68	2022 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	2,433.6	3,811.5	63.8%	60841
69	2019 Freightliner M2 106 Medium Duty	EO-LVD-LAKESHORE ZONE 7-MUSKEGON-B	BUCKET TRUCK	1,288.0	3,394.6	37.9%	32200
70	2021 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	1,279.5	3,293.8	38.8%	31989
71	2022 International HV607	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	1,925.1	3,360.3	57.3%	48128
72	2006 International 7400	EO-LVD-CENTRAL ZONE 2-CLARE-A	BUCKET TRUCK	650.3	2,152.2	30.2%	16257
73	2019 Freightliner M2 106 Medium Duty	EO-LVD-NW ZONE 8-BOYNE-A	BUCKET TRUCK	816.9	2,668.8	30.6%	20423
74	2021 International HV607	EO-LVD-NE ZONE 1-WV BRANCH-A	BUCKET TRUCK	718.2	2,349.0	30.6%	17955
75	2022 International HV607	EO-LVD-SW ZONE 5-HASTINGS-A	BUCKET TRUCK	1,678.3	2,903.8	57.8%	41958
76	2019 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,122.2	2,782.4	40.3%	28055
77	2021 International HV607	EO-LVD-WEST-ZONE 3-G RAPIDS-B	BUCKET TRUCK	733.7	2,543.7	28.8%	18343
78	2022 International HV607	EO-LVD-NE ZONE 1-BAY CITY-A	BUCKET TRUCK	1,505.2	2,575.2	58.5%	37631

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
79	2019 Freightliner M2 106 Medium Duty	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,460.2	2,818.0	51.8%	36506
80	2021 International HV607	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	1,057.7	3,308.6	32.0%	26442
81	2021 International HV607	EO-LVD-CENTRAL ZONE 2-ALMA-B	BUCKET TRUCK	1,078.9	3,198.3	33.7%	26971
82	2021 International HV607	EO-LVD-NE ZONE 1-MIDLAND-A	BUCKET TRUCK	2,712.7	3,904.4	69.5%	67819
83	2021 International HV607	EO-LVD-SW ZONE 5-HAMILTON-B	BUCKET TRUCK	1,309.9	3,240.0	40.4%	32747
84	2021 International HV607	LVD SOUTH ZONE 4	BUCKET TRUCK	1,209.0	3,414.7	35.4%	30225
85	2021 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	2,380.4	3,478.1	68.4%	59510
86	2021 International HV607	EO-LVD-EAST ZONE 3-LANSING-A	BUCKET TRUCK	1,510.4	2,418.8	62.4%	37760
87	2021 International HV607	EO-LVD-SW ZONE 5-KALAMAZOO-A	BUCKET TRUCK	1,341.9	4,160.2	32.3%	33547
88	2021 International HV607	EO-LVD-NE ZONE 1-BAY CITY-A	BUCKET TRUCK	1,670.7	2,918.7	57.2%	41767
89	2021 International HV607	EO-LVD-GR ZONE 6-WEST KENT-B	BUCKET TRUCK	759.7	2,744.9	27.7%	18994
				97,801.0			
2023 to Sept 2025							

Category	Usage Indicator	Location	Department Name Desc.	Unit Age (months)	Current Miles	Replace Year	Approx Daily EV Charge Demand Forecast (kWh)	Avg Idle Hrs/Year	Approximate Mileage Added by Idling	Percentage Idle Excluding PTO	Average Yearly Fuel Cost	5 Year Op. Cost	Potential Electrification Savings: Fuel (CALSTART)	Approx 5 Year Operation Cost Savings if Electrified (CALSTART)
PICKUP	E	BAT	LVD SYSTEM PLANNING - WEST	168	74,360	2026	7.79	93	2,325	41.8%	\$1,370.79	\$5,254	\$891.01	\$3,520
PICKUP	O	BAY	NOT MANAGEMENT	132	232,948	2026	293.4	293.4	5,835	35.4%	\$2,651.12	\$31,698	\$1,729.23	\$21,238
PICKUP	E	BEN	EO-CFS WEST B	228	116,126	2024	9.31	25.3	633	51.1%	\$493.43	\$6,729	\$320.73	\$4,598
PICKUP	E	FLI	LVD DESIGN	168	122,664	2025	12.68	82.7	2,068	35.8%	\$1,409.95	\$15,464	\$916.47	\$10,361
PICKUP	E	FRE	LVD DESIGN	168	142,027	2025	14.08	134.8	3,370	33.6%	\$1,916.81	\$12,242	\$1,245.93	\$8,202
PICKUP	G	GCM (Madison Heights)	GO-GCOON-JACKSON CONSTRUCTION D	120	200,186	2025	26.40	241.3	6,033	42%	\$3,446.95	\$53,547	\$2,240.52	\$35,876
PICKUP	G	GCM (Mt Morris)	GO-GCOON-CUSTOMER EXP B	72	93,700	2025	19.38	212.4	5,311	29.2%	\$3,737.46	\$12,102	\$2,429.35	\$8,108
PICKUP	G	Groveland	GO-GAS CONSTRUCTION	132	228,692	2029	31.89	259.8	6,495	56.4%	\$1,936.50	\$17,508	\$1,258.72	\$11,730
PICKUP	G	GSA (Saginaw)	GO-GCOON-RESOURCE MGMT B I	144	207,927	2026	28.30	463.8	11,595	69.3%	\$1,722.30	\$27,843	\$1,119.50	\$18,722
PICKUP	E	HAM	WM&CD-NW ZONE -	168	149,976	2025	16.62	31.4	785	29.7%	\$1,324.57	\$12,879	\$860.97	\$8,696
PICKUP	O	JAC	EPH-CONSTRUCTION FOSSIL GENERATION	144	313,798	2026	43.57	277	6,925	40.5%	\$1,475.42	\$15,996	\$959.02	\$10,717
PICKUP	O	JAC	NOT MANAGEMENT	120	241,031	2026	37.22	300.2	7,505	42.8%	\$4,720.64	\$21,784	\$3,068.41	\$14,595
PICKUP	E	JAC	LVD DESIGN-JACK/ADR/SMN	156	97,310	2026	11.2	51.4	1,285	32.6%	\$1,075.32	\$10,106	\$698.96	\$6,771
PICKUP	G	JAC	GO-GAS CAS PLANNING & TECHNICAL SRVS	228	96,315	2027	6.86	33.8	845	25.9%	\$1,127.48	\$21,515	\$732.86	\$14,415
PICKUP	O	JHC	EPH-CONSTRUCTION FOSSIL GENERATION	216	242,002	2028	19.57	1519.3	37,083	82.80%	\$1,038.14	\$39,242	\$674.79	\$26,292
PICKUP	O	KAL	CX&T-RO-REVENUE RECOVERY THEFT	120	244,870	2026	33.56	498.2	12,455	53%	\$4,812.73	\$45,844	\$3,128.27	\$30,715
PICKUP	G	MAC	GO-GAS DISTRIBUTION-EAST-ZONE	168	189,471	2028	20.38	377.1	9,428	70.70%	\$2,972.73	\$16,086	\$1,932.28	\$11,179
SUV	O	MID	SAFETY OPERATIONS	144	184,452	2026	6.38	42.1	1,053	26.70%	\$1,600.44	\$17,123	\$1,040.29	\$11,473
PICKUP	G	MID	GO-GAS DISTRIBUTION-NORTH-ZONE	144	259,409	2029	37.20	100.5	2,513	41%	\$1,115.79	\$15,080	\$725.27	\$10,104
PICKUP	E	MNS	LVD CIRCUIT PLANNING	168	110,636	2025	11.52	80.4	2,010	29.60%	\$1,545.67	\$11,593	\$1,004.69	\$7,767
PICKUP	G	NKS	WM&CD-NW ZONE-GRN/FRE/BIG/GVL	156	232,543	2028	No data	84.6	2,115	26.70%	\$2,231.63	\$20,019	\$1,450.56	\$13,413
PICKUP	O	ROY	CX&T-RO CREDIT & COLLECTION	156	122,379	2026	13.77	150.3	3,758	38.4%	\$2,416.08	\$24,376	\$1,570.44	\$16,332
PICKUP	O	ROY	CX&T-RO-REVENUE RECOVERY THEFT	132	148,283	2027	18.76	356.4	8,910	43.4%	\$2,948.01	\$24,619	\$1,916.20	\$16,495
PICKUP	O	ROY	CX&T-RO-REVENUE RECOVERY THEFT	132	147,512	2027	19.92	344.8	8,620	50.6%	\$3,224.70	\$26,227	\$2,096.06	\$17,572
PICKUP	O	ROY	CX&T-RO-REVENUE RECOVERY THEFT	132	166,216	2028	22.28	450.1	11,253	48.5%	\$1,922.56	\$17,275	\$1,249.66	\$11,574
PICKUP	O	ROY	CX&T-RO-REVENUE RECOVERY THEFT	132	89,639	2029	10.91	360.9	9,023	44.5%	\$2,154.69	\$20,277	\$1,400.55	\$13,585
PICKUP	G	SAG	GE&S/GAM-DIST ENGG	228	97,361	2027	7.89	26.25	656	46.50%	N/A	\$10,411	VALUE	\$6,975
PICKUP	G	SAG	WM&CD-NE-SAG/MID/BAY	204	117,132	2027	No data	68.4	1,710	37.20%	\$975.42	\$15,344	\$634.02	\$10,290
PICKUP	G	SAG	GE&S-GAM-DIST ENGG-DES	120	232,863	2028	46.41	211.8	5,295	39.70%	\$5,299.05	\$23,289	\$3,444.38	\$15,604
PICKUP	O	BAY	NOT MANAGEMENT	132	232,948	2026	28.48	233.4	5,835	35.4%	\$3,497.90	\$31,698	\$2,273.64	\$21,238
SUV	O	BAY	NOT MANAGEMENT	108	162,610	2027	19.59	N/A	N/A	N/A	\$4,536.23	\$22,485	\$2,948.55	\$15,065
PICKUP	E	ALM	EO-ELEC MTR OPS-ZONE 4	156	206,239	2025	26.32	N/A	N/A	N/A	\$4,699.42	\$9,853	\$3,054.62	\$6,602
PICKUP	G	BAT	WM&CD-SW ZONE-BCK/COLD/HAS/MAR	228	99,402	2026	6.98	N/A	N/A	N/A	\$769.02	\$15,497	\$499.87	\$10,383
SUV	G	GCM(Midland)	GO-GCOON-RESOURCE MGMT B	60	111,896	2025	17.47	\$12,477	N/A	N/A	\$3,200.35	\$12,477	\$2,080.23	\$8,360
SUV	G	GCM (Jolly)	GO-GCOON-RESOURCE MGMT A III	60	79,736	2025	11.12	\$3,605	N/A	N/A	\$2,428.87	\$3,605	\$1,578.77	\$2,415
PICKUP	G	GCS (Jolly Rd)	GO-GCOON-RESOURCE MGMT A II	72	111,272	2025	23.14	N/A	N/A	N/A	\$3,880.11	\$22,075	\$2,530.52	\$14,790
PICKUP	G	GHD (Holly)	GO-GCOON-RESOURCE MGMT B II	120	146,327	2025	25.17	N/A	N/A	N/A	\$973.39	\$19,501	\$632.71	\$13,066
PICKUP	O	JAC	PHYSICAL SECURITY & EMERGENCY MGT	120	161,318	2026	15.96	N/A	N/A	N/A	\$3,146.77	\$14,415	\$2,045.40	\$9,658
SEDAN	O	JAC	NOT MANAGEMENT	132	148,559	2027	13.02	N/A	N/A	N/A	\$997.96	\$15,585	\$748.47	\$7,325
PICKUP	E	JAC	LVD PLANNING - NORTH-EAST	168	93,295	2027	8.52	N/A	N/A	N/A	\$1,467.24	\$13,004	\$1,291.17	\$8,713
PICKUP	O	KAL	CX&T-RO-REVENUE RECOVERY THEFT	168	159,566	2026	17.95	N/A	N/A	N/A	\$353.86	\$14,909	\$229.88	\$9,989
PICKUP	O	LAN	FACILITIES OPERATIONS	144	179,272	2027	20.86	N/A	N/A	N/A	\$2,642.69	\$7,011	\$2,325.56	\$4,698
PICKUP	G	LAN	WM&CD-SW ZONE-LAN/OWO	204	116,864	2029	9.13	N/A	N/A	N/A	\$1,157.60	\$9,800	\$1,018.69	\$6,566
SEDAN	G	MAC	GO-GAS SERVICE-SOUTHEAST C2	132	176,180	2028	17.75	N/A	N/A	N/A	\$762.34	\$23,192	\$571.76	\$10,900
PICKUP	G	MID	WM&CD-NE-SAG/MID/BAY	228	86,877	2027	6.74	N/A	N/A	N/A	\$293.59	\$13,488	\$258.36	\$9,037
SUV	G	OVR	GE&S/GAM/MRA&TECH WEST	84	247,056	2029	35.36	N/A	N/A	N/A	\$5,548.14	\$19,156	\$4,882.37	\$12,834
PICKUP	O	ROY	CX&T-RO-REVENUE RECOVERY THEFT	156	68,559	2028	6.98	N/A	N/A	N/A	\$1,511.90	\$12,660	\$1,330.47	\$8,482
PICKUP	E	SAG	LVD DESIGN	156	140,260	2025	16.08	N/A	N/A	N/A	\$1,530.83	\$15,589	\$1,346.95	\$10,445
PICKUP	E	SAG	LVD PLANNING - NORTH-EAST	168	160,974	2025	17.55	N/A	N/A	N/A	\$1,463.24	\$14,459	\$1,287.65	\$9,687
PICKUP	G	SAG	GO-GAS DISTRIBUTION-NORTH-ZONE-3B	120	157,550	2028	10.17	N/A	N/A	N/A	\$4,598.64	\$12,864	\$4,046.81	\$8,619

Consumers Energy Potential EV Vehicle Savings Study

Introduction

This paper is a study of a specific set of Consumer Energy’s internal fleet vehicles for potential vehicle electrification savings. The study focuses on light duty internal fleet vehicles currently on the fleet purchase plan through 2029 and considers what potential savings could be gained if a fleet unit utilizing fossil fuels is replaced with an electrified vehicle (“EV”). For specificity, the 50 light duty pick-ups and SUVs on the 1:1 replacement plan are being studied for a potential electrified replacement. The data collected from these 50 current Internal Combustion Engine (“ICE”) units is utilized to compare for potential EV savings.

Definitions

- ICE Vehicle: Vehicle with Internal Combustion Engine
 - EV: Electric Vehicle
 - Idle: Event where a vehicle’s engine is on and it has not exceeded 1 MPH for 3 minutes
 - CALSTART: A national non-profit that works with businesses and governments to develop clean, efficient, transportation solutions.
 - Kwh: Kilowatt-hour measures the amount of electricity a device uses while running.
-

Purpose

The purpose of this paper is to discuss the following regarding the potential vehicle electrification savings the Company as requested in the September 30, 2025 Order for MPSC Case No. U-21806:

Conduct a more specific study as to the expected savings of electrifying fleet assets, by asset type (light duty car, pick up, van, heavy duty etc.) to be provided in the Company’s next gas rate case and the results incorporated into future cost recovery requests.

Introduction

For the purposes of this study, there are fifty units targeted for potential 1:1 replacement on the Company's fleet replacement plan being considered for electrification. As the fleet has already undergone a fleet assessment by CALSTART, forecasts for potential fuel and maintenance savings are based on their research and expertise in vehicle electrification. The assessment is used to support building business cases for EVs where possible.

It is important to note that the Company will continuously learn and evolve its electrification goals as more data is gathered and in the field experience is learned about the deployment of EVs in different field situations, and how they perform in support of the business throughout the state.

Findings

Exhibit A-107 (JJJ-7) provides a dataset evaluating the operational costs and potential savings from electrifying 50 fleet ICE-powered vehicles. The vehicles also represent a fairly typical ICE unit. The analysis spans various vehicle categories, departments, and locations, and includes metrics such as fuel costs, idle time, and projected savings over a five-year period.

Key Findings on Electrification Savings

1. Fuel Cost Reduction

One of the most significant potential benefits of electrification is the reduction in fuel costs. The vehicles on the replacement plan incur annual fuel costs ranging from approximately \$300 to over \$5,000. By replacing an ICE unit in specific situations, to an EV, many units could save between \$600 and \$4,600 annually on fuel. Over five years, it may be possible to save thousands per vehicle, with some units projected to save over \$27,000.

2. Five-Year Operational Cost Savings

Column O, "Approx 5 Year Operation Cost Savings if Electrified" in Exhibit A-107 (JJJ-7) quantifies the total projected savings from electrification on maintenance costs. These figures account for potential reduced maintenance costs associated with fewer moving parts on EVs, and

potentially lower overall ownership costs. Based on CALSTART's fleet assessment, their forecasts show that across the dataset, potential savings range from \$1,200 to over \$32,000 per vehicle. Vehicles with high mileage and idle time tend to show the greatest savings, emphasizing the value of targeting these units for electrification.

3. Idle Time and Efficiency Gains

Many vehicles in the dataset spend significant time idling, which contributes to fuel waste. The "Avg Idle Hrs/Year" and "Approximate Mileage Added by Idling" columns highlight inefficiencies that EVs can mitigate by eliminating the wear and tear caused by idling. Since EVs consume minimal energy while idling, electrification could substantially reduce unnecessary fuel usage and associated maintenance costs.

4. High-Impact Departments and Locations

Departments such as NDT Management, Revenue Recovery Theft, and Gas Distribution Zones show particularly high potential savings. Locations like ROY (Royal Oak), JAC (Jackson), and SAG (Saginaw) also appear frequently among vehicles with the highest projected savings, suggesting these areas could be prioritized for electrification initiatives. While more information is needed to learn more about context for the reasons these zones would have the highest electrification impact, these particular units show good potential if the EV market is able to support their work without range concerns.

5. Vehicle Type Considerations

For this study the majority of vehicle types are light duty pick-up trucks and SUVs. The data suggests that those with high mileage or idle time, show promising savings. For example, one SUV in Midland is projected to save over \$4,300 in five years.

Strategic Implications

The data presented supports electrifying the fleet represented in this spreadsheet as it could yield cost reduction benefits. With many vehicles showing five-figure savings over five years, the potential for a return on investment for EVs is worth a look into continued investment in EVs.

To maximize impact, the Company should:

- Prioritize high-mileage and high-idle vehicles.
- Continue exploring potential use cases for EVs throughout the company.
- Focus on departments and locations with the greatest savings potential.
- Continue growing its internal EV fleet while closely monitoring their performance in the field with various departments to verify forecasted gains.

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

LYNNE MCCOLLUM

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

LYNNE MCCOLLUM
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Lynne McCollum, and my business address is One Energy Plaza, Jackson,
3 Michigan, 49201.

4 **QUALIFICATIONS**

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
7 as a Senior Tariff Analyst in the Rates and Regulation Department.

8 **Q. Please describe your educational and professional experience.**

9 A. I earned a bachelor’s degree from Sacramento State University and a paralegal degree from
10 MTI Department of Procedural Law in Sacramento, California. I worked for 10 years in
11 health care program management before accepting a Medicaid Eligibility Analyst position
12 with the State of Michigan in 1998. In 2002, I joined the State of Michigan Office on
13 Aging as a Department Specialist responsible for the administration of legal services, elder
14 abuse prevention, and the Medicaid Medicare Assistance Program. In 2013, I accepted a
15 position with Consumers Energy as a paralegal in the Legal department, providing support
16 for both regulatory and litigation matters. In 2018, I joined the Customer Clean Energy
17 department as a regulatory analyst, initially to support the Company’s Demand Response
18 (“DR”) regulatory cases. In 2019, my role was expanded to include development of
19 testimony and exhibits and leading case facilitation and reporting for customer regulatory
20 filings including general rate, DR, Energy Waste Reduction (“EWR”), Voluntary Green
21 Pricing, electric vehicle, and Integrated Resource Plan filings. In April 2021, I was
22 promoted to Strategic Consultant/Principal Regulatory Compliance Analyst and in 2024 I
23 was promoted to Regulatory and Compliance Manager, leading the team of regulatory

LYNNE MCCOLLUM
U-21981 DIRECT TESTIMONY

analysts supporting customer organization regulatory filings. In April 2025, I joined the Rates and Regulation Department as a Senior Tariff Analyst in the Rate Administration Section. My responsibilities center on the development and implementation of the Company's tariffs for both its Gas and Electric business as the Company's business model changes over time. I also perform regulatory research, implement rate orders, review legislation, and analyze the practices and tariff language of other utilities.

Q. Have you previously testified before the Michigan Public Service Commission ("MPSC" or the "Commission")?

A. Yes. I have filed direct testimony on behalf of the Company in the following cases:

Case No. U-21090	PURPA Avoided Cost Rates (2023 Solicitation);
Case No. U-21972	Voluntary Green Pricing Biennial Plan;
Case No. U-21090	PURPA Avoided Cost Rates (2022 Solicitation);
	and
Case No. U-20865	2020 EWR Reconciliation.

Additionally, I have supported development of Company witness testimony and exhibits in general rate and customer product cases since 2018.

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

A. The purpose of my direct testimony is to present the Company's proposed tariff language changes to its gas rate schedules.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit A-109 (LM-1)	Summary of Tariff Changes; and
Exhibit A-16 (LM-2)	Schedule F-5 Proposed Tariff Sheets (MPSC No. 3 Redlined Version).

LYNNE MCCOLLUM
U-21981 DIRECT TESTIMONY

1 **Q. Were these exhibits prepared by you or under your direction?**

2 A. Yes.

3 **Q. Please describe Exhibit A-109 (LM-1) – Summary of Tariff Changes.**

4 A. Exhibit A-109 (LM-1) provides a summary and explanation of the tariff changes proposed
5 in this filing to the tariffs in the Company's Gas Rate Book.

6 **Q. Please describe Exhibit A-16 (LM-2), Schedule F-5, Proposed Gas Tariff Sheets**
7 **(MPSC No. 3 Redlined Version).**

8 A. Exhibit A-16 (LM-2), Schedule F-5, contains, in redlined format, all proposals the
9 Company is making in this case to its current gas tariffs in the Company's Rate Book for
10 Gas Service (MPSC No. 3 – Gas). Existing tariff language proposed for deletion is
11 indicated by red strikethrough formatting. New tariff language being proposed is indicated
12 by blue, underline, italicized formatting. Some of these changes are discussed in the
13 testimony of other Company witnesses. For example, the rationale for price changes to the
14 Company's gas rate schedules are supported by the Company's rate design witness,
15 S. Austin Smith.

16 **Q. Please explain the changes on Tariff Sheet No. C-40.00.**

17 A. On Tariff Sheet No. C-40.00, the Company proposes changing the carrying cost rate to
18 9.19% and the discount rate to 7.43%. This change is further detailed in Company witness
19 Smith's Exhibit A-136 (SAS-10).

20 **Q. Please explain the proposed change to the Excess Peak Demand charge on Tariff**
21 **Sheet No. D-12.00.**

22 A. On Tariff Sheet No. D-12.00 the Company proposes removing the Residential Multifamily
23 Dwelling Service Rate A-1 Excess Peak Demand charge after review of the Company's

LYNNE MCCOLLUM
U-21981 DIRECT TESTIMONY

1 current connection costs showed little difference in connection costs between a Residential
2 Rate A customer and a Residential Rate A-1 customer. This proposal is presented in
3 testimony by Company witness Smith at Section IV: Summary of Proposed Rate Design
4 Changes.

5 **Q. Please explain the Allowance for Use and Loss changes to Tariff Sheet Nos. E-4.00,**
6 **E-13.00, and G-5.00.**

7 A. Tariff Sheet Nos. E-4.00, E-13.00, and G-5.00 revise the Allowance for Use and Loss
8 percent, referred to as Gas-in-Kind on Tariff Sheet No. E-13.00, supported by the testimony
9 of Company witness Timothy K. Joyce.

10 **Q. Please explain the proposed changes to Tariff Sheet No. E-8.00.**

11 A. On Tariff Sheet No. E-8.00 the Company proposes removing the Remote Meter charge for
12 customers taking service under Transportation Service Rates XLT and XXLT. As
13 described in the testimony of Company witness Smith at Section IV, the remote meter
14 charge was introduced over 20 years ago to recover costs associated with early
15 remote-metering technology and is no longer reflective of today's standard metering
16 capabilities.

17 **Q. Are there any other tariff changes being proposed by the Company?**

18 A. Yes. The remainder of the Company's proposed tariff changes, as noted in Exhibit A-109
19 (LM-1), Summary of Tariff Changes, are pricing changes to the Company's gas rate
20 schedules supported by Company witness Smith's Exhibits A-16 (SAS-7), Schedule F-3,
21 and A-137 (SAS-11).

22 **Q. Does this complete your direct testimony?**

23 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

LYNNE MCCOLLUM

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

1. Tariff Sheet No. C-40.00 – Rule C8.I (1) and (6) – **Customer Attachment Program** – Revised the carrying cost and discount rate.
2. Tariff Sheet Nos. D-2.30, D-10.00 through D-13.00, E-8.00, E-10.00 and E.13.00 – **Rate Schedules** – Revised prices.
3. Tariff Sheet No. D-12.00 – Monthly Rate – **Multifamily Dwelling Service Rate A-1** – Revised to reflect proposed removal of the Excess Peak Demand charge.
4. Tariff Sheet Nos. E-4.00, E-13.00 and G-5.00 – **Quantities** – Revised the Allowance for Use and Loss percent.
5. Tariff Sheet E-8.00 – Monthly Rate – **Transportation Service Rate** – Revised to reflect proposed removal of the Remote Meter charge for customers taking service under XLT and XXLT.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Proposed Gas Tariff Sheets (MPSC No. 3 – Redlined Version)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. C-40.00

(Continued From Sheet No. C-39.00)

C8. CUSTOMER ATTACHMENT PROGRAM (Contd)

I. Model Assumptions

Incremental Revenues:

The incremental revenues will be calculated based on current rates and a forecast of the timing and number of customer attachments as well as the customer's annual consumption levels.

Incremental Costs:

(1) Carrying Cost Rate

The carrying cost rate will be based on the weighted rate of debt, preferred stock, equity and associated taxes. The cost will be equal to and weighted in proportion to those authorized in the Company's most recent rate order. The carrying cost rate is equal to 9.19 ~~8.73~~%.

(2) Plant in Service

Plant in Service shall reflect the Company's estimated cost to construct distribution mains, customer service lines, meters and pressure regulators or regulating facilities for the Project. The timing of the facility investment, primarily service lines, will correspond with the projected timing of the customer attachments.

(3) Carrying Costs

The Carrying Costs will be the product of the average of beginning and end-of-year net plant, Plant in Service minus accumulated depreciation minus deferred taxes, multiplied by the Carrying Cost Rate, noted in paragraph 1 above.

(4) Depreciation

Depreciation expense will be the product of Plant in Service multiplied by the appropriate prescribed depreciation rates approved for the Company.

(5) Property Taxes and Other Operating Expenses

Property taxes will be the product of Plant in Service multiplied by the Company's average property tax rate. All other incremental operating expenses will be included as identified. Incremental O&M will at a minimum include a proportional cost for monthly meter reading, billing and mailing.

(6) Discount Rate

The discount rate will be a weighted rate of long-term debt, preferred stock and common equity. The cost will be equal to and weighted in proportion to those authorized in the Company's most recent rate order. Based on the Company's rate order in Case No. U-21981 ~~21806~~, the discount rate is equal to 7.43 ~~7.08~~%.

J. Customer Attachment Project Areas

All gas sold in any area specifically listed below is subject to the following Customer Attachment Project (CAP) charges. CAP areas and charges shall be added to or removed from the list from time to time by the Company.

(Continued on Sheet No. C-41.00)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. D-2.30

SURCHARGES

Rate Schedule	<u>Home Products Credit</u> <u>(Case No. U-21981)</u> <u>Effective for service rendered</u> <u>November 1, 2026 through</u> <u>September 30, 2027</u>	Home Products Credit (Case No. U-21806) Effective for service rendered November 1, 2025 through <u>October 31, 2026 2027</u>	~~Home Products Credit~~ ~~(Case No. U-21490)~~ ~~Effective for service rendered~~ ~~October 1, 2024 through~~ ~~October 31, 2025~~
Rate A	<u>\$(0.1245)/Mcf</u>	\$(0.1342)/Mcf	~~\$(0.1428)/Mcf~~
Rate A-1	<u>(0.1245)/Mcf</u>	(0.1342)/Mcf	~~(0.1428)/Mcf~~
Rate GS-1	<u>(0.0899)/Mcf</u>	(0.0909)/Mcf	~~(0.1033)/Mcf~~
Rate GS-2	<u>(0.0568)/Mcf</u>	(0.0552)/Mcf	~~(0.0623)/Mcf~~
Rate GS-3	<u>(0.0458)/Mcf</u>	(0.0446)/Mcf	~~(0.0446)/Mcf~~
Rate ST	<u>(0.0319)/Mcf</u>	(0.0313)/Mcf	~~(0.0290)/Mcf~~
Rate LT	<u>(0.0220)/Mcf</u>	(0.0220)/Mcf	~~(0.0201)/Mcf~~
Rate XLT	<u>(0.0169)/Mcf</u>	(0.0156)/Mcf	~~(0.0152)/Mcf~~
Rate XXL	<u>(0.0112)/Mcf</u>	(0.0074)/Mcf	~~(0.0085)/Mcf~~
Rate TOT	<u>NA</u>	NA	~~NA~~
Rate CC	<u>Per applicable distribution Rate</u> <u>Schedule</u>	Per applicable distribution Rate Schedule	~~Per applicable distribution Rate~~ ~~Schedule~~

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. D-10.00

RESIDENTIAL SERVICE RATE A

Availability

Subject to any restrictions, this rate is available to any customer desiring gas service for any usual residential use in private family dwellings; tourist homes, rooming houses, dormitories, nursing homes and other similarly occupied buildings containing sleeping accommodations for up to six persons; or multifamily dwellings containing two households served through a single meter.

This rate is not available for resale service, multifamily dwellings containing more than two living units served through a single meter or for tourist homes, rooming houses, dormitories, nursing homes and similarly occupied buildings containing sleeping accommodations for more than six persons or for any other Non-Residential usage.

Residences in conjunction with commercial or industrial enterprises and mobile home parks may take service on this rate only under the Rules and Regulations contained in the Company's Gas Rate Book.

Monthly Rate

Customer Charge

\$20.00 ~~\$17.00~~ per customer per month, plus

Income Assistance Service Provision:

When service is supplied to a Principal Residence Customer, where the total household income does not exceed 150% of the Federal Poverty level, a credit shall be applied during all billing months. The total household income is verified when the customer has provided proof that they have received, or are currently participating in, one or more of the following within the past 12 months:

1. A Home Heating Credit energy draft
2. State Emergency Relief
3. Assistance from a Michigan Energy Assistance Program (MEAP)
4. Medicaid

If a customer does not meet any of the above requirements, a low-income verification form will be provided by the Company for the customer to complete and return.

The monthly credit for the Income Assistance Service Provision (RIA) shall be applied as follows:

Income Assistance Credit: \$(20.00) ~~\$(17.00)~~ per customer per month

If a credit balance occurs, the credit shall apply to the customer's future gas utility charges.

Low Income Assistance Credit (LIAC):

Company selected Residential customers may receive LIAC for up to 12 consecutive months. The number of customers enrolled may be adjusted, at the Company's discretion, in order to disperse Commission-approved LIAC funding on an annual basis. Any shortfall in the dispensing of annual LIAC funds to qualified customers shall be carried over into the subsequent LIAC program year. LIAC customer selection will be based on highest need and with total household income that does not exceed 150% of the Federal Poverty level. The total household income is verified when the customer has provided proof that they have received, or are currently participating in, one or more of the following within the past 12 months:

1. Customers whose total household income does not exceed 150% of the Federal Poverty level within the last 12 months
2. Customers who have received assistance from a Michigan Energy Assistance Program (MEAP)
3. Customers who have received a Home Heating Credit energy draft
4. A State Emergency Relief program
5. Medicaid
6. Customers that have participated in a Supplementary Nutrition Assistance Program where the total household income does not exceed 150% of the Federal Poverty level within the last 12 months

If the customer does not meet any of the above requirements, a low-income verification form will be provided by the Company for the customer to complete and return.

The monthly credit for LIAC shall be applied as follows:

Low Income Assistance Credit: (\$30.27) per meter per month

If a credit balance occurs, the credit shall apply to the customer's future gas utility charges. Re-enrollment, if applicable, and confirmation of qualification is required for each annual period of participation.

Customers selected for LIAC, will not be eligible for the RIA provision while enrolled in LIAC.

(Continued on Sheet No. D-11.00)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. D-11.00

RESIDENTIAL SERVICE RATE A
(Continued From Sheet No. D-10.00)

Monthly Rate (Contd)

Distribution Charge

\$6.3310 ~~5.7786~~ per Mcf for all Mcf purchased.

Gas Cost Recovery Charge

The gas cost recovery factors are shown on Sheet No. D-5.00.

General Terms and Surcharges

This rate is subject to all general terms and conditions shown on Sheet No. D-1.00 and surcharges shown on Sheet Nos. D-2.00 through D-4.00.

Minimum Charge

The Customer Charge included in the rate, adjusted for qualified service provision credit and any applicable non-consumption based surcharges.

Due Date and Late Payment Charge

The due date of the customer's bill shall be 21 days from the date of transmittal. A late payment charge of 2%, not compounded, of the portion of the bill, net of taxes, shall be assessed to any bill that is delinquent. A customer who participates in the Winter Protection Plan or who is 65 years of age or older and who has notified the Company the customer is 65 years of age or older, shall be exempt from a late payment charge as described in Rule B2., Consumer Standards and Billing Practices for Electric and Natural Gas Service, R 460.125, Late payment charges.

Term and Form of Contract

Service under this rate shall not require a written contract.

M.P.S.C. No. 3 - Gas
Consumers Energy Company

MULTIFAMILY DWELLING SERVICE RATE A-1

Availability

Subject to any restrictions this rate is available to any multifamily dwelling installation containing more than two households served through a single meter and where, in the Company's opinion, it is impractical to provide gas service to each household through an individual meter. This rate is not available for multifamily dwellings containing two households served through a single meter.

Monthly Rate

Customer Charge

~~\$20.00~~ \$17.00 per month

Distribution Charge

~~\$6.3310~~ \$5.7786 per Mcf for all Mcf purchased plus
~~\$0.1035 per Mcf of excess peak demand~~

Gas Cost Recovery Charge

The gas cost recovery factors are shown on Sheet No. D-5.00.

General Terms and Surcharges

This rate is subject to all general terms and conditions shown on Sheet No. D-1.00 and surcharges shown on Sheet Nos. D-2.00 through D-4.00.

Minimum Charge

The Customer Charge included in the rate, adjusted for qualified service provision credit and any applicable non-consumption based surcharges.

Due Date and Late Payment Charge

The due date of the customer's bill shall be 21 days from the date of mailing. A late payment charge of 2% of the unpaid balance outstanding, net of taxes, shall be assessed to any bill which is not paid in full on or before the due date shown thereon.

~~Determination of Excess Peak Demand~~

~~The Mcf used for billing the excess demand shall be equal to all usage in excess of 92 Mcf in the peak month. The peak month shall be that month in the latest 12 months in which the greatest consumption occurred.~~

~~If 12 months of historical data are not available for a premises, then the Company shall use an estimated peak usage while accumulating 12 months of data. If, during the accumulation of 12 months of data, any month's actual usage exceeds the original estimated peak usage, then the actual usage shall become the new peak demand. However, if after 12 months the estimated peak usage exceeds the actual peak month's usage, then the customer's bills shall be recalculated using the actual and any overcharge shall be refunded with interest.~~

Term and Form of Contract

Service under this rate shall not require a written contract.

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. D-13.00

GENERAL SERVICE RATE (Rates GS-1, GS-2 and GS-3)

Availability

Subject to any restrictions, this rate is available to any customer desiring gas service for any Non-Residential usage which includes tourist homes, rooming houses, dormitories, nursing homes and similarly occupied buildings containing sleeping accommodations for more than six persons. Gas shall not be purchased under any other rate for any equipment or process which uses gas under this rate.

This rate is not available for residential usage or for resale purposes.

Monthly Rate

	Service Category		
	GS-1	GS-2	GS-3
Principal Customer Charge	\$ <u>27.00</u> ~~21.00~~ /meter	\$ <u>144.85</u> ~~133.73~~ /meter	\$ <u>375.28</u> ~~330.17~~ /meter
Contiguous Customer Charge	<u>27.00</u> ~~21.00~~ /meter	<u>75.00</u> ~~45.00~~ /meter	<u>185.00</u> ~~125.00~~ /meter
Distribution Charge	\$ <u>5.7171</u> ~~4.9461~~ /Mcf	\$ <u>4.3027</u> ~~3.5935~~ /Mcf	\$ <u>4.0262</u> ~~3.3578~~ /Mcf

Selection of Service Category and Rates

Customers may choose the Service Category under which they take service, consistent with the provisions of Rules C4.1, Classes of Service, and C4.2., Choice of Rates. When the Customer is selecting its initial Service Category, the Company must advise them that the estimated economic breakeven point between GS-1 and GS-2 is approximately 1,000 Mcf per year and the estimated economic breakeven point between GS-2 and GS-3 is approximately 10,000 Mcf per year. Economic breakeven points may vary based on the usage and number of customer contiguous accounts. After the initial selection is made, then it is the customer's responsibility to determine when it is appropriate to switch Service Categories, as permitted by Rule C4.2, Choice of Rates.

Gas Cost Recovery Charge

The gas cost recovery factors are shown on Sheet No. D-5.00.

General Terms and Surcharges

This rate is subject to all general terms and conditions shown on Sheet No. D-1.00 and surcharges shown on Sheet Nos. D-2.00 through D-4.00.

Minimum Charge

The Customer Charge included in the rate and any applicable non-consumption based surcharges.

Due Date and Late Payment Charge

The due date of the customer's bill shall be 21 days from the date of mailing. A late payment charge of 2% of the unpaid balance outstanding, net of taxes, shall be assessed to any bill which is not paid in full on or before the due date shown thereon.

Term and Form of Contract

Service under this rate shall not require a written contract.

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. E-4.00

(Continued From Sheet No. E-3.00)

E3. GAS QUALITY (Contd)

E3.2 Heating Value.

The Gas transported shall have a Total Heating Value Per Cubic Foot of not less than 965 Btu nor more than 1,110 Btu at a base pressure of 14.65 psi and 60 degrees Fahrenheit. Unless otherwise agreed, differences in the thermal value of the Gas transported shall be determined by the Company based on the assumption that the Gas delivered to the customer has a Btu content per Mcf that is the same as the Company's then-current system average Btu content per Mcf which shall be redetermined Monthly.

E4. SERVICE REQUIREMENTS

E4.1 Quantities.

- A. The customer may deliver, or cause to be delivered, and the Company shall, subject to other provisions in the Company's Gas Rate Book, accept quantities of Gas up to the MDQ specified in the transportation contract. If deliveries to the Company exceed the agreed upon quantities, the Company may terminate the contract upon 30 Days' written notice to the customer.
- B. Deliveries to the Company may be made by or on behalf of the customer at existing interconnections between the gas transmission facilities of the Company and other pipeline systems. These points of receipt shall be those that are agreed to from time to time by the customer and the Company.
- C. The Company shall endeavor to deliver Gas to the customer, and the customer shall endeavor to take a quantity of Gas that is thermally equivalent to the Gas that it delivers or causes to be delivered. Such delivery on the part of the Company and take on the part of the customer is to be made at the outlet of the Company gas meter(s) identified in the transportation contract.
- D. The Company shall retain 2.38 ~~2.57~~ percent of all Gas received from customers being billed for distribution service on the Transportation Service Rate at the points of receipt to compensate it for the Company's use and lost and unaccounted for Gas on the Company's system ("Allowance for Use and Loss"). Gas received from customers being billed for distribution services on the General Service Rate shall not be subject to this provision. This volume shall not be included in the quantity available for delivery to the customer.
- E. If, in any month, the quantity of Gas received by the Company at the points of receipt, less the Allowance for Use and Loss, is more than the quantity of Gas taken by the customer at the points of delivery, then the difference shall be retained by the Company and delivered to the customer in those succeeding months when the quantity of gas received by the Company is less than the customer's requirements. Such subsequent deliveries to the customer shall be subject to the withdrawal limitations identified on the Transportation Service Rate Schedule. Should the aggregate quantity of gas, less the Allowance for Use and Loss, retained by the Company at any month-end exceed 10% of the Annual Contract Quantity for ST, LT and XLT, or exceed 4% of the Annual Contract Quantity for XXLT, then the Company shall have the right: (1) to refuse to receive any additional quantity of gas for that customer until the Company has satisfied itself that the quantity of gas retained for the customer is less than the Authorized Tolerance Level and (2) to assess the customer a Load Balancing Charge for any month-end balance that exceeds the Authorized Tolerance Level.
- F. After termination of the customer's Gas transportation contract, the customer must withdraw or transfer any Gas retained by the Company within 60 days. If the customer has not withdrawn or transferred all of the Gas retained by the Company within 60 days, the Company will cash out the remaining balance at a rate of \$1.00 per Mcf.

(Continued on Sheet No. E-5.00)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

TRANSPORTATION SERVICE RATE
(Rates ST, LT, XLT and XXLT)

Availability

Subject to any restrictions, service under this Rate Schedule is available to any customer that could otherwise purchase gas under another Company Rate Schedule. A customer selecting transportation service, is not eligible to receive Gas under any of the Company's firm Gas sales rates for a minimum period of one year from the date the customer commenced taking Transportation Service.

Service provided to Rate Schedule XXLT is available to customers with an annual minimum throughput of 4,000,000 Mcf, subject to an annual review to ensure the minimum requirement is met. Customers served under the XXLT Rate Schedule will be required to operate at a contracted Authorized Tolerance Level of 4% or less.

Under this Rate Schedule, the Company shall transport Gas for the customer to the interconnections between the Company's facilities and those of the customer (points of delivery) from the interconnections between the Company's facilities and those of a third party that delivers Gas to the Company for redelivery to the customer (points of receipt).

A producer or a broker may contract for service on this Rate Schedule for the transportation of Gas from a wellhead through the Company's system to another pipeline, for the transportation of Gas from one pipeline to another pipeline or for the transportation of Gas from a specified interconnection between the Company's facilities and those of a third party for delivery to a specific customer within the Company's integrated distribution system, provided that all Gas transported for a producer or broker pursuant to this Rate Schedule is consumed in and never leaves the State of Michigan after entering the Company's system.

All customers requesting transportation service under this Rate Schedule shall make written application for such service on a form provided by the Company.

Monthly Rate

	Service category			
	ST	LT	XLT	XXLT
Principal Customer Charge	~~\$1,320.00~~ ~~1,160.00~~ /meter	~~\$5,223.81~~ ~~4,685.01~~ /meter	~~\$19,969.91~~ ~~18,384.33~~ /meter	~~\$66,237.89~~ ~~35,089.70~~ /meter
Contiguous Customer Charge	~~195.00~~ ~~105.00~~ /meter	~~210.00~~ ~~105.00~~ /meter	~~400.00~~ ~~105.00~~ /meter	NA
Remote Meter Charge	~~NA~~	~~NA~~	~~70.00~~ /meter	~~70.00~~ /meter
Transportation Rates	~~2.2067~~ ~~1.8446~~ /Mcf	~~1.7382~~ ~~1.4216~~ /Mcf	~~1.3843~~ ~~1.0928~~ /Mcf	~~0.8679~~ ~~0.4601~~ /Mcf *

*The XXLT Transportation Rate reflects a contracted Authorized Tolerance Level of 4%.

Selection of Service Category and Rates

A customer may choose the Service Category under which they take service, consistent with the provisions of Rules C4.1, Classes of Service, and C4.2, Choice of Rates. When the customer is selecting its initial Service Category, the Company must advise them that the estimated economic breakeven point between ST and LT is approximately 100,000 Mcf per year, the estimated economic breakeven point between LT and XLT is approximately 500,000 Mcf per year. The estimated economic breakeven points assume an 8.5% ATL for rates ST, LT and XLT and exclude contiguous customer charges and all surcharges. Economic breakeven points may vary based on the throughput, contracted ATL and number of customer contiguous accounts. After the initial selection is made, then it is the customer's responsibility to determine when it is appropriate to switch Service Categories, as permitted by Rule C4.2, Choice of Rates.

(Continued on Sheet No. E-9.00)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. E-10.00

TRANSPORTATION SERVICE RATE
(Rates ST, LT, XLT and XXL)
(Continued From Sheet No. E-9.00)

Monthly Rate (Contd)

Load Balancing Charge (Contd)

ST, LT and XLT customer's ATL shall be 8.5% of the Customer's ACQ unless the customer contracts for a different percent in accordance with the following table. The Transportation Charge shall be adjusted as follows except for Transportation customers served on XXL, where service is offered at 4% ATL or less:

Authorized As a % of ACQ <u>Tolerance Level</u>	ST, LT and XLT Transportation <u>Charge Adjustment</u>	XXLT Transportation <u>Charge Adjustment</u>
2.0%	\$(<u>0.1459</u> ~~0.0738~~) Per Mcf	\$(<u>0.0449</u> ~~0.0227~~)/Per Mcf
4.0%	\$(<u>0.1010</u> ~~0.0511~~) Per Mcf *	No Change*
6.5%	\$(<u>0.0449</u> ~~0.0227~~) Per Mcf	N/A
7.5%	\$(<u>0.0225</u> ~~0.0113~~) Per Mcf	N/A
8.5%	No Change	N/A
9.5%	\$ <u>0.0225</u> ~~0.0113~~ Per Mcf	N/A
10.5%	\$ <u>0.0449</u> ~~0.0227~~ Per Mcf	N/A

*For XXL customers, the 4% ATL adjustment is reflected in their Transportation Rate, therefore there is no additional ATL adjustment required.

The monthly injection of Gas into the customer's ATL shall be at the customer's discretion except in September and October when any monthly injections in excess of 1.43% of the customer's ACQ, will be charged the Load Balancing Charge. A balance transfer between customers that does not directly result in any physical injection of gas into the Company's system may, in the Company's discretion, be exempted from the 1.43% monthly limit. Such a waiver may be granted once within any 12-month period.

Due Date and Late Payment Charge

The due date of the customer's bill shall be 21 Days from the date of mailing. A late payment charge of 2% of the unpaid balance outstanding, net of taxes, shall be assessed to any bill which is not paid in full on or before the due date shown thereon.

Metering Requirements

All eligible XLT and XXL customers shall be required to provide, at no expense to the Company, a dedicated telecommunication line(s) as required for metering purposes, to a location specified by the Company. The communication link must be installed and operating prior to a transportation customer receiving service under Service Category XLT or XXL. The customer shall be responsible for (i) ensuring that the communication links allow access to the meter data by the Company and are compatible with the Company's metering and billing systems, and (ii) all associated costs relating to the communication links including other accompanying equipment and monthly fees. The Company shall own and maintain the actual metering equipment and modem

(Continued on Sheet No. E-11.00)

M.P.S.C. No. 3 - Gas
Consumers Energy Company

TRANSMISSION ONLY TRANSPORTATION SERVICE RATE TOT

Availability

Subject to any restrictions, service under this Rate Schedule is available to customers desiring to move gas through the Company's transmission system to a point of delivery off the Company's distribution system only. This rate is not available to power generation customers.

Under this Rate Schedule, the Company will transport natural gas volumes for a customer on the Company's gas transmission system only. The Company, in its sole judgement, shall have the right to determine if capacity is available for transportation under this Rate Schedule.

All customers requesting transmission service under this Rate Schedule shall make written application for such service on a form provided by the Company. The point(s) of receipt and point(s) of delivery shall be mutually agreed upon by Company and Customer and set forth in the contract. Any rates, terms and conditions not covered by Tariff shall be as contained in Company's standard Contract for Transmission Only Transportation Service.

Monthly Rate

Transmission Only Charge

~~\$0.7114~~ ~~0.6229~~ per Mcf

Operational Balance Agreement (OBA)

The aggregate quantity of gas delivered by the Company to the customer's delivery point(s), may be inadvertently greater or less than the aggregate quantity of gas nominated for delivery by the customer. This inadvertent over-delivery or under-delivery of gas by the Company to the customer relative to the nominated quantities shall be governed by a separate OBA with a delivery point operator.

The Company reserves the right to require the customer to balance nominations with physical deliveries on a daily basis, and to reduce the Operational Imbalance to the maximum thresholds identified in the OBA or to a level determined by the Company if no OBA is applicable upon notification, by the Company that such an action is required, and the customer agrees to take the action(s) necessary to reduce the imbalance. If the customer does not make a nomination to reduce the imbalance within 24 hours of such notification by the Company, the customer will pay a penalty of \$10/MMBtu per day for each MMBtu of the daily Operation Imbalance.

Gas-in-Kind

Company shall retain ~~2.38~~ ~~2.57~~% of all gas received at the Receipt Point(s) to compensate it for the allowance for company-use and lost-and-unaccounted-for gas on Company's system. This volume shall not be included in the quantity available for delivery to Customer. In no event will Customer pay Gas-in-Kind more than once on the same volumes.

Due Date and Late Payment Charge

The due date of the customer's bill shall be 21 days from the date of mailing. A late payment charge of 2% of the unpaid balance outstanding, net of taxes, shall be assessed to any bill which is not paid in full on or before the due date shown thereon.

Metering Requirements

All eligible Customers metering requirements shall be in alignment with their delivery point operator according to their Interconnect Agreement.

General Terms and Surcharges

This rate is subject to all general terms and conditions shown on Sheet No. D-1.00 and surcharges shown on Sheet Nos. D-2.00 through D-4.00.

Term and Form of Contract

All service under this rate shall require a written contract with a minimum term of one year and month-to-month thereafter which must be approved by an authorized agent before it shall be binding upon the Company. Customers who choose to terminate their contract shall be required to give the Company a ninety (90) day written notice.

M.P.S.C. No. 3 - Gas
Consumers Energy Company

Sheet No. G-5.00

(Continued From Sheet No. G-4.00)

G4. SERVICE REQUIREMENTS

G4.1 Quantities.

- A. The Group Administrator may deliver, or cause to be delivered, and the Company shall, subject to other provisions in the Company's Gas Rate Book, accept quantities of gas up to the GMDQ specified in the Group transportation service contract.
- B. Deliveries to the Company may be made by or on behalf of the Group Administrator at existing interconnections between the gas transmission facilities of the Company and other pipeline systems. These points of receipt shall be those that are agreed to from time to time by the Group Administrator and the Company.
- C. The Company shall retain 2.38 ~~2.57~~ percent of all gas received for transportation customers in the Group to compensate it for the Company's use and lost and unaccounted for on the Company's system ("Allowance for Use and Loss"). This volume shall not be included in the quantity available for delivery to transportation customers in the Group.
- D. The amount of gas available for use by the Group will be calculated as the amount of gas received by the Company less the allowance for gas-in-kind, plus the net effect of any balance transfers, plus any withdrawals from the Group's storage balance. For purposes of this calculation, gas transferred to or from another Group or transportation customer during the billing month shall not be considered.

If, in any month, the amount of gas available for use by the Group is more than the quantity of gas taken by the transportation customers enrolled in the Group at their points of delivery, then the difference shall be retained by the Company and delivered to the Group in those succeeding months when the amount of gas available for use by the Group is less than the requirements of those transportation customers enrolled in the Group. Such subsequent deliveries to the Group shall be subject to the withdrawal limitations identified under the Monthly Fees Applicable to the Group Administrator section of the Group Transportation Service Program. Should the amount of gas available for use by the Group at any month-end exceed the GATL, then the Company shall assess the Group Administrator a Load Balancing Charge for any month-end balance that exceeds the GATL.

- E. In the event of the termination of a Group Administrator's contract, the Group Administrator must transfer any gas retained by the Company to another Group or to a transportation customer taking service under a Transportation Service Rate Schedule within 60 days. If the Group Administrator has not withdrawn or transferred all of the gas retained by the Company within 60 days, the Company will cash out the remaining balance at a rate of \$1.00 per Mcf.
- F. Upon joining a Group, any volumes in the transportation customer's Authorized Tolerance Level balance will transfer into the Group Administrator's Group Authorized Tolerance Level balance. Upon leaving a Group, the transportation customer's Authorized Tolerance Level will follow the transportation customer and the Group Administrator's Group Authorized Tolerance Level will be reduced by the transportation customer's Authorized Tolerance Level.

(Continued on Sheet No. G-6.00)

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

KRISTINE A. PASCARELLO

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

KRISTINE A. PASCARELLO
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1 **Q. Please state your name and business address.**

2 A. My name is Kristine A. Pascarello, and my business address is 1945 West Parnall Road,
3 Jackson, Michigan 49201.

4 **Q. By whom are you employed?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”).

6 **Q. What is your current position with Consumers Energy?**

7 A. I am a Senior Strategy Manager in the Gas Strategy department. I have held this position
8 since July 2019.

9 **Q. What are your responsibilities as Senior Strategy Manager?**

10 A. I perform the asset lifecycle oversight, guidance, and leadership of the Natural Gas
11 Delivery Plan (“NGDP”) development, implementation, recovery, and verification of
12 results focused on the Distribution assets.

13 **Q. What other relevant experience do you have?**

14 A. I have worked for Consumers Energy for 26 years. I have been a Senior Strategy Manager
15 in Gas Strategy since 2019. I have also served the Company as a Project Manager,
16 Deployment Lead, Senior Engineer Lead, and Engineer. Prior to becoming a Senior
17 Strategy Manager, I spent 10 years on the Smart Energy Advanced Metering Infrastructure
18 (“AMI”) and Gas Automated Meter Reading (“AMR”) project teams where I was
19 responsible for leading field implementation activities required to install electric smart
20 meters and gas communication modules. This involved business process redesign and
21 system requirements definition, working with a wide variety of stakeholders including
22 customers, municipalities, and various Company departments such as Field Operations,
23 Supply Chain, Customer Contact Center, Rates, Damage Claims, and Security, and

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1 successfully implementing new technology while delivering a high-quality customer
2 experience. I was also the contract administrator and Company supervisor for the meter
3 installation vendor. Before joining the AMI/AMR projects, I was in the Gas Engineering
4 department. I was the Gas Measurement Lead for 2.5 years, the Electrical, Instrumentation,
5 and Controls (“EI&C”) Lead for 5 years, and a General/Senior Engineer for 2.5 years. As
6 the Gas Measurement Lead, I led the Measurement Center of Excellence, was responsible
7 for Lost and Unaccounted for Gas (“LAUF”) projects including the development of
8 standardized gas measurement processes, and the monitoring of LAUF, including
9 implementation of Flow-Cal gas measurement software. During my 7.5 years as the EI&C
10 Lead/Engineer, I was responsible for project management and electrical design of the
11 Company’s natural gas facilities, including managing the Gas Transmission and
12 Distribution Supervisory Control and Data Acquisition (“SCADA”) system designs and
13 installations. Prior to joining Consumers Energy, I worked as an Electrical Engineer at
14 Dart Container for four years where I was responsible for machine control design,
15 including PLC programming and variable frequency drives. I started my career as an
16 Electrical Engineer at Florida United Engineers, where I was a contract Electrical Engineer
17 for Florida Power & Light specializing in generation power distribution processes and
18 power plant control/alarm designs for seven years. I have a total of 37 years of experience,
19 with 33 years in the utility industry.

20 **Q. Are you a member of any professional societies or trade associations?**

21 A. Yes. I am currently a member of the Engineering Society of Detroit. I am also a certified
22 Project Manager through the Project Management Institute (“PMI”). I have represented
23 the Company at the American Gas Association (“AGA”) where I served as a Distribution

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1 Measurement Committee (“DMC”) officer, chaired the AMI/AMR subcommittee, and
2 delivered presentations during conferences. I have also served on the American National
3 Standards Institute (“ANSI”) B109 working committee which governs the design,
4 performance, and testing standards for residential, commercial, and industrial gas meters
5 and service regulators.

6 **Q. What is your formal educational experience?**

7 A. I graduated from Lake Superior State University with a Bachelor of Science degree in
8 Electrical Engineering Technology. I graduated with an Associate of Science degree in
9 Electronics from Lansing Community College. I also hold Master and Associate
10 Certificates in Project Management from George Washington University, and Gas
11 Measurement Fundamentals Certification from the Gas Certification Institute. In addition,
12 I passed the Fundamentals of Engineering exam in 2004.

13 **Q. Have you previously testified before the Michigan Public Service Commission**
14 **(“MPSC” or the “Commission”)?**

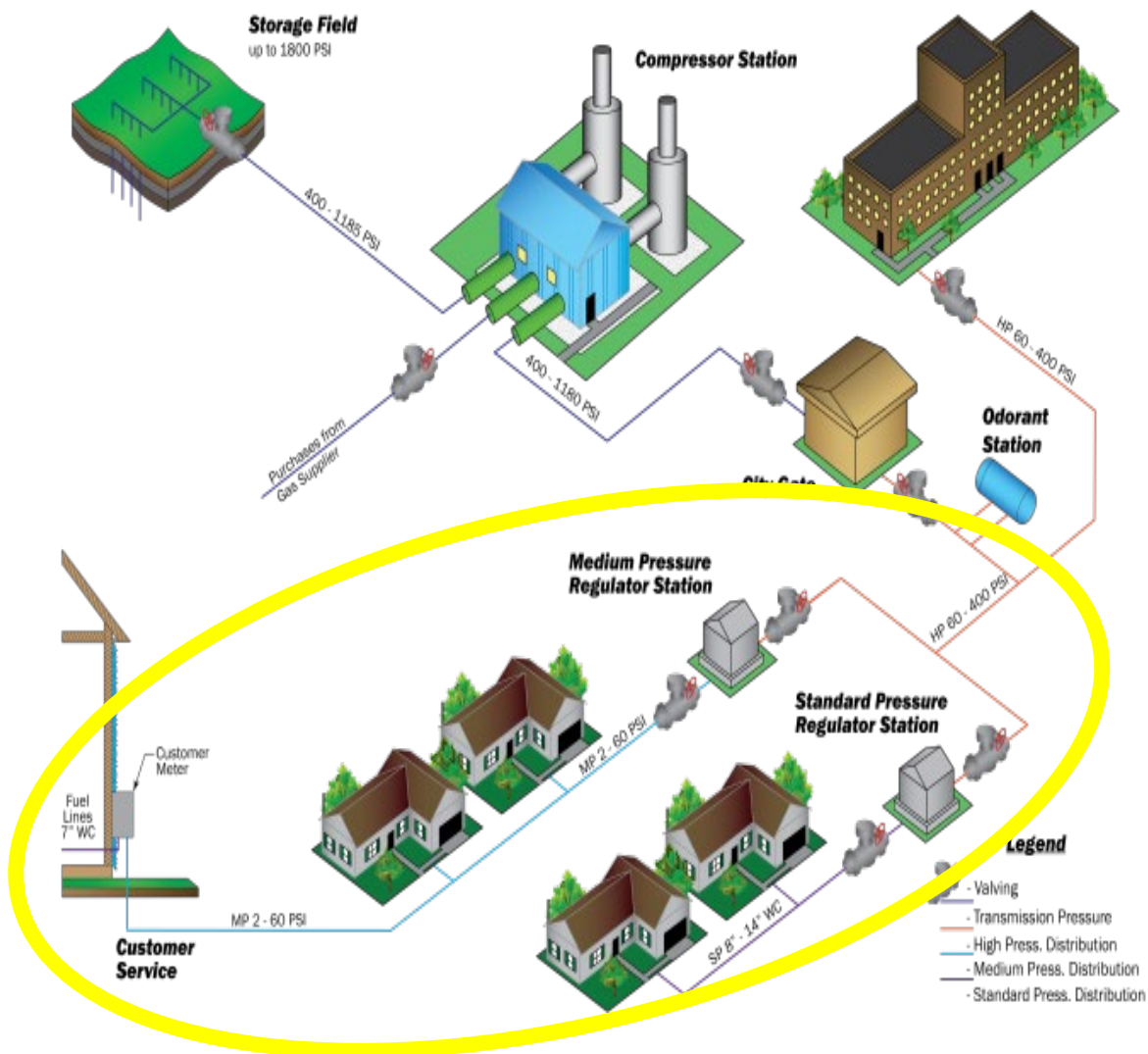
15 A. Yes, I testified in Case Nos. U-20893, U-21148, U-21308, U-21490, and U-21806.

16 **Q. What is the purpose of your direct testimony?**

17 A. The purpose of my direct testimony is to explain the Company’s request for rate relief as
18 it relates to Gas Engineering and Supply (“GE&S”) Operating and Maintenance (“O&M”)
19 expenses, and certain gas distribution capital investments that are intended to keep the
20 system safe and reliable while providing affordable and clean energy to customers. The
21 Company’s sustainable and equitable approach to gas distribution investment benefits all
22 customers, including our more vulnerable populations, with cleaner and safer
23 infrastructure. This includes engineering, strategy, and gas supply for this system as well

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as gas control of the transmission system. The distribution assets are the portion of the Company system that receives the gas at the outlet of the Company's city gates and delivers the gas to customers, a portion of which is monitored by Gas Control. In the diagram below, these assets are inside the yellow highlighted section.



These expenditures are primarily related to the operation of the Company's gas mains, services, and meters downstream of the city gates. These investments will ensure the continued safe delivery of gas through this system to customers.

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I have divided my direct testimony into two parts: (i) a description of the O&M expenses related to the Company's GE&S department; and (ii) a description of the Company's gas distribution capital expenditures that I am sponsoring for 2024, 2025, the 10 months ending October 31, 2026, and for the projected test year 12 months ending October 31, 2027. My direct testimony covers the capital cost for the Material Condition and Gas Operations Other programs. The remaining capital programs for Distribution are sponsored by Company witness Lincoln D. Warriner.

Q. How does your direct testimony relate to the NGDP presented by Company witness Trevor M. Blattner ?

A. Mr. Blattner's direct testimony discusses the Company's NGDP. My direct testimony contains elements that support the objectives of the NGDP: providing gas supply that is safe, reliable, affordable, and clean. The GE&S department is responsible for the engineering, design, strategy, project management, construction support, and gas supply and control associated with execution of the NGDP. The distribution capital programs represented in my direct testimony work toward achieving the NGDP's objectives of eliminating vintage materials and leaks, as well as providing safe and reliable service.

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-110 (KAP-1)	Summary of Actual & Projected O&M Expenses, Gas Engineering and Supply;

Exhibit A-111 (KAP-2)	Detailed Summary of Actual & Projected O&M Expenses, Gas Engineering and Supply;

Exhibit A-12 (KAP-3)	Schedule B-5.7	Summary of Actual and Projected Capital Expenditures, Distribution

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Plant – Material Condition and Gas
Operations Other;

Exhibit A-112 (KAP-4)

Actual & Projected Gas Capital
Expenditures - Material Condition
Program;

Exhibit A-113 (KAP-5)

Actual & Projected Gas & Common
Capital Expenditures - Gas
Operations Other Program;

Exhibit A-114 (KAP-6)

Detailed Summary of Actual and
Projected Capital Expenses –
Enhanced Infrastructure
Replacement Program; and

Exhibit A-115 (KAP-7)

Projected Capital Expenditures -
Distribution Plant - Material
Condition and Gas Operations Other,
Summary of Actual & Projected Gas
Capital Expenditures.

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

A. Yes.

Q. Please summarize your direct testimony.

A. First, I will address the reasonable and necessary O&M expenses for the Company's GE&S department, which are described on Exhibit A-110 (KAP-1). The total O&M expenses were \$18,556,000 in 2024; and are projected to be \$19,673,000 for the test year 12 months ending October 31, 2027, as set forth on this exhibit on line 5, columns (b) and (c).

Second, my direct testimony also supports certain Gas Distribution capital investments through October 31, 2027, which are shown on Exhibit A-12 (KAP-3), Schedule B-5.7. The total Gas Distribution capital expenditures presented in my direct testimony were \$303,846,000 in 2024 and are projected to be \$372,215,000 for 2025; \$338,000,000 for the 10 months ending October 31, 2026; and \$429,770,000 for the

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1 projected test year 12 months ending October 31, 2027; as set forth on this exhibit on line 3,
2 columns (b), (c), (d), and (f), respectively.

3 **Q. How has the Company projected its O&M expenses for the test year 12 months ending**
4 **October 31, 2027?**

5 A. The Company has projected its O&M expenses to meet customer service and safety
6 requirements. This projection considers several factors, including annual merit increases
7 for the GE&S department, and specific program expenses necessary to ensure customer
8 safety, meet regulatory requirements, and provide reliable service to customers. The
9 Company started with the historical 2024 O&M expenses, which include GE&S personnel
10 assigned to the department for the full year. The test year projections are included in Exhibit
11 A-111 (KAP-2). Lastly, the projection methodologies vary among the different O&M
12 programs and are described within each respective section later in this direct testimony.

13 **Q. Please describe the methodology used to project the Company's Gas Distribution**
14 **capital expenditures for the years 2025 through the 12 months ending October 31,**
15 **2027.**

16 A. The projected capital expenditures for this period are based on projected costs for
17 individual projects and programs, using historical costs and adjusting for market conditions
18 impacting areas such as materials and outside services, necessary to ensure customer
19 safety, meet regulatory requirements, and provide reliable service to customers. The
20 Company used a monthly cash flow average methodology, applying historical data to
21 forecast expenditures over the test period.

GAS ENGINEERING AND SUPPLY DEPARTMENT O&M EXPENSES

Q. Please explain the source of the 2024 actual O&M expenses for the GE&S department expenses shown on Exhibit A-110 (KAP-1), line 5.

A. The 2024 actual O&M expense amount of \$18,556,000 for the GE&S department was taken from Consumers Energy's internal reporting records. This total amount includes both labor and non-labor O&M expenses for this department, and the labor, material, contractor, non-labor overheads, and other non-labor expenses are detailed on Exhibit A-111 (KAP-2), pages 1 through 3. The 2024 level of expense allowed the Company to provide the engineering and support needed to serve 1.8 million natural gas customers and complete reasonable and necessary investments in 2024. The projected expenses for the test year 12 months ending October 31, 2027, are \$19,673,000 as shown on Exhibit A-110 (KAP-1), line 5, column (c). The calculation of expenses in the test year of this case is further described below.

Q. Please explain the derivation of the GE&S department O&M expenses for the test year as shown on Exhibit A-110 (KAP-1), line 5, column (c).

A. First, the Company has projected expenses for engineering and supply personnel, based on the number of employees needed to implement the gas system investments as described in the NGDP. Each department within GE&S analyzed the work activities and factored in productivity improvements to determine the necessary number of employees at 570 for the test year 12 months ending October 31, 2027, compared to the 2024 actual of 560 employees. The analysis of work activities is also used to determine how much of the total department expenses should be accounted for as O&M versus capital for each department. The O&M percentage for each department is applied to the total department projected

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1 expenses to derive the O&M portion shown in Exhibit A-110 (KAP-1) and detailed in
2 Exhibit A-111 (KAP-2). This staff will be responsible for engineering planning,
3 engineering design, permitting, and construction support for the gas system enhancements
4 as well as gas compliance, geospatial management, strategy, damage claims/prevention,
5 enterprise corrective action, gas control, supply, transport and customer choice, and system
6 and operations planning.

7 Second, the Company also has projected O&M expenses for the Storage Integrity
8 Management Program (“SIMP”), the Advanced Methane Detection (“AMD”) Program,
9 and the Geospatial Inventory and Modeling Program. The details of these programs and
10 the associated O&M expenses are described later in this testimony.

11 The resulting projected costs for the 12 months ending October 31, 2027 are
12 \$19,673,000 and can be found on Exhibit A-111 (KAP-2), page 3, line 14, column (c).
13 These expense levels for the GE&S department will allow the Company to meet customer
14 service, deliverability, and safety requirements in the test year.

15 **Q. Are there any Employee Incentive Compensation Program (“EICP”) O&M expense**
16 **dollars included in your exhibits?**

17 A. No, there are not. The direct testimony and exhibits of Company witness Amy M. Conrad
18 contain the EICP O&M expense dollars.

19 **Q. Please briefly describe each of the departments within GE&S, as listed on Exhibit**
20 **A-111 (KAP-2).**

21 A. GE&S is described in four major departments:

- 22 • Gas Project Management;

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- Gas Asset Management – Consists of Gas Engineering - Distribution, Gas Engineering – Transmission, System Integrity, which includes SIMP, and Gas Compression Engineering;
- Gas Engineering Support – Consists of Gas Strategy, Gas Regulatory and Compliance, which includes the AMD Program, Geospatial Management and Data Quality, which includes the Geospatial Inventory and Modeling Program, Damage Claims/Prevention, and Engineering Management; and
- Gas Management Services.

Q. Please briefly describe page 4 of Exhibit A-111 (KAP-2).

A. Page 4 of Exhibit A-111 (KAP-2) illustrates how historical O&M costs are adjusted to reflect inflation, additional cost increases, and anticipated productivity gains. Column (b) presents the historical O&M expense. Column (c) shows the expected increase in these costs based solely on projected inflation rates. Column (d) captures cost increases beyond inflation, net of any projected productivity improvements. Column (e) represents the total projected test year O&M expense, calculated as the sum of columns (b), (c), and (d).

Q. Please describe the activities of the Gas Project Management department.

A. Gas Project Management provides project oversight and management for certain programs and projects that are required by the business or directly for a customer. These programs and projects are usually large or complex in nature and require project management methodology to ensure predictable results. The Gas Project Management team includes Company-employed and contract project managers who oversee projects and ensure that each project meets the intended scope, schedule, and cost projection.

The projected O&M expense for Gas Project Management is \$1,147,000 for the 12 months ending October 31, 2027, as shown on Exhibit A-111 (KAP-2), page 1, line 1, column (c), and consists of the O&M portion of the salaries and expenses for project managers and their Company-employed and contracted support staff. The Gas Project

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1 Management Department's O&M expenses fluctuate based on the percentage of labor
2 charged to capital projects. In 2024, only 4% of labor costs were allocated to O&M due to
3 increased direct capital charging. For the test year, the Company projects a return to the
4 standard 8% O&M allocation, resulting in higher labor-related O&M expenses. The
5 increase in non-labor expenses is driven by project tracking software licensing and support
6 expenses of \$262,108 that transitioned to O&M beginning in 2026. This increase is
7 partially offset by a reduction in other non-labor expenses, such as training and travel,
8 resulting in a projected increase of \$191,949, from 2024 to the test year. The support staff
9 for Gas Project Management ensures project schedules are produced, tracks project
10 expenses, provides construction oversight and inspection, and ensures appropriate
11 resources are available for the project.

12 **Q. What operating sections are included in the Gas Asset Management department?**

13 A. The Gas Asset Management department consists of all engineering and technical support
14 for planning, designing, performing risk assessment, and construction support of the
15 transmission mainlines, distribution mains, storage laterals and wells, service lines, meter
16 installations, regulating stations, compressor stations, and other infrastructure involved in
17 delivering natural gas to customers safely and reliably. Gas Asset Management consists of
18 four sub departments that I will describe more fully below. They are:

- 19 • Gas Engineering – Distribution;
- 20 • Gas Engineering – Transmission;
- 21 • System Integrity; and
- 22 • Gas Compression Engineering.

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1 The employees within Gas Asset Management provide gas engineering and asset planning
2 for the compression, storage, transmission, and distribution pipelines, large metering,
3 regulation, and measurement assets, along with directing compliance-related programs
4 such as System Integrity, supporting the Company objectives of supplying safe, reliable,
5 affordable, and clean energy to customers. Gas Asset Management provides necessary
6 expertise and services in the areas of distribution and transmission system risk,
7 engineering, and technical design standards, performs system load studies, and initiates
8 augmentation projects to ensure the capacity of the gas distribution system can meet
9 projected customer demands. Additionally, this area provides the technical expertise and
10 coordination for public infrastructure projects initiated by third parties, such as cities,
11 Michigan Department of Transportation (“DOT”), and large new industrial customers. Gas
12 Asset Management includes System Integrity, which implements the SIMP, and is
13 responsible for the storage wells and pipelines within the storage fields. Gas Compression
14 Engineering is also a part of Gas Asset Management and is responsible for engineering of
15 the Company’s compressor station assets. The salaries and expenses of all the Gas Asset
16 Management teams described above and the expenses for the SIMP for the 12 months
17 ending October 31, 2027, are represented on Exhibit A-111 (KAP-2), page 1, lines 2
18 through 6.

19 **Q. Please describe the activities of the Gas Engineering - Distribution department.**

20 **A.** The Gas Engineering - Distribution department consists of seven functional sections.

- 21 • Distribution Pipeline Engineering;
- 22 • Gas System Engineering;
- 23 • Gas Distribution Engineering – Permitting;

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- Gas Distribution Engineering – Planning;
- Gas Distribution Engineering – Program Management;
- Gas Distribution Engineering - Design Quality; and
- Distribution Engineering Services.

First, the Distribution Pipeline Engineering team is responsible for the design of all new and replacement gas mains and services across the Company’s distribution system including customer requested service work.

Second, the Gas System Engineering team is responsible for the development of long-range engineering programs, such as Gas Enhanced Infrastructure Replacement Program (“EIRP”) and Vintage Service Replacement (“VSR”), as well as emergent engineering projects and operational support across the Company’s distribution system. This team partners with Gas Operations to develop long-range projects and with Gas Strategy to develop the NGDP.

Third, the Gas Distribution Engineering – Permitting team is responsible for securing Right-of-Way (“ROW”) permits for current Gas Distribution construction projects and works to negotiate favorable permitting requirements for future work.

Fourth, Gas Distribution Engineering - Planning is responsible for aligning the workforce to the proposed projects and coordinating annual projects across engineering organizations, such as transmission and distribution, to create efficiencies and reduce the impact on customers.

Fifth, Gas Distribution Engineering – Program Management has program managers responsible for the implementation of the EIRP, VSR, and Maximum Allowable Operating Pressure (“MAOP”) programs.

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1 Sixth area of responsibility is Gas Distribution Engineering - Design Quality team,
2 which ensures consistent and high-quality designs through review and coaching for the
3 design technicians in Distribution Pipeline Engineering, and completes process
4 development and technology improvement projects to make design teams more efficient.

5 Lastly, the Distribution Engineering Services team is responsible for field support
6 and field GPS data collection on installed gas distribution assets.

7 The projected O&M expenses for the Gas Engineering – Distribution department
8 for the 12 months ending October 31, 2027 are \$1,143,000, as shown on Exhibit A-111
9 (KAP-2), page 1, line 2, and consist of the O&M portion of the salaries and expenses for
10 engineers, designers, analysts, and other support staff needed to meet the engineering,
11 design, planning and operational support needs of the NGDP. The increase in expenses
12 over inflation shown in Exhibit A-111 (KAP-2), page 4, line 2, column (d), is due to four
13 vacancies that occurred in 2024 and are planned to be filled in 2025.

14 **Q. Please describe the activities of the Gas Engineering - Transmission department.**

15 A. The Gas Engineering - Transmission department contains two sections. First, the
16 Transmission Pipeline Engineering section is responsible for the engineering and design of
17 the Company's transmission and storage pipeline facilities and supports the following
18 transmission pipeline capital programs: Asset Relocation-Transmission, Deliverability
19 Base Pipeline, MAOP Pipeline, MAOP Transmission (O&M), and Transmission
20 Enhancements for Deliverability & Integrity ("TED-I"). The Transmission Engineering
21 employees have responsibility for improving the pipeline system and ensuring compliance
22 with applicable regulations. The second section is the Measurement, Regulation and
23 Controls ("MR&C") team. MR&C is responsible for the engineering, design, and technical

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1 support of the Company's regulator stations, city gates, odorizers, and large customer
2 meters through the following capital programs: Transmission City Gates, Distribution
3 Regulator Stations, MAOP Metering & Regulation, Deliverability Based Field
4 Measurement, and Commercial and Industrial Meters. My testimony covers the labor and
5 expense costs for staffing of the Gas Engineering - Transmission department. The capital
6 programs described above are sponsored by Company witness Michael P. Griffin except
7 for the Commercial and Industrial Meter program which is described later in my direct
8 testimony. The projected O&M expenses for the Gas Engineering – Transmission
9 department for the 12 months ending October 31, 2027 is \$2,227,000, as shown on Exhibit
10 A-111 (KAP-2), page 1, line 3, and consists of the O&M portion of the salaries and
11 expenses for engineers, designers, analysts, technicians, and other support staff needed to
12 meet the design and planning needs of the NGDP and the O&M expense for the purchase
13 of odorant. As shown on Exhibit A-111 (KAP-2), page 4, line 3, the test year projected
14 expenses remain below the 2024 actual expenses after applying inflation adjustments.

15 **Q. Please describe the activities of the System Integrity department.**

16 A. System Integrity is responsible for the integrity management programs for the Company.
17 This includes the following programs: Transmission Integrity Management Program
18 ("TIMP"), Distribution Integrity Management Program ("DIMP"), and SIMP. These
19 programs ensure the safety, reliability, and regulatory compliance of the Company's
20 transmission, distribution, and storage assets. My testimony addresses the labor and O&M
21 expenses associated with staffing the System Integrity department, including the O&M
22 costs for SIMP. The other System Integrity programs described above are sponsored by
23 Company witnesses Griffin and Timothy K. Joyce. The projected O&M expense for the

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1 System Integrity department for the 12 months ending October 31, 2027 is \$3,975,000, as
2 shown on Exhibit A-111 (KAP-2), page 1, line 4, and consists of the O&M portion of the
3 salaries and expenses for engineers, designers, analysts, and other support staff needed to
4 meet the design and planning needs of the NGDP including the implementation of the
5 Transmission and Storage Probabilistic Risk Models and meeting compliance requirements
6 of the Company's integrity management programs. The increase in O&M expenses
7 compared to the 2024 historical year is primarily due to a change in how capital and O&M
8 allocations are calculated. In 2024, the allocation method included employees and
9 activities from multiple areas beyond System Integrity. Beginning in 2025, the
10 methodology was refined to allocate costs based only on System Integrity employees and
11 activities. Because this department's work is more heavily weighted toward O&M
12 activities than other engineering areas that have a higher percentage of activities related to
13 capital projects, the refined approach results in a greater proportion of costs classified as
14 O&M for System Integrity. Under the prior approach, System Integrity was allocated at
15 approximately 19% O&M and 81% capital; under the updated approach, the allocation is
16 35% O&M and 65% capital. This change provides a more accurate reflection of the nature
17 of work performed by this department. Other engineering areas included in the prior
18 calculation method did not experience significant changes because the work mix between
19 capital and O&M remained relatively consistent under both allocation methodologies.
20 These areas primarily perform activities that result in capital investments, so the refinement
21 had minimal impact. System Integrity is unique because its activities, such as risk
22 modeling, compliance documentation, and engineering analysis, are predominantly O&M

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1 in nature. When the allocation was refined to reflect only System Integrity employees and
2 activities, the O&M percentage increased.

3 In addition to the System Integrity staffing requirements, the SIMP was created in
4 response to a new Pipeline and Hazardous Materials Safety Administration (“PHMSA”)
5 final rule issued on February 12, 2020. The SIMP O&M expenses for the 12 months ending
6 October 31, 2027 are \$2,031,000, as shown on Exhibit A-111 (KAP-2), page 1, line 6.

7 **Q. What is the basis for determining the \$2,031,000 in SIMP O&M expenses in the test**
8 **year 12 months ending October 31, 2027 for this program?**

9 A. On December 9, 2016, PHMSA issued an Interim Final Rule (“IFR”) titled “Pipeline
10 Safety: Safety of Underground Natural Gas Storage Facilities.” This IFR included a new
11 Rule 192.12 Underground Natural Gas Storage Facilities (“UNGSF”) and was enacted as
12 a congressionally mandated response to the natural gas leak incident at the Aliso Canyon
13 facility on October 23, 2015. Rule 192.12 became effective January 18, 2017, and was
14 incorporated by reference in the consensus document API RP 1171: Functional Integrity
15 of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs. On
16 February 12, 2020, PHMSA issued a Final Rule reinforcing its minimum safety standards
17 for underground natural gas storage facilities and including additional requirements and
18 clarifications. The effective date of this Final Rule was March 13, 2020.

19 As a result, Consumers Energy has developed the SIMP to comply with the federal
20 regulations. The Company owns and operates 783 gas storage wells that fall under the
21 scope of SIMP. The SIMP has several O&M components necessary to execute the program
22 shown below in Table 1. The O&M components address the expenses required for the well
23 plugging program, atmospheric corrosion protection (painting) of rehabilitated wells, risk

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reduction, annular pressure remediation, well re-assessment, gas storage field analysis, plugging of high-risk wells, and well performance. The projected O&M costs for the SIMP in the test year total \$2,031,000.

Table 1: SIMP O&M Program Components and Expenses

		12 Months Ending Dec 31, 2023	12 Months Ending Dec 31, 2024	Projected 12 Months Ending Dec 31, 2025	Projected 12 Months Ending Dec 31, 2026	Projected 12 Months Ending Dec 31, 2027	Projected 12-Mos Ending Oct 31, 2027
Storage Integrity Management Program ("SIMP") (\$000)		\$630	\$1,479	\$1,837	\$1,993	\$2,079	\$2,031
a) Well Plugging Program		\$22	\$4	\$17	\$10	\$18	\$18
	Units: # of CE Plugged Wells	85	81	64	39	69	69
	Units: # of 3rd Party Plugged Wells	0	82	2	0	0	0
b) Atmospheric Corrosion Protection (Painting) of Rehabilitated Wells		\$126	\$85	\$36	\$20	\$0	\$0
	Units: # of Wells Painted	25	24	8	3	0	0
c) Risk Reduction		\$184	\$250	\$306	\$942	\$482	\$434
	Units: # of Farm Taps	30	14	6	50	25	25
	Units: # of Storage Fields: Storage Lateral/Well Line (pipeline)	1	5	6	6	6	6
d) Annular Pressure Remediation		\$94	\$37	\$100	\$159	\$164	\$164
	Units: # of Wells	13	11	23	23	23	23
e) Well Re-assessment		\$48	\$939	\$1,377	\$811	\$740	\$740
	Units: # of Wells	0	97	105	72	62	62
f) Gas Storage Field Analysis		\$158	\$165	\$0	\$50	\$50	\$50
	Units: # of Storage Fields	1		\$0	1	1	1
g.) Plugging of high risk plugged wells		\$0	\$0	\$0	\$0	\$357	\$357
	Units: # of wells to plug	0	0	\$0	0	1	1
h.) Well Performance		\$0	\$0	\$0	\$0	\$268	\$268
	Units: # of Wells	0	0	\$0	0	60	60

Q. Please describe the plugged-well monitoring portion of the SIMP funding requirements.

A. To comply with PHMSA Regulation 192.12 and API RP 1171, Consumers Energy has created a program to perform baseline assessment of well integrity as part of the Well Rehabilitation Program sponsored by Company witness Joyce. For all plugged wells within the storage reservoir boundary, the Company must further comply with plugged well monitoring requirements including the 417 plugged wells owned by the Company and the 740 plugged wells owned by other operators or producers. The monitoring of plugged wells includes visual and instrumented observation of the plugged well sites for any indication of methane leaks, changes in nearby observation well pressures, changes in annulus pressures of nearby facility wells, gas loss reported through the gas inventory verification process, and abnormally high gas production reported. The instrumented field

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1 monitoring will include 69 Company-owned plugged wells in the test year. The average
2 cost to monitor a Company-owned plugged well is \$259 and to monitor a plugged well
3 owned by other operators or producers is \$456. Additional costs associated with third-party
4 plugged wells is due to the Company needing the ability to access property that it currently
5 does not have rights to as the plugged wells that require instrumented monitoring were not
6 owned or operated by the Company. In the test year, only plugged wells owned by the
7 Company will be monitored. The O&M costs associated with the well plugging portion of
8 the SIMP in the test year total \$17,871 and are based on historical cost of performing
9 monitoring.

10 **Q. Please describe the well rehabilitation atmospheric corrosion portion of the SIMP**
11 **funding requirements.**

12 A. The well rehabilitation portion of the SIMP performs baseline assessment and remediation
13 of Consumers Energy's natural gas storage wells. The O&M funding requirement is for
14 painting of above-grade equipment associated with the rehabilitated wells to provide
15 atmospheric corrosion protection upon completion of the assessment and remediation of a
16 well where an asset is not intended to be retired or replaced. The projected cost is derived
17 from the configuration of the well for applied corrosion control measures such as paint
18 applied by contractors and inspection to ensure applied coatings meet the application
19 specifications. The O&M costs associated with the well rehabilitation atmospheric
20 corrosion portion of the SIMP for the projected test year totals \$0 as the Well Rehabilitation
21 Program will conclude at the end of 2026 and it is not anticipated to have any costs
22 occurring in the test year.

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1 **Q. Please describe the risk reduction portion of the SIMP funding requirements.**

2 A. The risk reduction portion of SIMP is to address facilities and piping that have compliance
3 and safety risks associated with them. These facilities are associated with the storage
4 system and include sections of the storage pipelines, well lines, and farm tap setups that
5 fall outside of the capital SIMP programs due to being typically short sections of pipe or
6 fittings installed as part of the original installation. The risk reduction portion will be used
7 to investigate, evaluate, replace, or retire facilities to reduce risk on the storage system.
8 The projected cost addresses risk on the system that does not fall into other areas of SIMP
9 and includes approximately 25 farm tap facilities, short sections of transmission piping,
10 and well lines. The costs include records validation, field research and physical
11 verification, piping and equipment upgrades, replacements, repairs, and other associated
12 charges. The O&M costs associated with the risk reduction portion of the SIMP for the
13 projected test year is \$434,129.

14 **Q. Please describe the gas storage annular pressure diagnostics and remediation portion**
15 **of the SIMP funding requirements.**

16 A. The annular pressure diagnostics and remediation portion of SIMP is the cost of diagnosing
17 and remediating wells that have annular pressures trending toward or exceeding threshold
18 pressures. Annular pressure is monitored as part of SIMP and is a method to ensure
19 integrity of the wells. Annular pressure outside of and trending toward threshold limits
20 can indicate a loss of mechanical integrity or other failure requiring intervention. The
21 diagnostic and repair funds are estimated based on historical spend, which typically
22 requires testing, diagnosing, and repacking or replacement of wellhead seals. The O&M

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costs associated with the annular pressure diagnostics and remediation portion of the SIMP for the projected test year totals \$164,131.

Q. Please describe the well re-assessment portion of the SIMP funding requirements.

A. The well re-assessment portion of SIMP is initiated seven years after the initial baseline assessment has occurred, in accordance with PHMSA Regulation 192.12 and API RP 1171. The well re-assessment portion of SIMP started in 2024. The wells that were baseline assessed in 2019 will be re-assessed in 2026, and wells baseline assessed in 2020 will be re-assessed in 2027. The re-assessment will consist of well logging and Mechanical Integrity Testing (“MIT”) of the subject wells based on the configuration of each well and well history and includes any remedial and necessary actions. There is a total of 72 wells to be re-assessed in 2026 and 62 wells in 2027. All the wells inspected in 2027 will incur costs in the test year. The O&M costs associated with the well re-assessment portion of the SIMP for the projected test year totals \$739,919.

Q. Please describe the gas storage field analysis portion of the SIMP funding requirements.

A. The gas storage field analysis portion of the SIMP is an analysis used to model the storage system deliverability, considerate of all SIMP programs, and other related integrity programs. The purpose of the analysis is to better model the capability and needs of the existing storage system to enable right-sizing of the system and necessary equipment upgrades, including but not limited to well deliverability, field deliverability, pipeline replacements/retirements, liquid separation, and gas conditioning equipment. The analysis will support system risk reduction through optimization by matching existing and future

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1 system needs with the capabilities and future capabilities of the gas storage system. The
2 gas storage field analysis portion of the SIMP for the projected test year totals \$50,000.

3 **Q. Please describe the plugging of high risk plugged wells portion of the SIMP funding**
4 **requirements.**

5 A. The plugging of high risk plugged wells portion of the SIMP funding is used to address
6 wells that were previously plugged and have been identified as a risk. The Company
7 performed a review of all plugged wells across all storage fields and determined a risk
8 profile for all plugged wells. The review included records research including the location,
9 plugging methods, and mechanical properties of the wells. Well plugging techniques,
10 materials, and oversight has significantly improved over techniques in the past and the
11 review of plugged wells characterized the adequacy of prior plugged wells. Further review
12 focused on the location of the plugged wells with proximity to the storage reservoir to
13 develop a detailed risk profile. This portion of the SIMP funding is to address select and
14 high risk plugged wells to re-plug them to reduce the risk of a leak of gas from the storage
15 reservoir. The Company plans to start the plugging effort in 2027 with one well. The
16 plugging of high risk plugged wells portion of the SIMP for the projected test year totals
17 \$357,000.

18 **Q. Please describe the well performance portion of the SIMP funding requirements.**

19 A. The well performance portion of the SIMP funding is used to address flow performance of
20 the storage wells. For wells that have completed the baseline well assessment (Well
21 Rehabilitation Program) and the first well re-assessment cycle, key insights have been
22 gained with respect to flow performance. These insights have included a better
23 understanding of wells with performance loss and the drivers to degraded flow

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1 performance and integrity. These factors are often unique to the well and reservoir. This
2 portion of the SIMP program is to perform specific engineered well treatments to the wells
3 identified to ensure the wells perform at an acceptable level to maintain performance
4 requirements of the natural gas delivery system. The acceptable performance of the wells
5 on the system will continue to be critical as the Company continues to reduce risk on the
6 system through plugging of wells and lowering overall well counts underscoring the
7 criticality of performance with the remaining wells. Well performance work begins in
8 2027 and includes treatments of 60 wells, all of which fall within the test year. The well
9 performance portion of the SIMP for the projected test year totals \$268,300.

10 **Q. Please describe the activities of the Gas Compression Engineering department.**

11 A. Gas Compression Engineering is responsible for the engineering, design, and technical
12 support of the Company's compressor station assets. This team is also responsible for asset
13 planning for all capital investments within the existing compression fleet. These capital
14 investments are sponsored by Company witness Joyce. The increase in O&M expenses
15 from historical year 2024 is attributed to additional labor required to perform a process
16 hazard analysis of Northville and White Pigeon Compressor Stations that will occur in the
17 test year of this case. The projected O&M expenses for the Gas Compression Engineering
18 department for the 12 months ending October 31, 2027 is \$1,016,000, as shown on Exhibit
19 A-111 (KAP-2), page 1, line 5, and consists of the O&M portion of the salaries and
20 expenses for engineers, designers, analysts, and other support staff needed to meet the
21 design and planning needs of the NGDP.

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1 **Q. What operating sections are included in Gas Engineering Support?**

2 A. Gas Engineering Support consists of five departments which I will describe more fully
3 below. They are:

- 4 • Gas Strategy;
- 5 • Gas Regulatory and Compliance;
- 6 • Geospatial Management and Data Quality (which includes the Geospatial
7 Inventory and Modeling Program);
- 8 • Damage Claims/Prevention; and
- 9 • Engineering Management.

10 **Q. Please describe the activities of the Gas Strategy department.**

11 A. Gas Strategy provides asset strategy, business support, financial analysis, and business
12 performance measurement for the Company's compression, storage, transmission, and
13 distribution facilities. This department is responsible for the development,
14 implementation, and support of the long-term strategy for the natural gas system, and the
15 development of the NGDP. This department ensures the overall goals and outcomes
16 developed in the NGDP align with the Company's strategy. Gas Strategy includes the
17 individuals responsible for ensuring that financial analysis aligns with the portfolio
18 planning services, including long-term financial planning and long-term strategy. The
19 projected O&M expenses for the Gas Strategy department for the 12 months ending
20 October 31, 2027 is \$86,000, as shown on Exhibit A-111 (KAP-2), page 2, line 7, and
21 consists of the O&M portion of the salaries and expenses for strategy managers and
22 analysts needed to support the financial analysis and business performance measurements
23 necessary to ensure implementation of the NGDP as well as the long-term strategy
24 development for the natural gas system. Of the reduction in O&M expenses compared to
25 the 2024 historical year, as shown on Exhibit A-111 (KAP-2) page 4, line 7, column (d),

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\$63,000 reflects the expense associated with decarbonization technology studies that did not lead to a capital investment and are not recurring in the test year.

Q. Please describe the activities of the Gas Regulatory and Compliance department.

A. Gas Regulatory and Compliance interfaces with the MPSC Gas Safety Staff and the Federal Office of Pipeline Safety on regulatory compliance matters. This includes regulatory audits, inspection activities, gas standards work, and submission of periodic and incident reports in accordance with both federal and state requirements. Gas Regulatory and Compliance supports compliance-related programs and documents, including Transmission Integrity Management, Distribution Integrity Management, Gas Operations Procedures, Public Awareness, Damage Prevention, and AMD. The Gas Regulatory and Compliance department is managing the Company's implementation of the API RP 1173 – Pipeline Safety Management Systems which is the Company's Gas Safety Management System ("GSMS") and the AMD Program. The salaries and expenses associated with the Gas Regulatory and Compliance department for the 12 months ending October 31, 2027 is \$1,226,000 as shown on Exhibit A-111 (KAP-2), page 2, line 8. The historical expenses for this department are shown on Exhibit A-111 (KAP-2), page 2, column b, line 8. The increase in the test year O&M expenses above the inflation rate applied to the historical year is due to the software subscription fees and contracted drivers for the addition of three AMD units purchased in 2024. The AMD program is described later in this testimony.

Q. Please describe the activities of the Geospatial Management and Data Quality department.

A. The Geospatial Management and Data Quality department is responsible for creating and maintaining the Geospatial Information Systems ("GIS") & Service Information

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1 Management System (“SIMS”) databases for gas distribution, transmission, storage,
2 service, and regulation systems, and for supporting strategic and operating capacity
3 planning, performance, asset management, and regulatory reporting requirements.

4 The Geospatial Management and Data Quality department also supports the
5 Company’s gas technical records, working closely with operations and engineering teams
6 to store, protect, retrieve, and, when appropriate, destroy records according to operational
7 and regulatory requirements. In alignment with the above scope, the team has dedicated
8 roles to manage system administration of Consumers Energy’s Gas Engineering Content
9 Management software. The O&M expenses for the Geospatial Management and Data
10 Quality department for the 12 months ending October 31, 2027 is \$654,000, as shown on
11 Exhibit A-111 (KAP-2), page 2, line 9, and consists of the O&M portion of the salaries and
12 expenses of managers and their Company-employed and contracted staff needed to support
13 the increased asset records management to meet the compliance workload driven by the
14 NGDP, and to ensure Company records are compliant and current, enabling employees and
15 other end users to have comprehensive access to current and accurate mapping and correct
16 information in a timely and cost-effective manner, all contributing to increased pipeline
17 safety. As shown on Exhibit A-111 (KAP-2), page 4, line 9, column (d), the test year
18 projected expenses remain below the 2024 actual O&M expenses after applying inflation
19 adjustments.

20 Additionally, this department is responsible for the Geospatial Inventory and
21 Modeling Program, which includes the Gas Compliance Code Program – Service
22 Information Mapping System (“GCCP - SIMS”) project, and the Utility Network (“UN”)
23 implementation. The O&M expenses for the Geospatial Inventory and Modeling Program

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1 within the Geospatial Management and Data Quality department for the 12 months ending
2 October 31, 2027 is \$0, as shown on Exhibit A-111 (KAP-2), page 2, line 10.

3 **Q. Why is there no projected O&M expense in the test year 12 months ending**
4 **October 31, 2027 for the Geospatial Inventory and Modeling Program?**

5 A. The Geospatial Inventory and Modeling Program includes the GCCP - SIMS project and
6 the Utility Network project. This program was created to modernize and transform the
7 Company's GIS records and systems. This program has both a capital and O&M
8 component. The projected capital expenditures and project benefits are described in further
9 detail in the Gas Operations Other Program later in my testimony. The SIMS project will
10 be completed in 2025, and the UN project is projected to be completed in 2026. Since both
11 the SIMS and UN projects will be completed prior to 2027, there are no projected expenses
12 in the test year of this case.

13 **Q. Please describe the activities of the Damage Prevention and Claims department.**

14 A. The Damage Prevention and Claims department provides oversight of the Company's
15 staking and locating of underground facilities in accordance with 811 MISS DIG
16 regulations. This includes the Company's Gas Public Awareness Program. The O&M
17 expenses for the Damage Prevention and Claims department for the 12 months ending
18 October 31, 2027 is \$1,175,000, as shown on Exhibit A-111 (KAP-2), page 2, line 11, and
19 consists of the O&M portion of the salaries and expenses for roles needed to support
20 damage prevention/claims activities and liaison with external agencies and excavators, and
21 the public promoting of education and awareness to proactively prevent and reduce
22 third-party damages. The historical expenses for this department are shown in Exhibit
23 A-111 (KAP-2), page 4, line 11, column (b). The increase in the test year O&M expenses

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1 above the inflation rate applied to the historical year is due to the addition of the annual
2 subscription fee of \$67,000 for the Irth software, described later in this testimony, and
3 \$48,000 resulting from a shift in cost categorization from capital to O&M.

4 **Q. Please describe Engineering Management.**

5 A. The Engineering Management department includes the O&M expenses associated with the
6 roles of the Vice President of Engineering and Supply and their support staff. The expenses
7 include the O&M portion of salaries and associated expenses needed to support a range of
8 critical responsibilities, including oversight of:

- 9 • Engineering of the Company's natural gas system distribution, transmission,
10 storage, and compression assets;
- 11 • Procurement and supply of natural gas;
- 12 • Strategic planning;
- 13 • Budgeting and financial management;
- 14 • Setting performance goals, providing professional development opportunities,
15 and fostering a collaborative and innovative work environment; and
- 16 • Ensuring all operations comply with federal, state, and local regulations.

17 These responsibilities ensure safe, efficient, and reliable delivery of natural gas to
18 customers. The O&M expenses for the Engineering Management department for the
19 12 months ending October 31, 2027 are \$40,000, as shown on Exhibit A-111 (KAP-2),
20 page 2, line 12. As shown on Exhibit A-111 (KAP-2), page 4, line 12, column (d), the test
21 year projected expenses remain below the 2024 actual O&M expenses after applying
22 inflation adjustments.

23 **Q. What operating sections are included in Gas Management Services?**

24 A. Gas Management Services is responsible for four major functions:

- 25 • Gas Control;

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- Gas System and Operations Planning;
- Gas Supply; and
- Gas Transportation, Customer Choice, and Measurement.

Gas Control is responsible for:

- The centralized Gas Control Room operation, which monitors and controls the gas transmission system and monitors key points on the distribution system on a 24/7 basis, following PHMSA Title 49 CFR 192.631 (control room management);
- Monitoring scheduled third-party pipeline supply;
- Dispatching compression and storage assets to ensure customer supply is met within the Transmission system's design limits and monitoring portions of the Distribution system; and
- Gas SCADA development, including operations and 24/7 support.

Gas System and Operations Planning is responsible for:

- Transmission and storage capacity studies;
- Facility and operational improvements to meet changing supply and customer loads;
- Reporting operational data;
- Assisting in development of business cases for major system modifications related to the Company's gas transmission, storage, and compression system;
- The preparation of natural gas supply and storage dispatch plans;
- The coordination of the Gas Cost Recovery ("GCR") plan and GCR Reconciliation with the Company's operational plans;
- Administration of interconnect agreements; and
- Distribution system planning (added in July 2025)

The Gas Supply section is responsible for:

- Obtaining reliable and reasonably priced gas supply for the Company's GCR or Sales customers;

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- Negotiation and administration of all related gas supplier, transportation, and Buy/Sell agreements, and Asset Management contracts; and
- Tracking and projecting the cost of gas and related inventory valuations, coordinating the gas purchase planning related to GCR plans and reconciliations.

The Gas Transportation and Measurement section is responsible for:

- The management of the Company's Gas Customer Choice ("GCC") Program, including preparation of required deliveries for GCC Suppliers, and monthly GCC remittance statements and annual reconciliations;
- The daily management of the gas transportation activity at the Company, including the daily balancing and confirmation of gas nominations and gas transportation contract administration;
- The preparation of the Gas Control Operations Summary and various internal and external reports, all of which make up the foundation of volumetric accounting on the Company's gas transmission and storage system; and
- Gas transportation billing (added in September 2025).

The salaries and expenses associated with the Gas Management Services department for the 12 months ending October 31, 2027 is \$4,952,000, as shown on Exhibit A-111 (KAP-2), page 3, line 13, and consists of the O&M portion of the salaries and expenses for engineers and gas control staff needed for outage coordination, scheduling, and system planning activities necessary to support the capital, O&M, system control, and system analytics plans in the NGDP. Historical expenses for this department are shown in Exhibit A-111 (KAP-2), page 4, line 13, column (b). The increase in test year O&M expenses, beyond the inflation rate shown in column (d), is primarily driven by the full-year impact of salaries, support costs, and software licensing for the Operational Technology (OT) Gas SCADA team, which was added to the department in 2024. The 2024 partial-year expense (August-December) for this team was \$116,000; applying the full-year impact equates to an additional \$464,000 in the test year. The January-July 2024 historical expense

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for this team is included in Company witness Stacy H. Baker's Exhibit A-17 (SHB-1), line 1. Additionally, in 2025, the Distribution System Planning and Gas Transportation Billing teams were integrated into the department, contributing to the overall increase in O&M expenses. The 2024 historical expenses for these functions are included in the Distribution Engineering and the Rates and Regulation departments, respectively. The integration of the Distribution System Planning team increased O&M expenses by approximately \$206,000 for the test year ending October 31, 2027, while reducing Distribution Engineering O&M expenses by \$24,000 due to differences in capital/O&M allocation between the two departments. The transfer of Gas Transportation Billing activities did not materially impact capital allocations but shifted O&M responsibilities, adding approximately \$110,000 to Gas Management Services, as these activities are predominantly O&M in nature.

GAS DISTRIBUTION CAPITAL EXPENDITURES

Q. Please describe the Company's projections of capital expenditures for Gas Distribution – Material Condition and Gas Operations Other.

A. As shown on Exhibit A-12 (KAP-3), Schedule B-5.7, the Gas Distribution capital expenditures I am sponsoring were \$303,846,000 in 2024, and are projected to be \$372,215,000 in 2025; \$338,000,000 for the 10 months ending October 31, 2026; and \$429,770,000 for the 12 months ending October 31, 2027, as set forth on this exhibit on line 3, columns (b), (c), (d), and (f), respectively. These projections are based upon the necessary requirements to meet the Company's objectives of operating a system that is safe, reliable, affordable, and clean.

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1 **Q. Please list the major programs within the Gas Distribution capital expenditures.**

2 A. The Gas Distribution major programs, as shown on Exhibit A-12 (KAP-3), Schedule B-5.7,
3 and Exhibit A-12 (LDW-1), Schedule B-5.8, are:

- 4 • New Business;
- 5 • Asset Relocation;
- 6 • Regulatory Compliance;
- 7 • Material Condition;
- 8 • Capacity/Deliverability; and
- 9 • Gas Operations Other.

10 Several of these major programs have a gas distribution and a gas transmission component
11 to them. My direct testimony represents only the gas distribution portion of the Material
12 Condition and Gas Operations Other programs. The direct testimony of Company witness
13 Warriner represents the gas distribution portion of the remaining programs listed above.
14 The direct testimony of Company witnesses Griffin and Joyce represent additional
15 components of the gas transmission system as well as distribution regulating stations,
16 compression, and storage systems.

17 **Q. Have you included contingency costs in the capital expenditures you are sponsoring?**

18 A. No, there are not any contingency costs included in the capital expenditures.

19 **1. Material Condition**

20 **Q. Please describe the capital expenditures relating to the Material Condition Program**
21 **set forth on Exhibit A-12 (KAP-3), Schedule B-5.7, line 1.**

22 A. Material Condition Program expenditures are used to improve the natural gas distribution
23 system integrity, reduce service interruptions impacting customers, and replace leaking and
24 vintage gas distribution facilities. Reducing the number of leaks improves system

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1 reliability, reduces methane emissions to the atmosphere, and enhances public safety. The
2 expenditures in this program include the EIRP, the VSR Program, and system
3 enhancements that are prioritized by risk to improve safety and gain operational
4 efficiencies through replacement of lower performing gas distribution assets.

5 The expenditures in this program also include capital replacements due to leaks and
6 system damages, represented by the Material Condition Renewals Program, as well as
7 emergent gas service and main replacement projects driven by conditions observed in the
8 field, represented by the Material Condition Non-Modeled Program, and business customer
9 capital meter and meter stand replacements represented by the Commercial and Industrial
10 Meters Program. The projects and expenditures for these five programs are described in
11 more detail below. As shown on Exhibit A-12 (KAP-3), Schedule B-5.7, line 1, the capital
12 expenditures for these five programs were \$291,159,000 in 2024, and are projected to be
13 \$358,301,000 in 2025; \$324,919,000 for the 10 months ending October 31, 2026; and
14 \$415,842,000 for the test year 12 months ending October 31, 2027, as set forth on this
15 exhibit on line 1, columns (b), (c), (d), and (f), respectively. The expenditures for the
16 Material Condition Program are further detailed in Exhibit A-112 (KAP-4).

17 **Q. Please describe the EIRP.**

18 A. The EIRP was implemented by the Company in 2012 in direct response to the U.S. DOT
19 and the PHMSA national “Call to Action” issued in 2011. This federal initiative urged
20 pipeline operators to accelerate the replacement of aging and high-risk pipeline
21 infrastructure, specifically cast iron, wrought iron, and bare steel mains due to the elevated
22 safety risks and vulnerability to leaks and failures. As part of the Company’s DIMP, the
23 EIRP targets the replacement of these highest-risk materials with modern,

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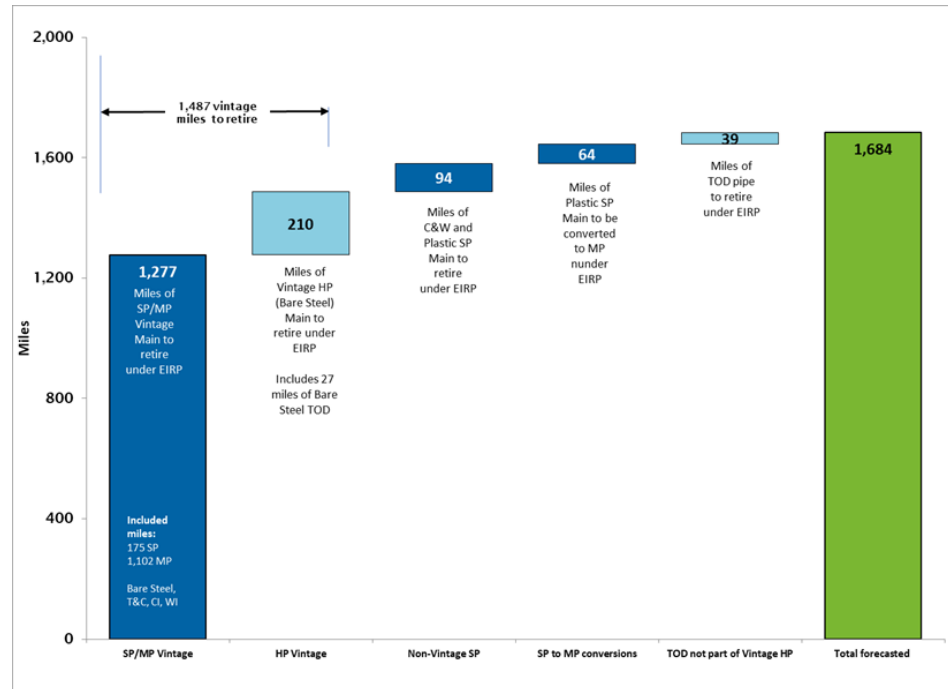
1 lower-maintenance plastic and steel mains, and includes the replacement or tie over of
2 associated services.

3 The program scope includes the following:

- 4 • Replacement of all cast iron main;
- 5 • Replacement of all bare, oxyacetylene welded, Threaded and Coupled
6 (“T&C”), Xtrube, and cathodically unprotected steel main;
- 7 • Replacement of all copper main;
- 8 • Replacement of metallic service materials associated with the main replacement
9 projects;
- 10 • Replacement of approximately 100 miles of transmission pipeline located in
11 high consequence areas and transmission pipelines operated on the Distribution
12 System;
- 13 • Replacement of approximately 70 miles of low frequency electric resistance
14 weld pipe in the Company’s Transmission and Storage fields; and
- 15 • In alignment with the Company’s NGDP, the EIRP also supports the
16 elimination of the standard pressure system which includes replacement of
17 approximately 94 miles of pipe that is not covered in the vintage main miles
18 and 64 miles of plastic to be converted from standard pressure (SP) to medium
19 pressure (MP). The Company intends to complete this work and include it as
20 part of planned EIRP work.

21 Figure 1 shows the breakdown of the remaining EIRP program miles by material type,
22 pressure class, and Transmission Operated by Distribution (“TOD”) as of January 1, 2025.

Figure 1: Projected remaining miles included in the EIRP



In addition to safety and reliability improvements, replacement of cast iron piping will enable the reduction and eventual elimination of the standard pressure system, allowing these areas to operate at higher, more efficient pressures while lowering gas losses, reducing the potential for water infiltration, and reducing greenhouse emissions. Upgrades to more efficient pressures may require modifications to regulator facilities under this program. Eliminating standard pressure also allows for the elimination of certain regulating stations that feed the standard pressure system, which lowers operating costs for those systems.

EIRP projects are selected by the gas engineering teams using a relative risk model that compares the risks and threats of each pipe segment to one another, in accordance with the Company's DIMP. This comparative approach allows the Company to prioritize replacements that offer the greatest reduction in system risk. This risk-based methodology, combined with subject matter expert input, guides the selection of EIRP replacement

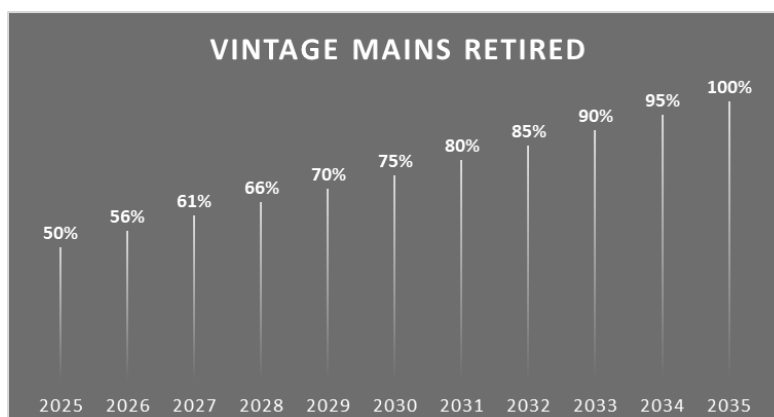
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1 projects that eliminate vintage mains and standard pressure systems. The well-planned,
2 thoughtful execution of the EIRP is a more cost-effective approach than being forced into
3 replacement under emergent conditions.

4 **Q. Why is the Company targeting 2035 for full elimination of vintage materials in the**
5 **gas distribution system?**

6 A. The Company's goal to eliminate all vintage materials from the gas distribution system by
7 2035 is rooted in both strategic planning and regulatory guidance. As outlined in Figure 3
8 of the Company's NGDP, Exhibit A-30 (TMB-1), having zero vintage materials in the
9 distribution system by 2035 is a key strategy outcome to improve safety and reliability.
10 The EIRP, as described earlier, was initiated in response to PHMSA's 2011 national "Call
11 to Action" and is currently scheduled for completion by the end of 2035, with a goal of
12 reducing vintage gas main mileage by approximately 5% each year as shown in Figure 2
13 below. This annual reduction rate is both practical and effective, as it enables steady
14 progress while minimizing disruption to customers and communities, and ensures that the
15 most at-risk infrastructure is replaced in a timely manner. This approach allows the
16 Company to manage costs and prioritize investments that deliver the greatest benefit
17 without extending the overall timeline or increasing long-term expenditures.

Figure 2: Vintage Main Replacement Pace 2025 – 2035



Q. Please describe the progress of the EIRP.

A. Since the EIRP began in 2012 through the calendar year ended 2024, the program has retired 900 miles of the vintage gas pipe identified for replacement as shown in Table 2 below. In addition to the EIRP, other programs, like Asset Relocation – Civic Improvement and Material Condition Non-Modeled, also eliminate vintage pipe. In any given year, the number of miles retired for each material will vary based on the mix of investment between steel and plastic projects. At the end of calendar year 2024, the status for each of the main types is detailed as follows:

- Copper main – Eliminated the last known copper main segments in 2018;
- Xtrube main – Eliminated the last known Xtrube main segments in 2018;
- Cast iron main – Eliminated 326.7 of 580.0 miles by the EIRP through December 31, 2024;
- Wrought iron main – Eliminated 5.2 of 21.6 miles by the EIRP through December 31, 2024;
- Bare steel main (including oxyacetylene welded bare steel) – Eliminated 349.8 of 1033.4 miles by the EIRP through December 31, 2024; and
- T&C main – Eliminated 144.7 of 1061.7 miles by the EIRP through December 31, 2024.

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See Table 2 below for a summary of pipe retired each year by the EIRP Program and the cumulative pipe retired by other programs.

Table 2: Miles of EIRP Main Pipe Retired by Year

MILES OF EIRP CLASSIFIED MAIN PIPE REPLACED BY YEAR											
PIPE TYPE:	Miles of Pipe by Pipe Type in EIRP Program Scope	EIRP 2012-2019 Actuals ¹	EIRP 2020 Actuals ¹	EIRP 2021 Actuals ¹	EIRP 2022 Actuals ¹	EIRP 2023 Actuals ¹	EIRP 2024 Actual ¹		Cumulative EIRP Retired as of 12/31/24 ¹	Estimated Cumulative Retired by Other Programs as of 12/31/24	Est. Miles Remaining as of 12/31/24
TOTAL:	2,869.2	439.2	62.5	124.2	84.9	87.1	102.5		900.3	384.0	1,584.9
Cast Iron	580	166.5	13.9	50.6	23.0	32.6	40.0		326.7	84.4	168.9
Bare Steel	1033.4	137.2	26.6	51.6	56.6	44.1	33.8		349.8	114.6	569.0
Threaded & Coupled	1061.7	80.3	19.8	14.9	4.2	3.95	21.6		144.7	178.6	738.4
Wrought Iron	21.6	4.7	0.0	0.4	0.0	0.0	0.2		5.2	5.8	10.6
X-trube	0.9	0.9	0.0	0.0	0.0	0.0	0.0		0.9	0.0	0.0
Copper	1.6	0.6	0.0	0.0	0.0	0.0	0.0		0.6	0.6	0.0
TOD	100	10.6	2.3	6.7	1.1	6.4	6.9		34.0		
LFERW	70	38.4	0.0	0.0	0.0	0.0	0.0		38.4		
Coated & Wrapped on Standard Pressure ³	108.35	0.0	0.0	2.2	10.2	10.0	6.8		29.2		
Additional Pipe Replacement:											
Plastic ²		8.4	1.7	3.2	6.6	9.9	3.9		33.7		
Coated & Wrapped ^{2,3}		76.1	7.4	10.2	29.3	35.8	20.6		179.5		

Notes:

- 1) Does not include miles of EIRP pipe type that were replaced as part of other programs like Civic Improvement or Emergent CE Initiated
- 2) It is necessary to replace some plastic and/or coated and wrapped steel as part of EIRP projects due to the configuration of the system, project constructability, Code 3 condition. This pipe is not included in EIRP targets.
- 3) Coated and Wrapped steel pipe on standard pressure does qualify under EIRP while Coated and Wrapped steel pipe on medium pressure does not qualify under EIRP

In 2024, the Company completed 15 projects using the grid approach, which plans for and constructs large scale EIRP projects (typically 15 to 25 miles of distribution pipeline). Opportunities to use the grid approach for future projects are decreasing due to the location of higher-risk pipe. A shift back to more segment projects will begin in 2025. The Company will continue to apply efficiencies achieved through prior years (described later in this testimony) to mitigate unit costs.

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1 **Q. Please explain the difference between replaced or retired pipe and installed pipe for**
2 **the EIRP and why cost is based on installed pipe.**

3 A. Replaced or retired pipe refers to the amount of vintage pipe existing on the Company's
4 gas system prior to EIRP project construction that will be replaced by newly installed pipe
5 and retired (abandoned in place) upon completion of the EIRP project construction. Miles
6 of replaced or retired pipe by the EIRP is included in Table 2 above and as part of the
7 Company's annual performance report filings. Installed pipe refers to the amount of new
8 pipe that is added to the Company's gas system to replace the vintage material pipe being
9 retired upon completion of the EIRP project construction. The EIRP project cost is based
10 on installed pipe, as the EIRP project activities are related to the planning, design, and
11 construction for the new pipe installation. There is a small amount of construction time
12 related to the retirement activity to safely cut and cap the old vintage pipe to retire the pipe
13 (abandon in place). The Company charges 2% of EIRP project cost to cost of removal
14 ("COR") to cover the cost related to the retirement activities, which is included in the
15 Company's depreciation rate cases, and not included as part of the EIRP project cost in this
16 testimony. The EIRP project costs provided in this testimony are without COR and related
17 to the project planning, design, construction, and other activities to support the new pipe
18 installation.

19 **Q. What were the results of the 2024 EIRP projects?**

20 A. In 2024, the Company constructed 15 EIRP projects using the grid approach, and
21 4 Steel/TOD projects. See Table 3 below for a summary of the scope of the 2024 EIRP
22 project work completed.

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Table 3: 2024 EIRP Program Completed Project Work

Project Type	# Projects	Installed Pipe (miles)	Service Counts
Grid Projects	15	122.99	10,610
Segment Projects	0	0	0
Steel/TOD Projects	4	8.41	21
Total	19	131.4	10,631

As shown in Exhibit A-114 (KAP-6), the 2024 EIRP spend was \$192.9 million. Of this amount, \$187.1 million was spent on 2024 projects, while \$5.8 million covered carry-over and future-year activities. Carry-over costs reflect work from the prior year, such as pipe installation, retirement, and surface restoration, that could not be completed during the prior construction year. Current-year expenditures include not only new pipe installation but also essential activities like standard pressure system conversions and meter move-outs, which do not contribute to installed mileage but are necessary for project completion. Future-year costs include engineering, surveying, and construction mobilization required ahead of construction. These non-mileage activities increase the average cost per mile. In 2024, the Company installed 131.4 miles of pipe, resulting in an overall average cost of \$1.47 million per mile. For plastic pipe installations, regional per mile costs were \$1.3 million in both the Southwest and Northeast, and \$1.4 million in the Southeast, yielding a weighted average of \$1.36 million per mile. Steel projects had higher costs, with per-mile averages of \$2.03 million in the Southwest and \$4.55 million in the Southeast.

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Q. What factors influence the installed cost per mile for EIRP distribution projects?

A. There are many factors that can influence the installed cost per mile of EIRP distribution projects. When looking at unit cost data, it is important to consider these factors to help understand the complexity and variability of costs incurred in performing the project work. Some of the key factors to consider are listed below.

- Location is a primary driver, as urban density affects permitting complexity, traffic control needs, and the presence of underground obstacles. Rural areas typically have minimal hard surfaces and lower permitting costs, while inner-city projects often involve extensive pavement removal, dense underground infrastructure, and higher permitting fees, all of which increase costs.
- Number of associated services – The number and type of services associated with a project also impact cost. Projects with more services per mile require additional labor and materials, especially when services are long-side, involve renewals rather than tie-overs, or serve commercial customers, which typically demand more complex equipment and coordination.
- Pipe type and size – High-pressure steel and TOD pipe installations are more complex and expensive than plastic pipe. Larger diameter pipes require more time, specialized equipment, and skilled labor, particularly when using non-coiled segments that require additional fusing.
- Tables 4 and 5 below provide data on the feet of pipe installed through the EIRP Program for the years 2017 through 2024.

Table 4: EIRP Feet of Pipe Installed by Size, Type, Year

Year/Size	2"P	4"P	6"P	8-12"P	2-6"S	8"S	10"S	12"S	16"S	Total
2017	344,644	44,231	11,768	3,231	700	0	0	225	0	404,799
2018	195,527	25,216	30,939	2	129	0	10,057	546	16,685	279,101
2019	192,783	32,619	32,535	1,526	386	0	8,121	12	0	267,982
2020	303,001	34,612	18,831	3,572	0	4,127	7,637	4,371	0	376,151
2021	698,773	44,554	52,279	10,620	922	428	100	22,426	0	830,102
2022	699,278	62,528	76,995	9,360	1,283	6,503	2	0	0	855,949
2023	446,536	32,497	55,590	5,624	115	34,833	0	0	0	575,195
2024	532,044	68,915	35,558	12,881	3,707	39,379	0	1,344	0	693,828
Total	3,412,586	345,172	314,495	46,816	7,242	85,270	25,917	28,924	16,685	4,283,107

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Table 5: EIRP % of Pipe Installed by Size, Type, Year

Year/Size	2"P	4"P	6"P	8-12"P	2-6"S	8"S	10"S	12"S	16"S	Total
2017	85.1%	10.9%	2.9%	0.8%	0.2%	0.0%	0.0%	0.1%	0.0%	100%
2018	70.1%	9.0%	11.1%	0.0%	0.0%	0.0%	3.6%	0.2%	6.0%	100%
2019	71.9%	12.2%	12.1%	0.6%	0.1%	0.0%	3.0%	0.0%	0.0%	100%
2020	80.6%	9.2%	5.0%	0.9%	0.0%	1.1%	2.0%	1.2%	0.0%	100%
2021	84.2%	5.4%	6.3%	1.3%	0.1%	0.1%	0.0%	2.7%	0.0%	100%
2022	81.7%	7.3%	9.0%	1.1%	0.1%	0.8%	0.0%	0.0%	0.0%	100%
2023	77.6%	5.6%	9.7%	1.0%	0.0%	6.1%	0.0%	0.0%	0.0%	100%
2024	76.7%	9.9%	5.1%	1.9%	0.5%	5.7%	0.0%	0.2%	0.0%	100%
Total	79.7%	8.1%	7.3%	1.1%	0.2%	2.0%	0.6%	0.7%	0.4%	100%

- Permitting requirements – Requirements vary by municipality and can significantly affect costs. Some communities require permits by address or mandate dual main installations, effectively doubling the footage and associated expenses.
- Time of year – Challenging weather conditions in the winter, spring, and late fall (such as cold, snow, thunderstorms, heavy wind and rain, and poor ground conditions) can slow production and lead to increased project cost. Additionally, to reduce customer outages during critical heating seasons, the Company transitions into “winter operations” typically in early November (temperature dependent), which requires customer appointment and presence to perform the work. This adds costs as it can require labor resources to work during non-regular time, resulting in overtime and premium time.
- Standard pressure conversions - A standard pressure conversion is a cost-saving measure used by the Company during standard pressure replacement projects. When there is existing plastic pipe within the project area, the Company assesses whether these can be converted to medium pressure instead of being replaced. If the existing plastic pipes are still within their usable life cycle, converting them is more economical than installing new plastic pipes. Although this conversion work increases the cost-per-mile of a project, since it does not involve laying new pipes, it ultimately reduces overall costs by avoiding the need for all-new plastic piping.

Some additional drivers of costs include:

- Sewer location services – As with all utilities, Consumers Energy locates underground facilities in advance of construction work. Locating sewer mains, laterals, and services helps to protect those facilities from damage such as cross-bores and leaves customer sewer lines intact. Sewer locating services are contracted to third-party vendors for this work and are primarily performed for the location of sewer mains at the onset of the program.
- Dual main installation - Some communities have placed conditions in the permits for projects that require the Company to install main on both sides of

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the road when replacing and retiring the existing vintage main, which historically was only required to be installed on one side of the road. This requirement in effect doubles the footage of main pipe installation for a project, increasing the cost of materials, labor, and the supporting services for the project.

- Cross bore inspections – This work helps ensure that Company Gas facilities were not installed through sewer lines or other utilities while using horizontal directional drilling pipe installation techniques. Given the potential risk with cross bores, the Company is inspecting for them after construction work is completed (though all other underground facilities are now being located and marked) to ensure public safety, which is adding to costs.

Q. Will all the remaining EIRP Program work be completed using the grid approach?

A. No. It will always be necessary to have certain project work completed using the segment project approach. The grid approach can be used in areas where the Company has a high concentration of EIRP vintage main distribution pipe to be replaced, allowing for the design and planning of large projects. As EIRP work is completed in the high concentration areas, it will be necessary to complete the replacement of vintage main distribution pipe in areas where the Company only has a small amount of EIRP pipe to replace. The Company also considers pipe risk in its planning and project selection criteria, which will result in some amount of segment projects to be completed each year based on risk selection. The Company is also replacing HP steel pipe and TOD pipe as part of the EIRP, and that work is planned as segment projects. For the test year of November 1, 2026 through October 31, 2027, a significant amount of the planned project work to be completed by the EIRP will be using the segment project approach.

Q. Is the Company planning to complete high pressure steel and other pipe replacement work within the EIRP Program?

A. Yes. The Company plans to complete high-pressure (HP) steel and TOD steel pipe projects in 2025, 2026, and 2027. Table 6 summarizes the planned EIRP HP and TOD replacement

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projects from 2025 through 2027, highlighting both the number of projects and total miles by region. A listing of the specific projects is included in workpaper WP-KAP-3.

Table 6: 2025 – 2027 EIRP HP/Steel Project Miles

	# Projects	Southwest	Northeast	Southeast	Total Miles
2025	13	5.00	15.70	1.40	22.10
2026	8	10.78	2.53	1.15	14.45
2027	11	6.53	2.17	0.84	9.53

Q. Has the Company taken actions to improve the cost per mile in the EIRP since the filing of Case No. U-21308?

A. Yes, the Company has implemented changes expected to mitigate the cost-per-mile for EIRP projects. The Company has taken the following actions:

- Engineering design timing – the Company has advanced the engineering design process so that EIRP project designs are completed the year prior to construction. This provides partnering teams such as Supply Chain, Permitting, and Operations more time to focus on planning the execution phase of the project, including materials management, sequencing of the construction phases, aligning workforce resources, arranging outside services, and other activities.
- Engineering designs – the Engineering team has implemented design checkpoints at 30%, 60%, and 90% completion milestones. The checkpoints provide opportunities for analysis, evaluation, and feedback by stakeholders, allowing the Engineering team to alter designs, if necessary, throughout the design process.
- Distribution Engineering Services – created a dedicated team to support field resources in construction planning, collecting asset information, making design adjustments, and completing as-built records. This provides real-time input and adjustments with engineering resources to increase efficiency and reduce unit costs.
- Redistributed Company headquarters for the Gas Construction Workforce – the Company has redistributed the Gas Construction headquarters to move the workforce closer to the projects based on the updated work plans. This allows the workforce to be repositioned closer to the worksite, thereby reducing travel

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and other related costs. In 2022, travel and lodging costs totaled \$1.8 million. In 2023, these costs were reduced to \$480,416, saving over \$1.3 million. For 2024, travel and lodging costs were \$643,104, which is a savings of \$1.2 million compared to 2022 levels. The new headquarters will be used for the remainder of the EIRP, with projected annual savings of \$1 million in travel and lodging from 2022 levels. The facilities' projected total cost is \$11 million, but the projected savings in travel and lodging of \$13 million results in an overall savings of \$2 million. Information on the additional EIRP Company headquarters can be found in the testimony and exhibits of Company witness Quentin A. Guinn.

- Gas Construction workforce stabilization – the workforce capacity is enhancing due to stability in the project layout, ability to pre-plan the work because of earlier designs, and productivity learnings from the EIRP grids.

Q. What cost per mile is the Company currently projecting for the EIRP projects?

A. Cost estimates were developed based on the scope and characteristics of each project, with regional factors such as urban density, permitting requirements, and infrastructure complexity influencing the projected cost per mile. As shown in Exhibit A-114 (KAP-6), cost estimates are as follows:

For SP/MP projects (plastic pipe):

- 2024: The overall project cost-per-mile for installed plastic pipe was \$1,356,900. This represents a reduction of \$268,619 per mile compared to the 2023 overall cost-per-mile of \$1,625,519.
- 2025: The projected overall cost-per-mile is \$1,279,179 for installed plastic pipe. This is based on regional costs of \$1,266,542 (Southwest), \$1,242,104 (Northeast), and \$1,313,844 (Southeast).
- 2026: The overall projected cost-per-mile is \$1,276,795 for installed plastic pipe. This is based on regional costs of \$1,311,271 (Southwest), \$1,313,364 (Northeast), and \$1,236,542 (Southeast).
- 2027: The overall projected cost-per-mile is \$1,265,942 for installed plastic pipe. This is based on regional costs of \$1,285,334 (Southwest), \$1,288,872 (Northeast), and \$1,236,542 (Southeast).

For HP steel/TOD projects (steel pipe):

- 2024: The projected cost-per-mile was \$2,031,667 for the GVL1 project and \$4,548,514 for the MAC3 project.

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- 2025: The projected overall cost-per-mile is \$2,639,618 for installed steel pipe. This is based on regional costs of \$4,273,973 (Southwest), \$2,021,579 (Northeast), and \$3,731,872 (Southeast).
- 2026: The projected overall cost-per-mile is \$3,384,535 for installed steel pipe. This is based on regional costs of \$3,398,850 (Southwest), \$3,159,939 (Northeast), and \$3,744,491 (Southeast).
- 2027: The projected overall cost-per-mile is \$3,201,785 for installed steel pipe. This is based on regional costs of \$3,135,259 (Southwest), \$3,485,042 (Northeast), and \$2,988,316 (Southeast).

Steel pipeline projects carry significantly higher cost-per-mile than plastic due to several factors. Steel pipeline installations typically involve larger diameters and thicker pipe walls to withstand high-pressure operations, which require more expensive raw materials and specialized fittings. Construction is more complex, demanding certified welding crews, non-destructive testing, and rigorous safety protocols, all of which extend project timelines and increase labor costs. These projects also require heavy equipment for handling and bending pipes, hydrostatic pressure testing, and additional environmental controls, particularly for crossings of highways, waterways, and urban areas. Restoration costs are higher in locations with hard surfaces and traffic control requirements. Finally, compliance with federal and state regulations for high-pressure systems adds engineering, inspection, and documentation expenses. These combined factors explain why steel projects are substantially more expensive per mile compared to plastic installations.

Q. What is the Company's projected EIRP cost for 2025, the 10 months ending October 31, 2026, and the test year 12 months ending October 31, 2027?

A. The capital expenditures for EIRP were \$192,973,757 in 2024 and are projected to be \$231,434,509 for 2025; \$196,377,066 for the 10 months ending October 31, 2026; and \$234,182,638 for the test year 12 months ending October 31, 2027. The costs for the EIRP are set forth on Exhibit A-112 (KAP-4), line 1, and Exhibit A-114 (KAP-6). As shown

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below in Table 7, the test year projects 159.4 installed miles and renewal of 14,404 services.

Q. How many miles of distribution main installation and associated services does the Company plan to complete for the \$234.2 million investment for the test year?

A. The referenced \$234.2 million supports the annual installed mileage required to ensure program completion by 2035. The Company prepares its estimates and projections based on calendar years running from January 1 through December 31. For the test year of November 1, 2026, through October 31, 2027, the Company combined a prorated projection for two months of 2026 and a prorated projection for the ten months of 2027 to provide the projected miles installed and service figures. The projection methodology is based on the monthly cash flow average percentage. The derivation of the test year projection is 12% of the 2026 projection and 88% of the 2027 projection.

- The Company's projection for the calendar year 2026 includes 131.0 miles of plastic main installation, 14.5 miles of steel main installation, 4 miles of SP conversion work, and 12,723 associated services.
- The Company's projection for the calendar year 2027 includes 151.7 miles of plastic main installation, 9.5 miles of steel main installation, 16.2 miles of SP conversion work, and 14,633 associated services.
- While total miles and services are subject to final project designs and construction schedule, based on the current projections the test year is estimated to include approximately 159.4 miles of main installation, 16.2 miles of SP conversion work, and 14,404 associated services.
- Table 7 below provides a summary for the years 2024 through 2027 and the test year.

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Table 7: EIRP 2024-2027 Scope and Cost

	Actual	Projected	Projected	Projected	Projected	Projected
Year	2024	2025	2026	2027	10 months 1/1/26- 10/31/26	Test Year 11/1/26 – 10/31/27
Installed Pipe (Miles) ¹	131.4	153.5	145.4	161.3	128.0	159.4
SP Conversion (Miles)			4.0	16.2	4	16.2
Service Counts ¹	10,631	12,267	12,723	14,633	11,196	14,404
Capital Cost (\$Millions) ²	\$193.0	\$231.4	\$223.2	\$235.7	\$196.4	\$234.2

¹ Includes total figures for all EIRP Program pipe installation and service counts for a year

² Includes total EIRP capital spend without COR (cost of removal) for a year

Q. Please highlight the customer benefits of the vintage main distribution pipe and services replacement.

A. Major gas utilities throughout the country are embarking or undergoing major replacement projects, and some utilities are undertaking these projects under urgent timeframes due to incidents on their systems. The well-planned, thoughtful execution of the EIRP is a more cost-effective approach than being forced into replacement under emergent conditions for several reasons including:

- **Cost Control:** Planned replacements allow for better budgeting and cost management. The Company can negotiate better prices for equipment and services, avoiding the premium costs often associated with emergency procurements.
- **Minimized Downtime:** Scheduled replacements can be coordinated to minimize operational and customer disruptions. In contrast, emergent replacements often result in unexpected downtime, which can be costly in terms of lost productivity and potential extended customer outages.
- **Resource Allocation:** With a planned approach, the Company can allocate resources more efficiently, ensuring that skilled personnel and necessary tools are available when needed. Emergencies often require pulling resources from other projects.

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- Risk Management: Proactive planning helps identify potential issues before they become critical, reducing the risk of catastrophic failures that can be far more expensive to address.

By taking a proactive approach, the Company can avoid the high costs and operational disruptions associated with emergency replacements. This leads to more efficient and cost-effective operations while minimizing the impact of service disruptions to customers. Through December 31, 2024, the Company has replaced 900 miles of high-risk pipe identified for replacement through the EIRP, including 327 miles of cast iron and over 106,500 services replaced and retired to improve reliability and customer safety.

Q. Does the Company expect to meet the spending levels for EIRP from the Case No. U-21490 settlement agreement?

A. Yes, the settlement agreement from Case No. U-21490 established a spending level of \$215.3 million for the EIRP for the 12-month period ending September 30, 2025. It also included cost-per-mile target of \$3.8 million for steel pipe and region-specific targets for plastic pipe: \$1,535,859 in the Southwest region, \$1,459,794 in the Northeast region, and \$1,503,818 in the Southeast region. For the 12-month period ending September 30, 2025, the Company expects EIRP expenditures of \$203.4 million, with an additional \$0.512 million in facilities-related costs, resulting in total projected expenditures of \$203.9 million. The Company expects to achieve a cost-per-mile of \$2.6 million for steel pipe. For plastic pipe, the projected cost-per-mile is \$1,274,471 in the Southwest, \$1,255,101 in the Northeast, and \$1,336,294 in the Southeast. The settlement agreement also required the Company to hold a technical conference in January 2025 after the filing of the EIRP planning report. The technical conference was held on January 17, 2025.

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1 **Q. Has the Commission previously reviewed the EIRP?**

2 A. Yes. In its order for Case No. U-21806, the Commission reviewed the Company's EIRP
3 and approved \$208.93 million in projected capital expenditures for the test year 12 months
4 ending October 31, 2026. The Commission reduced projected capital expenditures in the
5 amount of \$42.28 million related to three specific projects (SAG4, ALM2, and ROK10)
6 due to a lack of demonstrated design progress. These reductions were based solely on
7 project readiness and not on the reasonableness or prudence of the EIRP itself.

8 For this case, the Company has made significant design progress on these three
9 projects. As of the filing of this case, ALM2 has reached the 60% design completion
10 milestone, while SAG4 and ROK10 have reached 90% or greater design completion. All
11 three projects are on schedule for construction in 2026 and are therefore included in the
12 capital projections for this case.

13 **Q. What is the purpose of the Material Condition Non-Modeled Program?**

14 A. The projects in the Material Condition Non-Modeled Program are Company-initiated
15 replacements to address emergent issues that must be resolved to comply with regulations
16 or to ensure public and/or employee safety, and to target certain assets which may not rank
17 as highly in the Company's risk modeling but whose replacements offer operational
18 advantages to the Company and customers. Projects include issues associated with:

- 19 (i) Emergent Replacements / Leak Mitigation (i.e. main or service replacements
20 due to active gas main damages, leaks, or temporary repairs that need to be
21 resolved within the year);
- 22 (ii) Safety situations (i.e. saddle tee replacements);
- 23 (iii) Cathodic issues (i.e. cathodic shorts and atmospheric corrosion);
- 24 (iv) Company-initiated work to resolve standards discrepancies or customer
25 issues (i.e. obsolete fittings or materials); and

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- 1 (v) Projects based on operational improvements that may not be represented
2 effectively in risk model results (and therefore are not EIRP projects).

3 The combination of these items results in hundreds of small replacements annually that are
4 emergent in nature. The Company's capital expenditures for this program were
5 \$39,443,000 in 2024 and are projected to be \$52,802,000 for the year 2025; \$45,558,000
6 for the 10 months ending October 31, 2026; and \$47,205,000 for the test year 12 months
7 ending October 31, 2027. The costs for the Material Condition Non-Modeled Program are
8 set forth on Exhibit A-112 (KAP-4), line 2, and are further detailed later in this direct
9 testimony. The increase in the capital expenditures for this program in the test year is due
10 to the wrought iron replacement and HP waterway crossing initiatives described below. In
11 addition, the program is increasing projected capital expenditures in Company-initiated
12 work for 400 leak mitigations at \$2.0 million and 5,500 obsolete residential meter
13 replacements at \$6.6 million. Additional details on leaks and obsolete meters are included
14 below in the Material Condition Renewals program. Projects completed under the
15 Non-Modeled program are listed in the Non-Modeled program database and are designed
16 by Distribution Engineering. Projects that are initiated in the field and handled immediately
17 by field personnel are included in the Material Condition Renewals program.

18 **Q. What is the impact of the NGDP on the Material Condition Non-Modeled Program?**

19 A. The objectives outlined in the NGDP moves the Company toward finalizing EIRP project
20 areas earlier to complete design, and align with affected municipalities and stakeholders,
21 increasing the overall timeline allowed for design and construction planning. While this is
22 beneficial overall, and will positively impact the Company's EIRP, it reduces the flexibility
23 of the EIRP to add projects to address emergent issues on the system. This approach allows
24 for a balanced mix of EIRP and Non-Modeled work to continue with the long-term plan

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1 and address system issues as they arise. Therefore, the Company is expecting a sustained
2 level of Material Condition Non-Modeled spending to address emergent issues for the
3 bridge period and test year. Even though vintage infrastructure is being replaced, what
4 remains continues to deteriorate. In the long term, enough vintage material will be replaced
5 to allow for reductions in this program, but with the EIRP ending in 2035, the Company
6 expects that reduction to occur beyond the test year in this case.

7 **Q. Please describe the importance of replacing the Company's standard pressure system**
8 **through projects in the Material Condition Non-Modeled Program.**

9 A. The Company's standard pressure system, also called utilization or low-pressure system,
10 is made up primarily of cast iron main. In most instances, cast iron main was installed
11 from the early 1900s through the 1920s. Due to the vintage and the construction method
12 used when the cast iron gas mains were installed, the joints between each segment of main
13 will leak if the pressure is too high. These same connection points allow water to infiltrate
14 the gas main when the pressures in the ground are higher than the pressure of the gas inside
15 the gas main. This causes customer interruptions and other operating problems.

16 Within a standard pressure system, some meters have a regulator on them but not
17 all do, meaning that if an overpressure situation were to occur on the gas main, there is not
18 a device at each home or business preventing that higher pressure from reaching the
19 customer's equipment. There are several areas of the state where there are very few miles
20 of cast iron main remaining in that area or system. Replacing these sections allows the
21 operating pressure in that entire area to be increased, ensuring that the benefits of the new
22 system, such as improved safety and reliability, are equitably distributed across all
23 communities, particularly those disproportionately affected by past infrastructure issues.

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1 Additionally, with elimination of the standard pressure system, each home or business will
2 also now have a regulator installed, ensuring consistent delivery pressure, and reducing the
3 risk of higher pressures entering the premise. Customers will benefit from a higher level
4 of reliability with no water infiltration, and improved safety due to regulated meters and
5 elimination of these vintage, more leak-prone facilities. Eliminating cast iron also reduces
6 methane emissions from the gas distribution system.

7 **Q. Are there additional standard pressure replacements in the Company's future plans**
8 **for the Material Condition Non-Modeled Program?**

9 A. No standard pressure replacement projects are planned for the test year ending October 31,
10 2027. However, the Company is completing standard pressure replacement work in 2025,
11 including projects in the Jackson and Owosso areas. The Company will continue to
12 evaluate system risks and may prioritize future standard pressure replacements as needed.

13 **Q. Please describe the importance of replacing the Company's wrought iron gas main in**
14 **the Material Condition Non-Modeled Program.**

15 A. Wrought iron gas main was generally installed in the 1920s and 1930s. The annual DOT
16 report combines cast iron and wrought iron together in a single line item, which indicates
17 similar treatment and characteristics in the gas industry. Cast iron mains are only operated
18 at low pressures, specifically less than 1 psig. Wrought iron mains, however, are part of
19 the Company's medium pressure system, with MAOPs of up to 60 psig. Due to the way
20 wrought iron was manufactured, its material properties are inconsistent and contain
21 inclusions of lower quality materials. Therefore, it is not possible to choose a welding
22 procedure that ensures the quality of the finished weld is adequate for use on the gas
23 system. This leaves the Company with limited options for coupling or compression-style

fittings when a leak or damage occurs on the wrought iron system, none of which are considered permanent repairs by the manufacturers of those fittings. The other alternative is replacement of the leaking main on an emergent basis. Eliminating wrought iron also reduces methane emissions from the gas distribution system.

Additionally, the Company experienced an increasing number of leaks on the wrought iron system in 2018 through 2022, which is impactful given the inability to make a permanent repair. Figure 3 shows the 2015-2024 actual wrought iron leaks along with projected leaks for 2025 and 2026.

Figure 3: Wrought Iron Pipeline Leaks Found 2015 – 2024 and Projected 2025-2026



With only 10.6 total miles of wrought iron left on the entire system, it is prudent to prioritize the replacement of these 10.6 miles and eliminate this issue from the system altogether. Most of this material (9.4 miles) is found in the smaller cities west and south of Kalamazoo, but there are small pockets in other areas of the state that make up the remaining mile. On May 5, 2025, there was third-party damage on a 2-inch wrought iron standard pressure main in Kalamazoo, by the County Road Commission, while performing

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roadwork. Crews responded and replaced approximately 700 feet of the wrought iron and 12 services as an emergent project under the Material Condition Non-Modeled Program. The Company plans to replace 6.8 miles of wrought iron mains, and any other intermingled vintage material mains, under the Material Condition Non-Modeled Program over the next three years as shown in Table 8. The remaining wrought iron miles are planned to be replaced within the EIRP program. To avoid construction during the heating season, projects are planned for construction from April through October, so the entire 2027 projection of \$1,000,000 will fall within the 12 months ending October 31, 2027.

Table 8: Wrought Iron Replacements

Year	Miles Replaced	Location	\$
2025	1.36	Lawton, Hartford	\$ 1,500,000
2026	4.5	Comstock, Vicksburg, Paw Paw, Lawrence	\$ 5,000,000
2027	0.97	Bay City, Paw Paw, Parchment, Galesburg	\$ 1,000,000

Q. Please describe the Line 1010 project in the Material Condition Non-Modeled Program.

A. Line 1010 is a 1950s era pipeline that was purchased by the Company from another utility. In 2020, PSHMA issued a rule adjustment to traceable, verifiable, and complete (“TVC”) records for pressure test documentation. Pipeline segments installed prior to test record requirements implemented in 1970 were previously “grandfathered,” or exempt, from original construction pressure test documentation requirements and allowed to operate at the highest actual operating pressure observed between 1965 and 1970. The updated 2020 rule limited this exemption to pipelines operating below 30% of the specified minimum yield strength (or “SMYS”). As a result, the Company must reconfirm the MAOP for all

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pre-1970 pipelines operating above 30% SMYS. Additional details on the PHMSA TVC compliance standards are included in the MAOP – Distribution projects section of Company witness Warriner’s direct testimony. The Line 1010 project is included in the Material Condition Non-Modeled program because it was started in 2021, prior to the establishment of the other MAOP projects discussed in the testimony of Company witness Warriner. The Company attempted to locate the original Line 1010 pressure test records, but when this line was built in 1951, there was no code requirement to maintain the records. The Company plans to replace sections of Line 1010, which will remove them from the TIMP cycle. Between 2021 and 2026, various segments of Line 1010 will be replaced or retired to establish a TVC record bringing this pipeline into compliance with the new PHMSA rule. The various projects will retire approximately 79,000 feet of existing main. The Company plans to install approximately 27,400 feet of new 12-inch steel HP main. The Company will also convert three services from high pressure to medium pressure. Additionally, the Company will install a 200-foot bypass near the Coolidge City Gate. The projected total cost to replace/retire the Line 1010 pipeline is \$27.9 million as shown in Table 9 below. The 2024 actual expenditure was \$5.8 million, and the projected expenditures are \$1.1 million for 2025, and \$19.1 million for the 10 months ending October 31, 2026. There are no expenditures projected for the test year 12 months ending October 31, 2027. Any new main installed as part of this project section will not operate at a pressure that creates a hoop stress greater than 20% of the SMYS of the pipe, meaning it will not need to be inspected every six years as part of TIMP. The decision to replace the pipeline was made after exploring the option to re-pressure test the existing pipeline. A cost and risk analysis were completed, and it was found that it was not feasible to retest

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all of Line 1010 while serving the customers on the system. There is a level of impracticality and risk that is not reflected in the cost estimate for re-testing a distribution line of this length, especially when it comes to the customer meter stands. To test a segment, it is necessary to isolate each meter, and for HP customers, each HP regulator stand. These customers would be without gas for the duration of the test prep, the actual test, and the reinstatement of that section of pipe. Test durations could vary from several hours to several days based on multiple factors including the length of pipe being tested and the type of testing required. Additionally, the testing would have to be performed in rolling segments, which would require additional work to be able to isolate individual test segments.

Table 9: Line 1010 Project Expenditures (\$000)

Phase Description	Project Phase	Historical Expenditures				Projected Expenditures			
		12 Mos Ended 12/31/2021	12 Mos Ended 12/31/2022	12 Mos Ended 12/31/2023	12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	12 Mos Ending 12/31/2026	12 Mos Ending 12/31/2027
DAPP 18785 and 19545	Completed 9/24/21	\$ 345							
DAPP 19703	Completed 12/30/2022		\$ 640	\$ 38					
DAPP 20093	Completed 8/10/2022		\$ 55	\$ -					
DAPP 21224	Completed 11/13/2023			\$ 845					
DAPP 22455	Completed 1/9/2025				\$ 5,799	\$ 561			
DAPP 22692	Design in progress					\$ 500	\$ 9,800	\$ 9,800	
DAPP 22957	Design in progress						\$ 9,300	\$ 9,300	
Total	\$ 27,883	\$ 345	\$ 695	\$ 883	\$ 5,799	\$ 1,061	\$ 19,100	\$ 19,100	-

Q. Please describe the HP Waterway initiative in the Material Condition Non-Modeled Program.

A. On April 5, 2023, at approximately 9:30 pm, Consumers Energy customers experienced an interruption affecting approximately 4,500 customers around Hastings, MI. The cause of the interruption was a HP distribution gas main that broke where the pipeline crossed the Thornapple River. Although the pipeline was originally designed and installed in compliance with standards of the time, the flow of the river current appeared to have undermined the gas main, leaving it “elevated” in the waterway, with approximately

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1 1.5-2 feet of open water between the pipe and the riverbed it was originally installed
2 beneath. This elevated crossing allowed debris and water flow to exert unintended
3 structural stresses on the pipeline, which led to an overload condition during flooding and
4 caused a failure at a girth weld. An evaluation of the distribution system's GIS mapping
5 overlaid with state hydrologic data, identified 442 total potential HP water crossings.
6 Those 442 crossings have been evaluated by reviewing records and standards and
7 performing field visits to validate and augment the data. The Company's risk models have
8 been updated with the results and 15 additional pipe segments were identified as exposed
9 or visible in a flowing waterway. A replacement plan has been created to remediate these
10 over the next three years (2025-2027). A listing of the 15 projects is included in
11 WP-KAP-5, page 3. The projected cost for the HP Waterway initiative is currently
12 projected at \$8.3 million excluding 4 projects temporarily placed on hold pending a
13 comprehensive evaluation of potential additional load in the region and excluding two
14 additional projects that have been cancelled. The 2024 actual expenditure was \$641,989,
15 and the projected expenditures are \$200,000 for 2025, \$7,000,000 for the 10 months ending
16 October 31, 2026, and \$500,000 for the test year 12 months ending October 31, 2027.

17 **Q. Has the Commission previously reviewed the Line 1010 leak mitigation, obsolete**
18 **meter replacement, wrought iron, and HP waterway crossing projects included in the**
19 **Material Condition Non-Modeled program?**

20 **A.** Yes. In its order in Case No. U-21806, the Commission reviewed the Company's
21 Non--Modeled program and the details of the five projects within the program. The
22 Commission approved the expenditures in that case for the wrought iron main
23 replacements, leak mitigation, obsolete meter replacements, and the Line 1010 projects.

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1 The Commission removed the expenditures for the HP waterway projects based on the
2 finding these projects were still in the scoping phase, had not begun design or engineering
3 work, and were too uncertain in terms of timing and costs. The Company has now made
4 significant design progress on these HP waterway crossing projects. As of the filing of this
5 case, two projects have been completed (totaling \$642,000), two projects have been
6 released for construction (projected to total \$3.7 million), and five projects have started the
7 design process and are out for survey (projected to total \$4.0 million). All remaining seven
8 HP waterway crossing projects identified for construction in 2025 and 2026 are on schedule
9 and are included in the capital projections for this case.

10 **Q. Please describe the Material Condition Commercial/Industrial Meters Program.**

11 A. The Material Condition Commercial/Industrial Meters Program includes the replacement
12 of several commercial and industrial meter stands due to corrosion of the stand, obsolete
13 regulation equipment, or excessive maintenance requirements. Replacement of obsolete
14 equipment that the Company can no longer acquire parts for is prudent to ensure reliability
15 for these large customers. Replacement of the stands that have excessive corrosion
16 developing or excessive maintenance requirements is reasonable for both safety and
17 reliability for that customer. These replacements are prioritized each year through
18 collaboration between the Gas Commercial and Industrial Service team within Gas
19 Operations, and the Metering and Regulation Engineering team within Gas Asset
20 Management.

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1 **Q. Can you please explain the expenditures in the Material Condition Commercial/**
2 **Industrial Meters Program?**

3 A. In 2024, \$754,000 was spent to replace 10 meter stands for customers. The projection is
4 to replace 12 stands in 2025 and 13 additional stands in 2026. The Company's capital
5 expenditures for this program were \$754,000 in 2024 and are projected to be \$2,296,000
6 for 2025; \$1,888,000 for the 10 months ending October 31, 2026; and \$2,364,000 for the
7 test year 12 months ending October 31, 2027, respectively. The increase in expenditure
8 reflects a shift in the nature of the work. In 2024, the work primarily involved meter
9 move-out projects, many of which turned out to be substantial downsizes that could be
10 completed at a lower cost than originally estimated. The projected work includes both
11 meter move-outs and complex field-driven replacements, many requiring significant
12 redesign and site preparation. As shown on WP-KAP-9, actual expenditures through July
13 2025 have exceeded \$1,000,000, highlighting the higher cost profile of these projects. This
14 increase reflects the complexity of upcoming work and the need to address aging
15 infrastructure to maintain reliable service for large customers. The costs for the Material
16 Condition Commercial/Industrial Meters Program are set forth on Exhibit A-112 (KAP-4),
17 line 5.

18 **Q. Can you explain the purpose of the Material Condition Renewals Program?**

19 A. The Material Condition Renewals Program is part of a Company initiative to reduce
20 actionable leaks through full-service replacement versus repair or reclassification of leaks.
21 The distinction between the Material Condition Non-Modeled Program and the Material
22 Condition Renewals Program is that the decision to renew the facility is done by field
23 personnel on an immediate, emergent basis in the Material Condition Renewals Program.

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The program orders are created and completed in the field, are not contained within the Non-Modeled program database, and are directly related to active gas leaks on gas main and/or services. The capital expenditures for the Material Condition Renewals Program were \$38,636,000 in 2024 and are projected to be \$41,688,000 for 2025; \$37,407,000 for the 10 months ending October 31, 2026; and \$66,330,000 for the test year 12 months ending October 31, 2027, respectively. The historical and projected expenditures are detailed on Exhibit A-112 (KAP-4), line 3.

Q. Can you please explain the expenditures in the Material Condition Renewals Program?

A. The Material Condition Renewals Program focuses on addressing urgent issues that arise in the field, ensuring compliance with regulations and maintaining safety for both the public and employees. The capital expenditures, shown below in Table 10, in this program are allocated to projects that are initiated as a response to these emergent issues. The program is divided into four main areas:

- Leak Renewals - Main: This involves replacing main pipelines that have developed leaks.
- Leak Renewals - Services: This covers the replacement of service lines that are leaking.
- Leak Renewals – Meter Stands: This area focuses on renewing meter stands that have leaks.
- Damages: This includes field-initiated repairs and replacements due to discovered damages.

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Table 10: Material Condition Renewals Expenditures

	Historical Year 12 Mons Ending 12/31/2024	Projected Year 12 Mons Ending 12/31/2025	Projected 10 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
(\$000)				
Leak Renew Main	\$ 2,387	\$ 3,435	\$ 4,384	\$ 4,733
Leak Renew Service	\$ 17,642	\$ 15,482	\$ 16,387	\$ 29,904
Leak Renew Mtr/Stand	\$ 1,628	\$ 1,985	\$ 1,222	\$ 1,453
Damages	\$ 16,980	\$ 20,786	\$ 15,415	\$ 30,241
Total	\$ 38,636	\$ 41,688	\$ 37,408	\$ 66,330

Each of these areas ensures that the infrastructure remains safe and compliant with necessary regulations. Most new leaks are found during Leak Survey. Each year different sections of the system are inspected, which drives fluctuations in the number of leaks found annually. The Leak Repair and Survey process description and results are further described in the direct testimony of Company witness James P. Pnacek.

Q. How will the Company's change in methodology and technology for leak survey described in Company witness Pnacek's testimony impact the Material Condition Renewals program capital expenditures?

A. The Company's transition to using AMD and a grid-based leak survey methodology is expected to significantly increase the number of leaks identified, with a substantial rise projected in the test year ending October 31, 2027. The expanded survey coverage and enhanced detection sensitivity will result in a higher number of actionable leaks. These repairs often require full replacement of affected infrastructure, such as mains, services, and meter stands, rather than temporary fixes, consistent with the Company's proactive approach to leak mitigation. This approach prevents future leaks on the same facilities, reduces methane emissions, and improves long-term system reliability. As a result, the Material Condition Renewals Program must be scaled to accommodate a higher volume of

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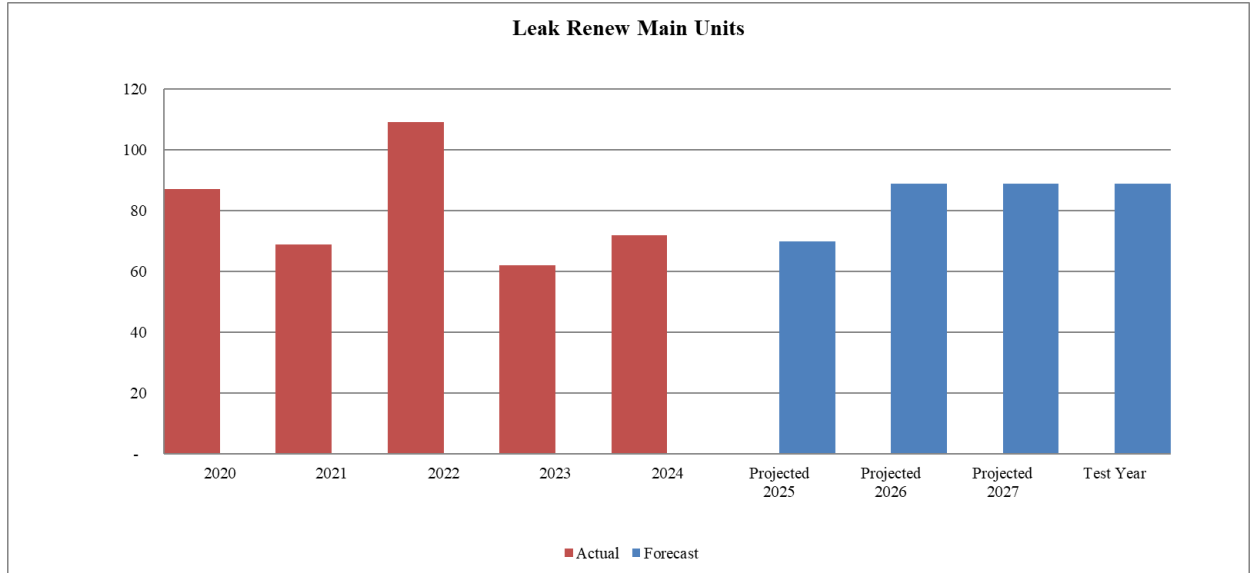
1 emergent replacements. These investments also support the Company's strategy to reduce
2 the leak backlog to the lowest achievable level, consistent with regulatory expectations and
3 public safety goals. While operational details of the leak survey program are addressed in
4 the testimony of Company witness Pnacek, my direct testimony describes the capital
5 investments required to support the increased leak remediation workload. The projected
6 number of leak renewals for the test year is based on a quantitative methodology using leak
7 find rates and the expanded survey scope enabled by AMD technology. Specifically, the
8 Company has applied the following assumptions:

- 9 • Above-ground leaks: One actionable leak is identified for every 30 services
10 surveyed.
- 11 • Below-ground leaks: One actionable leak is identified for every five miles of
12 main surveyed.
- 13 • Survey scope: For the test year, the Company projects surveying approximately
14 1,150,226 services and 23,622 miles of main.
- 15 • Capitalization factor: Using the assumptions above results in a projection of
16 43,065 actionable leaks found during survey. Approximately 19% of leaks
17 identified through survey activities are projected to require full replacement and
18 are capitalized under the Material Condition Renewals Program.

19 Applying these assumptions results in an estimated 8,182 capitalized replacements for the
20 test year. This projection reflects the anticipated increase in leak identification due to
21 AMD's enhanced sensitivity and expanded coverage, while maintaining consistency with
22 historical leak find rates and capitalization percentages. Figures 4 through 6 illustrate the
23 historical and projected unit counts for gas main, service, and meter stand replacements.

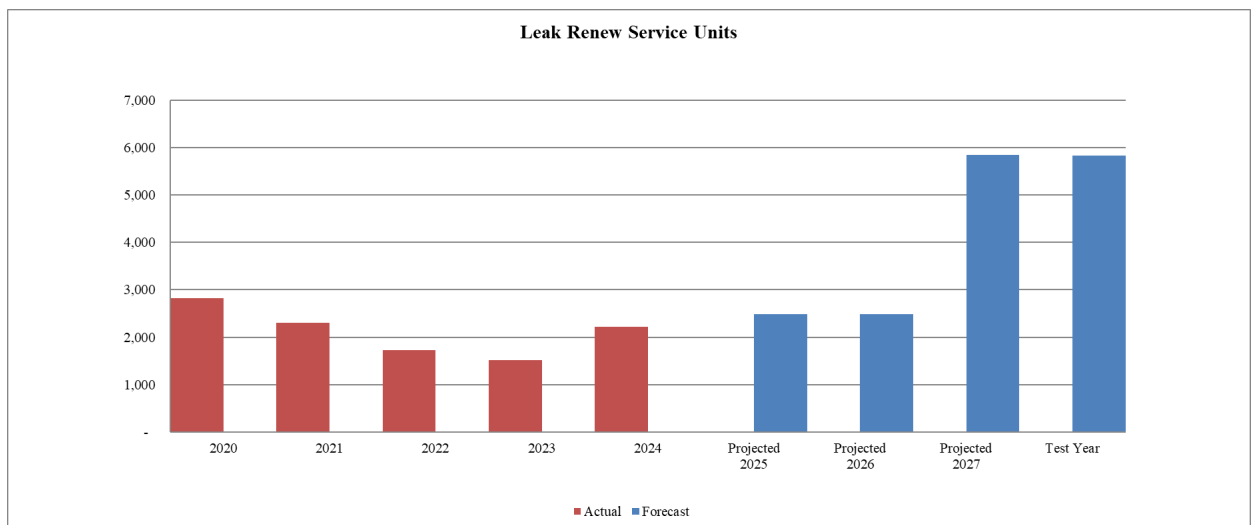
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Figure 4: Gas Main Renewal Projects



Leak Renew Main	2020	2021	2022	2023	2024	Projected 2025	Projected 2026	Projected 2027	Test Year
Actual	87	69	109	62	72				
Forecast						70	89	89	89
Actual Cost (\$000)	\$ 5,590	\$ 4,522	\$ 3,065	\$ 7,157	\$ 2,387				
Forecasted Cost (\$000)						\$ 3,435	\$ 4,551	\$ 4,740	\$ 4,733

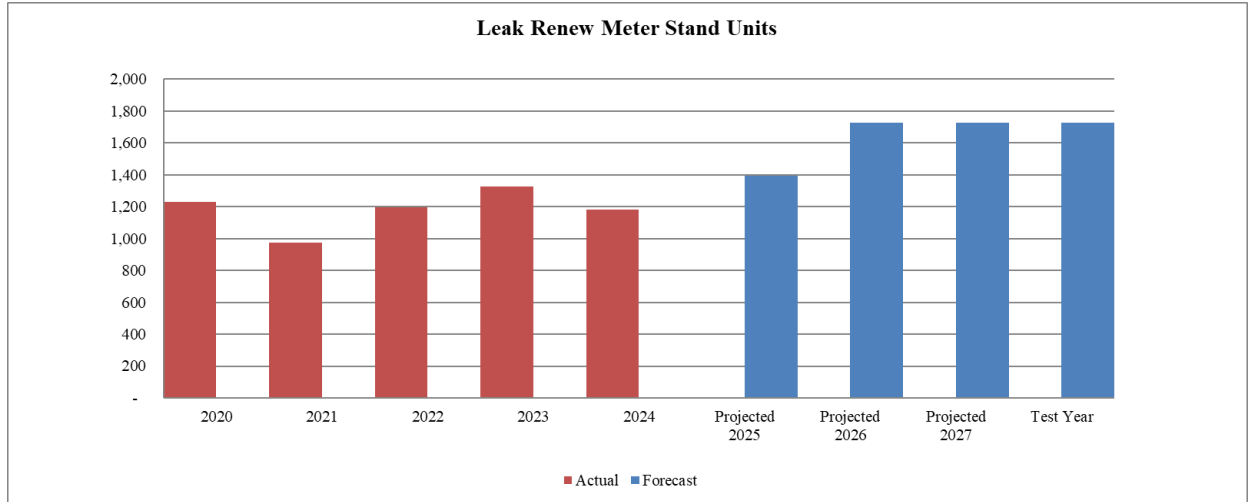
Figure 5: Gas Service Renewal Projects



Leak Renew Service	2020	2021	2022	2023	2024	Projected 2025	Projected 2026	Projected 2027	Test Year
Actual	2,824	2,302	1,732	1,512	2,219				
Forecast						2,485	2,485	5,849	5,828
Actual Cost (\$000)	\$ 22,788	\$ 21,537	\$ 16,040	\$ 13,866	\$ 17,642				
Forecasted Cost (\$000)						\$ 15,482	\$ 17,286	\$ 30,012	\$ 29,904

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Figure 6: Gas Meter Stand Renewal Projects



Leak Renew Mtr/Stand	2020	2021	2022	2023	2024	Projected 2025	Projected 2026	Projected 2027	Test Year
Actual	1,231	974	1,195	1,325	1,180				
Forecast						1,396	1,727	1,727	1,727
Actual Cost (\$000)	\$ 788	\$ 740	\$ 1,027	\$ 1,745	\$ 1,628				
Forecasted Cost (\$000)						\$ 1,985	\$ 1,399	\$ 1,465	\$ 1,453

Additionally, this program includes funding within the Damages category to replace obsolete regulated meter stands. The Customer Metering section of the NGDP, Exhibit A-30 (TMB-1), explains that the sole-sourced Regulated Meter (“RM”) residential gas meter was discontinued in 2021. This meter type is the most common in Consumers Energy’s gas system. As the Company’s RM inventory decreases, it will be necessary to replace RM meter stands with industry-standard top-connect meter stands due to the different connection methods of each type of meter. These new stands will feature a temperature-compensated top-connect gas meter and a separate pressure regulator. To meet meter exchange requirements and minimize extended customer outages during

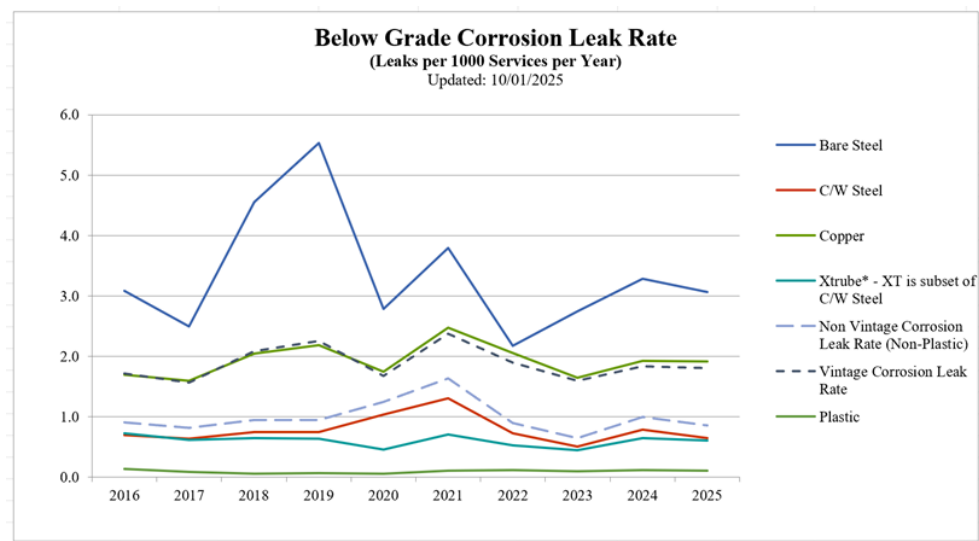
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emergent meter exchanges, the Company will continue converting meter stands in 2025. The projected cost for rebuilding 25,000 meter stands is \$30 million.

Q. Please describe the VSR Program.

A. The VSR Program began in 2017 and is a comprehensive approach to replace all copper, bare steel, and unknown-material gas services across the Company's distribution system. As shown in Figure 7, these vintage materials have significantly higher corrosion-related leak rates compared to modern alternatives, posing elevated safety, reliability, and environmental risks. Copper services make up approximately 85.1% of all vintage services.

Figure 7: Below Grade Corrosion Leak Rate (As of 10/1/2025)



Q. How are vintage services categorized within the VSR Program?

A. For planning purposes, the Company categorizes vintage services into four groups to support forecasting and resource allocation:

- In-Grid VSRs: Services connected to vintage main and replaced during EIRP main replacements.
- Proactive In-Grid VSRs: Services located within EIRP project areas but not connected to vintage mains.
- Proactive Out-of-Grid VSRs: Services located outside EIRP project areas.

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- Other Programs: Services replaced through other initiatives such as Material Condition Renewals and Asset Relocation.

Q. Why is the Company targeting 2035 for full elimination of vintage services?

A. The 2035 target aligns with the Company's long-term strategic goals outlined in the NGDP, Exhibit A-30 (TMB-1), which prioritizes the elimination of vintage infrastructure to improve safety, reliability, and environmental performance. Vintage services are copper, bare steel, and unknown materials, and have significantly higher leak rates and pose elevated risks to public safety and system integrity. By setting a clear timeline for full elimination by 2035, the Company can proactively manage these risks, reduce methane emissions, and avoid costly emergency replacements.

This timeline also allows for coordinated planning with other major infrastructure programs, such as the EIRP, enabling efficient resource allocation and minimizing customer disruption. The 2035 goal provides a practical and achievable framework for completing the work at a sustainable pace, while meeting regulatory expectations and supporting the Company's commitment to a clean and safe energy future.

Q. Has the Commission previously reviewed the VSR program?

A. Yes. In its order for Case No. U-21806, the MPSC reviewed the Company's VSR program and approved the projected VSR capital expenditures presented through the test year in that case. The Commission agreed with the Company that replacing the remaining vintage services is prudent for reliability and safety.

Q. How does the Company determine the order in which proactive vintage services will be replaced?

A. Risk and location are the primary factors that determine prioritization. For VSRs selected through 2024, the Company used a manual analysis process that examines the leak rate

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1 along with other factors such as soil conditions and material age, of each distribution
2 service material to prioritize replacement in accordance with the Company's DIMP.
3 Starting with 2025 VSRs, the Company has transitioned from the manual process to
4 running the analysis in the Distribution Risk Analysis Model ("DRAM"). The DRAM was
5 implemented in 2019, and is used primarily to analyze distribution pipelines, which
6 supports the identification of EIRP projects. The Company has gained enough experience
7 using the DRAM to apply the model to services as well. This aligns the Company's
8 approach to an industry standard model and will create efficiency within its engineering
9 team.

10 **Q. How many vintage services remain on the system, and what is the Company's plan to**
11 **eliminate them?**

12 A. As of January 2025, approximately 105,784 vintage services remain on the system. To
13 meet the Company's goal of full elimination by 2035, an average annual replacement rate
14 of approximately 10,500 services is required. The Company plans to replace 9,047 services
15 in 2026 and increase to 10,300 in 2027 to align with this timeline. Table 11 below outlines
16 the actual vintage services replacement figures as well as the projections for 2025, 2026,
17 and 2027, including the test year. The increase in unit cost from 2026 to 2027 is primarily
18 driven by the complexity of the projected work. The Company has been completing more
19 projects that include commercial and institutional services (such as industrial facilities and
20 schools), which require larger diameter service pipe and specialized fittings. These types
21 of projects often occur in areas with hard surfaces (pavement, concrete driveways, and
22 parking lots), necessitating saw cutting, temporary patching, and final hard surface
23 restoration. Restoration costs represent the highest outside service expense in the program.

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Additionally, projects located on major roads frequently require costly traffic control measures and road breaks to spot utilities during boring operations. Road breaks also require both temporary and permanent surface restoration, further increasing costs. These factors combined contribute to the higher projected unit cost for 2027 compared to 2026. To avoid construction during the heating season, projects are planned for construction from April through October, so the entire 2027 projection of \$65,761,000 will fall within the 12 months ending October 31, 2027.

Table 11: Vintage Services Replacements

	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023	Actual 2024	Projected 2025	Projected 2026	Projected 2027	Projected 12 Mos Ending 10/31/2027
VSR Program Units	6,307	9,381	5,571	5,456	5,056	2,176	1,228	2,569	4,194	5,913	7,683	7,683
VSR Unit Cost	\$5,322	\$6,037	\$7,260	\$7,848	\$6,518	\$7,888	\$9,246	\$7,533	\$7,180	\$7,389	\$8,559	\$8,559
VSR Program Spend (\$000)	\$33,564	\$56,634	\$40,443	\$42,818	\$32,955	\$17,165	\$11,354	\$19,352	\$30,113	\$43,689	\$65,761	\$65,761
EIRP/Other Programs	5,169	4,042	4,064	4,291	5,245	8,235	3,576	3,803	3,172	3,134	2,617	2,198
Total Services Replaced	11,476	13,423	9,635	9,747	10,301	10,411	4,804	6,372	7,366	9,047	10,300	9,881
Total Services Remaining	170,478	157,055	147,420	137,673	127,372	116,961	112,157	105,785	98,419	89,372	79,072	79,491

The capital expenditures for the VSR Program were \$19,352,000 in 2024 and are projected to be \$30,113,000 for 2025; \$43,689,000 for the 10 months ending October 31, 2026; and \$65,761,000 for the test year 12 months ending October 31, 2027, respectively. The historical and projected expenditures are detailed on Exhibit A-112 (KAP-4), line 4.

Q. Does the replacement of aging pipeline facilities through the Material Condition programs have the potential to reduce emissions into the atmosphere?

A. Yes. By replacing aging materials with the potential for increased leak rates, the Company is reducing the future methane emissions into the atmosphere.

2. Gas Operations Other

Q. Please list the programs within Gas Operations Other capital expenditures.

A. The five programs, as shown on Exhibit A-113 (KAP-5), page 1, are:

- Routine Computer and Equipment;

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- Tools;
- Land and ROW;
- Compliance and Controls; and
- Geospatial Inventory and Modeling Program.

Q. Please describe the capital expenditures relating to the Gas Operations Other Program as shown on Exhibit A-12 (KAP-3), Schedule B-5.7, line 2.

A. The Gas Operations Other Program expenditures were \$12,687,000 for the year 2024; and are projected to be \$13,914,000 for 2025; 13,080,000 for the 10 months ending October 31, 2026; and \$13,928,000 for the test year ending October 31, 2027, as set forth on Exhibit A-12 (KAP-3), Schedule B-5.7, line 2, columns (b), (c), (d), and (f), respectively. The Gas Operations Other Program includes the following programs:

- **Routine Computer and Equipment:** Computer equipment includes printers, plotters, and other technical equipment. Desktop and laptop computers for existing employees are not included in this program as they are purchased through the Information Technology (“IT”) department.
 - The Routine Computer and Equipment Program expenditures were \$2,000 for the year 2024; and are projected to be \$50,000 for 2025; \$0 for the 10 months ending October 31, 2026; and \$50,000 for the test year ending October 31, 2027, as detailed on Exhibit A-113 (KAP-5), line 1.
- **Tools:** Tools for field employees are purchased as part of this program. The purchase of new tools will replace tools that are worn, broken, or outdated. Tools purchased due to safety issues that come up throughout the year are also part of this program. The program also includes ergonomic tools that will prevent or lower the risk of employee injury.
 - The Tools program expenditures were \$5,167,000 for the year 2024; and are projected to be \$4,510,000 for 2025; \$3,748,000 for the 10 months ending October 31, 2026; and \$8,083,000 for the test year ending October 31, 2027, as detailed on Exhibit A-113 (KAP-5), line 2. The Company is requesting an additional \$3.6 million in capital funding within the Tools program for the test year to support the Work Innovation and Transformation department’s efforts to modernize field operations through the deployment of advanced technologies and pilot programs. This includes GPS-enabled asset tracking and air tagging systems to improve tool visibility and compliance, digital tools for real-time geospatial data capture,

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and smart gas grid enhancements such as intelligent metering and network monitoring. Funding will also support innovation pilots focused on safety, workforce transformation, and customer value, as well as exploration of emerging technologies. These technology investments support compliance requirements, improve operational efficiency, and are projected to reduce long-term spending. By automating processes and improving the flow of information, the Company projects reductions in manual errors, accelerated response times, and enhanced overall service reliability.

- **Land and ROW:** This program includes costs associated with Land and ROW specialists supporting gas distribution projects. The Land and ROW program expenditures were \$1,021,000 for the year 2024; and are projected to be \$1,302,000 for 2025; \$649,000 for the 10 months ending October 31, 2026; and \$849,000 for the test year ending October 31, 2027, as detailed on Exhibit A-113 (KAP-5), line 3.
- **Compliance and Controls Projects:** These investments are made up of the projects as listed in Table 12 below. The Compliance and Controls program expenditures were \$4,945,000 for the year 2024; and are projected to be \$199,000 for 2025; \$3,776,000 for the 10 months ending October 31, 2026; and \$4,946,000 for the test year ending October 31, 2027, as detailed on Exhibit A-113 (KAP-5), line 4.
- **Geospatial Inventory and Modeling Program:** I will further describe this program later in my testimony. The description of how the projections were developed for this program are included in the O&M section of my testimony. The Geospatial Inventory and Modeling program expenditures were \$1,552,000 for the year 2024; and are projected to be \$7,853,000 for 2025; and \$4,908,000 for the 10 months ending October 31, 2026. There are no expenditures projected in the test year for this program, as detailed on Exhibit A-113 (KAP-5), line 5.

Q. Please describe the capital projections for the Compliance and Controls projects.

A. These investments are made up of five projects with the capital projections listed in Table 12 below.

Table 12: Compliance and Controls Project Detail

	2024 Actual	2025 Projected	2026 Projected	2027 Projected	12 months ending 10/31/2027
(\$000)					
Advanced Methane Detection	\$4,635	\$0	\$3,280	\$4,773	\$4,773
Enterprise Contractor Oversight Dashboard	\$3	\$0	\$0	\$0	\$0
Enterprise Corrective Action Plan - Gas	\$191	\$199	\$0	\$0	\$0
Damage Prevention and MISS DIG	\$0	\$0	\$496	\$173	\$173
Other	\$115	\$0	\$0		\$0
Total Compliance and Controls	\$4,945	\$199	\$3,776	\$4,946	\$4,946

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1 **Q. Please describe AMD.**

2 A. AMD is a highly sensitive methane detection system designed to identify methane leaks
3 with exceptional precision. Unlike traditional leak detection equipment that measures
4 methane in parts per million (ppm), AMD detects methane in parts per billion (ppb),
5 significantly increasing sensitivity and accuracy. AMD units are equipped with advanced
6 features such as:

- 7 • Emission Rate Measurement: Quantifies the rate of methane emissions.
- 8 • Breadcrumbing: This feature helps in tracking the path of methane emissions.
- 9 • Geospatial Locations: AMD provides precise geospatial data of potential
10 methane emissions.
- 11 • Time-Stamped Datalogging: All data is logged with timestamps, providing a
12 detailed record of methane emissions over time.

13 These capabilities enable the Company to detect and prioritize leaks more effectively,
14 enhancing public safety, reducing methane emissions, and supporting regulatory
15 compliance.

16 **Q. How will this technology improve the Company's capability to find leaks on the**
17 **system?**

18 A. This technology enables the Company to find and prioritize the higher risk leaks to improve
19 public safety. Leveraging risk-based prioritization and algorithms, the Company has
20 implemented a Super Emitter Program, which identifies the largest methane emitting leaks
21 on its gas distribution system for investigation and escalated remediation. AMD is also
22 proving to be seven times more effective at locating below ground leaks, leading to
23 enhanced public safety.

24 **Q. Please explain the benefit to customers delivered through the AMD.**

25 A. AMD offers several key benefits to customers including:

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- Enhanced Safety: By improving the Company's ability to detect and pinpoint leaks more accurately, AMD helps prioritize the remediation of high-risk leaks. This leads to a safer environment for customers.
- Risk-based Prioritization: The addition of emissions rate data allows the Company to assess and address leaks based on their potential risk, ensuring that the most significant leaks are dealt with first.
- Increased Detection Sensitivity: With its heightened sensitivity, AMD can detect methane emissions more effectively, leading to better classification and remediation of leaks.
- Source Discrimination: AMD devices assist in pinpointing hard-to-locate leaks or to rule out bio-gas methane that could produce false positives through current leak survey methodologies.
- Support for Environmental Goals: AMD aids the Company in its goal of achieving net zero methane emissions by identifying and quantifying large emission sources. This enables targeted and efficient remediation efforts.

Overall, AMD enhances the Company's ability to manage methane emissions, contributing to improved public safety and environmental sustainability.

Q. What is the status of the AMD program?

A. The Company has evaluated the technology's effectiveness in various operational scenarios, which provided valuable insights into AMD's capabilities and confirmed its superior performance in detecting below-ground leaks compared to traditional methods. This has enabled the Company to move forward with full-scale implementation.

Q. What costs are associated with the initial phase of AMD?

A. Table 13 below provides the capital investment and O&M expenses for the initial phase of AMD. The capital expenditures were for the purchase of eight units and includes the vehicle costs. The O&M expenses include the license fees and costs associated with performing AMD surveys and studies.

Table 13: AMD Actual and Projected Costs Through 2025

	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Projected	Total
O&M	\$122,874	\$102,706	\$188,561	\$409,360	\$572,508	\$1,396,009
Capital	\$2,400,000	\$4,635,000	\$ -	\$4,635,000	\$0	\$11,670,000

Q. How will AMD be used in the Company's operations going forward?

A. AMD will be deployed across multiple operational areas to support the Company's safety, reliability, and environmental goals. Specifically, AMD will be used for:

- **Compliance Leak Survey:** As described earlier in my direct testimony and the direct testimony of Company witness Pnacek, AMD will become the primary method for conducting compliance leak surveys. Its enhanced sensitivity and geospatial capabilities allow for more efficient and accurate leak detection, enabling risk-based prioritization and reducing the likelihood of missed leaks.
- **Super Emitter Program:** AMD supports the Company's Super Emitter Program by identifying high-flow methane leaks (e.g. >10 SCFH) that contribute disproportionately to total emissions. These leaks are investigated and prioritized for remediation regardless of the standard leak survey schedule. Examples of identified super emitters and the resulting investigation findings are included in the testimony of Company witness Pnacek.
- **Emissions Monitoring:** AMD enables the Company to perform system-wide emissions quantification, measuring methane flow rates and identifying emission hotspots. This data supports the Company's goal of achieving net-zero methane emissions and informs strategic decisions for leak mitigation and infrastructure upgrades.
- **Pre/Post Construction drives:** The Company can drive replacement project areas preconstruction, collecting data to determine the emissions being released and then drive again after construction to determine emissions reduced as a result of the replacement projects.

Q. How will the Company's procedures be updated when a potential leak is found by AMD?

A. Leak indications are generated by the AMD technology after multiple nights of surveying each asset in a survey area, usually over three separate nights, which is the recommended number of drives to ensure comprehensive coverage. The collected data is sent for analysis

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1 and at the conclusion of the final drive, the leak detection team generates reports and
2 schedules investigations. Qualified individuals will then walk all mains and services,
3 including meter sets, within and 50 feet beyond the AMD-generated search area to
4 investigate the potential leaks. If leaks are found, the qualified investigator follows existing
5 leak response and reporting guidelines to address and document the issue.

6 **Q. Is the Company expecting to see an increase in leaks and associated leak repairs using**
7 **this new technology?**

8 A. Yes, as described earlier in the Material Condition Leak Renewals section of my testimony,
9 the Company does anticipate an increase in the detection and remediation of leaks with the
10 expanded use of AMD technology in compliance leak surveys. The technology's
11 heightened sensitivity allows for more precise detection of leaks. By providing exact
12 search areas, AMD minimizes the chance of human error during leak detection. These
13 improvements mean that more leaks are likely to be identified and remediated, enhancing
14 overall safety and system integrity.

15 **Q. What is the planned lifecycle and replacement strategy for AMD units?**

16 A. The AMD technology has a five-year lifecycle that is based on a combination of hardware
17 performance, software evolution, and regulatory compliance needs. Specifically:

- 18 • **Sensor Degradation** – Over time, the precision of methane sensors can decline
19 due to environmental exposure and continuous use. To maintain the high
20 sensitivity required for detecting methane in parts per billion (ppb), sensors
21 must be replaced periodically.
- 22 • **Software Advancements** – AMD units rely on advanced analytics, geospatial
23 mapping, and datalogging software. As technology evolves, newer versions
24 offer improved functionality, better integration with Company systems, and
25 enhanced leak prioritization capabilities. Replacing units ensures compatibility
26 with the latest software platforms and features.
- 27 • **Regulatory Alignment** – Emerging regulations, such as PHMSA's proposed
28 Rule 192.763, are expected to require advanced leak detection and repair

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technologies. Maintaining current AMD units ensures the Company remains compliant with these evolving standards.

- **Subscription Model** – The AMD technology is structured around a five-year subscription term that includes hardware, software licensing, and support services. This model ensures predictable budgeting and timely upgrades.

From 2021 through 2024, the Company purchased a total of eight AMD units. The projected costs for 2026 and 2027 include the replacement of the two units purchased in 2021 and the three units purchased in 2022, in accordance with this five-year lifecycle. The AMD O&M costs are projected to \$527,508 for 2026 and 2027.

Q. Why do AMD units need to be replaced every five years instead of being recalibrated?

A. While recalibration is a common maintenance practice for many types of field equipment, AMD units are significantly more complex and function as rolling laboratories—integrated platforms combining high-sensitivity sensors, advanced analytics, geospatial mapping, and real-time data processing. The five-year replacement cycle is necessary due to several key factors:

- **Sensor Degradation:** The core methane sensors in AMD units operate continuously in varying environmental conditions. Over time, exposure to temperature fluctuations, humidity, vibration, and particulate matter can degrade sensor performance beyond what recalibration can correct. To maintain the precision required for detecting methane in parts per billion (ppb), full sensor replacement is necessary.
- **Hardware Obsolescence:** AMD units include specialized components such as laser spectrometers and onboard computing systems. As technology advances, older hardware may no longer support updated software or meet evolving performance standards, making replacement more cost-effective and reliable than retrofitting.
- **Software Compatibility and Security:** The AMD platform relies on proprietary software that evolves rapidly to incorporate new features, regulatory requirements, and cybersecurity protections. Older units may lack the

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processing power or architecture to support these updates, limiting their effectiveness and increasing operational risk.

- **Regulatory Compliance:** Anticipated regulations, such as PHMSA’s proposed Rule 192.763, are expected to require advanced leak detection and repair technologies. Ensuring compliance with these standards necessitates the use of fully functional, up-to-date AMD units.
- **Vendor Support Model:** The AMD program is structured around a five-year subscription term that includes hardware, software licensing, and support. This model ensures predictable budgeting and guarantees that the Company operates with the latest technology available.

Q. Has the Commission previously reviewed the AMD program?

A. Yes. In its order for Case No. U-21806, the MPSC reviewed the Company’s AMD program and approved capital expenditures through the test year in that case. The Commission emphasized the importance of leak detection, even independent of federal rulemaking, PHMSA’s proposed Rule 192.763. The Commission noted that it found compelling the Company testimony that AMD improves the ability to detect small gas leaks, enhances public safety, and limits environmental exposure to methane emissions.

Q. Please describe how the implementation of AMD impacts Consumers Energy’s stated goals in the NGDP.

A. AMD is described in the NGDP under the technology investments and supports the Company’s stated goal to provide a safe, affordable, reliable, and clean natural gas system for Michigan. The implementation of this technology also supports the Company’s GSMS as it is part of the recommended practice to evaluate new platforms that can further enhance the Company’s capabilities in alignment with API RP 1173, which provides, “11.2 – *Management shall also periodically evaluate new technology that may enhance pipeline safety.*”

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1 **Q. Please describe the Enterprise Corrective Action Program.**

2 A. The Enterprise Corrective Action Program (“ECAP”) is an enterprise-wide issue
3 management and compliance software platform designed to support the Company’s
4 GSMS. It provides a structured approach for identifying, documenting, analyzing, and
5 resolving operational issues across the gas, electric, and generation systems. ECAP
6 enhances the Company’s ability to proactively manage risk, ensure regulatory compliance,
7 and improve operational performance through corrective actions and controls.

8 **Q. Why was ECAP developed?**

9 A. Prior to ECAP, the Company lacked a standardized corrective action program. Issue
10 management was handled inconsistently across departments using manual processes and
11 disparate systems, which led to containment rather than resolution of problems, minimal
12 trend recognition, and inconsistent categorization of issues. ECAP was developed to
13 address these gaps and to meet the Company’s commitment to achieving Level 3 GSMS
14 maturity in alignment with API RP 1173 standards.

15 **Q. What are the key benefits of ECAP?**

16 A. ECAP provides a standard approach to identify non-conforming conditions as it pertains
17 to system safety and compliance. The closed loop process is as follows: identification-
18 evaluation-investigation-implementation-verification-effectiveness review. This
19 alignment to a standard process ensures a consistent and uniform flow of information,
20 documentation of risk analysis, causal evaluation, action item development, verification of
21 actions taken, and evidence of effectiveness. The cross-functional collaboration within this
22 process is steered by a dedicated ECAP team to ensure the process and platform are
23 meeting their intended purpose.

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In addition to these core benefits, ECAP delivers:

- Document retention in a secure, enterprise-wide repository that enables oversight of corrective action plans and audit trails;
- Data trending and predictive analysis providing the organization with a historical basis for measuring effectiveness of issue resolution over time;
- Reduction in repetition and severity of non-conforming conditions through effective action tracking and validation of solution effectiveness; and
- Increased employee empowerment through standardized process to identify and address non-conforming conditions.

ECAP provides employees with a clear, structured workflow for issue management following the closed loop process described above. As an example, prior to ECAP, recurring equipment issues were often fixed temporarily without addressing the underlying cause. Under ECAP, these issues are categorized, analyzed for root cause, and resolved through corrective actions that prevent recurrence. A second example, before ECAP, documentation of compliance gaps was inconsistent, making it difficult to track trends. With ECAP, employees can record issues in a centralized system, ensuring visibility and enabling proactive solutions that reduce repeat findings and improve reliability.

Q. How does ECAP support regulatory compliance and risk reduction?

A. ECAP provides a system of record for audit purposes, helping the Company avoid non-compliance with MPSC requirements. It enables statistical and cognitive trending, risk-based remediation, and quality evaluations that inform operational controls and spending decisions. These capabilities directly support the Company's GSMS and broader safety and reliability goals through:

- Ensuring non-conforming conditions are resolved on the gas system;
- Implementing corrective actions to prevent recurrence of non-conforming conditions; and

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- Implementing a standardized method for problem solving to ensure consistent/repeatable outcomes.

Q. What costs are associated with the ECAP implementation?

A. The projected cost of the gas portion of the ECAP program is \$2,869,893. ECAP will use a phased implementation approach:

- Phase 1 (Go Live 2022) – Gas Operations, Regulatory, and Engineering;
- Phase 2 (Go Live 2023) – Electric Operations and Engineering;
- Phase 3 (Go Live 2024) – Generation Operations and Electric Supply Engineering; and
- Phase 4 (Go Live 2025) – Corporate Safety and Health (Gas, Electric, and Generation).

Table 14: ECAP Actual and Projected Capital Costs

2021 Actual	\$ 1,226,304	Vendor software to acquire licensing, service, and project support to implement ECAPs system of record into the Enterprise
2022 Actual	\$ 1,204,618	ECAP expense was \$126,333 for the closeout of Phase 1 project implementation. Additionally, \$1,078,285 was expensed in the Computer and Equipment program to advance the purchase of the Environmental Health and Safety Suite of software related to Phase 4 of the project.
2023 Actual	\$ 48,971	Expenses for ECAP platform modifications to support Phase 4
2024 Actual	\$ 191,000	Statement of work execution for the Phase 4 project of ECAP in 2024
2025 Projected	\$ 199,000	Projected expenses for completion of Phase 4 and ECAP project closeout

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1 **Q. How does ECAP align with the Company's long-term strategy?**

2 A. ECAP is a foundational component of the Company's GSMS and supports the strategic
3 goal of safe, reliable, and compliant operations. By enabling proactive issue management
4 and data-driven decision-making, ECAP contributes to sustainable infrastructure
5 performance and continuous improvement across all energy delivery systems.

6 **Q. Please describe the Irth Solutions software within Damage Prevention and Miss DIG.**

7 A. The Irth Solutions software is a damage prevention and 811 ticket management solution
8 used by the Company to report and document daily ticket volume and response as well as
9 a work management system for proactive and reactive field work.

10 **Q. Please describe the Irth Software funding requirements.**

11 A. The Irth software subscription includes Utilisphere fixed subscription fees, as well as
12 additional features such as photo artificial intelligence ("AI") and augmented reality
13 ("AR"). This software leverages the latest technology to ensure the safety, resiliency, and
14 reliability of critical network infrastructure. The projected funding will cover the next
15 five-year subscription term from 2026 to 2030. This includes:

- 16 • Utilisphere fixed subscription fees;
- 17 • Annual 100,000 additional tickets;
- 18 • New capabilities of photo AI for staking and locating audits, supporting quality
19 assurance; and
- 20 • New capabilities of AR to enable visual field representation of underground
21 assets, aiding Damage Prevention field activities and quality assurance
22 processes.

23 The total capital expenditure for the 5-year subscription term is \$953,000. Based on ticket
24 volume, the gas portion of this expenditure is \$496,000. The Irth software requires

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1 integration with the Company's SAP system. The integration expenditure is \$173,000 and
2 will be completed in 2027.

3 **Q. Please highlight the benefits of the Irth software.**

4 A. The Irth software provides the following benefits:

- 5 • Provides analytics and reporting on ticket volume, responses, and timeliness.
- 6 • Provides a calculating risk analysis on each excavator working near Company
7 facilities which maximizes team effectiveness.
- 8 • Tracks and records all program work being completed by field teams.
- 9 • Acts as a backup ticket management solution supporting the timeliness
10 procedure.
- 11 • The addition of photo AI and AR functionality to further increase the
12 Company's ability to maximize productivity.
- 13 • Supports the Company's overall damage prevention and public safety program.

14 **Q. Please describe the GCCP – SIMS project funding requirements within the**
15 **Geospatial Inventory and Modeling Program.**

16 A. The GCCP – SIMS will be completed in 2025 and is included in my testimony to account
17 for historical capital expenditures only. No O&M or capital funding is projected for the
18 test year ending October 31, 2027.

19 This project converted and migrated the SIMS gas service asset data into the gas
20 distribution GIS, reconfigured application integrations, and established a unified system of
21 record for both gas service and distribution assets. Table 15 provides the actual costs
22 associated with the project. Prior to this initiative, the Company's gas service records
23 lacked spatial data and were stored in a database with limited attribute capacity, resulting
24 in inaccuracies in U.S. DOT reporting, gas load analysis, and risk modeling. Manual
25 linking between SIMS and GIS created data inconsistencies and operational inefficiencies,

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increasing safety risks and response times during emergencies. The project delivered the following benefits:

- Established a single system of record within GIS for gas distribution mains and services.
- Created an enhanced GIS connectivity model using ortho-photo imagery.
- Improved systematic identification of data gaps and inconsistencies.
- Strengthened data quality for advanced risk analysis.
- Laid the foundation for future asset maintenance tools, including GPS-enabled leak survey routing.

By resolving these data challenges, the project significantly improved the accuracy, reliability, and usability of the Company's gas asset records, supporting safer and more efficient operations.

Table 15: GCCP - SIMS Actual and Projected Costs

GCCP-SIMS								
	2017- 2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Projected	2026 Projected	Project Total	Test Year
O&M	\$ 1,808,185	\$ 564,455	\$ 2,306,199	\$2,872,909	\$ 138,619	\$ -	\$ 7,690,366	\$ -
Capital	\$ 3,345,625	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,345,625	\$ -

Q. Please describe the Utility Network project and its funding requirements within the Geospatial Inventory and Modeling Program.

A. The Utility Network project will transform the Company's current GIS platform to the Esri Utility Network Model, and establish a unified gas transmission, distribution, and stations data model in support of optimizing the core engineering and operational processes, technologies, and data. This project is an important part of the Company's GSMS and will support continuous improvement for data gathering processes governed by the Risk Management element of the GSMS. This program includes O&M and capital funding

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requirements as shown in Table 16 and is projecting project completion in 2026. In the Commission's order in Case No. U-21806, the Company's funding projections for the Utility Network project were approved. There are no O&M or capital funding requirements for the Utility Network in the test year in this case.

Table 16: Utility Network Actual and Projected Costs

Utility Network								
	2022 Actual	2023 Actual	2024 Actual	2025 Projected	2026 Projected	2027 Projected	Project Total	Test Year
O&M	\$ -	\$ 352,679	\$ 778,242	\$ 1,348,061	\$ 990,354	\$ -	\$ 3,469,336	\$ -
Capital	\$ -	\$ -	\$ 1,552,199	\$ 7,852,791	\$ 4,907,776	\$ -	\$ 14,312,766	\$ -

The growing business requirements for advanced analytics and business challenges presented from regulatory mandates and requirements to support a strong pipeline safety management system necessitate geospatial insight on a more granular asset level than what is currently available. Managing the distribution and transmission data in different models continues to be a challenge. The Company's current GIS platform will become unsupported as Esri's product development focus is shifting to the components that support the ArcGIS Utility Network Management extension, ArcGIS Enterprise, and ArcGIS Pro. Esri's development team has taken the existing core technology of ArcMap and the geometric network for managing gas and electric networks to the limits of its capabilities and will no longer build additional functionality. Esri utility solution partners, including several currently in use at the Company, are also moving their product lines away from the geometric network and will soon only support their solutions on the Utility Network. The project adds the following value:

- (1) Mitigates risks associated with product support end of life;
- (2) Enables detailed asset management and location-based analytics to bring clearer understanding around the assets that support energy delivery;

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- (3) Enables real-time GIS with ArcGIS Event Server (via ArcGIS Enterprise);
- (4) Increases productivity through use of shortcuts, templates, and streamlined workflows within the software;
- (5) Provides extensive, out-of-the-box tracing tools;
- (6) Provides 3D visualization functionality;
- (7) Enables users with editing tools, giving them guidance at every step of the process for developing workflows and enforcing stronger data integrity;
- (8) Continues to support the concept of long transactions, enabling users to create future changes to the network model that go into effect after a certain time;
- (9) Offers views of the up-to-date network in a map or schematic diagram with the ability to quickly toggle back and forth between them; and
- (10) Enables archiving and historical snapshots to view the state of the gas network over time.

All these capabilities will result in greater insight and efficiency that improve safety and delivery to customers in Michigan.

IT PROJECTS

Q. What is the Spatial Asset Management project?

A. The Spatial Asset Management project is an IT initiative to implement SAP's Spatial Asset Management module. This module will enable geospatial visualization of assets, notifications, and work orders within SAP, allowing the Company to manage linear assets, such as segments of the gas and electric distribution networks, more effectively.

Q. What is the purpose of this project?

A. The project aims to enhance the Company's ability to plan, bundle, and execute work by providing spatial awareness of assets and maintenance activities. It will allow for the creation of maintenance plans for linear assets, generate notifications and work orders, and enable condition monitoring and defect identification using geospatial data.

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1 **Q. What problem does this project address?**

2 A. Currently, the Company lacks spatial visualization and awareness of work and assets,
3 which negatively impacts first-time quality and efficient work planning. The absence of
4 linear asset management capabilities leads to overproduction of maintenance activities
5 such as assessments, surveys, and inspections.

6 **Q. What value does the Spatial Asset Management project provide?**

7 A. This project delivers value by:

- 8 • Enabling map-based visualization of assets and work orders in SAP;
- 9 • Providing location awareness for assets and work;
- 10 • Establishing linear asset management capabilities for gas and electric networks;
11 and
- 12 • Supporting end-to-end map-based workflows that improve operational
13 efficiency.

14 **Q. What alternatives were considered and why were they not selected?**

15 A. The Company evaluated several alternatives:

- 16 • A cloud-based GIS-SAP integration, which was rejected due to performance
17 concerns and limited end-to-end workflow support;
- 18 • Workgroup-centric map viewing approaches, which lacked scalability across
19 the full work management value stream; and
- 20 • A “do nothing” approach, which would perpetuate inefficiencies and rising
21 costs.

22 The selected solution, implementing SAP’s Spatial Asset Management module, was
23 chosen because it leverages existing technology investments, aligns with the Company’s
24 GIS systems, and supports the broader work management strategy.

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1 **Q. What are the projected costs for this project in the test year?**

2 A. The Spatial Asset Management project includes \$20,085 (ROM Adjusted \$16,068) in
3 capital expenditures and \$3,299 in O&M expenses for the test year ending October 31,
4 2027, which are included in the exhibits of Company witness Baker.

5 **Q. Please describe Exhibit A-115 (KAP-7).**

6 A. Exhibit A-115 (KAP-7), in accordance with Attachment 11 to the filing requirements
7 prescribed in Case No. U-18238, provides the variances in the capital program amounts for
8 the distribution programs that I am sponsoring compared with the Company's most recent
9 general gas rate case, Case No. U-21806.

10 **Q. Can you explain why columns (d), (e), and (f) of Exhibit A-115 (KAP-7) do not contain**
11 **any data?**

12 A. Yes, the information for column (d), the "Actual Spending in the Test Year," cannot be
13 completed as the test year in Case No. U-21806, which was the 12 months ending
14 October 31, 2026, is a time period that has yet to transpire as of the filing of this case.
15 Since there is no data to display in column (d), the information for columns (e) and (f),
16 which seek information concerning the variances from (c) and (d), cannot be completed at
17 this time.

18 **Q. Please summarize your direct testimony.**

19 A. My direct testimony describes the GE&S O&M expenses and capital investments required
20 to operate a gas distribution system that is safe and reliable. The projections included in
21 this testimony are needed to meet customer capacity demand and regulatory requirements,
22 modernize the system, and protect public safety. The Company's NGDP will work to
23 enhance the Company's gas distribution system and offer additional opportunities for

KRISTINE A. PASCARELLO
U-21981 DIRECT TESTIMONY

1 collaboration with municipal partners. Through the implementation of the NGDP and the
2 execution of the projects outlined in my direct testimony above, investments that are both
3 reasonable and necessary, the Company can provide a safe, reliable, affordable, and clean
4 gas delivery system for customers.

5 **Q. Does this conclude your direct testimony?**

6 **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

KRISTINE A. PASCARELLO

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Summary of Actual & Projected O&M Expenses
 Gas Engineering & Supply
 (\$000)

Case No.: U-21981
 Exhibit No.: A-110 (KAP-1)
 Page: 1 of 1
 Witness: KAPascarello
 Date: December 2025

(a)		(b)	(c)
Line No.	Description	Actual 12-Mos Ended 12/31/2024	Projected 12-Mos Ending 10/31/2027
1	Gas Project Management	\$ 585	\$ 1,147
2	Gas Asset Management	7,317	10,393
3	Gas Engineering Support	6,565	3,181
4	Gas Management Services	4,088	4,952
5	Total Gas Engineering & Supply O&M Expenses	\$ 18,556	\$ 19,673

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Gas Engineering & Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 1 of 7
Witness: KAPascarello
Date: December 2025

(a)		(b)	(c)
Line No.	Description	Actual 12-Mos Ended 12/31/2024	Projected 12-Mos Ending 10/31/2027
<u>Gas Project Management</u>			
1	Gas Project Management	\$ 585	\$ 1,147
	66% Labor	385	755
	0% Material	-	-
	0% Contractor	-	-
	0% Non-Labor Overheads	-	-
	34% Non-Labor Other	200	392
<u>Gas Asset Management</u>			
2	Gas Engineering - Distribution	1,024	1,143
	90% Labor	923	1,030
	0% Material	-	-
	0% Contractor	-	-
	0% Non-Labor Overheads	1	1
	10% Non-Labor Other	101	112
3	Gas Engineering - Transmission	2,145	2,227
	61% Labor	1,299	1,348
	0% Material	-	-
	23% Contractor	491	510
	0% Non-Labor Overheads	-	-
	17% Non-Labor Other	356	369
4	System Integrity	1,823	3,975
	94% Labor	1,716	3,740
	0% Material	-	-
	0% Contractor	-	-
	0% Non-Labor Overheads	-	-
	6% Non-Labor Other	108	235
5	Gas Compression Engineering	845	1,016
	86% Labor	725	872
	0% Material	-	-
	0% Contractor	-	-
	0% Non-Labor Overheads	-	-
	14% Non-Labor Other	120	144
6	Storage Integrity Management Program ("SIMP")	1,479	2,031
	6% Labor	86	118
	2% Material	24	33
	84% Contractor	1,238	1,699
	1% Non-Labor Overheads	16	21
	8% Non-Labor Other	116	160

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Gas Engineering & Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 2 of 7
Witness: KAPascarello
Date: December 2025

(a)		(b)	(c)
Line No.	Description	Actual 12-Mos Ended 12/31/2024	Projected 12-Mos Ending 10/31/2027
<u>Engineering Support</u>			
7	Gas Strategy	142	86
46%	Labor	65	39
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
54%	Non-Labor Other	77	47
8	Gas Regulatory & Compliance	1,066	1,226
58%	Labor	617	710
0%	Material	-	-
11%	Contractor	120	138
0%	Non-Labor Overheads	-	-
31%	Non-Labor Other	329	378
9	Geospatial Mgmt & Data Quality	669	654
66%	Labor	445	435
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
34%	Non-Labor Other	224	220
10	Geospatial Inventory & Modeling Program	3,651	-
5%	Labor	166	-
0%	Material	-	-
95%	Contractor	3,470	-
0%	Non-Labor Overheads	-	-
0%	Non-Labor Other	15	-
11	Damage Claims/Prevention	997	1,175
68%	Labor	680	802
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
32%	Non-Labor Other	317	373
12	Engineering Management	40	40
91%	Labor	36	36
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
9%	Non-Labor Other	4	4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Summary of Actual & Projected O&M Expenses
 Gas Engineering & Supply
 (\$000)

Case No.: U-21981
 Exhibit No.: A-111 (KAP-2)
 Page: 3 of 7
 Witness: KAPascarello
 Date: December 2025

Line No.	(a) Description	(b)	(c)
		Actual 12-Mos Ended 12/31/2024	Projected 12-Mos Ending 10/31/2027
<u>Gas Management Services</u>			
13	Gas Management Services	4,088	4,952
	96% Labor	3,921	4,750
	0% Material	-	-
	0% Contractor	-	-
	0% Non-Labor Overheads	-	-
	4% Non-Labor Other	167	202
14	Total	\$ 18,556	\$ 19,673
	Labor	11,065	14,635
	Material	24	33
	Contractor	5,318	2,347
	Non-Labor Overheads	16	22
	Non-Labor Other	2,133	2,636

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
Gas Engineering & Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 4 of 7
Witness: KAPascarello
Date: December 2025

(a)		(b)	(c)	(d)	(e)
Line No.	Description	Actual 12 Mos Ended 12/31/2024	Inflation Impacts on Historical Costs Test Year (b) * Compounded Inflation Rate	Scope/ Cost Increases Net of Productivity Gains	Projected O&M 12 Mos Ending 10/31/2027 (b) + (c) + (d)
1	Gas Project Management	\$ 585	\$ 43	\$ 519	\$ 1,147
2	Gas Engineering - Distribution	1,024	75	44	1,143
3	Gas Engineering - Transmission	2,145	156	(75)	2,227
4	System Integrity	1,823	133	2,019	3,975
5	Gas Compression Engineering	845	62	109	1,016
6	Storage Integrity Management Program ("SIMP")	1,479	108	444	2,031
7	Gas Strategy	142	10	(66)	86
8	Gas Regulatory & Compliance	1,066	78	82	1,226
9	Geospatial Mgmt & Data Quality	669	49	(63)	654
10	Geospatial Inventory & Modeling Program	3,651	266	(3,917)	0
11	Damage Claims/Prevention	997	73	106	1,175
12	Engineering Management	40	3	(3)	40
13	Gas Management Services	4,088	298	566	4,952
14	Total	\$ 18,556	\$ 1,352	\$ (234)	\$ 19,673

Notes

	12-Mo Ending 2025	12-Mo Ending 2026	10-Mo Ending 2027	Compounded
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 Expenses
Gas Engineering and Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 5 of 7
Witness: KAPascarello
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	Description	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual
	<u>Gas Project Management</u>					
1	Gas Project Management	699	1,959	1,929	1,309	585
	Labor	1,091	1,277	1,543	1,013	385
	Material	-	-	-	-	-
	Contractor	-	-	-	-	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	(392)	682	386	296	200
	<u>Gas Asset Management</u>					
2	Gas Engineering - Distribution	1,363	1,232	974	965	1,024
	Labor	931	844	931	903	923
	Material	361	368	-	-	-
	Contractor	-	20	-	-	-
	Non-Labor Overheads	-	12	0	-	1
	Non-Labor Other	70	(12)	43	62	101
3	Gas Engineering - Transmission	562	657	1,393	1,430	2,145
	Labor	522	559	660	808	1,299
	Material	-	-	569	294	-
	Contractor	-	1	3	105	491
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	40	98	160	222	356
4	System Integrity	1,530	1,887	2,071	2,275	1,823
	Labor	1,410	1,699	1,849	2,021	1,716
	Material	-	0	-	-	-
	Contractor	0	-	-	-	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	119	188	222	254	108
5	Gas Compression Engineering	842	823	846	777	845
	Labor	710	664	721	656	725
	Material	-	-	-	-	-
	Contractor	-	-	1	4	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	132	159	124	116	120

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of O&M Historical Expenses
Gas Engineering and Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 6 of 7
Witness: KAPascarello
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	Description	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual
6	Storage Integrity Management Program ("SIMP")	-	-	629	630	1,479
	Labor	-	-	8	29	86
	Material	-	-	-	1	24
	Contractor	-	-	571	498	1,238
	Non-Labor Overheads	-	-	2	3	16
	Non-Labor Other	-	-	47	99	116
	<u>Engineering Support</u>					
7	Gas Strategy	473	272	255	92	142
	Labor	212	206	214	78	65
	Material	-	-	-	-	-
	Contractor	250	23	-	-	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	11	43	40	14	77
8	Gas Regulatory & Compliance	393	430	565	724	1,066
	Labor	378	402	436	592	617
	Material	-	-	-	-	-
	Contractor	-	-	110	50	120
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	15	28	19	81	329
9	Geospatial Mgmt & Data Quality	554	690	763	854	669
	Labor	460	552	592	548	445
	Material	-	-	-	-	-
	Contractor	-	-	-	168	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	94	138	171	138	224
10	Geospatial Inventory and Modeling Program	-	-	591	2,659	3,651
	Labor	-	-	-	43	166
	Material	-	-	-	-	-
	Contractor	-	-	-	2,596	3,470
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	-	-	591	19	15

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of O&M Historical Expenses
Gas Engineering and Supply
(\$000)

Case No.: U-21981
Exhibit No.: A-111 (KAP-2)
Page: 7 of 7
Witness: KAPascarello
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	Description	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual
11	Damage Claims/Prevention	-	-	-	221	997
	Labor	-	-	-	243	680
	Material	-	-	-	-	-
	Contractor	-	-	-	-	-
	Non-Labor Overheads	-	-	-	-	-
	Non-Labor Other	-	-	-	(21)	317
12	Customer Energy Management	488	584	-	-	-
	Labor	452	537	-	-	-
	Material		0	-	-	-
	Contractor		-	-	-	-
	Non-Labor Overheads		-	-	-	-
	Non-Labor Other	35	47	-	-	-
13	Engineering Management	-	-	-	43	40
	Labor				41	36
	Material				-	-
	Contractor				-	-
	Non-Labor Overheads				-	-
	Non-Labor Other				2	4
	<u>Gas Management Services</u>					
14	Gas Management Services	3,677	3,874	3,941	3,981	4,088
	Labor	3,602	3,647	3,842	3,878	3,922
	Material		-	-	-	-
	Contractor		-	-	-	-
	Non-Labor Overheads		-	-	-	-
	Non-Labor Other	75	227	100	103	167
15	Total Gas Engineering and Supply O&M Expenses	\$ 10,580	\$ 12,408	\$ 13,957	\$ 15,918	\$ 18,556
	Labor	9,769	10,387	10,797	10,813	11,065
	Material	361	369	569	295	24
	Contractor	250	44	685	3,423	5,318
	Non-Labor Overheads	-	12	2	3	16
	Non-Labor Other	200	1,597	1,903	1,384	2,132

Schedule: B-5.7

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual and Projected Capital Expenditures

Distribution Plant - Material Condition and Gas Operations Other

Summary of Actual & Projected Gas and Common Capital Expenditures
(\$000)

Case No.: U-21981
 Exhibit No.: A-12 (KAP-3)
 Schedule: B-5.7
 Page: 1 of 1
 Witness: KAPascarello
 Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year 12 Mos Ended 12/31/2024	Projected Bridge Period			Projected Test Year 12 Mos Ending 10/31/2027
		12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026		
1	Material Condition	291,159	358,301	324,919	683,220	415,842
2	Gas Operations Other	12,687	13,914	13,080	26,994	13,928
3	Total Capital	303,846	372,215	338,000	710,215	429,770
		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	
4	Material Condition	305,276	377,945	415,842	1,099,063	
5	Gas Operations Other	10,380	16,614	13,928	40,922	
6	Total Capital	315,656	394,559	429,770	1,139,985	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas Capital Expenditures
Material Condition Program
(\$000)

Case No.: U-21981
Exhibit No.: A-112 (KAP-4)
Page: 1 of 3
Witness: KAPascarello
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
1	EIRP - Distribution	192,974	231,400	196,377	427,777	234,183
22%	Labor	44,245	49,965	42,402	92,367	50,565
22%	Capitalized E&S	43,346	50,357	42,736	93,093	50,963
6%	Materials	9,730	13,616	11,556	25,172	13,780
25%	Contractor	45,514	58,477	49,627	108,104	59,180
10%	Non-Labor Overhead	19,535	22,442	19,045	41,487	22,712
16%	Non-Labor Other	30,602	36,542	31,012	67,554	36,982
	Contingency		0	0	0	0
2	Material Condition Non Modeled	39,443	52,805	45,558	98,363	47,205
17%	Labor	6,441	9,034	7,794	16,828	8,076
22%	Capitalized E&S	8,702	11,405	9,840	21,246	10,196
9%	Materials	3,013	4,905	4,232	9,137	4,385
30%	Contractor	12,674	15,739	13,579	29,319	14,070
3%	Non-Labor Overhead	1,053	1,480	1,277	2,757	1,323
19%	Non-Labor Other	7,561	10,241	8,835	19,076	9,155
	Contingency		0	0	0	0
3	Material Condition Renewals	38,636	41,688	37,407	79,094	66,330
36%	Labor	13,393	15,097	13,546	28,643	24,021
21%	Capitalized E&S	8,790	8,766	7,866	16,632	13,948
11%	Materials	3,718	4,761	4,272	9,032	7,575
6%	Contractor	2,306	2,314	2,076	4,390	3,681
6%	Non-Labor Overhead	2,231	2,391	2,146	4,537	3,805
20%	Non-Labor Other	8,198	8,359	7,501	15,860	13,301
	Contingency		0	0	0	0
4	Vintage Service Replacements	19,352	30,113	43,689	73,802	65,761
15%	Labor	3,351	4,632	6,720	11,352	10,115
22%	Capitalized E&S	4,473	6,740	9,778	16,518	14,718
2%	Materials	336	525	762	1,288	1,147
31%	Contractor	6,402	9,336	13,545	22,881	20,388
3%	Non-Labor Overhead	708	995	1,444	2,439	2,173
26%	Non-Labor Other	4,082	7,885	11,440	19,325	17,219
	Contingency		0	0	0	0
5	Commercial and Industrial Meters	754	2,296	1,888	4,184	2,364
23%	Labor	193	539	443	983	555
21%	Capitalized E&S	167	493	406	899	508
28%	Materials	138	633	521	1,154	652
10%	Contractor	117	237	195	431	244
3%	Non-Labor Overhead	25	63	52	116	65
14%	Non-Labor Other	113	330	271	601	339
	Contingency		0	0	0	0
6	Total Capital	291,159	358,301	324,919	683,220	415,842
	Labor	67,623	79,266	70,906	150,172	93,332
	Capitalized E&S	65,479	77,762	70,626	148,388	90,333
	Materials	16,937	24,441	21,343	45,784	27,540
	Contractor	67,012	86,103	79,022	165,124	97,563
	Non-Labor Overhead	23,553	27,372	23,964	51,336	30,078
	Non-Labor Other	50,555	63,357	59,059	122,416	76,996
	Contingency	0	0	0	0	0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas Capital Expenditures
Material Condition Program
(\$000)

Case No.: U-21981
Exhibit No.: A-112 (KAP-4)
Page: 2 of 3
Witness: KAPascarello
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	
7 EIRP - Distribution	194,184	233,593	234,183	661,960	
22% Labor	41,929	50,438	50,565	142,932	
22% Capitalized E&S	42,259	50,835	50,963	144,056	
6% Materials	11,426	13,745	13,780	38,952	
25% Contractor	49,072	59,031	59,180	167,284	
10% Non-Labor Overhead	18,833	22,655	22,712	64,199	
16% Non-Labor Other	30,665	36,889	36,982	104,536	
Contingency	0	0	0	0	
8 Material Condition Non Modeled	40,467	57,896	47,205	145,568	
17% Labor	6,923	9,905	8,076	24,903	
22% Capitalized E&S	8,741	12,505	10,196	31,442	
9% Materials	3,759	5,378	4,385	13,522	
30% Contractor	12,062	17,257	14,070	43,389	
3% Non-Labor Overhead	1,134	1,623	1,323	4,080	
19% Non-Labor Other	7,848	11,228	9,155	28,231	
Contingency	0	0	0	0	
9 Material Condition Renewals	38,577	40,517	66,330	145,425	
36% Labor	13,970	14,673	24,021	52,664	
21% Capitalized E&S	8,112	8,520	13,948	30,580	
11% Materials	4,405	4,627	7,575	16,607	
6% Contractor	2,141	2,249	3,681	8,071	
6% Non-Labor Overhead	2,213	2,324	3,805	8,342	
20% Non-Labor Other	7,735	8,124	13,301	29,160	
Contingency	0	0	0	0	
10 Vintage Service Replacements	30,113	43,689	65,761	139,563	
15% Labor	4,632	6,720	10,115	21,468	
22% Capitalized E&S	6,740	9,778	14,718	31,236	
2% Materials	525	762	1,147	2,435	
31% Contractor	9,336	13,545	20,388	43,268	
3% Non-Labor Overhead	995	1,444	2,173	4,612	
26% Non-Labor Other	7,885	11,440	17,219	36,544	
Contingency	0	0	0	0	
11 Commercial and Industrial Meters	1,934	2,250	2,364	6,548	
23% Labor	454	528	555	1,538	
21% Capitalized E&S	416	484	508	1,407	
28% Materials	534	621	652	1,806	
10% Contractor	199	232	244	675	
3% Non-Labor Overhead	53	62	65	181	
14% Non-Labor Other	278	323	339	940	
Contingency	0	0	0	0	
12 Total Capital	305,276	377,945	415,842	1,099,063	
Labor	67,908	82,264	93,332	243,505	
Capitalized E&S	66,267	82,122	90,333	238,722	
Materials	20,650	25,134	27,540	73,323	
Contractor	72,811	92,314	97,563	262,687	
Non-Labor Overhead	23,228	28,108	30,078	81,415	
Non-Labor Other	54,412	68,004	76,996	199,411	
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, and business expenses (e.g., travel, meals, etc.).

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 average (Jan 2024 - Jun 2025) 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 projected test year costs.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas Capital Expenditures
Material Condition Program
(\$000)

Case No.: U-21981
Exhibit No.: A-112 (KAP-4)
Page: 3 of 3
Witness: KAPascarello
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year	Projected Bridge Year			Projected Test Year
		12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
[Col. (c) + (d)]						
Projects Over \$5 Million (with spend in test year)						
1	EIRP - Distribution					
2	LAN4	11,774	14,194	2,435	16,629	332
3	ROK7	-	-	18,671	18,671	8,616
4	MAC11	-	-	10,891	10,891	14,312
5	MAC12	1,571	19,245	2,435	21,681	332
6	BCY2	1,776	8,353	5,214	13,567	7,812
7	FLT5	3,615	14,518	2,551	17,069	5,387
8	LIV6	32	5,039	3,784	8,823	516
9	ALM5	102	5,108	5,947	11,055	811
10	ALM2	85	9,401	7,654	17,055	10,893
11	LIV4	2	9,824	580	10,404	79
12	LAN10	-	65	6,217	6,283	848
13	KAL8	-	3	7,839	7,842	1,069
14	FLT11	-	-	15,308	15,308	2,087
15	OWS3	-	-	5,219	5,219	712
16	SAG4	-	-	15,680	15,680	2,135
17	ROK12	-	-	4,754	4,754	648
18	KAL3	-	-	4,987	4,987	680
19	KAL7	-	-	8,652	8,652	1,180
20	KAL11	-	0	9,046	9,046	1,233
21	LAN13	-	-	6,488	6,488	885
22	LAN14	-	-	5,567	5,567	759
23	ROK10	-	0	17,627	17,628	2,404
24	FLT12	-	-	-	-	18,896
25	SAG3	-	-	-	-	21,072
26	MAC7	-	-	-	-	16,491
27	ROK18	-	-	-	-	5,153
28	ROK27	-	-	-	-	5,955
29	ROK29	-	-	-	-	13,218
30	LIV8	-	-	-	-	12,826
31	LIV9	-	-	-	-	7,902
32	KAL9	-	-	-	-	11,330
33	KAL2	-	-	-	-	9,276
34	JAC2	-	-	-	-	24,863
35	LAN11	-	-	-	-	8,183
36	Material Condition Non Modeled					
37	Line 1010 Project	5,799	1,061	19,100	20,161	-
38	Material Condition Renewals					
39	None identified	-	-	-	-	-
40	Vintage Service Replacements					
41	None identified	-	-	-	-	-
42	Commercial and Industrial Meters					
43	None identified	-	-	-	-	-
Projects Under \$5 Million						
44	EIRP - Distribution	174,017	145,650	28,831	174,481	15,287
45	Material Condition Non Modeled	33,644	51,744	26,458	78,202	47,205
44	Material Condition Renewals	38,636	41,688	37,407	79,094	66,330
45	Vintage Service Replacements	19,352	30,113	43,689	73,802	65,761
46	Commercial and Industrial Meters	754	2,296	1,888	4,184	2,364
47	Total Capital	291,159	358,301	324,919	683,220	415,842

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas & Common Capital Expenditures
Gas Operations Other Program
(\$000)

Case No.: U-21981
Exhibit No.: A-113 (KAP-5)
Page: 1 of 3
Witness: KAPascarello
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
1	Routine Computer & Equipment	2	50	0	50	50
1%	Labor	0	0	0	0	0
0%	Capitalized E&S	0	0	0	0	0
89%	Materials	2	45	0	45	45
10%	Contractor	0	5	0	5	5
0%	Non-Labor Overhead	0	0	0	0	0
0%	Non-Labor Other	0	0	0	0	0
	Contingency		0	0	0	0
2	Tools	5,167	4,510	3,748	8,258	8,083
0%	Labor	1	1	0	1	1
0%	Capitalized E&S	0	0	0	0	0
100%	Materials	5,166	4,508	3,747	8,255	8,080
0%	Contractor	(1)	1	1	1	1
0%	Non-Labor Overhead	1	0	0	1	1
0%	Non-Labor Other	0	0	0	0	0
	Contingency		0	0	0	0
3	Land & ROW	1,021	1,302	649	1,951	849
13%	Labor	76	164	81	245	107
0%	Capitalized E&S	0	0	0	0	0
1%	Materials	0	7	3	10	4
9%	Contractor	79	113	56	169	73
0%	Non-Labor Overhead	0	0	0	0	0
78%	Non-Labor Other	866	1,019	508	1,527	665
	Contingency		0	0	0	0
4	Compliance & Controls Projects	4,945	199	3,776	3,975	4,946
0%	Labor	5	0	4	4	5
0%	Capitalized E&S	0	0	0	0	0
93%	Materials	4,635	186	3,524	3,710	4,616
5%	Contractor	213	9	172	181	225
0%	Non-Labor Overhead	0	0	0	0	0
2%	Non-Labor Other	92	4	76	80	99
	Contingency		0	0	0	0
5	Geospatial Inventory and Modeling Program	1,552	7,853	4,908	12,761	0
7%	Labor	36	521	326	847	0
0%	Capitalized E&S	0	0	0	0	0
0%	Materials	0	0	0	0	0
82%	Contractor	1,498	6,446	4,028	10,474	0
0%	Non-Labor Overhead	0	0	0	0	0
11%	Non-Labor Other	18	886	554	1,440	0
	Contingency		0	0	0	0
6	Total Capital	12,687	13,914	13,080	26,994	13,928
	Labor	117	686	411	1,097	113
	Capitalized E&S	0	0	0	0	0
	Materials	9,803	4,745	7,274	12,019	12,745
	Contractor	1,789	6,573	4,257	10,830	305
	Non-Labor Overhead	1	0	0	1	1
	Non-Labor Other	977	1,910	1,138	3,047	764
	Contingency	0	0	0	0	0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual & Projected Gas & Common Capital Expenditures
Gas Operations Other Program
(\$000)

Case No.: U-21981
Exhibit No.: A-113 (KAP-5)
Page: 2 of 3
Witness: KAPascarello
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	
7 Routine Computer & Equipment	37	13	50	100	
1% Labor	0	0	0	1	
0% Capitalized E&S	0	0	0	0	
89% Materials	33	11	45	89	
10% Contractor	4	1	5	10	
0% Non-Labor Overhead	0	0	0	0	
0% Non-Labor Other	0	0	0	0	
Contingency	0	0	0	0	
8 Tools	3,711	4,547	8,083	16,341	
0% Labor	0	1	1	2	
0% Capitalized E&S	0	0	0	0	
100% Materials	3,709	4,545	8,080	16,335	
0% Contractor	1	1	1	2	
0% Non-Labor Overhead	0	0	1	1	
0% Non-Labor Other	0	0	0	1	
Contingency	0	0	0	0	
9 Land & ROW	1,161	790	849	2,800	
13% Labor	146	99	107	352	
0% Capitalized E&S	0	0	0	0	
1% Materials	6	4	4	14	
9% Contractor	100	68	73	242	
0% Non-Labor Overhead	0	0	0	0	
78% Non-Labor Other	909	619	665	2,192	
Contingency	0	0	0	0	
10 Compliance & Controls Projects	8	3,966	4,946	8,921	
0% Labor	0	4	5	9	
0% Capitalized E&S	0	0	0	0	
93% Materials	8	3,702	4,616	8,326	
5% Contractor	0	181	225	407	
0% Non-Labor Overhead	0	0	0	0	
2% Non-Labor Other	0	80	99	179	
Contingency	0	0	0	0	
11 Geospatial Inventory and Modeling Program	5,463	7,298	0	12,761	
7% Labor	362	484	0	847	
0% Capitalized E&S	0	0	0	0	
0% Materials	0	0	0	0	
82% Contractor	4,484	5,990	0	10,474	
0% Non-Labor Overhead	0	0	0	0	
11% Non-Labor Other	617	824	0	1,440	
Contingency	0	0	0	0	
12 Total Capital	10,380	16,614	13,928	40,922	
Labor	509	588	113	1,210	
Capitalized E&S	0	0	0	0	
Materials	3,756	8,263	12,745	24,764	
Contractor	4,589	6,241	305	11,135	
Non-Labor Overhead	0	0	1	1	
Non-Labor Other	1,525	1,522	764	3,811	
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, and business expenses (e.g., travel, meals, etc.).

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 average (Jan 2024 - Jun 2025) 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 projected test year costs.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Actual & Projected Gas & Common Capital Expenditures

Gas Operations Other Program

(\$000)

Case No.: U-21981

Exhibit No.: A-113 (KAP-5)

Page: 3 of 3

Witness: KAPascarello

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	Routine Computer & Equipment					
2	None identified	-	-	-	-	-
3	Tools					
4	None identified	-	-	-	-	-
5	Land & ROW					
6	None identified	-	-	-	-	-
7	Compliance & Controls Projects					
8	Advanced Methane Detection	-	-	3,280	3,280	4,773
9	Geospatial Inventory and Modeling Program					
10	Utility Network	1,552	7,853	4,908	12,761	-
Projects Under \$5 Million						
11	Routine Computer & Equipment	2	50	-	50	50
12	Tools	5,167	4,510	3,748	8,258	8,083
11	Land & ROW	1,021	1,302	649	1,951	849
12	Compliance & Controls Projects	4,945	199	496	695	173
13	Geospatial Inventory and Modeling Prc	-	-	-	-	-
14	Total Capital	12,687	13,914	13,080	26,994	13,928

Line #		Company Regions			
		Southwest (SW)	Northeast (NE)	Southeast (SE)	
1	2018 actual capital expenditures⁽¹⁾:				
2	2018 Actual Cost Per Mile - Plastic	\$1,613,648	\$830,606	\$1,248,255	\$ 1,191,184
3	Number of Miles of Main - Plastic	10.0	15.2	22.5	47.7
4	2018 Actual EIRP Costs - Plastic	\$16,082,079	\$12,652,589	\$28,046,019	\$56,780,687
5	2018 Actual Cost Per Mile - Steel	\$5,664,717	\$0	\$4,832,391	\$ 5,359,407
6	Number of Miles of Main - Steel	3.3	0.0	1.9	5.2
7	2018 Actual EIRP Costs - Steel	\$18,624,903	\$0	\$9,204,424	\$27,829,327.8
8	Carry-Over & Future Year (\$M)	\$893,802	\$325,840	\$959,304	\$2,178,946
9	2018 Actual EIRP Capital Expenditures	\$35,600,785	\$12,978,429	\$38,209,748	\$86,788,961
10					
11					
12	2019 actual capital expenditures⁽¹⁾:				
13	2019 Actual Cost Per Mile - Plastic	\$1,432,160	\$1,107,787	\$1,274,454	\$ 1,264,450
14	Number of Miles of Main - Plastic	8.9	11.3	29.0	49.1
15	2019 Actual EIRP Costs - Plastic	\$12,682,756	\$12,550,299	\$36,905,815	\$62,138,870
16	2019 Actual Cost Per Mile - Steel	\$0	\$0	\$7,021,068	\$ 7,021,068
17	Number of Miles of Main - Steel	0.0	0.0	1.6	1.6
18	2019 Actual EIRP Costs - Steel	\$0	\$0	\$11,312,164	\$11,312,164.2
19	Carry-Over & Future Year (\$M)	\$851,241	\$842,351	\$3,236,292	\$4,929,884
20	2019 Actual EIRP Capital Expenditures	\$13,533,997	\$13,392,650	\$51,454,272	\$78,380,918
21					
22					
23	2020 actual capital expenditures⁽¹⁾:				
24	2020 Actual Cost Per Mile - Plastic	\$1,099,237	\$1,421,107	\$1,509,429	\$ 1,432,956
25	Number of Miles of Main - Plastic	9.4	15.4	43.4	68.2
26	2020 Actual EIRP Costs - Plastic	\$10,322,421	\$21,921,380	\$65,462,065	\$97,705,866
27	2020 Actual Cost Per Mile - Steel	\$5,877,206	\$0	\$5,389,108	\$ 5,348,322
28	Number of Miles of Main - Steel	0.8	0.1	2.1	3.1
29	2020 Actual EIRP Costs - Steel	\$4,865,391	Included in plastic	\$11,478,391	\$16,343,782.0
30	Carry-Over & Future Year (\$M)	\$598,887	\$864,405	\$3,033,921	\$4,497,213
31	2020 Actual EIRP Capital Expenditures	\$15,786,699	\$22,785,785	\$79,974,377	\$118,546,861
32					
33					
34	2021 actual capital expenditures⁽¹⁾:				
35	2021 Actual Cost Per Mile - Plastic	\$1,044,905	\$1,452,108	\$1,588,771	\$ 1,306,506
36	Number of Miles of Main - Plastic	68.9	41.0	42.7	152.7
37	2021 Actual EIRP Costs - Plastic	\$72,037,720	\$59,557,047	\$67,901,298	\$199,496,064
38	2021 Actual Cost Per Mile - Steel	\$0	\$5,889,526	\$0	\$ 5,882,372
39	Number of Miles of Main - Steel	0.0	4.5	0.0	4.5
40	2021 Actual EIRP Costs - Steel	\$0	\$26,599,909	\$0	\$26,599,909.0
41	Carry-Over & Future Year (\$M)	\$256,921	\$1,927,627	\$2,473,285	\$4,657,833
42	2021 Actual EIRP Capital Expenditures	\$72,294,641	\$88,084,583	\$70,374,583	\$230,753,806
43					
44					
45	2022 actual capital expenditures⁽¹⁾:				
46	2022 Actual Cost Per Mile - Plastic	\$1,149,363	\$1,433,446	\$1,717,247	\$ 1,421,541
47	Number of Miles of Main - Plastic	51.3	64.8	44.6	160.6
48	2022 Actual EIRP Costs - Plastic	\$58,910,930	\$92,906,602	\$76,533,932	\$228,351,464
49	2022 Actual Cost Per Mile - Steel	\$0	\$0	\$0	\$ -
50	Number of Miles of Main - Steel	0.2	1.3	0.0	1.5
51	2022 Actual EIRP Costs - Steel	Included in plastic	Included in plastic	\$0	\$0.0
52	Carry-Over & Future Year (\$M)	\$6,345,000	\$5,702,989	\$7,749,995	\$19,797,983
53	2022 Actual EIRP Capital Expenditures	\$65,255,930	\$98,609,591	\$84,283,927	\$248,149,447
54					
55					
56	2023 actual capital expenditures⁽¹⁾:				
57	2023 Actual Cost Per Mile - Plastic	\$ 2,343,464	\$ 1,434,706	\$ 1,537,740	\$ 1,625,519
58	Number of Miles of Main - Plastic	17.3	48.5	36.5	102.3
59	2023 Actual EIRP Costs - Plastic	\$40,655,999	\$69,578,082	\$56,088,205	\$166,322,286
60	2023 Actual Cost Per Mile - Steel	\$0	\$1,545,348	\$0	\$1,545,348
61	Number of Miles of Main - Steel	0.0	6.6	0.0	6.6
62	2023 Actual EIRP Costs - Steel	\$0	\$10,230,205	\$0	\$10,230,205
63	Carry-Over & Future Year (\$M)	\$530,086	\$498,321	\$4,345,733	\$5,374,140
64	2023 Actual EIRP Capital Expenditures				\$181,926,631
65	EIRP Facilities				\$ 3,550,319
66	2023 actual total EIRP Program and Facilities capital expenditures				\$ 185,476,950
67					

68					
69		Company Regions			
70	2024 actual capital expenditures⁽¹⁾ :	Southwest (SW)	Northeast (NE)	Southeast (SE)	
71	2024 Forecasted Cost Per Mile - Plastic	\$ 1,310,590	\$ 1,314,312	\$ 1,438,569	\$ 1,356,900
72	Number of Miles of Main - Plastic	36.6	43.1	43.3	123.0
73	2024 Actual EIRP Costs - Plastic	\$47,980,701	\$56,686,293	\$62,218,122	\$166,885,117
74	2024 Actual Cost Per Mile - Steel	\$2,031,667	\$0	\$4,548,514	\$2,405,257
75	Number of Miles of Main - Steel	7.2	0.0	1.2	8.4
76	2024 Actual EIRP Costs - Steel	\$14,558,357	\$0	\$5,681,335	\$20,239,692
77	Carry-Over & Future Year (\$M)	\$949,686	\$2,993,060	\$1,906,202	\$5,848,948
78	2024 Actual EIRP Capital Expenditures				\$192,973,757
79	EIRP Facilities (expenditures shown in Facilities Exhibit A-83 (QAG-3))				\$ 5,844,444
80	2024 Actual total EIRP Program and Facilities capital expenditures				\$ 198,818,201
81					
82		Company Regions			
83	2025 projected capital expenditures:	Southwest (SW)	Northeast (NE)	Southeast (SE)	
84	2025 Projected Cost Per Mile - Plastic	\$ 1,266,542	\$ 1,242,104	\$ 1,313,844	\$ 1,279,179
85	Number of Miles of Main - Plastic	28.4	44.7	58.2	131.3
86	2025 Projected EIRP Costs - Plastic	\$36,003,129	\$55,527,222	\$76,433,611	\$167,963,962
87	2025 Projected Cost Per Mile - Steel	\$4,273,973	\$2,021,579	\$3,731,872	\$2,639,618
88	Number of Miles of Main - Steel	5.0	15.7	1.4	22.2
89	2025 Projected EIRP Costs - Steel	\$21,570,614	\$31,832,219	\$5,067,713	\$58,470,546
90	Carry-Over & Future Year (\$M)	\$ 1,082,445	\$ 1,702,289	\$ 2,215,266	\$ 5,000,000
91	2025 Projected EIRP Capital Expenditures				\$231,434,509
92	EIRP Facilities (expenditures shown in Facilities Exhibit A-83 (QAG-3))				\$ 512,393
93	2025 Actual total EIRP Program and Facilities capital expenditures				\$ 231,946,902
94					
95		Company Regions			
96	2026 projected capital expenditures:	Southwest (SW)	Northeast (NE)	Southeast (SE)	
97	2026 Projected Cost Per Mile - Plastic	\$ 1,311,271	\$ 1,313,364	\$ 1,236,542	\$ 1,276,795
98	Number of Miles of Main - Plastic	20.1	49.1	61.8	131.0
99	2026 Projected EIRP Costs - Plastic	\$26,356,557	\$64,461,544	\$76,422,497	\$167,240,598
100	2026 Projected Cost Per Mile - Steel	\$3,398,850	\$3,159,939	\$3,744,491	\$3,384,535
101	Number of Miles of Main - Steel	10.8	2.5	1.1	14.5
102	2026 Projected EIRP Costs - Steel	\$36,625,186	\$7,986,627	\$4,300,491	\$48,912,303
103	2026 Projected Cost Per Mile - SP Conversion	\$500,000	\$500,000	\$500,000	\$500,000
104	Number of Miles of Main - SP Conversion	0.1	3.9	0.0	4.0
105	2026 Projected EIRP Costs - SP Conversion	\$50,000	\$1,950,000	\$0	\$2,000,000
106	Carry-Over & Future Year (\$M)	\$767,265	\$1,873,550	\$2,359,185	\$5,000,000
107	2026 Projected EIRP Capital Expenditures	\$63,799,008	\$76,271,720	\$83,082,174	\$223,152,901
108	Projected 10 months ending October 31, 2026				\$ 196,377,066
109					
110		Company Regions			
111	2027 projected capital expenditures:	Southwest (SW)	Northeast (NE)	Southeast (SE)	
112	2027 Projected Cost Per Mile - Plastic	\$ 1,285,334	\$ 1,288,872	\$ 1,236,542	\$ 1,265,942
113	Number of Miles of Main - Plastic	22.9	63.9	64.9	151.7
114	2027 Projected EIRP Costs - Plastic	\$29,417,109	\$82,365,731	\$80,293,538	\$192,076,378
115	2027 Projected Cost Per Mile - Steel	\$ 3,135,259	\$ 3,485,042	\$ 2,988,316	\$3,201,785
116	Number of Miles of Main - Steel	6.5	2.2	0.8	9.5
117	2027 Projected EIRP Costs - Steel	\$20,457,568	\$7,553,563	\$2,517,854	\$30,528,986
118	2027 Projected Cost Per Mile - SP Conversion	\$500,000	\$500,000	\$500,000	\$500,000
119	Number of Miles of Main - SP Conversion	8.9	6.5	0.8	16.2
120	2027 Projected EIRP Costs - SP Conversion	\$4,432,197	\$3,256,061	\$395,928	\$8,084,186
121	Carry-Over & Future Year (\$M)	\$754,213	\$2,105,944	\$2,139,843	\$5,000,000
122	2027 Projected EIRP Capital Expenditures	\$55,061,086	\$95,281,299	\$85,347,163	\$235,689,549
123	Projected 12 months ending October 31, 2027				\$ 234,182,638
124					

(1) Reference: EIRP Annual Performance Report filing for each year

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy Company

Projected Capital Expenditures

Distribution Plant - Material Condition and Gas Operations Other

Summary of Actual & Projected Gas Capital Expenditures

(\$000)

Case No.: U-21981

Exhibit No.: A-115 (KAP-7)

Page: 1 of 1

Witness: KAPascarello

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	Material Condition	291,159	334,323	n/a	n/a	n/a	415,842
2	Gas Operations Other	12,687	16,298	n/a	n/a	n/a	13,928
3	Total Capital	<u>303,846</u>	<u>350,621</u>	<u>-</u>			<u>429,770</u>

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 natural gas and for other relief.)
_____)

Case No. U- 21981

DIRECT TESTIMONY

OF

JAMES P. PNACEK, JR.

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

JAMES P. PNACEK, JR.
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1 **Q. Please state your name and business address.**

2 A. My name is James P. Pnacek, Jr., and my business address is 1945 West Parnall Road,
3 Jackson, Michigan 49201.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
6 as a Strategy Manager.

7 **Q. What are your responsibilities as Strategy Manager?**

8 A. In addition to being a rate case witness, I am responsible for performance-based and Lean
9 initiatives. I support the Company’s Gas Strategy, which includes the development,
10 recommendation, and administration of the Natural Gas Delivery Plan (“NGDP”).

11 **Q. Please describe your educational background.**

12 A. I received a Bachelor of Science degree, with Honors, in Mechanical Engineering from
13 Michigan State University in 1992.

14 **Q. Please describe your business experience.**

15 A. I joined Consumers Energy in 1992 as a Graduate Engineer in the Natural Gas
16 Compression Department, where I was responsible for providing project management and
17 operational support to the Company’s seven compressor stations. I transferred to the
18 St. Clair Compressor Station in 1996, where I supervised operations and maintenance
19 employees, and had responsibility for operating and maintaining the Station. In 1998, I
20 joined the Gas Operations Technical Support Department where I was responsible for the
21 Gas Transmission and Storage capital budget and prioritization of the capital projects. In
22 2001, I joined the Gas Engineering, Regulatory, and Operating Services - Codes and
23 Standards Group.

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1 In this position, I was Chairman of the Gas Transmission and Storage Standards
2 Committee, responsible for maintaining the Michigan Gas Safety Code-based standards
3 and addressing Michigan Gas Safety Code compliance questions. In 2005, I transferred to
4 the Electric Generation Operations Department. In this position, I was responsible for
5 implementing and managing a Health and Safety Compliance program for Consumers
6 Energy's electric generating plants. In 2008, I joined the Gas System and Operations
7 Planning section of Gas Management Services and was responsible for the Gas Cost
8 Recovery ("GCR") purchase recommendations and management of Storage Field
9 Inventory. I assumed my current duties and responsibilities in Gas Strategy in September
10 2021.

11 **Q. Have you previously testified before the Michigan Public Service Commission**
12 **("MPSC" or the "Commission")?**

13 A. Yes. I have filed testimony and/or testified in GCR Reconciliation Case Nos. U-16924-R,
14 U-17133-R, U-17334-R, U-17693-R, U-17943-R, U-20075, U-20209, U-20233, and
15 U-20542. I have also filed testimony in Gas Rate Case Nos. U-21490, U-21806 and End-
16 Use Transportation proceeding in Case No. U-17900.

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

18 A. My direct testimony provides a detailed description of the projected Operating and
19 Maintenance ("O&M") expenses for the Company's Gas Operations Division that are
20 necessary to allow the Company to meet public safety, compliance, and operating
21 requirements, while delivering an excellent level of service to customers. I will explain the
22 Company's Gas Operations Division O&M expenses for the projected test year 12 months
23 ending October 31, 2027, to be referred to as "test year" or "2026 – 2027 Test year" in my

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testimony. My direct testimony is divided into two parts: (i) Gas Operations O&M expenses and (ii) Information Technology ("IT") projects.

Q. Are you sponsoring any exhibits with your direct testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-116 (JPP-1)	Summary of Actual & Projected O&M Expenses: Operations, Maintenance & Metering, Field Operations Services, Other Operations;

Exhibit A-117 (JPP-2)	Summary of Actual & Projected O&M Expenses: Operations, Maintenance & Metering Programs;

Exhibit A-118 (JPP-3)	Summary of Actual & Projected O&M Expenses: Field Operations Services;

Exhibit A-119 (JPP-4)	Summary of Actual & Projected O&M Expenses: Other Operations;

Exhibit A-120 (JPP-5)	Summary of O&M Expenses Projected Using Inflation: Gas Operations O&M - Operations, Maintenance & Metering, Field Operations Services, and Other Operation; and

Exhibit A-121 (JPP-6)	Summary of Historic O&M Expenses, Units/Orders, and Hours: Operations, Maintenance & Metering, Field Operations Services, Other Operations,

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

A. Yes.

GAS OPERATIONS O&M EXPENSES

Q. Please describe the Gas Operations Division.

A. The Gas Operations Division is committed to meeting the needs of Consumers Energy's natural gas customers through the delivery of services in a safe, reliable, cost-effective, and timely manner. The division manages the routine, ongoing customer-facing operations and maintenance of the Company's distribution and transmission systems. The Gas Operations Division manages the O&M programs described more fully below.

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1 **Q. What major O&M programs are managed within the Gas Operations Division?**

2 A. The four major O&M programs within the Gas Operations Division are as follows:

- 3 1. Operations, Maintenance, and Metering
- 4 2. Field Operations Services
- 5 3. Work Management and Customer Delivery
- 6 4. Operations Management

7 **Q. Were there any changes to the major O&M programs within the Gas Operations**
8 **Division for this case?**

9 A. Yes. The O&M expenses for Gas Compression previously covered in Company witness
10 Timothy K. Joyce's testimony will now be covered in my testimony. This change results
11 in all the Gas Operations O&M being under one witness and adds efficiencies to Testimony
12 and Exhibit preparation.

13 **Q. Please define and discuss the term Standard Labor Rate ("SLR") as it is used within**
14 **the context of your testimony.**

15 A. The SLR is a cost allocation mechanism used by the Company to assign a direct labor
16 dollar value to an individual work order. A direct labor dollar value is calculated starting
17 with the direct labor hours spent completing a work order, then multiplying those hours by
18 the SLR. The SLR represents an average payroll cost that considers regular time payroll
19 costs, overtime payroll costs, and paid absence payroll costs. The specific dollar value of
20 an SLR is reviewed periodically to update the rate for any changes in regular time,
21 overtime, and paid absence payroll costs. For forecasts developed for future years, SLRs
22 generally reflect current payroll cost levels with an annual forward-looking adjustment of

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3.5% per year, which is consistent with the contractual labor agreement between the Company and its operating employees' union.

Q. Please define and discuss the term Indirect Labor as it is used within the context of your testimony.

A. Indirect Labor is a cost allocation mechanism used by the Company to assign payroll costs to a work order for periods of operating employee working time not directly attributed to a specific work order. Examples of these indirect working time costs include beginning of day or end of day administrative tasks, travel time between job sites, and meetings. Indirect Labor costs are allocated to specific work orders using indirect labor loading rates. These loading rates vary across different operating employee work groups and are reviewed periodically to manage any variances between actual indirect labor costs incurred and the amounts applied to work orders.

Q. Please describe how vehicle costs are generally applied to a work order.

A. Vehicle costs are allocated to work orders using vehicle loading rates, which are applied to the Direct Labor costs of a work order. Vehicle loading rates will vary between the various operating employee work groups, and these rates are reviewed periodically to manage any variances between actual vehicle costs and the amounts applied to work orders.

Q. How has the Company projected its Gas Operations Division O&M expenses for the test year?

A. The Company has identified the O&M expenses for the test year that are necessary to meet public safety and customer service requirements. The total amount of Gas Operations O&M expenses for which I am requesting recovery during this time period is \$172,040,000 as shown on Exhibit A-116 (JPP-1), line 5, column (c). These forecasts reflect the

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Company's expectations for work activity as measured in units and/or orders, resource requirements as measured by jobsite hours for each program, and the associated expense amount for each program.

Q. Please explain the source of the 2024 Actual and derivation of the projected test year O&M expenses for the Gas Operations expenses shown on Exhibit A-116 (JPP-1).

A. The 2024 Actual O&M expense amount of \$130,110,000 as shown on Exhibit A-116 (JPP-1), line 5, column (b), for Gas Operations is derived from Consumers Energy's internal records. The projected test year expense levels for the Gas Operations Division programs were derived as explained below for each program. Unless otherwise noted, the program projections for the test year were calculated using the Company's recent historical experience of monthly O&M expenses for individual programs.

The projected test year expense level of \$172,040,000 will allow the Company to meet customer service, deliverability, and safety requirements.

Q. Please explain the merit increase and inflation calculations that have been provided in Exhibit A-120 (JPP-5).

A. These specific pages of my exhibits present the anticipated amount of O&M expense increases that can be attributed to inflation by applying an inflation rate to historical O&M expenses. Column (b), which is titled "Actual 12 Mos Ending Dec 31, 2024" shows the historical O&M expense. Column (c), entitled "Inflation Impacts on Historical Costs Test Year" shows the amount of inflation that can be attributed to the test year request by applying a compounded inflation rate to Column (b). Columns (d) entitled "Scope/Cost Increases Net of Productivity Gains" is the amount of the test year funding request that is

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1 above or below the rate of inflation., Column (e) is the projected test year O&M and is the
2 sum of columns (b), (c), and (d)

3 The inflation values in Exhibit A-120 (JPP-5) were set to 2.8% for 2025, 2.4% for
4 2026, and 1.9% for the 10 months of 2027. For a compounded inflation rate of 7.3%. The
5 projected changes from 2024 to the test year are explained for each sub-program as part of
6 my direct testimony.

7 **Q. Are there any Employee Incentive Compensation Program (“EICP”) O&M expenses**
8 **included in your exhibits?**

9 A. No, there are not. The direct testimony and exhibits of Company witness Amy M. Conrad
10 contain the Gas Operations Division EICP O&M expenses.

11 **Q. Are there any Injuries and Damages expenses included in your exhibits?**

12 A. No, there are not. The direct testimony and exhibits of Company witness Matthew J. Foster
13 contain the Gas Operations Division Injuries and Damages expenses.

14 **Potential Regulatory Impacts**

15 **Q. Does the Company anticipate any new regulations from the Pipeline and Hazardous**
16 **Materials Safety Administration (“PHMSA”) during the test year?**

17 A. No.

18 **Q. Does the Company anticipate any new regulations from PHMSA in future years?**

19 A. Yes. The Company anticipates that PHMSA will adopt proposed regulatory amendments
20 that implement congressional mandates in the *Protecting the Infrastructure of Pipelines*
21 *and Enhancing Safety Act of 2020* (“PIPES Act”). The objective of the PIPES Act is to
22 reduce methane emissions from new and existing gas transmission pipelines, distribution

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1 pipelines, and underground natural gas storage facilities. PHMSA's proposed regulatory
2 amendments are otherwise referred to as Leak Detection and Repair ("LDAR") rules.

3 **Q. What is the status of PHMSA's LDAR regulation?**

4 A. The Final Rule was issued January 17, 2025, by PHMSA, U.S. Department of
5 Transportation. The rule was submitted to the Federal Register but was withdrawn due to
6 a Regulatory Freeze Pending Review issued by President Trump's administration. The rule
7 must now be re-evaluated to align with the new administration's policies and cost-benefit
8 priorities. PHMSA is expected to revise and resubmit the rule, but the timeline is uncertain.

9 **Q. Please describe the expenses associated with PHMSA's LDAR rule that the Company**
10 **is including in this case.**

11 A. The Company is not requesting funding in this case for compliance with the potential
12 LDAR requirements.

13 **Operations, Maintenance, and Metering**

14 **Q. Please describe the O&M expenses related to the Operations, Maintenance, and**
15 **Metering sub-programs shown on Exhibit A-117 (JPP-2).**

16 A. The Operations, Maintenance, and Metering sub-programs include the operation and
17 maintenance of the Transmission and Distribution system. Major assets in these
18 sub-programs include mains, services, pipelines, storage fields, engines and compressors,
19 meters, city gates, valves, and regulators. The sub-programs also include leak survey and
20 repair, damage repair, odor response, meter reading, meter services, right of way clearing,
21 and staking. The Operations, Maintenance, and Metering sub-programs include several
22 customer demand programs related to the front-line operations of the natural gas service
23 and natural gas distribution areas of the Company.

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1 Gas Transmission employees focus on safely maintaining the Company's above
2 and underground transmission system which includes pipelines, meters, regulators, city
3 gates, and storage fields.

4 Gas Compression employees focus on safely maintaining the Company's
5 compressor stations which includes natural gas compression engines, natural gas turbines,
6 natural gas compressors, natural gas processing equipment, liquid handling equipment and
7 other auxiliary equipment.

8 Gas Distribution employees primarily focus on safely maintaining the Company's
9 underground facilities (gas mains and services), meter stands, and regulation facilities. Gas
10 service employees focus on safely maintaining the Company's above ground facilities
11 including meters and meter piping. Each sub-program is more fully described below.

12 **Distribution Cathodic Protection**

13 **Q. Please describe the O&M expenses related to the Distribution Cathodic Protection**
14 **sub-program.**

15 A. This program is associated with regulatory-required corrosion control activities of the gas
16 distribution system. Cathodic protection reduces the corrosion on steel main that could lead
17 to natural gas leaks over time. The Company is projecting test year spending of \$2,083,000
18 on Distribution Cathodic Protection.

19 **Q. Please provide a breakdown of the work being performed in the test year for the**
20 **Distribution Cathodic Protection sub-program.**

21 A. This program includes O&M expenses for annual pipe-to-soil readings, bi-monthly
22 rectifier and foreign bond readings, interference testing, diagnosis of sectors not meeting
23 cathodic protection criteria, and repairs to downed sectors to meet code requirements. The

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Company currently has 45,330 test points read annually for pipe-to-soil readings, as well as an additional 1,438 bi-monthly reads at rectifiers and designated bond points. The annual test point reads by Headquarters for this sub-program are summarized in the following table:

Table 1

2027 Annual Reads Per Headquarters	
Work Headquarters	Annual Read at Designated Test Points Complete 100% of These Reads Impacts Year 2027
Adrian	377
Alma	880
Bad Axe	541
Bay City	1,679
Cadillac	86
Flint	4,547
Greenville	584
Groveland	2,639
Hastings	624
Howell	972
Jackson	1,505
Kalamazoo	3,055
Lansing	3,516
Livonia	5,306
Macomb	7,418
Marshall	204
Midland	1,122
Owosso	814
Royal Oak	6,596
Saginaw	2,865
Total	45,330

For the test year, the Company will have approximately 45,330 test points to read for pipe-to-soil readings. The Company's test points vary from year to year as it installs new plastic main, which changes the design of cathodic protection for that section of pipeline.

For the test year, the Company will have 1,438 bi-monthly reads at rectifiers and designated bond points. The overall number of reads has reduced as the Company installs

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remote monitoring units (“RMUs”) that reduced the bi-monthly requirements during the months of January, May, July, September, and November.

The bi-monthly reads by Headquarters for this sub-program are summarized in the following table:

Table 2

2027 Bi-monthly Reads (Includes Rectifiers and Bond Points)							
Work Headquarters	Jan	Mar	May	Jul	Sep	Nov	Total
Adrian	0	13	0	0	0	0	
Alma	7	41	7	7	7	7	
Bad Axe	0	14	0	0	0	0	
Bay City	2	41	2	2	2	2	
Cadillac	0	10	0	0	0	0	
Flint	2	87	2	2	2	2	
Greenville	0	15	0	0	0	0	
Groveland	6	79	6	6	6	6	
Hastings	2	27	2	2	2	2	
Howell	1	33	1	1	1	1	
Jackson	14	64	14	14	14	14	
Kalamazoo	15	164	15	15	15	15	
Lansing	9	88	9	9	9	9	
Livonia	5	68	5	5	5	5	
Macomb	5	38	5	5	5	5	
Marshall	3	16	3	3	3	3	
Midland	0	31	0	0	0	0	
Owosso	2	29	2	2	2	2	
Royal Oak	15	89	15	15	15	15	
Saginaw	0	51	0	0	0	0	
Total	88	998	88	88	88	88	1,438

In addition to the annual reads, the O&M expenses include dollars to complete three-year atmospheric above grade inspections at 2,103 locations and 120 bridge inspections in 2026. The atmospheric above grade and bridge inspection by Headquarters for this sub-program is summarized in the following table:

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Table 3

2026 – 3-Year Inspections Including Contractor Bridge Inspections			
Work Headquarters	Atmospheric Aboveground Corrosion Inspection (every 3 years) Impacts 2026	3-Year Bridge Inspections Impacts 2026	Total
Adrian	22	2	24
Alma	35	0	35
Bad Axe	35	0	35
Bay City	103	0	103
Cadillac	6	0	6
Flint	194	11	205
Greenville	25	2	27
Groveland	62	17	79
Hastings	30	0	30
Howell	47	9	56
Jackson	142	2	144
Kalamazoo	231	4	235
Lansing	204	9	213
Livonia	128	14	142
Macomb	263	18	281
Marshall	20	2	22
Midland	38	0	38
Owosso	61	4	65
Royal Oak	233	24	257
Saginaw	224	2	226
Total	2,103	120	2,223

1 For the test year, the Company will have approximately 24 bridge locations to
2 complete repairs, based upon its 2026 bridge inspection results.

3 The Company anticipates that approximately 2,000 sectors will not meet cathodic
4 protection requirements within the given test year based upon historical trends.

5 Sectors will not meet criteria for a variety of reasons, including third-party damages
6 to cathodic bond wires, foreign utility crossings that draw cathodic protection voltage away
7 from steel gas mains, and anode/groundbed lifespan deterioration. This historical trend in
8 this sub-program is summarized in the following table:

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Table 4

Historical Data 2024 and 2025 Downed Sectors	
2024	2025 YTD September
1,917 downed sectors	1,896 downed sectors

1 In addition to the annual reads, inspections, and diagnostic work, the O&M
2 expenses also include dollars to complete approximately 700 repairs in combinations of
3 coating repair, above and below grade short removal, test wire repairs, rectifier repairs,
4 groundbed repairs, and atmospheric corrosion repairs on service risers. These expenses are
5 projected based on historical information and include the number of annual and bi-monthly
6 survey reads that must be completed each year/month in compliance with regulatory
7 standards.

8 The historical year costs and projected test year costs for this sub-program are
9 shown in Exhibit A-117 (JPP-2), line 1, and summarized by work type in the following
10 table.

Table 5

Distribution Cathodic Protection Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Distribution Cathodic Protection – Non-WBS	\$263,217	\$275,847
Cathodic Protection – Contractor; Material and Other Expenses	\$373,892	\$391,833
Cathodic Repairs	\$146,825	\$153,871
Sector Diagnosis	\$188,065	\$197,089
Annual Pipe to Soil Survey	\$811,218	\$850,145
Riser Wraps – Non-Leak Maintenance	\$32,721	\$34,291
Bi-Monthly Survey	\$171,686	\$179,924
Total Program	\$1,987,624	\$2,083,000

11 **Q. Please describe the impact that Inflation has on the test year request for this**
12 **program?**

13 **A.** Inflationary impacts are incorporated into this program's test year funding request through
14 adjustments to material and labor costs. However, inflation alone did not determine the

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requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 1, column (d), the test year funding for this program is \$49,419 below the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$2,083,000 of projected O&M expenses in the test year for this sub-program?

A. Projected test year spending in this sub-program is primarily driven by annual reads, inspections, repairs, reduced contractor utilization, and diagnostic work.

The historical O&M expenses, units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 1. The historical year O&M expenses, units/orders, and hours and projected Test year O&M expenses, units/orders, and hours for this sub-program are summarized in the referenced Exhibit and in the following table:

Table 6

Distribution Cathodic Protection Units/Orders, Hours & Dollars			
Year (Jan-Dec)	Units/Orders	Hours	Program Dollars
2021	52,355	13,353	\$3,140,486
2022	35,514	13,451	\$2,677,564
2023	40,443	11,056	\$2,553,789
2024	50,121	11,393	\$1,987,624
2026-2027 Test year	47,933	10,145	\$2,083,000

The Company's projection for Distribution Cathodic Protection test year spending reflects the Company's historical experience of program expense timing.

Pipeline – Distribution

Q. Please describe the O&M expenses related to the Operations and Maintenance Pipeline – Distribution sub-program.

A. The Operations and Maintenance Pipeline – Distribution sub-program includes multiple activities that ensure safe and reliable delivery of gas to customers' homes. For this sub-program, the Company is projecting test year spending of \$13,797,000.

Q. What work is undertaken as part of the Operations and Maintenance Pipeline – Distribution sub-program?

A. This sub-program includes customer-requested work requiring alterations to existing gas mains and services, including new business branch services, meter and service relocations (where the entire service from the main to the meter is not installed or replaced) and replacing risers for installation of new meters. Where the entire service from main to meter is installed or is replaced, the costs become capital and are not included in this program. With respect to the condition of Company assets, the work activities include designated valve repairs, cross bore repairs, inside meter inspection, no-gas investigation and repair, non-leaking maintenance activities such as repairing or replacing lockwing valves to allow emergency shut-offs, replacing mushroomed plastic risers, replacing copper risers due to atmospheric corrosion, lowering main or service facilities if grade has changed, installing and pumping drips on the standard (low) pressure system thereby helping to alleviate water infiltration and freezing of service lines and meters, and property restoration costs. This sub-program also includes site checking activities to ensure customer locations are ready for work and improve efficiency and on-time delivery by avoiding unnecessary field trips by distribution crews. Site check activities additionally include confirming all jobsite

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requirements have been met, such as underground facility staking, sewer lead locations, final grade established, and site readiness prior to the arrival of distribution construction crews. In addition, electric utility costs for the gas distribution regulation facilities and the inspections at the Huron Compressor Station are both included in this sub-program.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 2, and summarized by work type in the following table:

Table 7

Operation & Maintenance – Distribution Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Material Condition Emergent	\$2,713,981	\$3,244,212
Material Condition	\$4,896,282	\$5,852,869
Huron Compressor Station	\$59,781	\$71,461
Main & Services Alterations	\$1,209,146	\$1,445,377
Property Restoration	\$1,051,215	\$1,256,590
Site Checks	\$395,165	\$472,369
Pre-fabrication Costs	\$64,517	\$77,122
Other, including Non-WBS, Utilities	\$1,151,945	\$1,377,000
Total Program	\$11,542,032	\$13,797,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 2, column (d), the test year funding for this program is \$1,414,151 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

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1 **Q. What is the basis for determining the \$13,797,000 of projected O&M expenses in the**
2 **test year?**

3 **A.** Projected test-year spending adjustments are driven by the following primary drivers:

- 4 • Increase of \$1,141,344 based on the expected number of non-leak maintenance
5 (“NLM”) orders. NLM’s are part of the Material Condition work types. NLM
6 orders are based on the rotation of area being surveyed, increased number of
7 surveys, and improved training to ensure all NLMs are identified, NLM orders
8 are identified as part of surveillance activities. Types of NLM work includes
9 inaccessible lockwings/curb valves, needs meter support, missing or
10 deteriorated vent screens, and mushroomed risers. Work can be impacted by the
11 geographical area, the types and vintage of facilities, and customer activities.
12 Ongoing education on these NLM has increased the number of orders that have
13 been found and need repair.
- 14 • Increased hours/units for the program.

15 Distribution and Service worker hourly standard labor rates are expected to be:

Table 8

Distribution and Service Rates (\$/hr)								
	Distribution				Service			
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$69.86	\$37.72	\$43.31	\$150.90	\$73.80	\$97.42	\$21.40	\$192.62
2025	\$73.41	\$39.64	\$33.77	\$146.82	\$75.63	\$100.59	\$22.69	\$198.91
2026	\$75.58	\$40.81	\$40.81	\$157.21	\$78.71	\$102.32	\$20.46	\$201.50
2027	\$78.47	\$42.37	\$42.37	\$163.22	\$81.96	\$106.55	\$24.59	\$213.10

16 The historical O&M expenses, units/order, and hours for this sub-program are
17 summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 2. The historical year O&M
18 expenses, units/orders, and hours and projected test year O&M expenses, units/orders, and
19 hours for this sub-program are summarized in the referenced exhibit and in the following
20 table:

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Table 9

Operations & Maintenance – Distribution Units/Orders, Hours & Dollars			
Year (Jan-Dec)	Units/Orders	Hours	Dollars
2021	13,755	59,207	\$11,721,014
2022	9,983	47,774	\$10,531,290
2023	9,370	40,741	\$8,924,773
2024	19,414	50,817	\$11,542,032
2026-2027 Test year	22,700	66,100	\$13,797,000

1 The Company’s projection for the Operations and Maintenance Pipeline –
2 Distribution sub-program test year reflects the Company’s historical experience of program
3 expense timing.

4 **Pipeline – Transmission**

5 **Q. Please describe the O&M expenses related to the Operations and Maintenance**
6 **Pipeline - Transmission sub-program.**

7 **A.** The Operations and Maintenance Pipeline - Transmission sub-program includes expenses
8 related to performing:

- 9 (a) Code Inspections;
- 10 (b) Third-party oversight and staking per MISS DIG 811 Underground Facility
11 Damage Prevention and Safety Public Act 174 (“Act 174”) of 2013, (“MISS
12 DIG 811”);
- 13 (c) Demand Maintenance;
- 14 (d) Preventive Maintenance & Operations;
- 15 (e) Restoration/Right-of-Way (“ROW”); and
- 16 (f) Miscellaneous Expenses.

17 This sub-program ensures public safety by maintaining the integrity of the
18 Company’s gas transmission pipeline system through inspection and repair of all critical
19 assets to sustain proper operating conditions. Sub-program funding also includes necessary
20 maintenance of valves sites, buildings, fencing, and security systems and structures. For
21 this sub-program, the Company is projecting test year spending of \$4,042,000.

1 **Q. Please provide a description of the work activities in the Operations and Maintenance**
2 **Pipeline - Transmission sub-program.**

3 A. This sub-program includes the following work activity categories.

- 4 • Code Inspections include completing Michigan Gas Safety Standards
5 (“MGSS”) and Michigan Department of Environment, Great Lakes, and Energy
6 (“EGLE”) code inspections associated with pipeline valves, pipe, and
7 associated assets. This work is generally completed by Company employees
8 and code inspection orders typically include labor and ancillary material costs.
9 Examples of these inspections include vehicle and foot patrol of pipelines, leak
10 survey, valve inspections, Pressure Limiting Device inspections, Remote
11 Control Valve inspection, corrosion inspections, maintenance pigging, and
12 inspection of gas quality equipment, including drip logs and separators that
13 protect pressure regulation and customer metering equipment. One key example
14 is line patrols where, based on class location, the Company patrols the system
15 from one to four times per year to investigate for new dwellings, leaks, and
16 third-party activity. As part of these line patrols, the Company takes appropriate
17 actions to repair equipment and/or remediate in compliance with the MGSS.
18 (MGSS code/standard/section 192.705, 192.706, 192.613, 192.935). This
19 sub-program also includes MGSS required pipeline maintenance cleaning pig
20 runs on five transmission lines that need to be completed annually. These pig
21 runs are coordinated with the Company’s Pipeline Integrity Program to avoid
22 duplicate pig runs in the same calendar year. This work is included as part of
23 the Company’s Transmission Integrity Management Program.
- 24 • The Pipeline Preventative Maintenance and Operations portion of the
25 sub-program involves proactive and necessary inspections that do not fall under
26 code requirements but are necessary for maintaining safe, reliable, and
27 predictable system operations for customers. Such inspections include:
28 (a) instrument calibration; (b) launcher and receiver inspections; (c) vehicle
29 safety inspections; (d) general safety inspections; (e) liquid drip collection;
30 (f) housekeeping; and (g) site maintenance and other general functions.
- 31 • The Demand Maintenance portion of the sub-program accounts for labor and
32 materials, to address pipeline assets that require repair due to performance
33 during annual inspections, outages, or other activities. These activities typically
34 include: (a) maintenance of valves, cathodic protection test stations, rectifiers,
35 liquid collection equipment, pipeline markers, metering equipment,
36 communication equipment, calibration equipment, pipe coating, sites, and
37 facilities; (b) leak repairs; (c) ROW access maintenance; (d) third-party damage
38 repairs; and (e) snow plowing.
- 39 • The Facilities Locating for Third Parties (MISS DIG 811) portion of the
40 sub-program is primarily comprised of labor hours required to evaluate, locate,
41 stake, and oversee third-party activities near transmission pipelines.

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- Non-Work Breakdown Structure (“Non-WBS”) portion of the sub-program includes labor, internal departmental chargebacks, contractors, and materials not directly associated with a specific work order. These costs include OM&C travel and meal charges, Company Laboratory labor for equipment calibration, storeroom stock and non-stock material issues, equipment rental charges, storage space rental, electric bills for rectifiers, and other site equipment.
- Contractor Materials, Credits and Other Expenses portion of the sub-program includes Contractor labor, credits, and materials for Code Inspection, Preventive Maintenance & Operations, Demand Maintenance, and Facilities Locating for Third Parties (MISS DIG 811) that are directly associated with a specific work order.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 3, and summarized by work type in the following table:

Table 10

Operation & Maintenance – Pipeline- Transmission Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Non-WBS	\$749,027	\$813,000
Contractor; Materials, Credits and Other Expenses	\$413,244	\$372,000
Code Inspections	\$731,282	\$857,100
Preventive Maintenance & Operations	\$263,092	\$399,980
Demand Maintenance	\$284,311	\$457,120
Facilities Locating for Third Parties (PA 174)	\$1,069,754	\$1,142,800
Total Program	\$3,510,709	\$4,042,000

Q. Please describe the impact that Inflation has on the Test year request for this program.

A. Inflationary impacts are incorporated into this program’s test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program’s work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 3, column (d), the test year funding for this program is \$275,542 above the rate of inflation. This variance highlights the influence of factors beyond general

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1 inflation. The following section provides an explanation of the impact on the test year
2 funding request.

3 **Q. What is the basis for determining the \$4,042,000 of projected O&M expenses in the**
4 **test year?**

5 A. The Company's projection for the Operations and Maintenance Pipeline – Transmission
6 sub-program test year spending reflects the Company's historical experience of program
7 expense timing. As shown in the table above, projected spending in this sub-program is
8 primarily driven by known hours for regulatory driven code inspections, preventative
9 maintenance, and maintenance pigging activities. Demand maintenance (conditions
10 requiring short-term response), and facility locating for third parties (MISS DIG 811), are
11 projected based on historical trends and anticipated needs. The projected labor hour
12 allocations for Code Inspections are based on historical time to perform required
13 inspections and maintenance to the assets on the transmission pipeline system.

14 The projected expenses associated with Facilities Locating for Third Parties (MISS
15 DIG 811) activities are comprised of historical data and projected trends. Historically,
16 ticket volumes have trended down due to a greater volume of tickets being processed in
17 the office, and only actionable tickets being sent to the operational groups.

18 Based on the trend experienced in 2025 and the current economic growth, ticket
19 volumes and hours are expected to be flat through 2027 per Table 11.

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Table 11

Miss Digs 811 Tickets and Associated Hours		
Year	Orders	Hours
2021	15,931	8,633
2022	9,562	7,801
2023	9,337	8,115
2024	9,359	8,652
Trend 2025	9,400	8,616
Trend 2026	9,400	8,500
Trend 2027	9,400	8,500

Gas Transmission worker hourly standard labor rates are expected to be:

Table 12

Transmission Rates (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$72.53	\$23.93	\$32.64	\$129.10
2025	\$76.37	\$26.73	\$32.08	\$135.17
2026	\$80.38	\$28.13	\$29.74	\$138.25
2027	\$83.69	\$29.29	\$35.15	\$148.13

The historical O&M expenses and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 3. The historical year O&M expenses and hours and projected test year O&M expenses, units/orders, and hours for this sub-program are summarized in the referenced Exhibit and in the following table:

Table 13

Operations—& Maintenance - Pipeline Hours & Dollars		
Year (Jan-Dec)	Hours	Dollars
2021	20,676	\$3,198,861
2022	21,783	\$4,221,974
2023	17,879	\$3,830,542
2024	18,710	\$3,510,709
2026-2027 Test year	19,100	\$4,042,000

Regulation Distribution

Q. Please describe the O&M expenses related to the Operations and Maintenance - Regulation Distribution sub-program.

A. The Operations and Maintenance - Regulation Distribution sub-program is responsible for delivering safe and reliable gas service pressure to customers. For the test year, the Company is projecting spending of \$8,885,000 for this sub-program. This program consists of all code compliance requirements for regulation stations and odorant facilities statewide. This includes all required annual inspections, and maintenance and repairs of these facilities. The sub-program ensures gas delivery to customers with a detectible odor required for public safety. Inspection of critical designated valves that isolate sections of the distribution pipeline system during planned outages or emergencies is also included in this sub-program. This is critical for system operations and public safety. The Regulation Distribution sub-program is responsible for the statewide inspection, maintenance, and repair of:

- 662 Distribution Regulation Stations,
- 1,660 1-inch and larger high-pressure regulation stands,
- 100 Odorant Injection Facilities, and
- 7,270 Designated Pipeline Valves.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 4, and summarized by work type in the following table:

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Table 14

Operation & Maintenance – Regulation Distribution Projection Breakdown by Activity Type		
	2024 Actual	2026-2027 Test year
Designated Valves	\$942,544	\$1,027,052
Regulation Inspection	\$4,290,611	\$4,675,306
Regulation Repairs	\$2,333,576	\$2,542,804
Vegetation Management	\$587,190	\$639,838
Total Program	\$8,153,922	\$8,885,000

1 **Q. Please describe the impact that Inflation has on the test year request for this**
2 **program?**

3 A. Inflationary impacts are incorporated into this program’s test year funding request through
4 adjustments to material and labor costs. However, inflation alone did not determine the
5 requested funding level. The test year request also reflects changes in the program’s work
6 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
7 A-120 (JPP-5), line 4, column (d), the test year funding for this program is \$137,080 above
8 the rate of inflation. This variance highlights the influence of factors beyond general
9 inflation. The following section provides an explanation of the impact on the test year
10 funding request.

11 **Q. What is the basis for determining the \$8,885,000 projected O&M expenses in the test**
12 **year for this sub-program?**

13 A. To efficiently and safely operate the distribution pipeline system, the Company continues
14 to invest in new regulation facilities (city gates and distribution regulator stations). These
15 investments are sponsored by Company witness Michael P. Griffin. These new or upgraded
16 facilities have additional equipment and technology installed that requires annual
17 inspection and maintenance. Examples include Supervisory Control and Data Acquisition
18 (“SCADA”) communication components, transducers, catalytic heaters, gas pipeline filter

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separators, odorant pump injection systems, additional designated blow-down valves on Transmission Operated as Distribution (“TOD”) pipe, and poly valves as required on all new gas main installed.

The historical O&M expenses, units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 4. The historical year O&M expenses, units/orders, and hours and projected test year O&M expenses, units/orders, and hours for this sub-program are summarized in the referenced exhibit and in the following table:

Table 15

Operations & Maintenance – Regulation Distribution Units/Orders, Hours & Dollars			
Year (Jan-Dec)	Units/Orders	Hours	Dollars
2021	13,651	43,728	\$7,662,838
2022	10,701	52,315	\$9,126,940
2023	10,641	47,443	\$8,435,995
2024	11,690	46,070	\$8,153,922
2026-2027 Test year	11,840	47,007	\$8,885,000

The projection for the test year reflects the Company’s recent historical experience with the timing of program expenses.

Measurement and Regulation Transmission

Q. Please describe the O&M expenses related to the Operations and Maintenance - Measurement and Regulation Transmission sub-program.

A. The Operations and Maintenance - Measurement and Regulation Transmission sub-program is primarily responsible for gas measurement, pressure control, and gas quality for the Company’s transmission system, which feeds the distribution system as well. This work is driven by MGSS, EGLE, Department of Transportation, Federal Energy Regulatory Commission (“FERC”), PHMSA, Occupational Safety and Health Administration, and Sarbanes Oxley (“SOX”) controls. This includes third-party supplies

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1 and metering to meet SOX requirements as well as lost and unaccounted fuel custody
2 requirements. This sub-program also includes expenses relating to the inspection and repair
3 of data acquisition systems, metering, pressure control valves and regulators, overpressure
4 protection, odorization, gas quality analyzers, and gas conditioners. These inspections can
5 include piping, regulators, transducers, SCADA, valves, operators, emergency shut down
6 devices, separators, heaters, meters, relief valves, and odorizers. Also included are
7 monitoring and operating gas quality and analysis equipment such as chromatographs,
8 which measure for water (H₂O), hydrogen sulfide (H₂S), carbon dioxide (CO₂), oxygen
9 (O₂), and testing for Polychlorinated Biphenyls (PCB). Other expenses include vehicles,
10 maintenance equipment, utility bills, regulatory permits, and general cost to maintain city
11 gate sites, buildings, fencing, and security. This sub-program ensures the safety and
12 compliance of Company gas transmission and distribution pipeline systems through
13 inspection and repair of all critical assets to meet federal, state, and local agencies'
14 regulatory requirements.

15 **Q. Please provide a description of the work activities in the Operations and**
16 **Maintenance - Measurement and Regulation Transmission sub-program.**

17 A. This sub-program includes the following work activity categories:

- 18 • The Demand Maintenance projected expense accounts for labor, material, and
19 contractor supported activities to perform repairs on measurement and
20 regulation assets. These repairs can arise from code inspections or failed
21 equipment that requires immediate or scheduled actions. This activity covers
22 all required emergent work relating to safety or system improvements to ensure
23 the flow of gas and material readiness. Examples include driveway stone and
24 repairs, filters for separators and liquid extraction, building repairs and
25 permitting, painting, brush and tree removal, landscaping, fencing, lighting,
26 Remote Terminal Unit ("RTU") repairs, transducer and ultrasonic
27 instrumentation, and required investigations to respond to gas control alarms,
28 including RTU device communication failures. The additional equipment
29 added to the system results in the increased units.

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- The Preventative Maintenance projected expense supports performing proactive and necessary inspections that do not fall under the code requirements but are necessary for maintaining safe, reliable, and predictable system operations. Such inspections include RTU inspections, instrument calibration, liquid drip collections, pilot filter replacements, winter system operational checks, non-code valve inspections, general site inspections, pressure changes, heater maintenance, orifice plate inspections, painting, and grade work. Additionally, preventative maintenance includes labor hours and material costs to maintain site access and conditions including access drive and site stone, grass and weed spraying and mowing, and fence condition. These costs are forecasted based on the number of facility locations that require regular maintenance as well as condition-based needs.
- The Inspections projected expense primarily consists of Company employee labor hours, services, and necessary material costs. Labor hour projections are based on historical time to perform inspections, required maintenance, and standard work initiatives to meet code, manufacturer recommendations, deliverability, and reliability of gas systems. Inspection units increase as new equipment (gas filtration, liquid separation, gas analyzers, chromatographs, and regulation) is being added to the system. Also, regulation and other ancillary equipment has been added, such as filter-separators and multiple station outputs to meet customer demands. The Inspection activity levels satisfy safety and compliance regulatory requirements of the Company's gas transmission and distribution pipeline systems through inspection and repair of all critical assets to meet regulatory requirements.
- The Non-WBS portion of the sub-program is comprised of labor, materials, and services not associated with a work order. These costs include (a) travel and meal charges, (b) Company laboratory labor for equipment calibration, (c) stock and non-stock material, (d) heater glycols, (e) valve grease, (f) equipment rental charges, (g) storage space rental, (h) purchase power, (i) SCADA cellular bills, (j) repair parts, (k) outside services, (l) contractors, (m) buildings, (n) testing in laboratory services, and (o) parts and materials to support system operations and code work. This portion of the sub-program also includes actions needed to comply with governmental agencies and local ordinances. Costs here are projected based on historical spend.
- Contractor Materials, Credits and Other Expenses portion of the sub-program includes contractor labor, credits, and materials for inspections, preventive maintenance and operations, demand maintenance, and third-party contracts which are directly associated with a specific work order.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 5, and summarized by work type in the following table:

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Table 16

Operation & Maintenance – Transmission Measurement & Regulation Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Non-WBS	\$519,771	\$493,850
Contractor; Materials, Credits and Other Expenses	\$426,737	\$451,340
Demand Maintenance	\$434,396	\$467,240
Preventative Maintenance	\$1,164,373	\$1,252,411
Inspections	\$530,714	\$570,841
Third Party Contracts	\$141,610	\$152,317
Total Program	\$3,217,600	\$3,388,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program's test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program's work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 5, column (d), the test year funding for this program is \$63,997 below
7 the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$3,388,000 of projected O&M expenses in the**
11 **test year for this program?**

12 A. The test year amount of \$3,388,000 reflects the Company's historical experience of
13 program expense timing. Much of the projected expense in this sub-program is derived
14 from the Company's estimated gas transmission field worker jobsite hours.

15 Each activity includes a forecasted number of units and associated expected average
16 amount of time to complete each unit. The units multiplied by the time to complete, along

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with anticipated labor rates, account for much of the cost projection. In total, the Company projects jobsite labor hours to be 16,300 hours during the test year in this proceeding.

Gas Transmission worker hourly standard labor rates are expected to be:

Table 17

Transmission Rates (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$72.53	\$23.93	\$32.64	\$129.10
2025	\$76.37	\$26.73	\$32.08	\$135.17
2026	\$80.38	\$28.13	\$29.74	\$138.25
2027	\$83.69	\$29.29	\$35.15	\$148.13

The historical O&M expenses and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 5. The historical year O&M expenses and hours and projected test year O&M expenses and hours for this sub-program are summarized in the referenced exhibit and in the following table:

Table 18

Operations & Maintenance – Measurement & Regulation Transmission Hours & Dollars		
Year (Jan-Dec)	Hours	Dollars
2021	17,795	\$3,188,919
2022	17,197	\$4,339,305
2023	20,394	\$3,496,577
2024	15,825	\$3,217,600
2026-2027 Test year	16,300	\$3,388,000

Odor Response

Q. Please describe the O&M expenses related to the Odor Response sub-program.

A. This sub-program provides for around-the-clock response to odor calls and other emergencies, including initial response to third-party damages. The Company has been achieving an average annual response time of 30 minutes or less, to ensure the safety of customers and the public.

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1 The Commission monitors the Company performance on response times to ensure
2 the safety of customers and the public. The program consists of Company employee labor
3 costs inclusive of material and fleet costs.

4 This sub-program deals with initial response to odor calls from customers and the
5 general public. Final resolution of the odor calls, if determined to be caused by leaking gas
6 from Company facilities, may be an O&M repair or a capital asset replacement. The costs
7 of this sub-program cover the O&M portion of the final resolutions. The O&M portion is
8 based on a historical two-year analysis, which is reviewed every year (using a rolling
9 two-year average). This portion/average will fluctuate based on whether the leaks found
10 on gas services and mains are repaired or replaced.

11 The Odor Response sub-program consists of labor costs that are based on the
12 Reasonable Expectancy to complete each work activity along with known labor rates for
13 the personnel completing the activity. Activities such as the leak investigation standard
14 (six-house check) implemented by the Company in 2018 provides for a more thorough leak
15 investigation. The standard requires Company employees to check the house for which the
16 leak was called in as well as a six-house check, including the buildings next to the reported
17 address and the three buildings on the other side of the main (which are often across the
18 street). They check for leak sources at the service riser/entrance of these buildings.

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The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 6, and summarized by work type in the following table.

Table 19

Odor Response Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Odor Response	\$6,154,519	\$6,350,000
Total Program	\$6,154,519	\$6,350,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 6, column (d), the test year funding for this program is \$252,864 below the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$6,350,000 of projected O&M expenses in the test year for this sub-program?

A. The Company has projected the costs of the Odor Response sub-program based on expected workload associated with 41,100 O&M odor response orders.

Each odor response call is expected to require gas service worker jobsite time of 0.71 hours, or about 43 minutes. This expected time requirement is based on reviews during 2024 and 2025 of jobsite time per order completed.

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The test year also reflects projected gas service worker hourly standard labor rates, indirect labor rates, and vehicle rates.

Gas Service worker hourly standard labor rates are expected to be:

Table 20

Service Rates (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$73.80	\$97.42	\$21.40	\$192.62
2025	\$75.63	\$100.59	\$22.69	\$198.91
2026	\$78.71	\$102.32	\$20.46	\$201.50
2027	\$81.96	\$106.55	\$24.59	\$213.10

The historical O&M expenses, units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 6. The historical year O&M expenses, units/orders, and hours and projected test year O&M expenses, units/orders, and hours for this sub-program are summarized in the referenced exhibit and in the following table. The projection for the test year reflects the Company's historical experience of program expense timing.

Table 21

Odor Response Program O&M Units/Orders, Hours & Dollars			
Year (Jan-Dec)	O&M Units/Orders	Jobsite Hours	Dollars
2021	48,248	36,057	\$6,159,004
2022	44,729	34,770	\$6,445,000
2023	42,023	32,402	\$6,308,854
2024	44,233	32,538	\$6,154,519
2026-2027 Test year	41,100	29,300	\$6,350,000

Leak Repair and Survey

Q. Please describe the O&M expenses related to the Leak Repair and Survey sub-program.

A. The Leak Repair and Survey sub-program includes Company labor and contractor services for annual mobile and walking leak surveys, and classification of leaks on mains, services, and meter stands called in by customers or found during leak survey activity.

The sub-program also includes leak repairs to mains, services, and meter stands, including installation of leak repair fittings and clamps, tightening of fittings and clamps, partial service replacement, and rebuilds of meter installations. This work is on the Company's distribution system and helps to ensure public safety. This program includes the costs associated with contracts for maintenance of customer-owned fuel lines and will continue to include those costs as well, in compliance with regulations for master meters operators. In accordance with Mich Admin R 460.20335, the costs associated with central meters, otherwise referred to as master meter systems, run through this Leak Repair and Survey sub-program. These costs are offset by the owner of the master meter system as specified under Mich Admin R 460.20335(d)(4).

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 7, and summarized by work type in the following table.

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Table 22

Leak Repair and Survey Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Leak Survey and Patrol	\$7,054,883	\$10,049,705
Leak Classification	\$1,212,538	\$2,243,537
Leak Assessments	\$468,761	\$619,616
Leak Repairs – Meter Stands and Regs	\$5,235,841	\$9,844,215
Leak Repairs – Services	\$3,478,992	\$6,541,059
Leak Repair – Mains	\$2,415,682	\$4,541,868
Total Program	\$19,866,696	\$33,840,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program’s test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program’s work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 7, column (d), the test year funding for this program is \$12,526,050
7 above the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$33,840,000 of projected O&M expenses in the**
11 **test year for this sub-program?**

12 A. The projected expense in this sub-program is primarily driven by:

- 13 • Changing the method and technology of leak survey by implementing mobile
14 Advanced Methane Detection (“AMD”) Technology,
- 15 • Changing the leak survey scheduling approach by going from an individual
16 asset approach to a Geographic Grid approach,
- 17 • Leak Survey requirements,
- 18 • Line Patrol requirements,
- 19 • Increasing the number of units and miles being surveyed,

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- The expected increase in the number of Leaks found during leak survey,
- Number of leaks requiring Immediate Repair,
- Number of Leaks requiring Scheduled repair, and
- The leak backlog.

The historical O&M expenses, units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 7. The historical year O&M expenses, units, and hours and projected test year O&M expenses, units/orders, and hours for this sub-program are summarized in the referenced exhibit and in the following table. The projection for the test year reflects the Company's historical experience of program expense timing.

Table 23

Leak Repair and Survey Units/Orders, Hours & Dollars					
Year (Jan-Dec)	Survey Units	Classification Units	Repair Units	Jobsite Hours	Dollars
2021	491,858	7,438	18,612	97,692	\$21,786,507
2022	352,437	4,695	16,537	83,987	\$18,941,796
2023	368,287	3,981	14,132	60,650	\$14,865,676
2024	512,729	5,871	28,552	87,136	\$19,866,696
2026-2027 Test year	1,150,226	10,863	45,189	146,853	\$33,840,000

- Survey Units are the number of services/meters that require(d) a survey; Survey Units are based on the code-required schedule and new frequency of the gas facilities to be surveyed;
- Repair Units are the number of leak repairs orders; Leak Repair units are based on applying a historic leak find rate to the surveys being performed;
- Classification units are the number of leaks that did/do not get repaired immediately. These leaks go to the backlog. The classification units are driven by historical and projected leaks data and the balancing of workload; and
- Jobsite Hours are the total hours required for the Leak Survey, Leak Classification, and Leak Repair units work. The work associated with units for each category are used to determine the Job Site hours.

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The projection for Company labor and vehicle costs are primarily based on the projected hours for each year. Increases in labor and vehicle costs from 2024 to the test year also reflect projected gas distribution worker hourly standard labor rates, indirect labor rates, and vehicle rates. Gas Distribution worker hourly standard labor rates are expected to be:

Table 24

Distribution Rates (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$73.41	\$37.44	\$29.36	\$140.21
2025	\$75.58	\$37.03	\$31.74	\$144.36
2026	\$78.96	\$39.48	\$30.00	\$148.44
2027	\$82.22	\$41.11	\$35.35	\$158.68

Q. Describe the main cost driver to this program for the test year.

A. The following is a summary of the cost impacts associated with the programs cost drivers.

- The method and technology of leak survey changed through the implementation of mobile AMD. The leak survey scheduling approach changed by going from an individual asset approach to a Geographic Grid approach. These changes will add efficiencies to program.
- There is an increase in survey units of 637,497 and classification units of 4,992. Leak Survey and Leak Classifications unit increases, and Line Patrols result in an expense increase of \$4,025,820.
- The repair units increased by 16,637 units. Increasing the number of units and miles being surveyed results in an increase in the expected number of leaks found during leak survey. The Company plans to maintain a leak backlog at the lowest achievable level. The increase in the number of repairs contributes \$9,796,628 to the program increase.

Q. Please describe the Company's change in methodology and technology for leak survey.

A. The Company is transitioning from the traditional walking leak survey to mobile AMD. The Company currently conducts leak surveys with handheld instrumentation through foot

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1 patrol of gas service lines and infrastructure. During the test year, the Company plans to
2 use a Grid based approach combined with AMD to perform leak survey on the Company's
3 natural gas system. The use of Traditional Walking Leak survey will be utilized in
4 situations where the mobile AMD is not able to obtain a survey reading or a gap in the data
5 is identified. AMD is further explained in Company witness Kristine A. Pascarello's
6 testimony. Traditional Leak surveys will continue to be performed on assets with
7 compliance dates that are due for a leak survey and are not part of a Grid that is scheduled
8 during the test year. This is necessary to synchronize the Leak survey dates between the
9 individual asset method of scheduling with the new Grid approach to scheduling.

10 As stated by the Commission in the ordered issue in Case No. U-21806, the leak
11 detection objectives of the AMD program remain of significant importance, regardless of
12 whether the PHMSA rule is ultimately enacted. The Commission further found persuasive
13 the Company's testimony and arguments that the AMD program will strengthen the
14 Company's ability to identify even the smallest gas leaks, thereby reducing the risk of
15 undetected leaks, enhancing public safety, and minimizing environmental exposure to
16 methane emissions.

17 **Q. Please describe the Company's change to the leak survey scheduling approach.**

18 A. The Company is transitioning from individual asset compliance date survey scheduling to
19 Grid based scheduling. With the Grid approach, the Company's system is divided into
20 grids. A Grid is a township-range section. The Grid approach will eliminate scattered
21 individual asset surveys and the need to potentially return to the same area multiple times
22 a year to complete surveys. Going forward, all the assets in a grid will be surveyed at the
23 same time and will have the same compliance survey date. However, there will be a

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1 three-year transition period where individual asset compliance date surveys, that are due
2 and are not a part of a planned Grid, will be surveyed by the traditional leak survey method.
3 This is necessary to align the compliance dates of the scheduling approaches. Grids
4 surveyed during the test year will continue to be located all around the Company's service
5 territory and not necessarily limited to a specific geographic area.

6 The Grid approach supports the Company's transition from the traditional walking
7 leak survey to the mobile AMD technology approach. The mobile AMD is designed to
8 drive the system and identify a Leak Indication Search Area ("LISA") in its Field of View
9 ("FOV"). Instead of driving around surveying scattered individual assets, all assets in Grid
10 or section can be surveyed at the same time. This approach significantly improves the
11 efficiency of the technology and the survey scheduling.

12 **Q. Describe the benefits that customers will experience based on the change in**
13 **methodology, technology, and scheduling approach.**

14 A. AMD uses higher sensitivity instrumentation to detect smaller amounts of gas release than
15 traditional tools. The technology significantly outperforms the walking survey methods by
16 covering greater distances in less time, providing a search area to focus on for leak
17 investigation and repair, and detecting emissions at part-per-billion (ppb) levels compared
18 to a part-per-million (ppm) level. Early detection of leaks reduces the likelihood of small
19 leaks progressing to hazardous situations and in turn improves public safety.

20 The Grid approach is a focused and more efficient approach than the individual
21 asset compliance date approach. The individual asset compliance date approach has
22 surveys due at specific locations around the system one month and then the next month
23 asset compliance date surveys could be due in the same areas that were surveyed in the

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1 previous month. Grids define contiguous areas so the surveys can be conducted in a logical
2 route instead of driving many miles between assets that are being surveyed. More efficient
3 route mileage means lower fuel costs, less wear on vehicles, and more survey time with
4 leak-detection instruments running at optimal speed. Once transition is complete, the
5 Company is expecting to see reduction in the total survey cost in the future by reducing
6 travel mileage between surveys and balancing daily workloads. The Grid approach will
7 also add efficiencies associated with ensuring compliance with survey date requirement by
8 simplifying the tracking and scheduling of the surveys.

9 With the new technology and scheduling approach the Company expects to see a
10 reduction in Odor Investigation related to leaks in the future. The Company will be
11 identifying and repairing all leaks on a Grid basis and using AMD to detect smaller leaks.

12 **Q. Please describe the Leak survey requirements and the Company's changes to the**
13 **requirements.**

14 A. Leak surveys are compliance driven per MGSS 192.481, 192.557, 192.613, 192.705,
15 192.706, 192.721, 192.723, and 192.935, which require line patrol and leak survey
16 frequency for mains, services, and customer-owned gas systems. The frequency of leak
17 surveys is determined by the survey type:

- 18 • Scheduled leak surveys - Required by code on a quarterly, semi-annual, annual,
19 three-year, or five-year basis. However, the Company is changing the
20 frequencies associated with the Scheduled leak surveys. The assets with a code
21 required five-year survey, adequately vented non-business districts assets, will
22 now be performed on a three-year basis. The assets currently requiring a
23 three-year code required survey, cathodically unprotected metallic mains and
24 services, will now be performed on an annual basis. These changes will increase
25 public safety and reduce methane emissions;
- 26 • Non-scheduled leak surveys - Required on an as-needed basis;
- 27 • Contracted Customer-Owned Gas System Leak Surveys - Varies per contract;
28 and

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- Discretionary leak surveys - Performed on an as-needed basis.

The Leak Surveys expense for the test year is forecasted to be higher than the previous two years with approximately 1,150,226 survey units and 23,623 miles of main. This is based on the code-required schedule and the new frequency of the gas facilities to be surveyed.

With the increased frequency, the Company will be leak surveying its entire system every three years as opposed to every five years.

Q. Please describe the types of assets that will be impacted by the survey frequency increase.

A. A three year leak survey frequency will now occur on non-business district assets which refers to any area outside of a business district where commercial activity is not concentrated. These areas typically include residential neighborhoods, rural or suburban zones, industrial areas not classified as business districts, and open land or undeveloped regions.

An annual survey frequency will now occur on cathodically unprotected metallic mains and services. This refers to natural gas mains and services made of metal that lack cathodic protection. These lines are considered higher risk due to their susceptibility to corrosion, which can lead to leaks or structural failure over time. Annual surveys will continue to occur in business districts.

Q. Describe the benefits that customers will experience based on increasing the number of assets surveyed annually.

A. Leak investigations can begin with a customer complaint (odor, sound, or visible damage) or the customer being unaware that they even have a leak. The Company's proactive program of surveying more assets annually, no longer places the customer in the position

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1 of being the “first line of defense” for hazardous conditions. Emergencies are more
2 expensive and disruptive than planned repairs; early detection shifts the balance toward
3 planned work.

4 While conducting leak surveys under the Company’s annual Super Emitter
5 program, the Company discovered and was able to avert several potential catastrophic
6 situations. The Super Emitter program is discussed in the testimony of Company witness
7 Pascarello. The following are three instances where increasing the number of asset surveys
8 annually resulted in increased safety for our customers and prevented potentially
9 catastrophic events. All leaks were discovered using mobile AMD technology through the
10 Company’s Super Emitter program.

- 11 • In November 2024 on Cheeseman Rd. in St. Louis, MI. The survey detected
12 a large emission while surveying for super emitters. The investigation found
13 dangerous levels of gas inside the elderly and mobility-challenged customer's
14 home. This home was not scheduled for leak survey for two more years. This
15 survey added a life-saving layer of safety for this customer.
- 16 • In March 2025 on Old Kawkawlin Rd. in Bay City, MI. The survey detected
17 a super emitter near a Bay City residence. Upon investigation, 25% gas was
18 detected at the base of the meter. The Company responder confirmed the leak
19 as well as gas odor in the basement which could have ignited. This residence
20 was not due for a leak survey until 2027.
- 21 • In August 2025 on N. Morey Rd. in Lake City, MI. The survey detected a
22 very large (700+ scfh) super emitter at a Lake City residence. Upon
23 investigation, 100% gas was detected 25 ft. from the home. The leak was
24 caused by a lightning strike that melted through the plastic service two months
25 prior. This residence was not due for a leak survey until 2027.

26 Another success story related to increasing the amount of assets surveyed annually
27 occurred in Nevada. Nevada’s Staff requested the Public Utilities Commission of Nevada
28 (“PUCN”) to approve annual leak surveys to improve public safety, reduce methane
29 emissions, and create jobs. In 2023, they detected 242 hazardous leaks that might have
30 gone unnoticed under previous rules. In Nevada, they found and corrected 526

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1 non-hazardous leaks. The leaks were in areas that would not have been inspected until 2024
2 or 2025 under older standards. The PUCN's Staff justified the economics by reasoning that
3 avoiding even one major gas incident, some of which have cost tens of millions of dollars,
4 can offset the cost of implementing annual surveys.

5 The Company expects that by surveying assets more frequently and repairing the
6 leaks at an accelerated rate, the result will be a significant reduction in the amount of leaks
7 found within three years of the frequency change. The Company anticipates that it should
8 be able to significantly reduce the leak repairs for this program in the future.

9 **Q. Please discuss other states or utilities that are performing increased Leak Surveys on**
10 **assets.**

11 A. The following are instances where utilities are exceeding the five-year survey frequency
12 for non-business district asset and the three-year survey frequency for cathodically
13 unprotected metal mains and service.

- 14 • As mentioned previously, Nevada's PUCN requires utilities to perform leak
15 survey annually on their entire system.
- 16 • Pacific Gas and Electric (PG&E) assesses more than 42,000 miles of natural
17 gas distribution pipeline every three years versus the previous five-year
18 rotation
- 19 • Texas requires a two- to five-year survey frequency depending on the system
20 type for non-business district assets.
- 21 • Consolidated Edison of New York surveys their entire system every three
22 years.
- 23 • UGI Utilities in Pennsylvania requires annual surveys of unprotected metallic
24 lines.

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Q. Please describe the Number of Leaks found during Leak Survey.

A. The historical and projected number of Leaks Found During Leak Survey in this sub-program is summarized in Table 25. The 2025 Projected leaks in the table are based on actuals and forecasted data.

Table 25

Leaks Found During Survey			
Year (Jan-Dec)	Above Grade	Below Grade	Total
2017	5,220	1,555	6,775
2018	7,931	1,715	9,646
2019	18,393	2,697	21,090
2020	9,842	1,589	11,431
2021	12,009	1,577	13,586
2022	9,714	1,516	11,230
2023	9,151	343	9,494
2024	19,308	846	20,154
2025 Projected	15,552	635	16,187

The historical and projected Leak Survey Units, which represents the number of services, in this sub-program is summarized in Table 23. As shown in exhibit A-121 (JPP-6), line7, column (k), the 2025 projected survey units are 105,561 units lower than 2024 due to the five-year survey schedule. This decreased number of surveys is the main contributor to the decrease in the number of leaks found for 2025.

Q. Describe how program changes are expected to impact the number of leaks found during survey.

A. Based on the increase in the number of services and miles of mains being surveyed annually and use of the AMD technology, the number of leaks being found are expected to increase in the test year as shown in Table 23.

Q. Please describe Leak Repair Scheduling.

A. Leak Repair Scheduling is required per code by MGSS 192.703, 192.709, 192.711, and Michigan Admin Code R. 460.20318 - 460.20318 - Gas leak investigation; establishment

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of service; Michigan Admin Code R. 460.20327 - Section R. 460.20327 - Distribution system; leakage surveys and procedures. Each leak must have a complete leak analysis completed to determine the appropriate leak classification for repair scheduling. As a result of the new leak-found trend, and an initiative to reduce the overall leak backlog, leak repair units are forecasted to be higher than average. Forecasts are based on:

- (1) Code requirements regarding leak classifications and repairs on active leaks,
- (2) Code requirements and the increase of leak survey frequency and annual asset surveys,
- (3) Resource availability, and
- (4) Historical averages.

The historical and projected Leak Repair Units in this sub-program are summarized in Table 23. The historical and forecasted Leak Classification units are shown in Table 23.

Leaks are classified into the following three categories for repair priority:

- Immediate Action: Immediate hazard to life or property,
- Scheduled Action: Nonhazardous now but could become dangerous. Repair or reinvestigate the leak within 6 months, and
- Deferred Action: Minor leak with low risk. Reinvestigate the leak within one year of the date the leak was found.

Q. Please describe Leak Repairs.

A. The graph below depicts a comparison of natural gas utilities with more than one million customers with vintage main and is based on leaks repaired per leaks repaired and actionable leaks at year end (see the below formula).

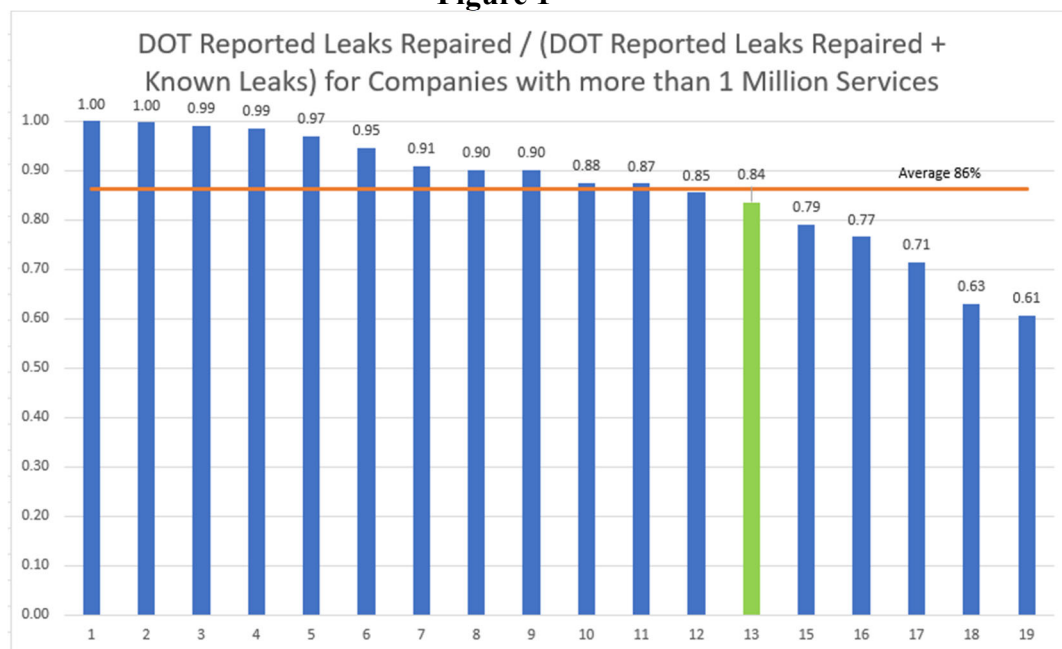
$$\% = \frac{\text{Leaks repaired}}{\text{Leaks repaired} + \text{Actionable Leaks}}$$

Consumers Energy is depicted in green, and was at 84% as of year-end 2024, which is just below industry average of 86%. Based on benchmarked data, shown in Figure 1 below, the

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Company is seeking to position itself in the top of the first quartile, which drives improved system integrity and public safety.

Figure 1



The leak repairs planned for 2026 and 2027 will ensure the Company maintains a safe and reliable natural gas system by permanently repairing leaks and working to eliminate our current leak backlog. Doing so, the Company can enhance public safety, increase the integrity of the natural gas system, reduce methane emissions, and lower long-term costs. The NGDP will address long-term system integrity.

Q. Describe how the programs changes will impact Leak Repair and the Leak Backlog.

A. The Company has determined Leak Repair estimates based on historic find rates and the best information available at the time. The increase in assets being surveyed annually and the advanced, higher-sensitivity detection equipment will result in more leaks being found during leak survey. It is the Company's plan to maintain the lowest achievable leak backlog at the end of the 2027 calendar year. This requires significantly more leaks to be repaired (as shown on Table 23) and \$9,796,628 in additional program funding for repairs compared

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1 to 2024. In the Order issued in Case No. U-21806, the Commission stated that regardless
2 of the implementation of the proposed LDAR rule, addressing a backlog of known leaks
3 represents a reasonable and prudent expense by the Company to support safe and reliable
4 natural gas service. Additionally, the Commission stated that Consumers Energy has
5 demonstrated that the Company has a backlog of leaks that should be addressed, regardless
6 of whether the final LDAR rule is in effect.

7 **Q. Describe the benefits that customers will experience based on repairing leaks with an**
8 **accelerated timeline.**

9 A. Minimizing the time from detection to repair reduces both safety risks and methane
10 emissions. Prompt repairs prevent leaks from worsening, which could otherwise require
11 larger, more expensive repairs later. Visible and timely repairs foster trust in the
12 Company's safety commitment. With the new Grid Approach, repairs and work routes can
13 be prioritized and bundled for multiple leaks in a single deployment, spreading fixed costs
14 over more repairs and lowering per-repair expense. Proactive maintenance reduces the risk
15 of sudden outages caused by leak escalation. Customers feel protected and valued when
16 the Company demonstrates it is actively safeguarding their wellbeing without waiting for
17 a complaint.

18 The Company expects that by surveying assets more frequently and repairing the
19 leaks at an accelerated rate, the result will be a significant reduction in the amount of leaks
20 found within three years of the frequency change. The Company anticipates that it will be
21 able to significantly reduce the leak repairs for this program in the future.

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1 **Q. Please describe how surveying assets on a more frequent basis and accelerating the**
2 **repair timeline has an impact on reducing greenhouse gas emissions.**

3 A. The Company's proposal to increase leak survey and repair frequency directly supports the
4 MI Healthy Climate Plan's goals of reducing greenhouse gas emissions by 52% by 2030
5 and achieving carbon neutrality by 2050. Methane, the primary component of natural gas,
6 is a potent greenhouse gas, and reducing its release through early detection and repair is an
7 effective climate action available to the Company. At the beginning of 2027, the Company
8 is forecasting 4,353 metric tons of methane emission or 91,413 metric tons of carbon
9 dioxide equivalent emission ("CO₂e") on the Distribution system due to natural gas leaks.
10 The Company estimates that by implementing these changes there will a reduction in
11 methane emission by 2,393 metric tons or 50,253 metric tons CO₂e, which goes toward
12 achieving Michigan's 2030 greenhouse gas emissions goal.

13 **Damage Repair**

14 **Q. Please describe the O&M expenses related to the Operations & Maintenance -**
15 **Damage Repair sub-program.**

16 A. The Operations & Maintenance - Damage Repair sub-program involves repairing natural
17 gas mains, services, and meter installations from third-party damages (such as excavators,
18 other utilities, municipalities, and homeowners). These expenses are necessary to ensure
19 public safety, and to bring the system back into service in a timely manner. Consumers
20 Energy's operating employees assess the site, mitigate the gas leak caused by the damage,
21 and make necessary repairs to the system. In addition, the program is the recipient of credits
22 from billing (less write-offs) from these third parties. These credits have shown variability

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year over year for several reasons, such as volume of damages, third-party response (willingness or ability to pay), and market and economic conditions.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 8, and summarized by work type in the following table:

Table 26

Operation & Maintenance – Damage Repair Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Service/Meter Stand Repair	\$1,651,965	\$1,673,383
Main Repair	\$1,002,208	\$1,015,202
Damage Assessment	\$445,443	\$451,218
Credits	(\$1,715,387)	(\$1,640,803)
Total Program	\$1,384,229	\$1,499,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 8, column (d), the test year funding for this program is \$13,933 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$1,499,000 of projected test year O&M expenses for this sub-program?

A. Spending in this sub-program is primarily driven by the number of damages recorded on the system. Projected costs consider historical volume and Company efforts to reduce

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damages to the gas system. The Company maintains a Public Safety Outreach (“PSO”) function, using damage prevention liaisons, which seek to work with third parties through various channels to provide awareness of the gas system, and to prevent damages. These efforts are meant to reduce costs for the damage repair portion of this program. Offsetting these cost reductions is a reduced level of damage credits being collected from or paid by third parties. A common reason for not billing a third party for damage is that the damaging party is unknown, such as when gas damage occurs and the party leaves the scene prior to the Company arriving.

Gas distribution worker hourly standard labor rates are expected to be:

Table 27

Distribution (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$73.41	\$37.44	\$29.36	\$140.21
2025	\$75.58	\$37.03	\$31.74	\$144.36
2026	\$78.96	\$39.48	\$30.00	\$148.44
2027	\$82.22	\$41.11	\$35.35	\$158.68

The historical O&M expenses and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 8. The historical year O&M expenses and hours and projected test year O&M expenses and hours for this sub-program are summarized in the referenced Exhibit and in the following table. The test year projection reflects the Company’s historical experience of program expense timing.

Table 28

Operations & Maintenance – Damage Repair		
Hours & Dollars		
Year (Jan-Dec)	Hours	Dollars
2021	19,644	\$1,379,759
2022	23,854	\$1,574,894
2023	18,402	\$1,414,532
2024	20,117	\$1,384,229
2026-2027 Test year	20,900	\$1,499,000

Staking & Locating

Q. Please describe the O&M expenses related to the Staking & Locating sub-program.

A. The Staking & Locating sub-program involves Company labor and contractor services for the staking and locating of the Company's gas distribution pipeline facilities in accordance with Act 174 of 2013, MISS DIG 811 Underground Facility Damage Prevention and Safety Act, a key component of securing public and employee safety. Work is typically performed by a contracted outside service vendor on a multi-year contract with the Company.

Q. Please discuss the work activities in the Staking and Locating Sub-Program.

A. The Staking and Locating sub-program includes the following work activity categories:

- Outside Services – Staking and Locating: contractor costs are included for staking and locating activities that are performed under the shared resource model and advanced locating for abnormal operating conditions.
- Outside Services - Dedicated Contractor: contractor costs are included in the test year projection for staking and locating activities that will be performed under the Dedicated Contractor staking program.
- Company Labor: volumes and hours are included in the test year projection for Company labor to support standby inspections, and abnormal operating condition efforts. Included are the projected increases in labor and vehicle costs from 2024 to the test year for gas distribution worker hourly standard labor rates, indirect labor rates, and vehicle rates. The projection for Company labor and vehicle costs are primarily based on the projected hours for each year.
- Licenses, Permits & Fees: This includes the fees that Consumers Energy pays to the state MISS DIG 811 system as part of Act 174.

Standby inspections are on-site inspections/observations that are required when the excavation will cross or is within 5 feet of any of the following: Any transmission or storage pipeline or 20% Specific Minimum Yield Strength (TOD) Pipe in High Consequence Areas or in Class 3 and 4 locations. An Abnormal Operating Condition ("AOC") also known as Advanced Locate is when there is one or more facilities within the work area that is not locatable via standard locate methods as defined within Company Standards. Expert locate

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1 technicians resolve AOC's encountered by primary locate contractor using multiple
2 advanced techniques, frequencies, methods, and equipment.

3 **Q. Please provide a breakdown of the Staking and Locating sub-program expense.**

4 A. The Staking & Locating sub-program expenses for historical year and projected test year
5 are shown in Exhibit A-117 (JPP-2), line 9, and summarized by work type in the following
6 table:

Table 29

Staking and Locating Sub-program Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Outside Services – Shared Staking and Locating	\$7,541,342	\$0
Outside Services – Dedicated Staking and Locating	\$5,910,797	\$23,794,765
Company Labor	\$1,399,651	\$2,136,095
Licenses, Permits & Fees	\$566,071	\$872,772
Total Program	\$15,417,861	\$26,803,632

7 **Q. Please describe the impact that Inflation has on the test year request for this program.**

8 A. Inflationary impacts are incorporated into this program's test year funding request through
9 adjustments to material and labor costs. However, inflation alone did not determine the
10 requested funding level. The test year request also reflects changes in the program's work
11 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
12 A-120 (JPP-5), line 9, column (d), the test year funding for this program is \$10,262,976
13 above the rate of inflation. This variance highlights the influence of factors beyond general
14 inflation. The following section provides an explanation of the impact on the test year
15 funding request.

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1 **Q. What is the basis for determining the \$26,803,632 of projected O&M expenses for this**
2 **sub-program?**

3 A. Spending in this sub-program is primarily driven by staking request volume (units) and the
4 cost of staking contractors. Table 32 shows the change in staking volumes realized year
5 over year. The primary drivers for this increase include:

- 6 (a) Increase of \$2,603,004 based on anticipated contractor volume increases of
7 91,835,
- 8 (b) Increase of \$736,444 based on Company labor standard labor rate change and
9 increased hours/units,
- 10 (c) Increase in MISS DIG 811 membership fees of \$306,701, and
- 11 (d) Increase of \$7,739,623 based on dedicated model expansion and contractor
12 rate increases:
- 13 • The 2024 expansion of Oakland County from 67% to 100% of the
14 dedicated staking ticket volumes, and the 2024 addition of Kent County
15 under the dedicate model.
 - 16 • The 2025 expansion of the dedicated model to the remainder of the
17 Company's Gas Service Territory, based on performance and the staking
18 Request for Proposal ("RFP") results .

19 The historical O&M expenses for this sub-program are summarized from 2016 to
20 2024 in Exhibit A-121 (JPP-6), line 9. The historical year O&M expenses and projected
21 test year O&M expenses for this sub-program are summarized in the referenced exhibit
22 and in the following table:

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Table 30

O & M – Staking & Locating Total Program	
Year (Jan-Dec)	Dollars
2021	\$10,982,945
2022	\$10,309,238
2023	\$12,407,527
2024	\$15,417,861
2025 Projected	\$21,086,305
2026 Projected	\$24,412,362
2026-2027 Test year	\$26,803,632

1 The test year expense projection reflects the Company's historical experience of
2 program expense timing.

3 **Q. Please describe the test year cost forecast for volume and unit cost.**

4 A. An anticipated unit cost increase is included in the test year projection for contractor
5 services and with the requirement for enhanced capability to manage increased demand in
6 performance and increasing labor costs.

7 The staking completed by an outside contracted vendor is billed based on
8 contractual unit costs. An anticipated volume increase of 7.0% is included in the test year
9 projection relative to 2025 contractor services. This is in alignment with the trend of the
10 historical data and staking forecasts for the state of Michigan. The anticipated contractor
11 unit cost and staking volume increases is shown in the following table.

Table 31

Dedicated Contractor Staking		
	Base Unit cost (\$/unit)	Base Unit Forecast (units/volume)
2022	\$21.83	407,551
2023	\$26.71	412,008
2024	\$31.27	448,354
2025 Projected	\$39.88	471,839
2026 Projected	\$43.03	504,868
2027 Projected	\$44.70	540,207

12 The Statewide MISS DIG 811 Annual Ticket Requests table below shows the
13 change in staking volumes realized year over year.

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MISS DIG 811 data (www.missdig811.org/about/who-we-are/about-miss-dig.html) shows a continuous growth in staking and locating ticket requests for the entire state of Michigan, except for a small decline in 2020, which appears to be a temporary result of COVID-19 pandemic business impacts.

The following is the historic and projected Statewide MISS DIG 811 annual ticket requests:

Table 32

Statewide MISS DIG 811 Annual Ticket Requests		
Year	Annual Ticket Requests	% Change From Prior Year
2016	814,303	
2017	872,896	7.2%
2018	923,993	5.8%
2019	1,015,753	9.9%
2020	994,573	-2.1%
2021	1,088,030	9.4%
2022	1,093,021	1.0%
2023	1,202,992	10.1%
2024	1,327,894	10.4%
2025 Forecast	1,420,847	7% assumed
2026 Forecast	1,520,306	7% assumed

Q. Please describes the Company's concerns with the increase in staking ticket volumes and proposed recommendation.

A. The Company has estimated staking tickets for the test year based on the best information available at this time. With staking requests increasing due to fiber optic and other infrastructure work, the actual staking demand the Company experiences in 2027 could be above the Company's staking volume forecast. While the Company attempts to forecast staking volumes with a high degree of accuracy, the largest factors influencing expenditures in these programs are externally driven. As a result, the Company requests it be allowed to defer for refund or recovery certain O&M expenses for this program. The request would avoid a potential budgetary impact on important programs in order to cover

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1 the required staking volume costs. It would also prevent customers from paying for costs
2 that were not incurred if staking volumes are below forecasted levels.

3 The Company based its deferral request on high-speed internet infrastructure grant
4 programs administered by the Michigan High-Speed Internet Office. The first program is
5 Realizing Opportunities with Broadband Infrastructure Networks (“ROBIN”). Projects
6 funded by ROBIN are expected to be completed by the end of 2026. With ROBIN projects
7 being completed in 2026, the main program that is expected to impact the 2027 calendar
8 year is the Broadband Equity, Access, and Deployment Program (“BEAD”). According to
9 the State of Michigan’s Labor and Economic Opportunities website, as of 2023, close to
10 500,000 households are unserved or underserved by high-speed internet infrastructure.
11 BEAD is designed to ensure that every one of Michigan’s unserved and underserved homes
12 and businesses can get connected to reliable high-speed internet infrastructure. Approval
13 of Michigan’s final list of subgrantees and the locations to be served is anticipated to occur
14 in 2025. Subgrantees have four years to complete their infrastructure projects and begin
15 delivering service. These two infrastructure projects have the potential to significantly
16 increase staking volumes above forecasted levels. The deferral mechanism benefits both
17 the Company and customers as it allows for refund and recovery without building the
18 unknown cost into rates.

19 **Q. Describe the Company’s proposed deferral mechanism.**

20 A. The Company is proposing a continuation of the deferral mechanism approved in Case U-
21 21806 based on the variability in staking volume with the following adjustments. The
22 Company projects a 2027 Calendar year base unit ticket volume as shown in Table 31 of
23 540,207. The Base unit cost used to determine the recovery or refund would be the

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projected average unit cost for 2027 of \$44.70 per Table 31. The equation to determine the refund or recovery for the 2027 Calendar year is proposed to be:

- Refund (-) /Recover (+) = (2027 actual staking volume – 540,207) * \$44.70

The purpose of the deferral mechanism is to address future uncertainty about staking volumes, and that uncertainty is due in large part to potential variability tied to the larger BEAD rural broadband program. Therefore, the Company is not proposing a Refund or Recovery limit at this time.

Q. Please describe the change in the Company's standard labor rate and volume increase.

A. The projection for Company labor is primarily based on the projected hours for each year. Increases in labor also reflect projected gas distribution worker hourly standard labor rates. The Company crews historical units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 9. The historical year units/orders and hours and projected test year units/orders and hours for this sub-program are summarized in the referenced exhibit and in the following table:

Table 33

OM&C Labor Breakdown – Advanced Locating & Inspections		
Year (Jan-Dec)	Units/Orders	Hours
2021	11,168	14,877
2022	2,298	8,962
2023	2,692	9,033
2024	3,529	9,274
2025 Projected	4,024	10,004
2026 Projected	3,750	11,624
2026-2027 Test year	4,080	12,649

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Gas distribution worker hourly standard labor rates are expected to be:

Table 34

Distribution (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$73.41	\$37.44	\$29.36	\$140.21
2025	\$75.58	\$37.03	\$31.74	\$144.36
2026	\$78.96	\$39.48	\$30.00	\$148.44
2027	\$82.22	\$41.11	\$35.35	\$158.68

Q. Why did the Company initially implement the Dedicated Contractor staking strategy?

A. The Company's Dedicated Contractor staking strategy is to hire a contractor that is dedicated to staking only the Company's gas and electric assets. This was originally implemented in a limited portion of the Company's gas service territory because changes in the program were necessary to improve timeliness and accuracy of staking for public safety, especially given the continued ticket volume. Consumers Energy and the state of Michigan are in the fourth quartile for third-party gas distribution damages per 1,000 tickets. When accuracy and timeliness of staking are off target, this creates negative behaviors with third-party excavators, resulting in unsafe digging practices. A critical step in ensuring safe digging practices is having excellence in stake-and-locate timeliness and accuracy.

With a Dedicated Contractor staking strategy, the Company is looking to achieve the following key pillars in support of safe digging and the excavating community.

- The first key objective is *timeliness*. Through the dedicated workforce, the Company will see improved timeliness compared to historical performance to support the excavating community. This will be achieved by having a single utility focus for ticket management. This model improves the ability to manage ticket volume fluctuations throughout the year due to not having the risk of completing all other commitments on the ticket in the shared resource model.

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- Another key objective is *quality*, with improved staking accuracy performance compared to recent historical data. This is expected to be achieved as stakers need only focus on one utility type, compared to the shared resource model, where stakers are responsible for all assets (electric, gas, communications, water). This will lead to increased staking proficiency.
- The last key objective is *improved excavator communications* on projects. Improved communications with the excavating community will be enabled by use of enhanced positive response, which provides additional information and pictures to the ticket initiator, and an additional payment type for 180-day project tickets to assist in mitigating the risk of rushing.

Q. Please describe the test year costs for the Dedicated Contractor asset locating program.

A. Based on public safety, damage prevention, and compliance with a facility owner's obligation under Act 174, an anticipated increase in volume and costs are included in the test year projection for gas-only locating. This includes resources to locate *only* gas facilities for Consumers Energy compared to the existing method of vendors locating several other additional external facilities. Additionally, based on the existing benefits realized and lower comparative costs to the Shared Contractor resources, the Company expanded the program in 2025 to include 100% of all of the Company's statewide gas service territory.

Q. Please explain why the Company accelerated the implementation of the Dedicated Contractor staking model to 100% of the total ticket volume in 2025.

A. The staking contract with the contractor that the Company uses for its Shared Contractor approach expired in the first quarter of 2025. In anticipation, the Company sent out an RFP in the third quarter of 2024 for staking services for the Company's remaining gas service territory that at the time was under the Shared Contractor resource model. The request included options for both shared and dedicated services. The bids yielded an average unit cost for the Dedicated Contractor resource model that was below the average unit cost of

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1 the bids received for the Shared Contractor staking model. Based on the lower unit cost,
2 the realized timeliness, and quality improvement from the Dedicated Contractor resource
3 model, the Company selected the lower cost Dedicated Contractor option and implemented
4 a statewide Dedicate Contractor staking approach for its gas service territory for 100% of
5 the total staking ticket volume.

6 **Q. Has the Company added communication audits to assist in validating appropriate**
7 **positive response code utilization as a result of the MPSC Safety Staff's**
8 **recommendations in the Company's previous gas rate case?**

9 A. Yes. The Company is enhancing communication audits executed by the Company's
10 Damage Prevention Field Liaisons as well as updating timeliness reporting to include
11 county level data in addition to statewide, to assist in identifying incorrect positive response
12 code utilization.

13 **Q. What other activities does the Company perform to reduce dig-in damages besides**
14 **stake and locate?**

15 A. In addition to the stake and locate program, the Company has a robust damage prevention
16 program that includes damage prevention and public safety liaisons, and public awareness
17 activities.

18 Damage prevention and public safety liaisons focus on proactive support for the
19 excavating community, including but not limited to training, troubleshooting locating
20 needs, and communications and issues management for all involved stakeholders. The
21 liaisons also play a critical role in the Company's damage investigation program, repeat
22 damager program, and no-call program, where the liaisons follow up on damages in which
23 MISS DIG 811 was not called. Additionally, they perform quality assurance audits on the

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Company's staking contractors for accuracy in locates. The Company has eight public safety liaisons, with the most recent being a dedicated individual for the gas transmission system due to an increasing number of near misses on the transmission pipelines. The Company has implemented the Irth Solutions UtiliSphere solution as a critical part of the damage prevention MISS DIG 811 ticket management. It enables standardization for field processes and supporting data. It can prioritize tickets and field activities, which help to mitigate the highest risks.

Customer Requested Services

Q. Please describe the O&M expenses related to the Operations & Maintenance – Customer Requested Services sub-program.

A. This sub-program includes the following work activity categories:

- Customer and Company Requested Service activities include Company labor and contractor services for meter and meter stand work, and appliance re-lights after interruptions. Interruptions may be customer driven or related to Company work such as gas facility replacement projects. This category also includes gas meter investigations associated with operational and billing issues.
- Charts and Inspection activities include gas meter inspections and battery exchanges. This work is associated with the metering equipment for commercial and industrial customers. The charts and inspection requirement helps to ensure accuracy in gas flow and utilization.
- Gas Meter Routine activity includes scheduled and companion gas meter exchanges. This work fulfills the Company's Routine Meter Exchange Program. Every year, the Company removes (exchanges) a sample of meters (specific years and types) and tests them for billing accuracy to fulfill MPSC requirements. The number of exchanges required annually is determined according to the testing procedures currently in effect, which specifies how meters are grouped and how many meters of each lot are to be removed and tested annually.
- Meter Work activities include gas turn-ons, turn-offs, investigative tests, as well as setting and removing meters. This work is both emergent and customer committed and is planned based on historical levels; transportation customer meter reads are part of this activity. Also, Smart Energy Advanced Metering Infrastructure ("AMI")/Automated Meter Reading ("AMR") activities were

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added to the program in 2017 with the implementation of the Gas AMI/AMR project. All activities associated with the gas communication modules are included in this activity, which are investigations, removals, exchanges, and installations of gas communication modules. Deployment has completed, and work has shifted to troubleshooting communication issues with the AMI/AMR meters.

- Non-WBS portion of the sub-program includes labor, internal departmental chargebacks, contractors, and materials not directly associated with a specific work order.
- Contractor Materials, Credits and Other Expenses portion of the sub-program includes Contractor labor, credits, and materials for work associated with the activities below.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 10, and summarized by work type in the following table:

Table 35

Operations & Maintenance – Customer Requested Services		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Non-WBS	\$872,939	\$32,064
Contractor; Materials, Credits and Other Expenses	\$154,615	\$408,387
Cust Req Services	\$2,890,135	\$3,158,742
Charts & Inspections	\$1,578,280	\$1,724,964
Routines	\$2,746,158	\$3,001,384
Meter Work	\$9,015,559	\$9,853,459
Total Program	\$17,257,686	\$18,179,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 10, column (d), the test year funding for this program is \$335,877 below the rate of inflation. This variance highlights the influence of factors beyond general

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inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$18,179,000 of O&M expenses in the test year as requested for this sub-program?

A. The costs of the sub-program are primarily driven by Company gas service worker labor, materials, and vehicle expenses. Labor costs consider the amount of jobsite time needed to complete each work activity along with standard labor rates and indirect labor rates for the personnel completing the activity. The Company moved the work type no-gas investigation and repair from this program in 2024 to the Operations and Maintenance – Distribution sub-program. For this sub-program, the units and hours from 2024 to the test year are higher due to the increase in inactive meter removal, routine exchanges associated with rebuilds to top connect stands, and seal for non-pay turn on.

Non-WBS expenses are projected to be lower than in previous years due to a new Meter Set order charging process implemented in 2025. Distribution and Service worker hourly standard labor rates are expected to be:

Table 36

Distribution and Service Rates (\$/hr)								
	Distribution				Service			
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$69.86	\$37.72	\$43.31	\$150.90	\$73.80	\$97.42	\$21.40	\$192.62
2025	\$73.41	\$39.64	\$33.77	\$146.82	\$75.63	\$100.59	\$22.69	\$198.91
2026	\$75.58	\$40.81	\$40.81	\$157.21	\$78.71	\$102.32	\$20.46	\$201.50
2027	\$78.47	\$42.37	\$42.37	\$163.22	\$81.96	\$106.55	\$24.59	\$213.10

The historical O&M expenses, units/order, and hours for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 10. The historical year O&M expenses, units/orders, and hours and projected test year O&M expenses, units/orders, and

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hours for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 37

Operations & Maintenance – Customer Requested Services Units/Orders, Hours & Dollars			
Year (Jan-Dec)	Units/Orders	Hours	Dollars
2021	150,212	82,741	\$15,519,751
2022	160,647	92,868	\$19,198,250
2023	153,649	87,195	\$18,876,849
2024	167,040	82,802	\$17,257,686
2026-2027 Test year	161,744	79,106	\$18,179,000

Meter First Set Credits

Q. Please describe the Operations & Maintenance – Meter First Set Credits sub-program.

A. The Operations & Maintenance – Meter First Set Credits sub-program offsets the initial labor costs to install a newly purchased natural gas meter (or First Set Cost), and the final labor costs to remove the meter from service prior to retiring and scrapping the meter (or Cost of Removal). Meters are capitalized on purchase, per FERC accounting rules, and these credits offset the installation costs of the meters upon purchase and final disposal of meters.

The Company establishes an annual meter purchase plan for each year in June of the preceding year. That purchase plan provides for meter quantities and types, broken into periodic releases from meter manufacturers throughout the year, to meet all business requirements. Those requirements include new business sets, service upgrades, for-cause exchanges (such as damage, leak, and obsolescence), project work such as Enhanced Infrastructure Replacement Program ("EIRP"), and regulatory testing requirements.

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1 Factors considered when establishing the annual plan include current levels of inventory
2 by meter type, assumptions of new business services expected in the coming year, historical
3 for-cause exchange data, project work projections, historical trending for meter
4 retirements, and regulatory program (i.e., the Routine Meter Exchange Program)
5 projections. The plan calls for receiving shipments of meters at different points throughout
6 the year, so the Company can adjust the orders as actual inventories are observed.

7 **Q. Please describe the impact that Inflation has on the test year request for this program.**

8 A. Inflationary impacts are incorporated into this program's test year funding request through
9 adjustments to material and labor costs. However, inflation alone did not determine the
10 requested funding level. The test year request also reflects changes in the program's work
11 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
12 A-120 (JPP-5), line 11, column (d), the test year funding for this program is \$583,718
13 above the rate of inflation. This variance highlights the influence of factors beyond general
14 inflation. The following section provides an explanation of the impact on the test year
15 funding request.

16 **Q. What is the basis for determining the \$8,029,000 projected O&M credit in the test**
17 **year?**

18 A. This O&M offset is primarily driven by the purchase of new gas meters. During the test
19 year period, the Company plans to purchase 57,279 new gas meters. The expected credit
20 from these purchases during the test year is \$5,173,000. The credit is calculated monthly
21 based on the standard labor rate of employees performing the work, the vehicle loading
22 rate, and the indirect labor costs such as travel time that an employee spends performing

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their work. This rate is applied to each meter purchased during that month based on the average time required to install the meter to determine the O&M first set credit.

During the test year period, the Company plans to retire 71,400 existing gas meters. The expected credit from these meter retirements is \$2,856,000.

The cost of removal credit rate is calculated monthly based on the standard labor rate of employees performing the work, the vehicle loading rate, and the indirect labor costs incurred as employees perform the work. This rate is applied to each meter retired from service during that month based on the average time required to remove the meter from service to determine the O&M cost of removal credit. The annual dollar amount of first set credits is tied directly to the number of units of natural gas meters purchased.

The annual dollar amount of the cost of removal credits is directly tied to the number of units of natural gas meters retired from service during the year. The historical O&M expenses and units for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 11. The historical year O&M expenses and units and projected test year O&M expenses and units for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 38

Operations & Maintenance – Meter Credits Units/Orders & Dollars			
Year (Jan-Dec)	Units Purchased	Units Retired	Dollars
2021	49,759	38,230	(\$7,062,668)
2022	20,902	39,631	(\$5,451,241)
2023	35,200	65,222	(\$6,942,199)
2024	43,251	46,946	(\$8,027,900)
2026-2027 Test year	57,445	71,400	\$(8,029,000)

ROW Clearing

1 **Q. Please describe the O&M expenses related to the ROW Clearing sub-program.**

2 A. The ROW Clearing sub-program expenses are needed for clearing and vegetation
3 management for the Company's nearly 2,800 miles of natural gas transmission and storage
4 field pipelines. The Company has historically performed minimum clearing necessary to
5 complete inspections, repairs, replacement of pipe, and limited demand clearing for
6 emergent work.

7 ROW clearing for gas transmission lines at a cyclical program level began in 2020.
8 The projected test year amount of \$2,042,000 will permit the continued clearing and
9 herbicide treatment of approximately 400 miles of transmission line ROW per year.

10 This will place the natural gas transmission and storage pipeline system on an
11 approximate seven-year clearing cycle to optimize the resources needed to maintain the
12 ROW and prevent the growth of large trees that require hand cutting. A seven-year clearing
13 cycle will allow the Company to create a sustainable integrated vegetation management
14 program to minimize woody vegetation growth. This will also allow the gas transmission
15 ROWs to be maintained at full width, increasing awareness for nearby property owners,
16 and making encroachments on the ROW more visible. This seven-year cycle represents the
17 maximum period between clearings to permit aerial patrol and ground line patrol, leak
18 survey, and identify encroachments. The integrated vegetation management program
19 promotes pollinator species and bird species dependent on early successional habitat,
20 whose populations have been on the decline in the United States due to habitat loss. This
21 additional environmental benefit does not affect the cost of the clearing program.

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The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 12, and summarized by work type in the following table.

Table 39

Right-of-Way Clearing		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Salary & Expenses	\$455,652	\$594,776
Mechanical Clearing	\$825,477	\$1,077,520
Herbicide Treatments	\$283,227	\$369,705
Total Program	\$1,564,356	\$2,042,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material, equipment, and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 12, column (d), the test year funding for this program is \$363,684 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$2,042,000 of projected O&M expenses in the test year for this sub-program?

A. The projected expenses in this sub-program are primarily driven by the planned miles to be cleared and maintained. In Case No. U-20322, the Company proposed increased funding to implement a vegetation management program with a seven-year clearing cycle. For the fifth full year of the plan implementation in 2024, the Company spent \$1,564,356 and is targeting and on track to spend \$1,649,000 in 2025.

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The 2024 program includes the continued implementation of the herbicide treatment portion of the integrated vegetation management program, which is offset one year following mechanical clearing treatments. The Company is on track to continue to clear 400 miles annually, including herbicide as part of the integrated vegetation management program for ROW Clearing at the projected test year spending of \$2,042,000. The projected cost increase reflects the program theoretically getting on cycle. So rather than continuing to reclaim the ROW as in previous years, the Company's intent is to reach a managing phase of the program.

The historical O&M expenses and miles for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 12. The historical year O&M expenses and miles and projected test year O&M expenses and miles for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 40

Right of Way Clearing		
Miles & Dollars		
	Miles	
Year (Jan-Dec)	Cleared	Dollars
2021	423	\$1,844,924
2022	304	\$1,827,267
2023	424	\$1,767,066
2024	514	\$1,564,356
2026-2027 Test year	400	\$2,042,000

Meter Reading

Q. Please describe the O&M expenses related to the Meter Reading sub-program.

A. The Meter Reading sub-program includes Company employee labor, business expenses (such as fleet costs, and training), and technology expenses (hardware and software

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1 maintenance, cellular, and system improvements) for purposes of obtaining meter indexes
2 for the calculation of customer bills.

3 The Company obtains meter indexes by three methods:

- 4 1. The mobile collection of meter indexes using AMR equipped vehicles on
5 scheduled routes.
- 6 2. The automated collection of meter indexes using the Company's AMI meters.
- 7 3. The manual collection of meter indexes by walking up to meter installations to
8 obtain reads.

9 The Company achieved overall year-end gas meter read rates of 99.73% in 2023
10 and 99.87% in 2024. The year-end meter reading results for 2023 and 2024 for the various
11 processes used by the Company are as follows:

Table 41

	Meters Available		Meters Read		Meter Read Rate	
Year	2023	2024	2023	2024	2023	2024
Gas AMR	13,787,192	13,941,150	13,767,861	13,932,072	99.86%	99.93%
Gas AMI	8,047,105	8,176,126	8,023,901	8,169,209	99.71%	99.92%
Manual Gas Reads	159,831	151,855	143,063	139,808	89.51%	92.07%

12 The Meter Reading sub-program is managed jointly for the Company's electric and
13 natural gas operations. As a result, the total meter reading costs are allocated between
14 electric and natural gas. The average gas/electric allocation for the test year is projected to
15 be 39% electric and 61% gas; in 2024, the allocation was split 38.8% electric and 61.2%
16 gas. The difference between the 2024 Actual and projected test year electric and gas
17 allocation considers the optimization of AMR and manual routes.

18 The historical year costs and projected test year costs for this sub-program are
19 shown in Exhibit A-117 (JPP-2), line 13, and summarized by work type in the following
20 table:

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Table 42

Meter Reading		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Meter Reader Salaries	\$329,661	\$352,226
Supervision & Administration Salaries	\$1,593,059	\$1,702,102
Meter Reading Expenses	\$594,949	\$635,672
Total Program	\$2,517,669	\$2,690,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program's test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program's work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 13, column (d), the test year funding for this program is \$11,077 below
7 the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$2,690,000 projected O&M expenses in the test**
11 **year for this sub-program?**

12 A. Spending in this sub-program is primarily driven by Company employee labor, business,
13 and technology expenses. The test year projected expense is \$2,690,000, which is an
14 increase of \$172,331 because of increased technology fees and annual labor salary
15 increases.

16 For the test year, the number of gas meter reader operating employees is projected
17 to be 23 employees. These employees will navigate AMR mobile collection vehicles and
18 continue to manually read approximately 13,654 gas meters.

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The manual reads occur for the following reasons: opt-out customers (Opt Out Not Cut Over), out of scope meters (i.e., commercial/industrial meters) (Not Cut Over), and rate not eligible accounts (Rates ineligible).

The table below shows this breakdown as well, separated between Legacy and Smart meter customers:

Table 43

August 2025	
Gas Customers Not Cut Over To AMI/AMR	
Description	Manually Read Meters Count
Legacy Not Cut Over	4,628
Legacy Opt Out Not Cut Over	5,212
Legacy Rates Ineligible for GCM	1,827
Total Legacy Not Cut Over	11,667
GCM AMR Not Cut Over	1,453
GCM AMR Opt Out Not Cut Over	0
GCM AMR Rates Ineligible	358
GCM AMI Not Cut Over	408
GCM AMI Opt Out Not Cut Over	0
GCM AMI Rates Ineligible	185
Total Smart Not Cut Over	2,404
Grand Total Not Cutover	14,071

The historical O&M expenses and headcount for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 13. The historical year O&M expenses and headcount and projected test year O&M expenses and headcount for this sub-program are summarized in the referenced Exhibit and in the following table. The expense projection for the test year reflects the Company's historical experience of program expense timing.

Table 44

Meter Reading		
Equivalent Staffing & Dollars		
	Average	
Year (Jan-Dec)	Gas Staff	Dollars
2021	23	\$2,830,688
2022	22	\$2,592,247
2023	22	\$2,607,415
2024	23	\$2,517,669
2026-2027 Test year	23	\$2,690,000

Meter Technology and Management System Support

Q. Please describe the O&M expenses related to the Meter Technology and Management System Support sub-program.

A. The Meter Technology and Management System Support sub-program ensures the safety, accuracy, maintenance, and stability of the Company's natural gas metering equipment. This program supports the verification of meter accuracies for all customer classes. The program costs are associated with testing and refurbishing gas meters, instrument correctors, gas communication modules, and regulators in response to the Company's Routine Meter Exchange Program.

In July of 2020, the Company combined the Meter Technology Center ("MTC") and the Smart Energy Operations Center ("SEOC") into one combined operation. The SEOC Program includes the gas portion of the labor and expenses relating to the SEOC daily responsibilities in connection with obtaining AMR meter reads. This includes troubleshooting the equipment, order creation, and IT system demand requirements.

The SEOC is responsible for the reliability and data delivery of the AMI electric meters and AMR gas communication modules. Electric-related costs are not included in this filing. The SEOC benefits customers by providing actual meter reads, minimizing the

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number of estimated bills, and providing reliable and timely data through daily AMI and monthly AMR meter interrogations.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 14, and summarized by work type in the following table.

Table 45

Meter Tech & Mgmt Sys Support		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Exempt/Non-Exempt Salaries	\$145,432	\$191,597
OM&C Salaries	\$847,601	\$1,022,220
Expenses	\$116,020	\$195,200
Gas Smart Meter Pilot	\$0	\$240,000
Meter Correctors (began to purchase as O&M in 2022)	\$884,697	\$2,203,983
Total Program	\$1,993,750	\$3,853,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's work plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit A-120 (JPP-5), line 14, column (d), the test year funding for this program is \$1,714,009 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$3,853,000 projected O&M expenses in the test year for this sub-program?

A. This sub-program expense is primarily driven by labor, operating, and material costs.

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1 In 2021, a determination was made relative to stand-alone natural gas meter
2 correctors, which had previously been purchased under the Gas Meters capital program,
3 that the components were considered replacement parts and would be purchased under the
4 O&M program going forward, starting in 2022. In 2022, 2023, and 2024 the Company was
5 able to reduce stand-alone meter corrector inventory purchases by depleting excess
6 inventory holdings and receiving meter correctors at no cost as part of a vendor quality
7 settlement. The increase for the projected year is due to a projected unit usage increase year
8 over year as well as the need to supplement on-hand inventory after years of inventory
9 depletion. 2025 spend levels represent the ramping back up of purchases to a more normal
10 level of equipment demand, with full normalization beginning in 2026. The change in
11 purchasing instrument correctors in this program represents a \$2,203,983 impact in the test
12 year, purchasing 4,354 stand-alone units. The test year projected program requirement
13 represents normal business expenses with the change in categorization of the gas meter
14 corrector purchases.

15 The program includes expenses of \$240,000 for a Gas Smart Meter Pilot program
16 discussed in the testimony of Company witness Lincoln D. Warriner. The funding covers
17 expenses for software maintenance, cellular service, integration & reporting, and fees.

18 The Labor dollars for this sub-program are determined by headcount and pay
19 increase for the salary work types in Table 45. The other dollars mainly reflect expenses
20 and materials which includes procurement of gas meter corrector quantities that align with
21 workload requirements.

22 The historical O&M expenses for this sub-program are summarized from 2016 to
23 2024 in Exhibit A-121 (JPP-6), line 14. The historical year O&M expenses and projected

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test year O&M expenses for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 46

Meter Tech & Mgmt Sys Support Dollars			
	Labor	Other	Total
Year (Jan-Dec)	Dollars	Dollars	Dollars
2021	\$1,055,672	\$213,094	\$1,268,766
2022	\$1,106,459	\$320,326	\$1,426,785
2023	\$950,010	\$581,768	\$1,531,778
2024	\$993,033	\$1,000,717	\$1,993,750
2026-2027 Test year	\$1,213,817	\$2,639,183	\$3,853,000

Smart Energy Metering Technology Center

Q. Please describe the O&M expenses related to the Smart Energy Metering Technology Center sub-program.

A. The Smart Energy Metering Technology Center sub-program includes:

- (i) The gas portion of expenses related to software maintenance for gas communications modules installed on locations in which the module communicates data through the electric meter.
- (ii) The gas portion of the cellular communication expenses allocated to gas communication modules that pass data through the electric meter.
- (iii) The gas portion of a technical support contract with the Company's AMI/AMR vendor.

These costs are contractually based through 2032 on a per meter or communication module basis. The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 15, and summarized by work type in the following table.

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Table 47

Smart Energy MTC – Gas		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Communication Charges	\$264,801	\$267,716
GCM Software Maintenance	\$168,058	\$169,908
Technical Support Services Contract	\$125,000	\$126,376
Total Program	\$557,859	\$564,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program’s test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program’s work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 15, column (d), the test year funding for this program is \$34,498 below
7 the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$564,000 projected O&M expenses in the test**
11 **year for this sub-program?**

12 A. The projected expense is based on the number of units of AMI-programmed gas modules
13 installed in the field and in inventory to support operations.

14 With the completion of deployment, the AMI gas module population, subject to a
15 portion of the cellular and software maintenance expenses, has stabilized at a level to
16 include all installed meters and inventory required to support new installations going
17 forward. This should also provide for replacement of existing meters for cause (an
18 error/malfunction) or routine exchange requirements. In addition, per the contract that runs
19 through 2032, the software maintenance expense per unit increases 3% per year.

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The historical O&M expenses for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 15. The historical year O&M expenses and projected test year O&M expenses for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 48

Smart Energy MTC – Gas Dollars	
Year (Jan-Dec)	Total Dollars
2021	\$565,536
2022	\$542,948
2023	\$543,842
2024	\$557,859
2026-2027 Test year	\$564,000

Gas Storage

Q. Please describe the O&M expenses related to the Gas Storage sub-program.

A. Gas Storage sub-program O&M expenses are directly associated with various maintenance and operational tasks purposed to ensure the predictable and safe operation of the natural gas storage system. The natural gas storage system includes 15 gas storage fields, 783 gas storage wells, and 244 miles of gathering lines, with associated valving, conditioning systems, and access roads. The program funds critical tasks associated with operability and regulatory compliance. Tasks that are executed annually through this sub-program include valve and operator inspections, line patrol and leak survey, integrity monitoring, inspection and maintenance of regulators and relief valves, surface and subsurface safety valves, isolation valves, fluid separators, and fluid disposal systems. In addition, the Gas Storage O&M sub-program ensures near real-time emergency response preparedness.

This sub-program includes the following work activity categories:

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- Non-WBS portion of the sub-program includes labor, internal departmental chargebacks, contractors, and materials not directly associated with a specific work order.
- Contractor Materials, Credits and Other Expenses portion of the sub-program includes contractor labor, credits, and materials for Code Inspection, Facilities Locating for Third Parties (MISS DIG 811), Demand/Preventive/Compliance Maintenance and Operations which are directly associated with a specific work order.
- Code inspections and compliance work is in adherence to all applicable local, state, and federal laws, including those implemented by the MPSC, EGLE, PHMSA, Environmental Protection Agency, Bureau of Land Management, and Michigan Occupational Safety and Health Administration. Regulatory Maintenance activities include pigging activities, corrosion prevention, dehydrator and separator preventative maintenance, valve and operator inspection and repair, access road maintenance, regulator and relief inspections, pipeline patrol, and leak survey to ensure public safety.
- Operation and integrity work includes the bi-annual pressure survey of all 15 fields for reservoir integrity and inventory verification, monthly wellhead pressure monitoring to ensure asset integrity and deliverability, configuring of gas storage fields for injection/withdraw cycles, and routine inspection of assets during winter operations/peak demand.
- Demand maintenance has trended consistent historically. Drivers of these costs include gas storage well intervention, integrity demonstration, and issues affecting gas flow deliverability. This may include well intervention, well logging, freezes in pipelines, snow plowing to ensure access to facilities, and response to periodic equipment and system failures requiring intervention and corrective measures to maintain reliability and public safety.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 16, and summarized by work type in the following table.

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Table 49

Gas Storage O&M			
Projection Breakdown by Activity Type			
Work Type	2023 Actual	2024 Actual	2026-2027 Test year
Non-WBS	\$1,699,628	\$1,680,263	\$1,780,174
Contractor; Materials, Credits and Other Expenses	\$909,821	\$867,237	\$960,826
Code Inspections	\$1,559,900	\$1,198,581	\$1,512,694
Facilities Locating for Third Parties (MISS DIG 811)	\$828,615	\$760,433	\$897,906
Demand/Preventive/Compliance Maintenance	\$890,681	\$579,174	\$873,360
Operations	\$53,032	\$104,294	\$135,040
Less: Facility Chargebacks	(\$202,567)	(\$222,985)	(\$226,000)
Total Program	\$5,739,110	\$4,966,998	\$5,934,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program's test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program's work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 16, column (d), the test year funding for this program is \$605,165
7 above the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$5,934,000 of projected O&M expenses in the**
11 **test year for this sub-program?**

12 A. The projected expense for this sub-program is historically based, and primarily driven by
13 known units (labor hours) and historical actuals execution of tasks associated with the
14 following activities: compliance inspections, maintenance inspections, operation of the gas
15 storage facilities to meet gas flow deliverability needs and third-party damage prevention
16 tasks (such as locate/stake, crossings, and contractor oversight) to ensure public safety,

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code compliance, maintenance of critical assets, and operation of the system to deliver natural gas across the state.

These tasks include monthly well site visits and operational support of the Annular monitoring program, including well intervention. Gas transmission worker hourly standard labor rates are expected to be:

Table 50

Transmission (\$/hr)				
	Standard Labor Rates	Indirect Labor Rates	Vehicle Rates	Total Rate
2024	\$72.53	\$23.93	\$32.64	\$129.10
2025	\$76.37	\$26.73	\$32.08	\$135.17
2026	\$80.38	\$28.13	\$29.74	\$138.25
2027	\$83.69	\$29.29	\$35.15	\$148.13

The projected expenses for the test year expense is higher relative to 2024 actuals, primarily due to increased crew involvement in capital project work during 2024, which reduced maintenance related expenses in that year. However, when compared to 2023, the test year projection remains below the rate of inflation. The historical O&M expenses for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 16. The historical year O&M expenses and projected test year O&M expenses for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 51

Gas Storage O&M Dollars	
Year (Jan-Dec)	Dollars
2021	\$5,860,452
2022	\$6,338,065
2023	\$5,739,110
2024	\$4,966,998
2026-2027 Test year	\$5,934,000

Replace Vintage Services

Q. Please describe the O&M expenses related to the Replace Vintage Services (“RVS”) sub-program.

A. The O&M expenses for the RVS sub-program occur because a small percentage of planned capital RVS orders are not able to be completed as planned.

Reasons for these orders not being completed include field crew identification of services that are already plastic, construction barriers such as service connections to mains that exist under construction barriers such as poles or trees, field crew identification of forced sewer facilities, meters that are not reasonably accessible, excessive main depth, high ground water conditions, evidence of other underground facilities that were unable to be located, and orders for branch services that do not qualify as capital assets.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-117 (JPP-2), line 17, and summarized by work type in the following table.

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Table 52

Replace Vintage Services		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Replace Vintage Services	\$66,165	\$73,000
Total Program	\$66,165	\$73,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program's test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program's work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 17, column (d), the test year funding for this program is \$2,015 above
7 the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$73,000 of projected O&M expenses in the test**
11 **year for this sub-program?**

12 A. The forecast for 2027 anticipates that a small percentage of RVS construction orders will
13 be returned from the field as non-constructible. The Company plans to replace 7,683
14 services in 2027. The expected non-constructible rate is expected to be 1.30% of planned
15 units.

16 The historical O&M expenses and units for this sub-program are summarized from
17 2016 to 2024 in Exhibit A-121 (JPP-6), line 17. The historical year O&M expenses and
18 units and projected test year O&M expenses and units for this sub-program are summarized
19 in the referenced exhibit and in the following table. The test year expense projection
20 reflects the Company's historical experience of program expense timing.

Table 53

Operations & Maintenance – Replace Vintage Services Units/Orders, Return Rate & Dollars			
Year (Jan-Dec)	VSR Planned Units	Return Rate	Dollars
2021	5,056	1.25%	\$298,453
2022	2,176	1.25%	\$98,417
2023	1,228	1.40%	\$13,897
2024	2,564	1.06%	\$66,165
2026-2027 Test year	7,683	1.30%	\$73,000

Compression

Q. Please describe the O&M expenses related to the Gas Compression sub-program.

A. Gas compression is responsible for the safe operation, maintenance, and performance of the Company's natural gas-fired engines. These units provide the pressure necessary to move gas in and out of the storage fields, to move gas from interstate pipeline sources onto the Company's transmission pipeline system, and ultimately, to move the natural gas to the city gate facilities feeding distribution systems that transport gas to the Company's customers.

Maintenance costs vary by individual compression engine(s). The Company's compression engines vary in age, size, type, and design and encounter varying operating conditions. Consumers Energy is not unique in that its fleet contains units of different size, type, and design. The compression engines used for storage will typically encounter a wider range of operating pressures and flow rates than engines used to boost pressure on the transmission system.

The frequency of compressor engine inspections is based on operating hours, and consists of disassembling, inspecting, and cleaning the different components of the engine. During the inspection, worn or damaged parts are repaired or replaced to specific tolerances. Additional costs can occur if parts are found to be worn and require replacement

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1 before resulting in random outages at inopportune times when needed to meet system
2 demand.

3 Gas Compression expenses in Exhibit A-117 (JPP-2), line 18, were developed by
4 evaluating a station's operating history and are broken into "labor" and "non-labor"
5 categories. Labor is the primary component and has a predictable increase. Non-labor
6 categories include Material, Contractors, Overheads, and other. Non-labor expenses are
7 also predictable and include items required to operate and execute a workplan to meet code
8 requirements, while meeting operational performance to fulfill customer demand. These
9 items include but are not limited to: (i) fuel, oil, and glycol for equipment and vehicles;
10 (ii) materials; (iii) tools; (iv) cleaning supplies; (v) security; and (vi) road and grounds
11 maintenance.

12 The historical year costs and projected test year costs for this sub-program are shown
13 in Exhibit A-117 (JPP-2), line 18, and summarized by category in the following table:

Table 54

Compression Summary		
Projection Breakdown by Category		
Category	2024 Actual	2026-2027 Test year
Labor	\$9,419,621	\$11,262,143
Material	\$2,998,370	\$3,578,642
Contractor	\$2,517,324	\$3,004,483
Non-Labor Overheads	\$49,542	\$59,684
Non-Labor Other	\$2,157,139	\$2,558,048
Total Program	\$17,141,996	\$20,463,000

14 **Q. Please describe the impact that Inflation has on the test year request for this program.**

15 A. Inflationary impacts are incorporated into this program's test year funding request through
16 adjustments to material and labor costs. However, inflation alone did not determine the
17 requested funding level. The test year request also reflects changes in the program's work
18 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit

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1 A-120 (JPP-5), line 18, column (d), the test year funding for this program is \$2,072,000
2 above the rate of inflation. This variance highlights the influence of factors beyond general
3 inflation. The following section provides an explanation of the impact on the test year
4 funding request.

5 **Q. What is the basis for determining the \$20,463,000 of projected O&M expenses in the**
6 **test year for this sub-program?**

7 A. Consumers Energy tracks the history and future maintenance needs of each station. Once
8 costs to reliably operate and comply with the Michigan Gas Safety Code are prioritized,
9 Business Services-Portfolio Planning, with the support and input from Engineering and
10 Asset Strategy, evaluates the maintenance plans required to maintain and improve the
11 condition of the plant. Using this information, a preliminary plan is prepared, reviewed (to
12 ensure high-priority issues are addressed and adequate resources and funding are
13 available), and approved by management. The overall objective is the safe, reliable, and
14 cost-effective operation of the Compression operations.

15 The Company's objective for its gas compression assets is to realize the most value
16 out of the Company's substantial storage capacity in terms of resilience and buffering
17 summer/winter price fluctuations. Continually improving the safety of compression assets
18 and reducing operational risks is critical. Beginning in 2010, the Company made significant
19 progress transforming the compression fleet from 1950's technology to modern, efficient,
20 and clean running equipment. The Company's objectives for improving the system's
21 reliability, resiliency, and optimal utilization are to:

22 a. Accelerate the implementation of preventative maintenance program and
23 practices and gradually implement predictive technologies.

24 b. Decommission retired/mothballed compressor units.

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- 1 c. Optimize the fleet of compressor units at Muskegon River to meet volume and
2 pressure requirements.
- 3 d. Evaluate contingency options for resiliency and opportunities that mitigate risk
4 of outages at the compression stations.
- 5 e. Assess feasibility of retiring additional compression assets to focus investment
6 on most critical units and optimize portfolio.
- 7 f. Meet Compressor Station Compliance with Proposed Michigan NOx RACT
8 Rule.

9 Gas Compression worker hourly standard labor rates are expected to be:

Table 55

	Standard Labor Rates (\$/hr)
2024	\$75.85
2025	\$79.43
2026	\$81.26
2027	\$82.92

10 The historical O&M expenses for this sub-program are summarized from 2019 to
11 2024 in Exhibit A-121 (JPP-6), line 18. The historical year O&M expenses and projected
12 test year O&M expenses for this sub-program are summarized in the referenced exhibit
13 and in the following table:

Table 56

Gas Compression O&M Dollars	
Year (Jan-Dec)	Dollars
2021	\$25,456,000
2022	\$23,830,000
2023	\$17,880,000
2024	\$17,142,000
2026-2027 Test year	\$20,463,000

15 The test year expense projection reflects the Company's historical experience of
16 program expense timing. The test year expense is higher due to the following factors:

- 17 • Top End and Gas Compressor Overhauls at the Ray and White Pigeon
18 compressor stations of \$1,350,550;

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- Process gas compression valve replacement project at Ray Compressor station. These are obsolete compressor valves that need to be replaced. The cost of the valves is \$240,000;
- Compression unit's (engine/compressor) hourly interval inspections are coming due on the units. All inspections are Original Equipment Manufacturer ("OEM") recommended. Engine side interval inspections are required as part of the unit's renewal operating permits. Additionally, increased emission testing and preventative maintenance on engines and compressor station equipment. This is an incremental increase of \$128,766;
- Crews performed local capital program work in 2024 that is not in the test year plan. This contributes \$595,074 to the perceived program increase; and
- Salaries for Technician were removed from this program in mid-2024. This resulted in a \$243,390 reduction to the program.

Q. Describe the Company's engine overhauls planned in the test year.

A. The Company plans to begin Top End Engine Overhauls during the test year at the Ray and White Pigeon compressor stations. The work includes replacement of all reciprocating components on the Engine side of the units excluding the crankshaft. The overhauls are based on the OEM unit hour recommendations. The overhauls are necessary to ensure reliability, safe operation, and continued emission compliance of the Engines.

Gas Operations Field Operations

Q. Please describe the O&M expenses related to the Gas Field Operations sub-programs shown on Exhibit A-118 (JPP-3).

A. The Gas Field Operations sub-programs includes training for approximately 1,500 natural gas field operations employees.

Also included is training for the Company's gas construction workforce, small tools, natural fiber clothing, safety equipment, field operation expenses, labor and expenses for personnel who are responsible for statewide scheduling and assignment of requested

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work, and management and administrative personnel of Gas Operations to ensure the safe and effective operation of the gas facilities.

Training

Q. Please describe the O&M expenses related to the Training sub-program.

A. The Training sub-program includes training for approximately 1,500 natural gas field operations employees, including Operator Qualification (“OQ”) training, in accordance with applicable regulations. Examples of training provided under this sub-program include equipment operator, pipe joining, valve inspection and maintenance, welding, and pressure control (regulation).

Safety training is included in this program, which drives improved safety performance in gas field operations. Gas field operations employees receive training each year to ensure a highly skilled workforce qualified to safely operate, maintain, and execute the tasks necessary to meet customer and work demands.

Athletic Trainers are also included in this program. Athletic trainers do not perform training. They assist employees with injury prevention, biomechanics & job coaching, flexibility education, health and wellness, and work-related injury care. Athletic Trainers are contractors from a third party.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-118 (JPP-3), line 1, and summarized by work type in the following table.

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Table 57

Operation & Maintenance – Training Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Gas Operations OM&C Training	\$3,332,764	\$4,025,020
Athletic Trainers	\$218,413	\$232,859
Gas Training Non-Labor Expense	\$89,035	\$91,380
Total Program	\$3,640,212	\$4,349,259

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program’s test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program’s work
5 plan, which includes scope adjustments and operational efficiencies. As shown in Exhibit
6 A-120 (JPP-5), line 19, column (d), the test year funding for this program is \$443,605
7 above the rate of inflation. This variance highlights the influence of factors beyond general
8 inflation. The following section provides an explanation of the impact on the test year
9 funding request.

10 **Q. What is the basis for determining the \$4,349,259 of projected O&M expenses in the**
11 **test year for this sub-program?**

12 A. Spending in this sub-program is primarily driven by the hours of training conducted for
13 Gas Operations employees. This training is required to ensure a skilled and qualified field
14 operations workforce is available that can complete all customer-requested and
15 compliance-based tasks.

16 The historical O&M expenses and hours for this sub-program are summarized from
17 2016 to 2024 in Exhibit A-121 (JPP-6), line 19. The historical year O&M expenses and
18 hours and projected test year O&M expenses and hours for this sub-program are

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summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 58

Training Hours & Dollars		
Year (Jan-Dec)	Training Hours	Dollars
2021	85,722	\$6,246,682
2022	83,518	\$6,205,592
2023	73,753	\$4,735,683
2024	50,822	\$3,640,212
2026-2027 Test year	59,477	\$4,349,259

Tools

Q. Please describe the O&M expenses related to the Tools sub-program.

A. The Tools sub-program includes the acquisition of small tools, natural fiber clothing, and safety items for field employees.

This ensures employees complete field work in a safe, efficient, and effective manner. Natural fiber clothing is a required personal protective equipment provided by the Company for employees in the field and who may be exposed to an area where natural gas is present.

Tools included in this sub-program are small hand tools and any tool used in the field that had an original cost of less than \$1,000. Fusion equipment, drills, grinders, peelers, and clamps are examples of tools that would be purchased under this program.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-118 (JPP-3), line 2, and summarized by work type in the following table.

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Table 59

Tools		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Tools	\$1,839,716	\$1,558,000
Total Program	\$1,839,716	\$1,558,000

1 **Q. Please describe the impact that Inflation has on the test year request for this program.**

2 A. Inflationary impacts are incorporated into this program's test year funding request through
3 adjustments to material and labor costs. However, inflation alone did not determine the
4 requested funding level. The test year request also reflects changes in the program's
5 expenses. As shown in Exhibit A-120 (JPP-5), line 20, column (d), the test year funding
6 for this program is \$415,736 below the rate of inflation. This variance highlights the
7 influence of factors beyond general inflation. The following section provides an
8 explanation of the impact on the test year funding request.

9 **Q. What is the basis for determining the \$1,558,000 of projected O&M expenses in the**
10 **test year for this sub-program?**

11 A. The projected expense for this sub-program is based on historical levels as well as any
12 known work plan needs and headcount changes for the test year period. The historical
13 O&M expenses for this sub-program are summarized from 2016 to 2024 in Exhibit A-121
14 (JPP-6), line 20. The historical year O&M expenses and projected test year O&M expenses
15 for this sub-program are summarized in the referenced exhibit and in the following table.
16 The test year expense projection reflects the Company's historical experience of program
17 expense timing.

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Table 60

Tools	
Dollars	
Year (Jan-Dec)	Dollars
2021	\$1,691,000
2022	\$3,065,612
2023	\$1,827,711
2024	\$1,839,716
2026-2027 Test year	\$1,558,000

Field Operations

Q. Please describe the O&M expenses related to the Field Operations Expenses sub-program.

A. The Field Operations Expenses sub-program includes operating employee expenses, telephone/computer chargebacks, environmental fees, gas pipeline user fees, transmission flight operations (aerial surveys), and other miscellaneous expenses.

Primary drivers for this sub-program's expenses are operating employee miscellaneous expenses, pipeline user fees, and permits. Operating employee miscellaneous expenses include items such as costs for mileage, hotels for Company-related trips, permit fees, and telephone and computer charges.

Pipeline user fees are fees paid to the PHMSA section of the United States Department of Transportation for gas distribution and gas transmissions lines.

Gas Bonds are no longer part of this program and have been moved to the balance sheet to be treated as receivables. Bonds are paid to municipalities in order to obtain permits to start work on projects. The municipalities refund the amount back to the Company when all conditions are met. Gas Escrows remain in the program; they are not fully refundable.

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Technology and Digital solutions is a new activity type that has been added to this program. The associated expenses are for technology and digital solutions to improve public safety and improve processes.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-118 (JPP-3), line 3, and summarized by work type in the following table.

Table 61

Field Operations Expenses			
Projection Breakdown by Activity Type			
Work Type	2023 Actual	2024 Actual	2026-2027 Test year
Field Ops OM&C Gas Expenses	\$1,752,881	\$1,619,018	\$1,505,078
Field Ops OT Meals Gas	\$287,835	\$360,741	\$304,290
Pipeline User Fees	\$696,966	\$830,915	\$851,008
Technology and Digital Solutions	\$0	\$0	\$1,800,000
Permits	\$95,831	\$111,979	\$112,446
Gas Field Mobility Exp	\$294,525	\$419,321	\$301,596
Gas Bonds and Escrows	\$334,514	(\$1,993,180)	\$130,000
Total Program	\$3,462,552	\$1,348,794	\$5,004,418

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's expenses. As shown in Exhibit A-120 (JPP-5), line 21, column (d), the test year funding for this program is \$3,556,948 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

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1 **Q. What is the basis for determining the \$5,004,418 projected O&M expenses in the test**
2 **year for this sub-program?**

3 A. The projected test year expense in this sub-program is based on historical spend levels as
4 well as any known work plan needs for the test year period. The reasons for this relative
5 increase are as follows:

- 6 • To be reflected as receivables, \$2,369,562 in Gas Bonds was moved to the
7 balance sheet in 2024 resulting in lower 2024 actuals for comparison. There is
8 a process in place to track bonds paid to municipalities and follow up to receive
9 refunds as projects are completed and restored, allowing the Company to
10 account for these as a receivable on the balance sheet.
- 11 • The Company is researching new technologies, material, tools, and process
12 efficiencies to improve public safety. The Company is investigating new
13 methane leak detection tools such as drones and satellites. The Company will
14 test innovative materials that enhance system integrity, advanced monitoring
15 and leak detection, reduce maintenance costs, and support reliability and safety
16 of the system. Additionally, the Company will investigate advanced monitoring
17 and leak detection with Sensors and Fiber-optics. The Company will pursue
18 smart meter technology that allows for automatic remote shut off of customers
19 in the event of fire or excess flow indication. The associated funding is
20 \$550,000.
- 21 • The Company is investing in advanced geospatial systems and asset tracking
22 technologies. These upgrades are designed to improve real-time data
23 communication from the field, enhance records accuracy, and strengthen GPS-
24 based monitoring capabilities across the system. Additionally, the Company is
25 implementing air tagging technologies for tools and equipment. These tags
26 allow for precise tracking and location of critical assets, minimizing losses due
27 to human error, improving utilization, and ensuring that the calibration
28 compliance requirements for tools are being met. The associated funding is
29 \$1,250,000.

30 The historical O&M expenses for this sub-program are summarized from 2016 to
31 2024 in Exhibit A-121 (JPP-6), line 21. The historical year O&M expenses and projected
32 test year O&M expenses for this sub-program are summarized in the referenced exhibit
33 and in the following table. The test year expense projection reflects the Company's
34 historical experience of program expense timing.

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Table 62

Field Operations Expenses	
Dollars	
Year	Dollars
2021	\$3,709,349
2022	\$3,899,805
2023	\$3,462,552
2024	\$1,349,000
2026-2027 Test year	\$5,004,418

Indirect Labor/Labor Variation

Q. Please describe the Indirect Labor/Labor Variation O&M Expense.

A. The Indirect Labor/Labor Variation expense supports the difference between the Company's actual operating employees' wages and the amount of salary cost allocated to work orders, using standard labor rates. Indirect Labor Variation occurs when the Company has labor costs not directly related to a work order, such as travel time between jobs, that has not been allocated to a work order via the indirect labor loading. The Company attempts to clear these account balance variances by year end. Thus, the Company does not project any test year expense in this sub-program.

Supervision/Admin Staff

Q. Please describe the O&M expenses related to the Supervision/Admin Staff sub-program.

A. The Supervision/Admin Staff sub-program provides for the management and administrative personnel for Gas Operations to ensure the safe and effective operation of the gas facilities. Operational supervision helps ensure the safety of crews working in the field as well as the safe execution of work practices.

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1 This section combines the Supervision/Admin Staff – Distribution & Service and
2 Supervision/Admin Staff - Transmission & Storage sub-programs that are shown
3 individually on Exhibit A-118 (JPP-3), lines 5 and 6.

4 **Q. Please describe the impact that Inflation has on the test year request for this program.**

5 A. Inflationary impacts are incorporated into this program’s test year funding request through
6 adjustments to material and labor costs. However, inflation alone did not determine the
7 requested funding level. The test year request also reflects any changes in headcount and
8 program accounting. As shown in Exhibit A-120 (JPP-5), lines 23 and 24, column (d), the
9 test year funding for this program is \$267,000 above the rate of inflation. This variance
10 highlights the influence of factors beyond general inflation. The following section provides
11 an explanation of the impact on the test year funding request.

12 **Q. What is the basis for determining the \$5,937,000 projected O&M expenses in the test**
13 **year for this sub-program?**

14 A. The projected expense in this sub-program is primarily driven by labor and expenses.

15 In 2021, this program only included employees from Gas Service and Gas
16 Distribution. During 2022, Gas Transmission and Storage, which encompasses M&R and
17 Pipeline, was added to this sub-program. In September 2023, the Gas Operations Support
18 and Gas Contractor Oversight Teams, formerly part of the Operations Compliance and
19 Controls sub-program, were added to this sub-program. The Distribution program includes
20 the labor, expenses, and chargebacks for these employees. In 2025, the Gas Contractor
21 Oversight expenses moved to the EIRP Training sub-program and the Work Innovation
22 and Transformation team was added to this program. This team is newly formed with
23 responsibility to enhance operational efficiency, workforce safety, and customer value in

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the Company's natural gas delivery business. This includes initiatives to modernize processes, leverage technologies, and optimize workforce practices through digitization.

The historical year costs and projected test year costs and headcounts are summarized in the following table. The test year expense projection for the test year reflects the Company's historical experience of program expense timing. Headcount for this program is expected to increase slightly from 2024 through the test year and is associated with the Work Innovation and Transformation Team.

Table 63

Year (Jan – Dec)	Distribution and Service Headcount	T&S Headcount	Total Headcount	Dollars
2021	151	27	178	\$6,819,841
2022	150	24	174	\$5,345,649
2023	164	15	179	\$5,576,984
2024	160	18	178	\$5,285,312
2026-2027 Test year	165	18	183	\$5,937,000

Dispatch & Scheduling

Q. Please describe the O&M expenses related to the Dispatch & Scheduling sub-program.

A. The Dispatch & Scheduling sub-program includes the labor and expenses for personnel who are responsible for efficiency and consistency in statewide scheduling and assignment of emergent, compliance, and customer requested work.

The Dispatching function operates 24 hours per day, 365 days per year in three locations across the state. The Scheduling and Meter Reading support operates during normal business hours and the associated overtime hours as work volume fluctuates throughout the year.

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1 *Emergent work* consists of odor response investigations, emergent leak repairs, and
2 third-party damage response and repair.

3 *Compliance work* consists of work order coordination, creation, and assignment of
4 gas meter routine exchange program, and planned leak and non-leak maintenance work.

5 *Customer-requested work* consists of meter turn on/off, seal for nonpayment turn
6 on, issue investigations, and meter upgrades.

7 This sub-program is also responsible for assigning meter reading routes to
8 technicians and associated troubleshooting. Additionally, it is also responsible for the gas
9 meter Consecutive Estimate Program, which manages customer accounts (approximately
10 1,000) with three or more consecutive estimates through an escalation process. Escalation
11 includes tracking and reporting of accounts, manual and automated phone calls, postcard
12 and letter mailings, scheduling of appointments, and coordination with other departments
13 and customers to resolve meter access issues. The historical year costs and projected test
14 year costs for this sub-program are shown in Exhibit A-118 (JPP-3), line 7, and
15 summarized by work type in the following table:

Table 64

Dispatch and Scheduling		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Dispatch and Scheduling	\$1,074,744	\$1,161,000
Total Program	\$1,074,744	\$1,161,000

16 **Q. Please describe the impact that Inflation has on the test year request for this program.**

17 A. Inflationary impacts are incorporated into this program's test year funding request through
18 adjustments to material and labor costs. However, inflation alone did not determine the
19 requested funding level. The test year request also reflects changes in the program's
20 headcount or expenses. As shown in Exhibit A-120 (JPP-5), line 25, column (d), the test

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year funding for this program is \$7,963 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the \$1,161,000 for Scheduling and Dispatch expenses in the test year for this sub-program?

A. The projected expense in this sub-program is primarily driven by customer-requested demand, including short cycle demand, such as emergency and service calls in addition to gas meter reading work assignment and Consecutive Estimate Program activities. Response to customer and emergent demand requires appropriate levels of personnel to plan, schedule, and dispatch the associated work. This sub-program includes the labor costs and expenses for these personnel.

In 2021, this financial program was separated from a larger program with responsibility for the identified work activities and long cycle work planning, scheduling, and closeout.

The historical O&M expenses for this sub-program are summarized from 2021 to 2024 in Exhibit A-121 (JPP-6), line 25. The historical year O&M expenses and projected test year O&M expenses for this sub-program are summarized in the referenced exhibit and in the following table. The test year expense projection reflects the Company's historical experience of program expense timing.

Table 65

Dispatch and Scheduling Dollars	
Dollars	
Year	Dollars
2021	\$1,465,488
2022	\$1,371,650
2023	\$1,179,714
2024	\$1,074,744
2026-2027 Test year	\$1,161,000

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EIRP

Q. Please describe the O&M expenses related to the EIRP sub-program.

A. These expenses include training for the Company's gas construction workforce, salaries and expenses for the field supervisors and managers, tools, and facilities maintenance. These expenses ensure that the seasonal workforce is properly staffed, trained, and has the necessary tools and facilities.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-118 (JPP-3), line 8, and summarized by work type in the following table:

Table 66

EIRP O&M		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
EIRP Supervision & Admin Sal/Exp	\$974,098	\$1,090,500
EIRP Tools	\$34,238	\$63,100
EIRP OM&C Expenses (Non-Labor)	\$5,256	\$0
EIRP Facilities	\$182,023	\$353,400
EIRP Labor OM&C Training	\$1,846,780	\$2,933,000
Total Program	\$3,033,396	\$4,440,000

Q. Please describe the impact that Inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's headcount and expenses. As shown in Exhibit A-120 (JPP-5), line 26, column (d), the test year funding for this program is \$1,185,627 above the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

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1 **Q. What is the basis for determining the \$4,440,000 of projected O&M expenses in the**
2 **test year for this sub-program?**

3 A. Approximately 75-80% of the expense in this program is the technical training required to
4 ensure the field employees are fully skilled and qualified to complete the EIRP work. This
5 includes initial training for newly hired employees, as well as more advanced training for
6 higher skilled employees. Along with technical training, expenses in this sub-program
7 include annual refresher training covering standards and policy changes, along with safety
8 procedural changes.

9 The EIRP workforce is one of the largest hiring groups in the Company to meet
10 the demand of the total gas construction activities (including gas asset replacement and
11 relocation programs as well as the Infrastructure Replacement Program). The EIRP
12 workforce continues to experience employees transferring to other operating departments
13 within the Company.

14 Along with this employee movement, hiring and training are planned to allow for
15 appropriate staffing as the Company implements the NGDP. Based on projections, this will
16 result in increased spending compared to 2024. This increase is due to additional training
17 needed for the complexity of the EIRP work plan, and for training new hires to maintain
18 the workforce. As the NGDP progresses, this level of staffing and training is expected to
19 moderate. This is the main driver of the cost increase in this program relative to 2024.

20 In addition to training field personnel, this program also equips those employees
21 with necessary tools and facilities. Facility expenses largely consist of the nine
22 Headquarters sites for the group (located in Saginaw, Lansing, Livonia, Macomb, Flint,
23 Midland, Jackson, Kalamazoo, and Royal Oak). These costs are driven by the planned work

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1 activities that are based on the amount of vintage pipe to be replaced. The facility expenses
2 also include the O&M portion of the total lease payment for the facilities. Lease payments
3 are discussed in the testimony of Company witnesses Pascarello and Quentin A. Guinn.
4 This program expense also experiences inflationary effects as nearly all sites are leased or
5 rented.

6 The Gas Contractor Oversight Team has moved to this program from the
7 Supervision and Administration program. This group is focused on enhancing the
8 Company's compliance to regulatory requirements and ensuring proper controls. The
9 Team's expenses include contractor oversight and management for construction
10 contractors performing work on behalf of the Company on the gas system. This also
11 includes expenses for technology and standardization to achieve remote inspection,
12 governance around contractor oversight, and sewer/cross bore program. Leadership
13 oversight of the approximately 563 field employees, including contractors, in the EIRP
14 workforce is necessary to ensure regulatory compliance, provide instruction for field
15 employee training, and confirm OQs are in place. The projected test year costs for this
16 function are consistent with historical expenses.

17 The historical O&M expenses for this sub-program are summarized from 2016 to
18 2024 in Exhibit A-121 (JPP-6), line 26. The historical year O&M expenses and projected
19 test year O&M expenses for this sub-program are summarized in the referenced exhibit
20 and in the following table. The test year expense projection reflects the Company's
21 historical experience of program expense timing.

Table 67

EIRP O&M Dollars	
Year (Jan-Dec)	Dollars
2021	\$3,681,670
2022	\$4,370,398
2023	\$3,348,137
2024	\$3,033,000
2026-2027 Test year	\$4,440,000

Work Management and Customer Delivery

Q. Please describe the expenses related to the Work Management and Customer Delivery O&M Program shown on Exhibit A-119 (JPP-4), line 1.

A. The Gas Operations Performance (“Ops Performance”) Department represented a department within the Consumers Energy Operations organization that began in 2017. The Ops Performance team included experts in work planning, project management, scheduling, administration, data analytics, data science, Lean Operating Systems, process engineering, industrial engineering, standards management, and technology. This department consisted of the following functions focused on streamlining processes to achieve first-time quality for customers:

- (1) Work Management Excellence,
- (2) Process, Analytics & Technology, and
- (3) Industrial Engineering.

In 2024, Industrial Engineering and portions of the Process, Analytics & Technology departments moved to other organizations within the Company. The Work Management Excellence department remained and was renamed Work Management and Customer Delivery. Their function is described below.

- Work Management and Customer Delivery includes functions for Distribution Scheduling, Close-Out, Statewide Admin, and Customer Energy Management (“CEM”) for long-cycle work. Long-cycle work includes new business

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requests, gas facility relocates, planned maintenance, alterations, demolitions, gas leak repair, and capacity/augmentation.

– Scheduling ensures field crews have enough work, ready-work, and the right work and resources to complete the work plan.

– The Close Out and Admin functions ensure technical documentation is accurate and complete, and that the costs of the work settle appropriately to the work orders and comply with Sarbanes-Oxley rules for capital and O&M work.

– In addition to Scheduling, Close-Out, and Admin functions, the Work Management and Customer Delivery Team assumed responsibility, costs, and headcount of the CEM team from Gas Engineering in 2023 and retained Operations Process and Technology functions.

– The CEM team is focused on meeting customer needs by providing a single point of contact for customer-requested main, service, and meter installations and alterations. CEM is responsible for ensuring all new customer service requests and customer-requested alterations to the Company's distribution system are coordinated from initiation through completion to meet customer expectations.

– Within CEM, there are four departmental areas of focus.

- The Zonal Project Coordination team is responsible for customer interaction and project coordination for all new business gas main extensions in their respective geographical region.

- The Gas Customer Attachment Program ("CAP") team coordinates the completion of projects which expand the natural gas system into areas that are just adjacent to the current system limits, where more concentrated pockets of potential customers are located, and administration of CAP project tracking and CAP payments. Even with the conclusion of proactive CAP main installation in 2019, this team remains intact to facilitate the tracking of projects and administer the CAP payments associated with the previously installed mains and services per the tariff requirements.

- The CEM team is also responsible for "Express Design" services for all residential service requests within subdivisions, workload coordination and balancing, as well as other design support related tasks, including billing, permitting, and inspection. This organizational re-alignment has aligned like work with like work and provides efficiencies in the work management process.

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- The Operations Process and Technology teams provide support for process improvement, standardization, and systems used by Gas Operations, for functions such as project management, scheduling, work management, field order management, field call-out, and meter reading. These resources provide subject-matter expertise, performance coaching, documentation, change management, and technology analysis for changes across the work management process to improve the customer experience.

In 2025, the Planning group and associated functions moved from this department and is discussed in Company witness Pascarello's testimony.

The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-119 (JPP-4), line 1, and summarized by work type in the following table:

Table 68

Work Management and Customer Delivery		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Work Management and Customer Delivery	\$2,279,000	\$1,737,000
Total Program	\$2,279,000	\$1,737,000

Q. Please describe the impact that inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in headcount and expenses. As shown in Exhibit A-120 (JPP-5), line 27, column (d), the test year funding for this program is \$707,791 below the rate of inflation. This variance highlights the influence of factors beyond general inflation. The following section provides an explanation of the impact on the test year funding request.

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1 **Q. What is the basis for determining the projected \$1,737,000 O&M expenses in the test**
2 **year for this program?**

3 A. The projected expense is primarily the salary and expenses for this team, and other
4 associated costs (such as vendor costs) in support of the Company achieving the objectives
5 previously discussed. To ensure affordability, the Work Management and Customer
6 Delivery program estimates stable costs through the test year, absorbing increases for
7 inflation.

8 The historical O&M expenses for this sub-program are summarized from 2016 to
9 2024 in Exhibit A-121 (JPP-6), line 28. The historical year O&M expenses and projected
10 test year O&M expenses for this sub-program are summarized in the referenced exhibit
11 and in the following table:

Table 69

Work Management and Customer Delivery O&M Headcount & Dollars		
Year (Jan-Dec)	Headcount	Dollars
2021	285	\$3,211,000
2022	244	\$4,955,000
2023	382	\$3,005,111
2024	309	\$2,279,000
2026-2027 Test year	310	\$1,737,000

12 **Gas Operations Management**

13 **Q. Please describe the expenses related to the Gas Operations Management O&M**
14 **Program shown on Exhibit A-119 (JPP-4), line 2.**

15 A. The Gas Operations Management Program includes salaries and expenses for Gas
16 Operations executive level management, Gas Operations support for supply chain and
17 material handling, real estate services that support Gas Operations land ROW, leasing, and
18 Company buildings, and environmental support for contaminated soil testing and clean-up,
19 asbestos assessments and removal, and environmental spills testing and clean-up.

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The historical year costs and projected test year costs for this sub-program are shown in Exhibit A-119 (JPP-4), line 2, and summarized by work type in the following table:

Table 70

Gas Operations Management O&M		
Projection Breakdown by Activity Type		
Work Type	2024 Actual	2026-2027 Test year
Gas Operations Management	\$2,550,070	\$1,397,000
Total Program	\$2,550,070	\$1,397,000

Q. Please describe the impact that inflation has on the test year request for this program.

A. Inflationary impacts are incorporated into this program's test year funding request through adjustments to material and labor costs. However, inflation alone did not determine the requested funding level. The test year request also reflects changes in the program's expenses. As shown in Exhibit A-120 (JPP-5), line 28, column (d), the test year funding for this program is \$1,338,839 below the rate of inflation. This variance highlights the influence of factors beyond general inflation. The variance is due mainly to a \$927,000 inventory adjustment taken in 2024. The following section provides an explanation of the impact on the test year funding request.

Q. What is the basis for determining the projected \$1,397,000 O&M expenses in the test year for this program?

A. The 2024 Actual expense for the Gas Operations Management Program was \$2,550,070. The historical actual amount of program expense is detailed by labor and various non-labor expense components in Exhibit A-119 (JPP-4), line 2, column (b).

The Company's projected test year expense is \$1,397,000, as shown on Exhibit A-119 (JPP-4), line 2, column (c).

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The historical O&M expenses for this sub-program are summarized from 2016 to 2024 in Exhibit A-121 (JPP-6), line 30. The historical year O&M expenses and projected test year O&M expenses for this sub-program are summarized in the referenced exhibit and in the following table:

Table 71

Gas Operations Management O&M Dollars	
Year	Dollars
2021	\$1,580,115
2022	\$2,094,000
2023	\$834,000
2024	\$2,548,071
2026-2027 Test year	\$1,397,000

IT PROJECTS

Q. Is the Company planning IT projects that support the engineering, asset planning, design, construction, and maintenance of a safe, reliable, and affordable natural gas distribution system for its customers?

A. Yes. Company witness Stacy H. Baker includes in her direct testimony and exhibits a number of technology projects that are critically important in supporting these gas functions within the Company. The expenditures for these projects are contained within the exhibits sponsored by Ms. Baker. I am not sponsoring IT Projects in my testimony. However, Company witness Joyce will be sponsoring a Compression Air Permit and Compliance Digitization project in his testimony that does require O&M funding for Gas Operations.

Q. Does this complete your direct testimony?

A. Yes. The Gas Operations Division is committed to meeting the needs of Consumers Energy's 1.8 million natural gas customers by consistently delivering services safely and efficiently. The Company's proactive approaches to Gas Operations, Maintenance and

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1 Metering, Field Operations, Operations Performance, and Operations Management, ensure
2 that the Company adequately prepares for the future circumstances required to continue
3 serving the needs of customers and the communities in which they live.

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
JAMES P. PNACEK, JR.
ON BEHALF OF
CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual & Projected O&M Expenses

Operations, Maintenance & Metering, Field Services, Other Operations
(\$000)

Case No.: U-21981

Exhibit No.: A-116 (JPP-1)

Page: 1 of 1

Witness: JPPnacek

Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
1	Operations, Maintenance & Metering	109,274	146,457
	Labor	67,600	82,125
	Material	6,973	9,085
	Contractor	7,732	9,675
	Non-Labor Overheads	8,538	10,761
	Non-Labor Other	18,432	34,811
2	Field Operations Services	16,008	22,449
	Labor	11,587	14,401
	Material	13	15
	Contractor	203	232
	Non-Labor Overheads	0	0
	Non-Labor Other	4,205	7,800
3	Work Management and Customer Delivery	2,279	1,737
	Labor	1,868	1,424
	Material	0	0
	Contractor	0	0
	Non-Labor Overheads	0	0
	Non-Labor Other	411	313
4	Operations Management	2,550	1,397
	Labor	979	537
	Material	928	508
	Contractor	2	1
	Non-Labor Overheads	0	0
	Non-Labor Other	642	352
5	Total O&M Expenses	\$ 130,110	\$ 172,040
	Labor	82,034	98,487
	Material	7,913	9,608
	Contractor	7,936	9,908
	Non-Labor Overheads	8,538	10,761
	Non-Labor Other	23,689	43,275

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Operations, Maintenance & Metering
(\$000)

Case No.: U-21981
Exhibit No.: A-117 (JPP-2)
Page: 1 of 4
Witness: JPPnacek
Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
1	Distribution Cathodic Protection	1,988	2,083
69%	Labor	1,368	1,434
0%	Material	3	3
6%	Contractor	120	125
10%	Non-Labor Overheads	197	207
15%	Non-Labor Other	300	315
2	Operations & Maint Pipeline - Distribution	11,542	13,797
62%	Labor	7,120	8,511
10%	Material	1,166	1,394
20%	Contractor	2,339	2,796
11%	Non-Labor Overheads	1,256	1,502
-3%	Non-Labor Other	(339)	(406)
3	Operations & Maint Pipeline - Transmission	3,511	4,042
56%	Labor	1,957	2,253
2%	Material	80	92
11%	Contractor	388	446
15%	Non-Labor Overheads	515	593
16%	Non-Labor Other	571	657
4	Operations & Maint Regulation-Distribution	8,154	8,885
75%	Labor	6,120	6,669
5%	Material	415	453
3%	Contractor	272	296
13%	Non-Labor Overheads	1,077	1,174
3%	Non-Labor Other	269	293
5	Operations & Maint-M&R-Transmission	3,218	3,388
53%	Labor	1,703	1,793
11%	Material	368	387
7%	Contractor	233	245
16%	Non-Labor Overheads	503	530
13%	Non-Labor Other	411	432
6	Odor Response	6,155	6,350
91%	Labor	5,574	5,751
0%	Material	3	3
0%	Contractor	3	3
0%	Non-Labor Overheads	21	22
9%	Non-Labor Other	553	571

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Operations, Maintenance & Metering
(\$000)

Case No.: U-21981
Exhibit No.: A-117 (JPP-2)
Page: 2 of 4
Witness: JPPnacek
Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
7	Leak Repair & Survey	19,867	33,840
48%	Labor	9,488	16,162
2%	Material	456	776
5%	Contractor	1,024	1,744
10%	Non-Labor Overheads	1,891	3,221
35%	Non-Labor Other	7,008	11,937
8	Damage Repair	1,384	1,499
173%	Labor	2,395	2,594
6%	Material	87	94
13%	Contractor	176	191
36%	Non-Labor Overheads	501	543
-128%	Non-Labor Other	(1,775)	(1,922)
9	Staking	15,418	26,804
7%	Labor	1,063	1,848
0%	Material	2	3
1%	Contractor	113	196
1%	Non-Labor Overheads	222	385
91%	Non-Labor Other	14,019	24,372
10	Customer Requested Services	17,258	18,179
91%	Labor	15,626	16,460
1%	Material	136	144
0%	Contractor	21	22
9%	Non-Labor Overheads	1,639	1,726
-1%	Non-Labor Other	(165)	(174)
11	Meter First Set Credits	(8,028)	(8,029)
0%	Labor	-	-
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
100%	Non-Labor Other	(8,028)	(8,029)
12	ROW Clearing	1,564	2,042
22%	Labor	348	454
0%	Material	2	3
0%	Contractor	4	5
3%	Non-Labor Overheads	53	69
74%	Non-Labor Other	1,158	1,511

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Operations, Maintenance & Metering
(\$000)

Case No.: U-21981
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Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
13	Meter Reading	2,518	2,690
79%	Labor	1,996	2,132
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	2	2
21%	Non-Labor Other	520	556
14	Meter Tech & Mgmt Sys Support	1,994	3,853
50%	Labor	996	1,924
44%	Material	885	1,710
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
6%	Non-Labor Other	113	219
15	Smart Energy MTC - Gas	558	564
0%	Labor	-	-
0%	Material	-	-
22%	Contractor	125	126
0%	Non-Labor Overheads	-	-
78%	Non-Labor Other	433	438
16	Gas Storage (note: excludes facilities chargebacks)	4,967	5,934
48%	Labor	2,375	2,838
7%	Material	371	444
8%	Contractor	383	457
12%	Non-Labor Overheads	598	715
25%	Non-Labor Other	1,239	1,481
17	Replace Vintage Services	66	73
55%	Labor	37	40
0%	Material	0	0
24%	Contractor	16	18
18%	Non-Labor Overheads	12	13
2%	Non-Labor Other	1	1
18	Compression	17,142	20,463
55%	Labor	9,434	11,262
17%	Material	2,998	3,579
15%	Contractor	2,517	3,005
0%	Non-Labor Overheads	50	60
13%	Non-Labor Other	2,143	2,558

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Operations, Maintenance & Metering
(\$000)

Case No.: U-21981
Exhibit No.: A-117 (JPP-2)
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Date: December 2025

	(a)	(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
19	Total Operations, Maintenance & Metering	109,274	146,457
	Labor	67,600	82,125
	Material	6,973	9,085
	Contractor	7,732	9,675
	Non-Labor Overheads	8,538	10,761
	Non-Labor Other	18,432	34,811

*** 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
Summary of Actual & Projected O&M Expenses
Field Operations Services
(\$000)

Case No.: U-21981
Exhibit No.: A-118 (JPP-3)
Page: 1 of 1
Witness: JPPnacek
Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
1	Training	3,640	4,349
91%	Labor	3,318	3,965
0%	Material	8	9
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
9%	Non-Labor Other	314	375
2	Tools	1,840	1,558
37%	Labor	679	575
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
63%	Non-Labor Other	1,160	983
3	Field Operations Expenses	1,349	5,004
0%	Labor	(2)	(8)
0%	Material	0	1
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
100%	Non-Labor Other	1,351	5,010
4	Indirect Labor/Labor Variation	(214)	-
219%	Labor	(470)	-
0%	Material	1	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
-119%	Non-Labor Other	255	-
5	Supervision / Admin-Staff - Distribution & Service	4,722	5,400
85%	Labor	4,034	4,613
0%	Material	-	-
4%	Contractor	203	232
0%	Non-Labor Overheads	-	-
10%	Non-Labor Other	485	555
6	Supervision / Admin-Staff - Transmission & Storage	563	537
81%	Labor	457	436
0%	Material	1	1
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
19%	Non-Labor Other	105	100
7	Gas Dispatch & Scheduling	1,075	1,161
99%	Labor	1,059	1,144
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
1%	Non-Labor Other	16	17
8	EIRP O&M	3,033	4,440
83%	Labor	2,512	3,677
0%	Material	2	3
0%	Contractor	0	1
0%	Non-Labor Overheads	-	-
17%	Non-Labor Other	519	760
9	Total Field Operations Services	16,008	22,449
	Labor	11,587	14,401
	Material	13	15
	Contractor	203	232
	Non-Labor Overheads	-	-
	Non-Labor Other	4,205	7,800

*** 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
Summary of Actual & Projected O&M Expenses
Other Operations
(\$000)

Case No.: U-21981
Exhibit No.: A-119 (JPP-4)
Page: 1 of 1
Witness: JPPnacek
Date: December 2025

(a)		(b)	(c)
Line No.	Description	2024 Actuals	Projected 12-Mos Ending Oct 31, 2027
1	Work Management and Customer Delivery	2,279	1,737
82%	Labor	1,868	1,424
0%	Material	-	-
0%	Contractor	-	-
0%	Non-Labor Overheads	-	-
18%	Non-Labor Other	411	313
2	Operations Management	2,550	1,397
38%	Labor	979	537
36%	Material	928	508
0%	Contractor	2	1
0%	Non-Labor Overheads	-	-
25%	Non-Labor Other	642	352
3	Total Other Operations	4,829	3,134
	Labor	2,847	1,960
	Material	928	508
	Contractor	2	1
	Non-Labor Overheads	-	-
	Non-Labor Other	1,053	665

*** 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

Gas Operations O&M - Operations, Maintenance & Metering, Field Operations Services, and Other Operations
(\$000)

Case No.: U-21981

Exhibit No.: A-120 (JPP-5)

Page: 1 of 1

Witness: JPPnacek

Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)
Line No.	Description	Actual 12 Mos Ended 12/31/2024	Inflation Impacts on Historical Costs Test Year	Scope/ Cost Increases Net of Productivity Gains	Projected O&M 12 Mos Ending Oct 31, 2027	Comment
			(b) * Compounded Inflation Rate	(b) + (c) + (d)		
1	Distribution Cathodic Protection	\$ 1,988	\$ 145	\$ (49)	\$ 2,083	Exhibit JPP-2
2	Operations & Maint Pipeline - Distribution	\$ 11,542	\$ 841	\$ 1,414	\$ 13,797	Exhibit JPP-2
3	Operations & Maint Pipeline - Transmission	\$ 3,511	\$ 256	\$ 276	\$ 4,042	Exhibit JPP-2
4	Operations & Maint Regulation-Distribution	\$ 8,154	\$ 594	\$ 137	\$ 8,885	Exhibit JPP-2
5	Operations & Maint-M&R-Transmission	\$ 3,218	\$ 234	\$ (64)	\$ 3,388	Exhibit JPP-2
6	Odor Response	\$ 6,155	\$ 448	\$ (253)	\$ 6,350	Exhibit JPP-2
7	Leak Repair & Survey	\$ 19,867	\$ 1,447	\$ 12,526	\$ 33,840	Exhibit JPP-2
8	Damage Repair	\$ 1,384	\$ 101	\$ 14	\$ 1,499	Exhibit JPP-2
9	Staking	\$ 15,418	\$ 1,123	\$ 10,263	\$ 26,804	Exhibit JPP-2
10	Customer Requested Services	\$ 17,258	\$ 1,257	\$ (336)	\$ 18,179	Exhibit JPP-2
11	Meter First Set Credits	\$ (8,028)	\$ (585)	\$ 584	\$ (8,029)	Exhibit JPP-2
12	ROW Clearing	\$ 1,564	\$ 114	\$ 364	\$ 2,042	Exhibit JPP-2
13	Meter Reading	\$ 2,518	\$ 183	\$ (11)	\$ 2,690	Exhibit JPP-2
14	Meter Tech & Mgmt Sys Support	\$ 1,994	\$ 145	\$ 1,714	\$ 3,853	Exhibit JPP-2
15	Smart Energy MTC - Gas	\$ 558	\$ 41	\$ (34)	\$ 564	Exhibit JPP-2
16	Gas Storage (note: excludes facilities chargebacks)	\$ 4,967	\$ 362	\$ 605	\$ 5,934	Exhibit JPP-2
17	Replace Vintage Services	\$ 66	\$ 5	\$ 2	\$ 73	Exhibit JPP-2
18	Compression	\$ 17,142	\$ 1,249	\$ 2,072	\$ 20,463	Exhibit JPP-2
19	Training	\$ 3,640	\$ 265	\$ 444	\$ 4,349	Exhibit JPP-3
20	Tools	\$ 1,840	\$ 134	\$ (416)	\$ 1,558	Exhibit JPP-3
21	Field Operations Expenses	\$ 1,349	\$ 98	\$ 3,557	\$ 5,004	Exhibit JPP-3
22	Indirect Labor/Labor Variation	\$ (214)	\$ (16)	\$ 230	\$ -	Exhibit JPP-3
23	Supervision / Admin-Staff - Distribution & Service	\$ 4,722	\$ 344	\$ 334	\$ 5,400	Exhibit JPP-3
24	Supervision / Admin-Staff - Transmission & Storage	\$ 563	\$ 41	\$ (67)	\$ 537	Exhibit JPP-3
25	Gas Dispatch & Scheduling	\$ 1,075	\$ 78	\$ 8	\$ 1,161	Exhibit JPP-3
26	EIRP O&M	\$ 3,033	\$ 221	\$ 1,186	\$ 4,440	Exhibit JPP-3
27	Work Management and Customer Delivery	\$ 2,279	\$ 166	\$ (708)	\$ 1,737	Exhibit JPP-4
28	Operations Management	\$ 2,550	\$ 186	\$ (1,339)	\$ 1,397	Exhibit JPP-4
	Total Operations, Maintenance & Metering	\$ 109,274	\$ 7,960	\$ 29,223	\$ 146,457	Exhibit JPP-2
	Total Field Operations Services	\$ 16,008	\$ 1,166	\$ 5,275	\$ 22,449	Exhibit JPP-3
	Total Other Operations	\$ 4,829	\$ 352	\$ (2,047)	\$ 3,134	Exhibit JPP-4
TOTAL		\$ 130,110	\$ 9,478	\$ 32,451	\$ 172,040	

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%

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Line No.	Description	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actuals	2025 Projected	2026 Projected	2026-2027 Test Year	Notes
Operations, Maintenance & Metering														
1	Distribution Cathodic Protection													Table 6
	Program Dollars	\$ 2,378	\$ 2,783	\$ 3,763	\$ 2,478	\$ 3,190	\$ 3,140	\$ 2,678	\$ 2,554	\$ 1,988	\$ 1,882	\$ 2,418	\$ 2,083	
	Units/Orders	31,705	40,664	44,794	52,924	43,146	52,355	35,514	40,443	50,121	47,700	47,933	47,933	
	Hours	24,616	19,127	20,222	15,029	15,720	13,353	13,451	11,056	11,393	9,000	10,145	10,145	
2	Operations & Maint Pipeline - Distribution													Table 9
	Program Dollars	\$ 5,788	\$ 6,879	\$ 8,241	\$ 7,999	\$ 7,850	\$ 11,721	\$ 10,531	\$ 8,925	\$ 11,542	\$ 12,112	\$ 11,282	\$ 13,797	
	Units/Orders	5,129	9,415	10,023	10,722	9,064	13,755	9,983	9,370	19,414	18,200	22,700	22,700	
	Hours	37,298	40,679	43,952	40,430	43,157	59,207	47,774	40,741	50,817	58,400	66,100	66,100	
3	Operations & Maint Pipeline - Transmission													Table 13
	Program Dollars	\$ 2,675	\$ 2,131	\$ 2,670	\$ 3,122	\$ 3,013	\$ 3,199	\$ 4,222	\$ 3,831	\$ 3,511	\$ 3,386	\$ 3,437	\$ 4,042	
	Hours	24,033	21,865	23,556	26,639	23,634	20,676	21,783	17,879	18,710	16,900	16,200	19,100	
4	Operations & Maint Regulation-Distribution													Table 15
	Program Dollars	\$ 4,609	\$ 4,331	\$ 6,169	\$ 5,910	\$ 6,364	\$ 7,663	\$ 9,127	\$ 8,436	\$ 8,154	\$ 8,673	\$ 7,616	\$ 8,885	
	Units/Orders	5,129	5,009	6,240	7,672	8,246	10,701	10,701	10,641	11,690	11,500	11,800	11,800	
	Hours	41,366	38,058	40,943	40,350	42,432	43,728	52,315	47,443	46,070	47,800	47,000	47,000	
5	Operations & Maint-M&R-Transmission													Table 18
	Program Dollars	\$ 2,434	\$ 3,461	\$ 3,074	\$ 3,005	\$ 2,898	\$ 3,189	\$ 4,339	\$ 3,497	\$ 3,218	\$ 3,455	\$ 3,120	\$ 3,388	
	Hours	18,233	20,497	20,497	20,722	18,540	17,795	17,197	20,394	15,825	16,320	17,140	16,300	
6	Odor Response													Table 21
	Program Dollars	\$ 6,340	\$ 4,522	\$ 5,265	\$ 6,147	\$ 5,506	\$ 6,159	\$ 6,445	\$ 6,309	\$ 6,155	\$ 6,041	\$ 5,678	\$ 6,350	
	Units/Orders	78,719	58,892	54,743	56,755	51,500	48,248	44,729	42,023	44,233	41,600	41,100	41,100	
	Hours	51,429	34,012	35,587	40,061	36,442	36,057	34,770	32,402	32,538	29,700	29,300	29,300	
7	Leak Repair & Survey													Table 23
	Program Dollars	\$ 13,511	\$ 10,909	\$ 16,088	\$ 20,233	\$ 19,803	\$ 21,787	\$ 18,942	\$ 14,866	\$ 19,867	\$ 20,103	\$ 15,350	\$ 33,840	
	Survey Units	462,334	556,249	457,641	480,394	415,305	491,858	352,437	368,287	512,729	407,168	395,994	1,150,226	
	Classification Units	18,734	13,079	12,650	13,374	12,923	7,438	4,695	3,981	5,871	5,726	5,109	13,645	
	Repair Units	15,814	13,815	18,556	21,970	23,649	18,612	16,537	14,132	28,552	25,908	17,831	45,189	
	Jobsite Hours	96,196	67,091	83,858	98,567	110,011	97,692	83,987	60,650	87,136	67,160	56,600	146,853	
8	Damage Repair													Table 28
	Program Dollars	\$ 1,209	\$ 624	\$ 683	\$ 1,102	\$ 2,550	\$ 1,380	\$ 1,575	\$ 1,415	\$ 1,384	\$ 2,345	\$ 1,222	\$ 1,499	
	Hours	17,486	17,497	18,685	18,471	23,753	19,644	23,854	18,422	20,117	20,500	20,900	20,900	
9	Staking													Table 30 and 31 and 33
	Program Dollars	\$ 5,145	\$ 5,829	\$ 6,754	\$ 8,200	\$ 7,306	\$ 10,983	\$ 10,309	\$ 12,408	\$ 15,418	\$ 21,086	\$ 24,412	\$ 26,804	
	Internal O&M Staking - Units	6,914	2,771	2,988	10,390	2,366	11,168	2,298	3,529	4,034	3,750	4,080	4,080	
	Internal O&M - Hours	12,771	7,262	7,281	13,739	10,933	14,877	8,962	9,033	9,274	10,004	11,624	12,649	
	Contractors Staking - Units	370,190	385,667	342,633	396,304	375,604	415,561	407,551	412,008	448,354	471,839	504,868	540,207	
10	Customer Requested Services													Table 37
	Program Dollars	\$ 14,468	\$ 15,411	\$ 15,885	\$ 16,711	\$ 12,114	\$ 15,520	\$ 19,198	\$ 18,877	\$ 17,258	\$ 16,437	\$ 16,258	\$ 18,179	
	Units/Orders	216,935	229,333	211,300	186,242	134,870	150,212	160,647	153,649	167,040	159,780	161,744	161,744	
	Hours	105,474	110,080	106,027	102,968	73,132	82,741	92,868	87,195	82,802	78,961	79,106	79,106	
11	Meter First Set Credits													Table 38
	Program Dollars	\$ (4,918)	\$ (6,783)	\$ (6,637)	\$ (7,064)	\$ (6,810)	\$ (7,063)	\$ (5,451)	\$ (6,942)	\$ (8,028)	\$ (8,690)	\$ (8,703)	\$ (8,029)	
	Units Purchased	73,707	77,380	65,471	61,570	58,997	49,759	20,902	35,200	43,251	50,762	56,445	57,445	
	Units Retired	53,518	55,846	50,654	43,207	42,471	38,230	39,631	48,391	46,946	45,468	71,400	71,400	
12	ROW Clearing													Table 40
	Program Dollars	\$ 86	\$ 536	\$ 1,095	\$ 359	\$ 1,148	\$ 1,845	\$ 1,827	\$ 1,767	\$ 1,564	\$ 1,649	\$ 1,917	\$ 2,042	
	Miles Cleared	n/a	n/a	n/a	n/a	413	423	304	424	514	400	400	400	
13	Meter Reading													Table 44
	Program Dollars	\$ 13,582	\$ 12,328	\$ 10,499	\$ 7,633	\$ 4,097	\$ 2,831	\$ 2,592	\$ 2,607	\$ 2,518	\$ 2,531	\$ 2,529	\$ 2,690	
	Average Gas Staff			112	67	31	23	22	24	23	23	23	23	
14	Meter Tech & Mgmt Sys Support													Table 46
	Program Dollars	\$ 1,266	\$ 1,283	\$ 1,349	\$ 1,312	\$ 1,085	\$ 1,269	\$ 1,427	\$ 1,532	\$ 1,994	\$ 3,249	\$ 3,536	\$ 3,853	
	Labor Dollars	\$ 1,199	\$ 1,219	\$ 1,266	\$ 1,240	\$ 1,040	\$ 1,056	\$ 1,106	\$ 0,947	\$ 0,993	\$ 0,993	\$ 1,175	\$ 1,214	
	Other Dollars	\$ 0,067	\$ 0,065	\$ 0,083	\$ 0,085	\$ 0,045	\$ 0,213	\$ 0,320	\$ 0,585	\$ 1,001	\$ 2,256	\$ 2,361	\$ 2,399	
15	Smart Energy MTC - Gas													Table 48
	Program Dollars	\$ -	\$ 847	\$ 599	\$ 606	\$ 543	\$ 566	\$ 542	\$ 544	\$ 558	\$ 560	\$ 554	\$ 564	
16	Gas Storage (note: excludes facilities chargebacks)													Table 51
	Program Dollars	\$ 7,139	\$ 6,118	\$ 6,412	\$ 6,265	\$ 5,821	\$ 5,860	\$ 6,338	\$ 5,739	\$ 4,967	\$ 5,176	\$ 5,085	\$ 5,934	
17	Replace Vintage Services													Table 53
	Program Dollars	\$ -	\$ 1	\$ 103	\$ 90	\$ 84	\$ 298	\$ 98	\$ 14	\$ 66	\$ 70	\$ 72	\$ 73	
	VSR Planned Units	NA	6,307	9,381	5,571	5,456	5,056	2,176	1,228	2,564	4,239	5,913	7,683	
	Return Rate	NA	NA	NA	NA	NA	1.25%	1.25%	1.38%	1.06%	1.30%	1.30%	1.30%	
18	Compression													Table 56
	Program Dollars	\$ -	\$ -	\$ -	\$ 25,388	\$ 17,948	\$ 25,456	\$ 23,830	\$ 17,880	\$ 17,142	\$ 17,930	\$ 17,600	\$ 20,463	
19	Training													Table 58
	Program Dollars	\$ 5,142	\$ 5,719	\$ 6,787	\$ 6,146	\$ 4,698	\$ 6,247	\$ 6,206	\$ 4,736	\$ 3,640	\$ 3,670	\$ 3,929	\$ 4,349	
	Hours	77,351	74,539	100,790	83,324	50,033	85,722	83,518	73,753	50,822	50,822	55,357	59,477	

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Line No.	Description	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actuals	2025 Projected	2026 Projected	2026-2027 Test Year	Notes
20	Tools													Table 60
	Program Dollars	\$ 1,806	\$ 1,939	\$ 2,137	\$ 1,703	\$ 1,786	\$ 1,691	\$ 3,066	\$ 1,828	\$ 1,840	\$ 1,496	\$ 1,344	\$ 1,558	
21	Field Operations Expenses													Table 62
	Program Dollars	\$ 4,071	\$ 4,039	\$ 3,223	\$ 3,134	\$ 2,964	\$ 3,709	\$ 3,900	\$ 3,463	\$ 1,349	\$ 3,484	\$ 2,953	\$ 5,004	
22	Indirect Labor/Labor Variation													No table in testimony
	Program Dollars	\$ 1,145	\$ 231	\$ 756	\$ (399)	\$ 569	\$ 2,620	\$ 1,386	\$ (1,100)	\$ (214)	-	-	-	
23	Supervision / Admin-Staff - Distribution & Service													Table 63
	Program Dollars	\$ 8,735	\$ 6,141	\$ 5,894	\$ 5,895	\$ 4,940	\$ 4,840	\$ 4,775	\$ 4,624	\$ 4,722	\$ 4,902	\$ 4,453	\$ 5,400	
24	Supervision / Admin-Staff - Transmission & Storage													Table 63
	Program Dollars						\$ 1,979	\$ 571	\$ 953	\$ 563	\$ 406	\$ 482	\$ 537	
25	Gas Dispatch & Scheduling													Table 65
	Program Dollars						\$ 1,465	\$ 1,372	\$ 1,180	\$ 1,075	\$ 1,097	\$ 1,018	\$ 1,161	
26	ERP O&M													Table 67
	Program Dollars	\$ 2,309	\$ 2,416	\$ 1,996	\$ 2,496	\$ 5,463	\$ 3,682	\$ 4,370	\$ 3,348	\$ 3,042	\$ 2,454	\$ 4,059	\$ 4,440	
27	Compliance & Controls													No table in testimony
	Program Dollars				\$ 818	\$ 1,688	\$ 2,177	\$ 2,819	\$ 2,053					
28	Work Management and Customer Delivery													Table 69
	Program Dollars	\$ 772	\$ 859	\$ 1,118	\$ 1,141	\$ 1,005	\$ 3,211	\$ 4,955	\$ 3,005	\$ 2,279	\$ 2,095	\$ 1,520	\$ 1,737	
	Headcount						285	244	382	309	298	298	310	
29	Planning and Scheduling													No table in testimony
	Program Dollars	\$ 4,097	\$ 3,293	\$ 2,974	\$ 2,873	\$ 2,520								
30	Operations Management													Table 71
	Program Dollars	\$ 2,195	\$ 922	\$ 965	\$ 1,213	\$ 1,943	\$ 1,580	\$ 2,094	\$ 1,250	\$ 2,548	\$ 1,365	\$ 1,319	\$ 1,397	

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

HEATHER M. PRENTICE

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

HEATHER M. PRENTICE
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1 **Q. Please state your name and business address.**

2 A. My name is Heather M. Prentice, and my business address is 1945 West Parnall Road,
3 Jackson, Michigan 49201.

4 **Q. By whom are you employed?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
6 as the Director of Environmental Compliance, Risk Management & Governance in the
7 Environmental Quality and Sustainability Department.

8 **Q. How long have you been employed by Consumers Energy?**

9 A. I have been employed by Consumers Energy since 2008.

10 **Q. Please describe your educational background and work experience.**

11 A. I graduated from Ohio Northern University in 1999 with a Bachelor of Science degree in
12 Civil Engineering with an Environmental Option. I am a Registered Professional Engineer
13 in the states of Michigan and Ohio. My environmental investigation and remediation
14 work experience spans 25 years and includes a variety of technical and managerial
15 responsibilities.

16 After graduating in 1999, I started working for Water Resources & Coastal
17 Engineering, a consulting firm based in Solon, Ohio. As a project engineer, my
18 responsibilities included modification of the facilities planning reports for the City of
19 Cleveland’s four major water treatment plants per review comments, analysis of pump
20 performance for various service levels (pressure zones), and estimation of the construction
21 costs for various projects recommended in the plan. I then worked at Camp, Dresser &
22 McKee in its Cleveland, Ohio office. As project engineer, I managed tasks from multiple
23 projects including odor sampling, soil removal, water treatment, and regional storm-water

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1 drainage study projects. Project tasks included developing contract drawings and
2 specifications for the removal of soil stockpiles, interacting with regulatory agencies,
3 preparing construction cost estimates for water treatment equipment, developing public
4 education materials, and hydrologic and hydraulic modeling of interjurisdictional
5 watersheds.

6 In October 2001, I accepted a position with NTH Consultants, Ltd. (“NTH”) in
7 Lansing, Michigan. Throughout my career at NTH, I assumed increasing levels of
8 responsibility from staff engineer to assistant project engineer, and to project engineer on
9 a variety of environmental and civil projects. Projects included due diligence assessments,
10 subsurface explorations, underground storage tank (“UST”) removal and closure, and
11 risk-based contaminant exposure evaluations. More specifically, I managed and performed
12 numerous Phase I Environmental Site Assessments (“ESAs”) in accordance with American
13 Society for Testing and Materials standards and United States Environmental Protection
14 Agency All Appropriate Inquiry. Based on the Phase I ESA results, I planned and
15 completed Phase II ESAs to characterize and delineate the horizontal and vertical extents
16 of contamination. When appropriate, Baseline Environmental Assessments and due-care
17 plans were prepared in accordance with the Michigan Department of Environment, Great
18 Lakes and Energy (“EGLE”) guidelines. I have remediated and closed several USTs.
19 I also have extensive construction management experience, including bid specification
20 package development, trade contractor procurement and management, field oversight of
21 construction and demolition projects, and associated documentation and report preparation.

22 After nine years in consulting, I accepted a position at Consumers Energy in August
23 2008. I was initially hired to serve as the project engineer and construction manager for

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1 the Little Traverse Bay Environmental Project. In this role, I managed the design and
2 implementation of remedial strategies to address water impacted by cement kiln dust that
3 was entering Little Traverse Bay. Some of the specific responsibilities included managing
4 the project reserve, serving as the day-to-day interface with regulators, maintaining
5 compliance with the final agreement with the State of Michigan, and interfacing with the
6 impacted stakeholders. I also held the overall responsibility for project permitting, the
7 adequacy of engineering design, selection of the contractor(s), project scopes, schedules,
8 and budgets.

9 In January 2014, I became supervisor of the Risk Management group within the
10 Environmental Compliance, Risk Management & Governance section of the
11 Environmental and Laboratory Services Department. In this role, I became familiar with
12 the status of the 23 Manufactured Gas Plant ("MGP") sites being managed by the
13 Company. I served as the technical resource to the project managers and assisted with
14 aligning the direction of the MGP Program. In January 2015, I became the Director of the
15 Environmental Compliance, Risk Management & Governance section of the
16 Environmental and Laboratory Services Department. The Environmental and Laboratory
17 Services Department is now the Environmental Quality and Sustainability Department.

18 **Q. What are your responsibilities as Director of Environmental Compliance, Risk**
19 **Management & Governance?**

20 A. As Director of Environmental Compliance, Risk Management & Governance, I am
21 responsible for Environmental Compliance Assurance (corporate-wide environmental
22 management system implementation), Environmental Risk Management (assessing and
23 mitigating corporate environmental risks), and Environmental Governance to help ensure

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1 the Company maintains its strong record of excellent environmental stewardship. An
2 integral part of the Environmental Risk Management function includes planning, directing,
3 and controlling the investigation and remediation/risk management at former MGP sites
4 and Comprehensive Environmental Response, Compensation, and Liability Act
5 (“CERCLA” or “Superfund”) sites where Consumers Energy is a responsible party. My
6 section also supports the natural gas and electric operating organizations of Consumers
7 Energy regarding the investigation and remediation of environmental contamination. The
8 Risk Management section is also responsible for conducting environmental due diligence
9 assessments for the acquisition, sale, lease, and licensing of Consumers Energy property.

10 **Q. Have you previously provided testimony before the Michigan Public Service**
11 **Commission (“MPSC” or the “Commission”)?**

12 A. Yes, I provided testimony in Case Nos. U-17882, U-18124, U-18424, U-20322, U-20650,
13 U-21148, U-21308, U-21490, and U-21806.

14 **Q. Are you a member of any professional societies or organizations?**

15 A. Yes. I represent Consumers Energy on the MGP Consortium. The MGP Consortium is
16 discussed later in my testimony.

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

18 A. The purpose of my testimony is to: (i) identify the former MGP sites at which Consumers
19 Energy has a present or former ownership interest; (ii) discuss environmental requirements
20 for investigation and remediation by Consumers Energy at these sites; (iii) identify and
21 describe expenditures for environmental response activities at these sites that the Company
22 is seeking approval to recover in this Commission case; and (iv) address the prudence of
23 these expenditures.

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1 **Q. How is your direct testimony organized?**

2 A. I will discuss the environmental remediation at Consumers Energy's former MGP sites in
3 Sections I through IV of my direct testimony. In Section I of my direct testimony, I will
4 identify and provide information regarding the MGP sites Consumers Energy has identified
5 where it has a present or former ownership interest. In Section II of my direct testimony,
6 I will discuss reasons that Consumers Energy is undertaking environmental investigation
7 and remediation activities at these sites. In Section III of my direct testimony, I will discuss
8 costs and the prudence of the costs. In Section IV of my direct testimony, I will discuss
9 investigation, remediation activities, and overall progress at MGP sites. The accounting
10 and ratemaking treatment for the MGP-related costs which I identify will be discussed by
11 Company witness Matthew J. Foster.

12 **Q. Are you sponsoring any exhibits?**

13 A. Yes. I am sponsoring the following exhibits:

14 Exhibit A-122 (HMP-1) Manufactured Gas Plant Sites Information; and

15 Exhibit A-123 (HMP-2) MGP Environmental Response Cash Outflows –
16 January 2025 to December 2025 by Phase & Site.

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

18 A. Yes. These exhibits were prepared by me or under my supervision.

19 **Q. Please summarize your direct testimony.**

20 A. Consumers Energy has identified 23 sites that formerly housed MGPs at which it has a
21 present or former ownership interest. Reasonable and typical industry practices during the
22 MGP era resulted in environmental contamination that is unacceptable under current
23 environmental standards and laws. Consumers Energy has incurred, and will continue to
24 incur, costs related to investigation and remediation of MGP sites. Costs related to

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1 investigation and remediation of MGP sites that Consumers Energy is seeking approval of
2 in this case total approximately \$1,633,600 that will be deferred (amortized) over 10 years,
3 and approximately \$1,124,500 in non-deferred (operation and maintenance (“O&M”))
4 dollars in addition to the normal direct management expenses. The split in costs will be
5 discussed further in Section III of my testimony. These costs are reasonable and prudent,
6 as discussed later in my testimony.

7 **SECTION I – Information on MGP Sites**

8 **Q. How many MGP sites has Consumers Energy identified where it has a present or**
9 **former ownership interest?**

10 A. Consumers Energy has identified 23 sites that formerly housed MGPs at which it has a
11 present or former ownership interest. These sites are listed on Exhibit A-122 (HMP-1).
12 Gas was manufactured from these locations for various periods during the late 1800’s until
13 the 1950’s when the last MGP was retired. The 23 sites were acquired or built by
14 Consumers Energy between 1917 and 1934 on behalf of customers. Predecessor
15 companies were either acquired by Consumers Energy or no longer exist.

16 **Q. Please describe Exhibit A-122 (HMP-1).**

17 A. Exhibit A-122 (HMP-1) provides a summary of site information for each of the 23 former
18 MGP sites, listing: (i) location; (ii) approximate size of the site in acres; (iii) estimated peak
19 plant capacity; (iv) date the plant was acquired or built by Consumers Energy; (v) date
20 natural gas arrived; (vi) date put on standby status; (vii) when the plant was retired;
21 (viii) when the holder (the MGP storage tank) was retired; (ix) the current property owners;
22 (x) the current property use; and (xi) the current site status.

1 **Q. What was the role of MGPs?**

2 A. MGPs were formerly an integral part of gas utility service. Prior to the availability of
3 natural gas, gas was manufactured. By the end of the 19th century, manufactured gas was
4 widely used for lighting, heating, and cooking. As natural gas became available, it replaced
5 manufactured gas as a base fuel. Even after natural gas became available, maintaining the
6 ability to manufacture gas on a stand-by basis was viewed as important. At most of
7 Consumers Energy's sites, after natural gas replaced manufactured gas, the plants retained
8 their ability to manufacture gas for use in the event of gas shortages. In addition, the MGP
9 storage tanks, often referred to as holders, were used to store natural gas.

10 **SECTION II – Need for Environmental Investigation and Remediation**

11 **Q. Why is Consumers Energy undertaking environmental investigation and remediation**
12 **activities at former MGP sites?**

13 A. The levels of environmental awareness have increased significantly since the time when
14 MGPs were operated. During MGP operations, the manufacture of gas resulted in various
15 by-products which are now recognized as being environmentally harmful. Consumers
16 Energy has discovered soil and/or ground/surface water contamination at all 23 of the
17 former MGP sites during remedial investigations. Under current environmental standards,
18 Consumers Energy will incur cleanup costs at all of the sites.

19 The costs of environmental investigation and remediation with respect to former
20 MGP sites are necessary and ongoing costs of doing business which were not, and could
21 not have been, anticipated during the time MGPs were in operation. Awareness of the
22 environmental risk associated with these by-products did not exist during the MGP era.
23 The costs of investigation and remediation are prudent expenditures that are based on

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1 public policy considerations of protecting the environment and natural resources of the
2 State to help ensure the quality of life that customers desire. These costs are unavoidable
3 and do not arise out of any failure to meet standards at the time the plants were in operation.

4 **Q. How will site remediation requirements be determined for the former MGP sites in**
5 **Michigan?**

6 A. The overall framework for environmental response activities is provided by several
7 statutory enactments. In 1980, Congress enacted the CERCLA, commonly referred to as
8 Superfund, which required potentially responsible parties to investigate and remediate
9 various wastes. In 1982, the Michigan Environmental Response Act (“Act 307”) was
10 enacted. In 1990, the State of Michigan passed amendments to Act 307, which established
11 a state program similar to the federal Superfund law, although broader in scope. In 1994,
12 additional amendments were made, and Act 307 was recodified as Part 201 of Act 451
13 (“Part 201”), the Michigan Natural Resources and Environmental Protection Act,
14 MCL 324.20101 *et seq.* Part 201 provides the primary framework for investigation and
15 remediation of Consumers Energy’s former MGP sites. EGLE oversees Michigan’s
16 Part 201 Program. As Director of Environmental Compliance, Risk Management &
17 Governance, I am responsible for the Company’s primary interface with EGLE on Part 201
18 issues.

19 **Q. What EGLE division administers Michigan’s Part 201 Program?**

20 A. EGLE’s Remediation and Redevelopment Division administers programs that facilitate the
21 cleanup and redevelopment of sites of environmental contamination in Michigan. This
22 includes the responsibility to oversee Michigan’s Part 201 Program. Among other things,
23 it oversees and provides information to support cleanup of contaminated sites by

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1 responsible parties, initiates enforcement action when voluntary compliance cannot be
2 achieved, and recovers State cleanup funds from liable parties. Administrative Rules,
3 Operational Memorandums, and Generic Cleanup Criteria are provided by EGLE.
4 A responsible party is obligated to diligently pursue cleanup at contaminated sites to be
5 compliant.

6 **Q. Who are responsible parties under Part 201?**

7 A. Under Part 201, those liable for response activity costs include: (i) the owner or operator
8 of a facility, if the owner or operator is responsible for an activity causing a release or threat
9 of release; and (ii) the owner or operator of a facility at the time of disposal of a hazardous
10 substance, if the owner or operator is responsible for an activity causing a release or threat
11 of release. Under certain circumstances, others can also be liable for response activity
12 costs.

13 A party may be liable under Part 201 even though the act causing environmental
14 contamination was lawful and reasonable at the time. Any potentially responsible party
15 may be held liable for the entire cost of investigation and remediation of a site. Part 201
16 states that it applies regardless of whether the release or threat of release of a hazardous
17 substance occurred before or after the effective date of Part 201.

18 **Q. What is a utility's responsibility at a former MGP site that it owned or operated?**

19 A. Part 201 requires that when a liable owner or operator of a facility obtains information that
20 there may be a release of a hazardous substance at a facility for which they are liable, such
21 owner or operator must take appropriate action, including confirming the existence of the
22 release, determining the nature and extent of the release, reporting the release to EGLE if
23 there was a reportable quantity released, and immediately taking steps to stop any

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1 continuing release. Part 201 contains affirmative obligations to avoid exacerbation of any
2 existing contamination. The liable owner or operator must “diligently pursue”
3 environmental response activities, including investigation and remediation, and ultimately
4 address all contaminants associated with the site. Consumers Energy has been the owner
5 or operator for all the former MGP sites listed on Exhibit A-122 (HMP-1) and currently
6 owns all or portions of most of the former MGP sites listed.

7 EGLE has responsibility to oversee and coordinate all activities required under
8 Part 201. EGLE is authorized by Part 201 to request or order remediation by one or more
9 responsible parties or to undertake response activities and to recover costs incurred from
10 responsible parties later. Each year, EGLE publishes a list of Michigan Sites of
11 Environmental Contamination (“Part 201 Inventory of Facilities”). There are currently
12 about 28,750 sites of environmental contamination listed on the Inventory of Facilities. All
13 23 Consumers Energy former MGP sites are on the Inventory of Facilities.

14 **Q. Has Consumers Energy identified any former MGP owners or any predecessor or**
15 **successor companies of such owners for the 23 sites at which Consumers Energy has**
16 **a present or former ownership interest?**

17 A. No. A prior search for former MGP owners or any predecessors or successor companies
18 of such owners for the 23 sites did not find any in existence today. Hence, no other
19 potentially responsible parties have been identified.

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1 **Q. Does a site have to be listed on the Part 201 list in order for an owner or operator to**
2 **be obligated to undertake environmental response activities or to incur response**
3 **costs?**

4 A. No. EGLE is authorized to require that environmental response activities be undertaken
5 by a responsible party even if the site is not listed on the Part 201 list. In addition, discovery
6 of contamination related to MGPs at or near a former MGP site can require an owner or
7 operator to undertake response activities.

8 **Q. What is Consumers Energy's strategy for the management of the former MGP sites?**

9 A. Consumers Energy's strategy is to minimize the impact from the former MGP sites on
10 human health and safety, as well as to minimize any damage to the surrounding natural
11 resources, in the most cost-effective way possible. The strategy for the management of the
12 former MGP sites is based on the environmental risk that these sites pose to human health,
13 safety, and damage to natural resources. Consumers Energy routinely assesses the
14 environmental exposure and/or exacerbation risks at each site based on changing
15 conditions and new information. Based on the risk assessment, response activities are
16 prioritized, developed, designed, and implemented.

17 The environmental response strategy will be determined based upon the land uses
18 and zoning at individual facilities, the environmental media involved, and the relevant
19 exposure pathways. The key elements of an exposure pathway are a source or release of a
20 hazardous substance, an exposure point, an exposure route, and a transport mechanism. In
21 developing an environmental response strategy at a particular site, the Company develops
22 a plan to address contamination in all environmental media, including but not limited to:
23 (i) contaminated groundwater; (ii) contaminated soils; (iii) contaminated sediments; and

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1 (iv) vapor intrusion. Based on the media impacted and the nature of contaminant(s),
2 remediation strategies may vary including removal, recovery, containment/barrier
3 technologies, monitored natural attenuation, etc. Once exposure risks for all contaminants
4 in all applicable media for all exposure scenarios are mitigated, the site may be eligible for
5 No Further Action (“NFA”).

6 **Q. Is it possible under current regulations to obtain total closure status for an**
7 **environmentally contaminated former MGP site?**

8 A. No. Part 201 of the Natural Resources and Environmental Protection Act, 1994 Public
9 Act 451, was revised in 2010 by adding a regulatory mechanism that allowed for NFA at a
10 contaminated site if certain conditions are met. However, NFA does not mean there is a
11 total closure. Rather, NFA is a regulatory status that allows the site to maintain a
12 “negotiated status quo,” that requires no or minimal ongoing remedial actions. It is the
13 responsibility of the owner/operator to maintain the agreed upon conditions of the NFA
14 agreement such as due care, groundwater monitoring, and O&M of control technologies.
15 If any of the conditions are not maintained, or there is a change in conditions, the NFA
16 status becomes invalid. While NFAs acknowledge remedial actions performed and what
17 exposures/risks are still present at the sites, approvals of these actions do not eliminate
18 present or future liabilities or close the site.

19 **Q. Who is financially responsible if the negotiated status is not maintained and work**
20 **needs to be performed?**

21 A. Typically, the party that commits the noncompliance will ultimately be financially
22 responsible.

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1 **Q. Is Consumers Energy looking into the possibility of obtaining NFA status at former**
2 **MGP sites?**

3 A. Yes. Consumers Energy is actively pursuing NFA at several former MGP sites. It should
4 be noted that the Company does not consider a site eligible to pursue NFA status unless
5 contamination in all environmental media is addressed. Consumers Energy submitted and
6 obtained NFA status for the following former MGP sites:

- 7 • Ionia – 2013
- 8 • Grand Ledge (site proper) – 2016
- 9 • Marshall – 2019
- 10 • Mt. Clemens (site proper) – 2021
- 11 • Royal Oak – 2021
- 12 • Alpena – 2021
- 13 • Bay City (site proper) - 2022
- 14 • St. Johns (site proper) – 2023
- 15 • Manistee (Operational Site) – 2023
- 16 • Hastings (site proper) – 2024
- 17 • Bay City (off-site) – 2024

18 An NFA was submitted for the Sault Saint Marie MGP site but was ultimately
19 withdrawn due to lack of property owner signature on the necessary restrictive covenant.
20 A Certificate of Completion was obtained for this site in 2021.

21 Consumers Energy has also initiated discussions with EGLE regarding several
22 MGP sites that potentially may qualify for NFA status. This is discussed later in my
23 testimony. Due to the complexity of the remediation that needs to be addressed and current

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1 status of remediation, it would not be efficient at present to seek NFA status at all of the
2 sites. In some cases, it may be more practical to obtain a Certificate of Completion
3 (described below) due to site restrictions/liability concerns.

4 **Q. Does NFA mean that there will be no additional costs on these sites?**

5 A. No. There will be costs associated with these projects even after they achieve NFA status.
6 These costs may include routine sampling, preparing and submitting reports, some O&M
7 tasks, due care, etc. These long-term, post-NFA costs may be significant.

8 **Q. What is a Certificate of Completion?**

9 A. A Certificate of Completion is a written response provided by EGLE that a response
10 activity has been completed in accordance with the applicable requirements of Part 201
11 and is approved by EGLE.

12 **Q. What are the benefits of a Certificate of Completion?**

13 A. A Certificate of Completion provides EGLE concurrence that response activities were
14 performed at a site as proposed. However, there are no requirements for either Post Closure
15 Agreements or financial assurance with a Certificate of Completion.

16 **Q. Has the Company received any Certificates of Completion?**

17 A. Yes. The Company received a Certificate of Completion from EGLE in July 2019 for the
18 Sediment Response Action project at the Flint East MGP, and for the Sault Saint Marie site
19 as discussed earlier. The Certificate of Completion for the Manistee River Sediment work
20 was deemed administratively approved in 2022.

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1 **Q. What is a Post Closure Agreement?**

2 A. It is an agreement that may be required by EGLE based on activities needed following
3 NFA approval. The agreement is between EGLE and the submitting entity. It contains
4 terms regarding future liabilities and potential reopeners of the NFA document.

5 **SECTION III – Costs and Prudence**

6 **Q. What levels of expenditures are attributable to environmental response activities at**
7 **the 23 former MGP sites?**

8 A. The level of environmental response expenditures for the period January 2025 through
9 December 2025 totals approximately \$1,633,600 in deferred (amortized) dollars, and
10 \$1,124,500 in non-deferred dollars for the period of October 1, 2026 through
11 September 30, 2027.

12 **Q. Do these amounts include Consumers Energy’s Project Management (“PM”) costs?**

13 A. No. As recommended by the Commission Staff (“Staff”) in Case No. U-14547, the
14 Company has excluded PM and associated costs from the MGP Environmental Response
15 Cash Outflows.

16 **Q. Please describe what types of costs were excluded from the MGP Environmental**
17 **Response Cash Outflows.**

18 A. The types of costs excluded are costs of Consumers Energy employees and associated
19 expenses such as Labor, Lab Services, Fleet, Real Estate, business expenses, and computer
20 charges. Those costs are included as O&M expense. In addition, Consumers Energy has
21 excluded professional organization membership costs and lawn maintenance costs from
22 the MGP Environmental Response Cash Outflows shown on Exhibit A-123 (HMP-2).

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1 Membership fee expenditures and lawn care expenditures are included instead as O&M
2 expenditures.

3 **Q. Do the MGP Environmental Response Cash Outflows you are presenting in this rate**
4 **case include professional membership fees?**

5 A. No. As mentioned earlier, professional membership fees, specific to MGP remediation
6 operation, are not included in the MGP Environmental Response Cash Outflows shown on
7 Exhibit A-123 (HMP-2). However, professional membership costs are included in the
8 MGP PM and Associated Costs included in the O&M portion of the rate case. The two
9 specific professional memberships are the Utility Solid Waste Advisory Group
10 (“USWAG”) and MGP Consortium.

11 Membership in the USWAG is directly related to helping Consumers Energy
12 evaluate environmental investigation and remediation response activities and to identify
13 the most cost-effective MGP investigation and remediation measures that are protective of
14 human health and the environment. The USWAG provides a technical resource for
15 management of waste streams from the remediation of MGP sites allowing for protection
16 of natural resources while minimizing unnecessary costs.

17 The MGP Consortium includes members from various utility companies in the
18 nation who are currently managing MGP sites as part of their liability management. The
19 MGP Consortium is designed to discuss and share knowledge or project experience
20 between owners/operators of former MGP sites. Membership in the MGP Consortium has
21 facilitated discussions about general MGP PM, remediation technology evaluation,
22 remediation technology application, lessons learned, public relations, public policy trends,
23 and vendor evaluations. These memberships have helped Consumers Energy in its

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1 evaluation of technical, regulatory, legislative, and policy issues related to the investigation
2 and remediation of former MGP sites.

3 **Q. Why have dollars been separated as non-deferred?**

4 A. In Case No. U-20650, the Company agreed in rebuttal testimony to include routine
5 monitoring and reporting and regulatory/legal requirements of Post Closure Agreements or
6 other mechanisms after receipt of NFA, Remedial Action Plan, or Certificate of
7 Completion approval as non-deferred (O&M) expenditures. This change began with the
8 test year for Case No. U-21308. These costs are in addition to the direct management or
9 other O&M costs previously discussed.

10 **Q. What is the amount of the non-deferred MGP expenditures?**

11 A. The additional amount of non-deferred MGP expenditures is \$1,124,500. These expenses
12 are covered in Company witness Foster's Exhibit A-123 (MJF-6).

13 **Q. Were MGP environmental response activity costs incurred prior to January 2025?**

14 A. Yes. Costs for environmental response activities for periods prior to January 2025 were
15 reviewed and audited by Staff in Case No. U-21806 and earlier cases; therefore, these costs
16 have not been included on Exhibit A-123 (HMP-2) in the current case.

17 **Q. At how many of the sites will Consumers Energy incur deferred (amortized) costs
18 during the period January 2025 through December 2025?**

19 A. Costs will be incurred at 10 sites.

20 **Q. Why were deferred costs not incurred at all of the 23 MGP sites?**

21 A. As the sites reach NFA status or point of minimal activity, the Company does not
22 necessarily use consultants for the remaining activities. The Company will use internal
23 staff to complete the necessary obligations and reporting to reduce the program costs.

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 **Q. Please explain Exhibit A-123 (HMP-2).**

2 A. Exhibit A-123 (HMP-2) shows the cash outflows for environmental investigation and
3 remediation during the period January 2025 through December 2025 for each MGP site.
4 Costs are shown by phase and in total for all 23 MGP sites.

5 **Q. How were these costs developed?**

6 A. Costs shown on Exhibit A-123 (HMP-2) include projected costs. Costs for January through
7 December 2025 are projected costs based on the work scope developed for the sites and
8 the long-term strategy.

9 **Q. How did you determine the costs for activities that have not yet occurred?**

10 A. The cost for each activity is based upon the strategy identified to move the site toward
11 NFA/Certificate(s) of Completion. The strategies have been developed based on past
12 experience at Consumers Energy sites and other sites, overall knowledge, site background,
13 site use, site investigations, remedial investigations, and feasibility study evaluations.
14 Based on all this information and data, we determine, with assistance from the consultants
15 involved with each of these sites, how to move sites forward in the most prudent way
16 possible while maintaining compliance with EGLE regulations and requirements.

17 **Q. Why are the costs incurred differently at different sites?**

18 A. Environmental response costs are influenced by a number of site-specific factors. Costs
19 can vary significantly depending on: (i) the nature and extent of contamination; (ii) size of
20 the site; (iii) geology of the site; (iv) presence of surface water and depth of groundwater;
21 (v) present and future use of the site; and (vi) types of remedial action. The costs on Exhibit
22 A-123 (HMP-2) differ due to site-specific factors.

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 **Q. What MGP environmental expenditures are you seeking approval for in this case?**

2 A. Consumers Energy is seeking approval in the current case for deferred (amortized) MGP
3 environmental response expenditures from January 2025 through December 2025. The
4 Company is also seeking approval of non-deferred (O&M) recovery of MGP expenditures
5 for the test year that covers October 1, 2026 through September 30, 2027.

6 **Q. Are the expenditures that Consumers Energy is seeking recovery for in this case**
7 **reasonable and prudent?**

8 A. Yes. The need for environmental investigation, remediation, and the parameters for
9 cleanup are mandated and defined by the state and federal government. The costs of
10 investigation and remediation are not based on any imprudence, but upon public policy
11 considerations of protecting the environment and natural resources of the State on behalf
12 of the customers the Company serves. MGP site investigation and remediation costs are
13 legitimate and necessary costs of doing business. The costs incurred were costs for
14 activities that are necessary under current environmental regulations and overseen by
15 EGLE. The need for incurring such costs is based upon current environmental awareness,
16 not any fault on the part of the operator of the former MGP facilities.

17 **Q. Does the Company coordinate site activities with EGLE?**

18 A. Consumers Energy has taken a proactive role with EGLE. By taking a proactive role,
19 Consumers Energy has had a better opportunity to participate in decisions involving
20 investigation and remedial actions than if EGLE were to order remediation or to undertake
21 remediation itself. Consumers Energy has undertaken response activities in an efficient
22 manner to minimize costs consistent with health and safety considerations. Consumers
23 Energy has sought approval from EGLE of the most cost-effective remediation, which is

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 protective of human health and the environment, as allowed by law. The expenditures
2 which Consumers Energy is seeking to recover in this case are reasonable and prudent.

3 **Q. Does the Company use competitive bidding as a means of controlling costs?**

4 A. Yes. Current Company policies require competitive bidding for purchases of materials
5 and/or services initially over \$500,000, except for emergencies or where only one vendor
6 can supply the goods or services. For smaller scale response activities, such as drilling and
7 small disposal activities, the site consultant handles the initial bidding and ensures the
8 contracted costs are reasonable. For larger activities, the Company competitively bids the
9 project. If competitive bids are not sought, the Company documents reasons why the
10 competitive bidding process was not used. During the competitive bidding process, the
11 qualifications of each contractor and subcontractor are reviewed to determine if they have
12 the resources and expertise to complete the tasks on which they are bidding. The Company
13 also evaluates contracting strategies (*e.g.*, time and materials, lump sum, not to exceed,
14 etc.) to determine which will provide the most value and reduce risks during the projects.

15 **Q. Please describe how the consultants used were selected.**

16 A. The initial consultants for each site were selected using a bidding process. Consultants
17 who were interested bid for each MGP site separately. As part of the competitive bidding
18 process, the qualifications of each consultant were reviewed to determine if they had the
19 resources and expertise to complete the projects on which they were bidding. The
20 Company currently has five consultants for the MGP sites. Using the same consultant for
21 more than one site increases efficiency and improves consistency. Limiting the consultants
22 to fewer than all sites helps assure that they will be able to complete the work in a timely
23 fashion.

1 **Q. Please discuss Environmental Response Cash Outflows at the MGP sites.**

2 A. The majority of the Environmental Response Cash Outflows shown on Exhibit A-123
3 (HMP-2) are for remedial actions. Remedial action costs were incurred at 6 of the 23 sites.
4 The remedial action costs incurred include collection of data supporting remedial action
5 and response activities such as: (i) source-area impacted soil removal; (ii) operation of
6 existing in-site remediation systems; (iii) groundwater monitoring; (iv) treatability studies;
7 and (v) other activities intended to resolve containment issues. The environmental
8 response costs also include activities related to Remedial Investigations, Feasibility
9 Studies, and NFA. The NFA phase tasks included EGLE negotiations, preparation of NFA
10 reports, property surveys, and recording use restrictions, etc. O&M tasks included
11 monitoring, operation, maintenance, due care, and reporting obligations. Response
12 activities are discussed in more detail later in my testimony.

13 **SECTION IV – Response Actions**

14 **Q. What types of environmental response activities may be required at a former MGP**
15 **site?**

16 A. The sequence, timing, and magnitude of response activities vary from site to site depending
17 upon the size of the site, the degree of environmental contamination, current and potential
18 future land use, the degree of enforcement discretion exercised by EGLE, the media
19 impacted, and other site-specific factors. However, the usual sequence of environmental
20 response activities which would typically be undertaken at a former MGP site would be:

- 21 1. Site Investigation;
- 22 2. Remedial Investigation;
- 23 3. Interim Response Activities;
- 24 4. Feasibility Study;
- 25 5. Remedial Action;
- 26 6. NFA; and

7. O&M.

Q. Please briefly describe each of these activities.

A. Site Investigation: A Site Investigation involves research of site-related information such as available historical records, past and current site uses, topographical maps, engineering drawings, and a review of potential sources of environmental contamination. A site visit is also usually done during a Site Investigation to relate the information collected by the records search to current site conditions and to conduct a visual inspection for any obvious signs of MGP contamination.

Remedial Investigation: The purpose of a Remedial Investigation is to define the nature and extent of contamination at a site. Consumers Energy worked with EGLE to reach a common understanding on facility prioritization criteria as it relates to risk assessment and exposure pathways. In addition, Consumers Energy sought input, review, and concurrence from EGLE on major remedial investigation work plans. This collaborative approach allowed Consumers Energy to be better responsive to EGLE concerns and issues in developing and implementing work plans.

The Remedial Investigation includes the collection and analysis of samples of surface soils, subsurface soils, groundwater, and/or surface water. Limited field screening measurements of soil, gas, and air samples may also be conducted. These samples are analyzed for chemicals of concern that are typical of MGP by-products and wastes. Remedial Investigations typically generate solid and liquid waste, called Investigation Derived Waste, that must be disposed per state and federal regulations.

Interim Response Activities: Interim Response Activities may be required if the results of the Remedial Investigation or other information indicates a need to abate a threat to human health or to the environment on an interim basis while further investigation

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 occurs. Examples of the types of Interim Response Activities which may occur for
2 contaminated soils include erecting a fence, installing drainage controls and stabilization,
3 capping, removal, and treatment or disposal of the grossly contaminated soils to eliminate
4 direct-contact hazards and to prevent further migration. Free phase product recovery is
5 also considered as an Interim Response Activity. Interim Response Activities can also
6 generate solid and liquid waste that must be disposed per state and federal regulations.

7 **Feasibility Study:** The purpose of the Feasibility Study is to develop, evaluate,
8 and select which of several remedial action alternatives, including no action, may be
9 appropriate. The Feasibility Study involves identifying appropriate remedial technologies,
10 determining the applicability of the technologies to a specific site, evaluating the
11 implementability and total cost of operations, and developing a cost benefit analysis.

12 **Remedial Action:** Remedial Action includes, but is not limited to, cleanup,
13 removal, containment, isolation, destruction, or treatment of a hazardous substance
14 released or threatened to be released. Some remedial actions may require operation of
15 active remediation systems, which require significant ongoing activities along with
16 performance monitoring. Remedial actions may generate significant solid and liquid waste
17 that must be disposed per state and federal regulations.

18 **NFA:** Once Remedial Action is complete, and the applicable cleanup criteria are
19 achieved, then the project may be eligible to seek NFA status. The NFA is usually
20 associated with some land and resource use restrictions along with long-term monitoring
21 and/or due-care obligations. As discussed earlier in my testimony, it is not possible under
22 current regulations to obtain total closure status for the former MGP sites. The NFA
23 activities may include NFA report preparation, negotiations with EGLE and other

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 stakeholders, developing and recording site surveys, restrictive covenants, etc. Preparation
2 of Certificate(s) of Completion will also be included as NFA activities.

3 **O&M:** Activities performed as O&M may include routine monitoring data
4 collection, due-care activities, system operation and maintenance, and associated reporting.
5 The O&M activities may be required indefinitely.

6 **Q. What are some examples of environmental response activities that have either been**
7 **completed during the January 2025 through October 2025 timeframe or are currently**
8 **underway?**

9 A. Examples of projects that have been completed or are underway include the following:

- 10 • Charlotte MGP site – NFA drafting was initiated.
- 11 • Flint East MGP site – Annual groundwater sampling was performed.
12 Conducted inspections and bathymetry evaluations within sediment cap reach,
13 in addition to, groundwater elevation monitoring to evaluate the potential for
14 uplift conditions under the sediment cap. Continued to provide coordination
15 and field observations during the dam removal project as it impacts the river
16 sediment removal work that was performed in 2017. Started to evaluate and
17 coordinate with EGLE on a bankfull bench design to fulfill permit obligations
18 from the Flint River Sediment Response Action in 2017.
- 19 • Kalamazoo MGP site – Prepared the NFA document and associated
20 institutional control documents (restrictive covenants and public highway
21 institutional control). Submitted a draft of the NFA to EGLE for preliminary
22 review.
- 23 • Jackson MGP site – Participated in coordination meetings with the City of
24 Jackson and EGLE regarding the potential redevelopment of a portion of the
25 former MGP site.
- 26 • Manistee MGP site (ongoing) – Performed quarterly groundwater sampling at
27 the former relief holder site. Continued to operate and maintain the air sparge
28 system on the former relief holder site to treat dissolved-phase impacts in
29 groundwater.
- 30 • Plymouth MGP site – Annual sampling was performed at the site. Developed
31 a model to assist in evaluation of remedial activities for both the source area
32 and off-site groundwater plume.

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 Additionally, investigations, routine monitoring, reporting, NFA activities, and O&M
2 activities were also conducted.

3 **Q. Does the Company need formal approval by EGLE to implement response activities?**

4 A. No. A formal approval is not required to implement response activities. However,
5 Consumers Energy has taken a proactive role with EGLE to provide an opportunity to
6 collaborate with EGLE regarding decisions involving investigation and remedial actions.
7 This approach helps minimize the possibility of EGLE issuing a remediation order or
8 undertaking the remediation itself at Consumers Energy's expense. We believe that our
9 continuous involvement with EGLE and the collaborative approach results in cost-effective
10 remediation that is protective of human health and the environment as required by law.
11 This collaborative approach is carried out both through formal and informal means.

12 **Q. How does the Company respond to EGLE requests for inclusion of additional**
13 **parameters in testing or any other requests at a site?**

14 A. The Company has highly trained remediation experts that will review the request, evaluate
15 the value provided by the request, and discuss this evaluation with EGLE. Inclusion of
16 additional parameters or other requests suggested by EGLE can significantly increase
17 costs. In addition, practical and technical limitations must be considered. If these are not
18 typical for the type of remedial action underway, the Company will attempt to determine
19 if there is an alternative or more cost-effective way to address EGLE's concerns.

20 As mentioned earlier in my testimony, Consumers Energy has taken a proactive
21 role with EGLE to provide an opportunity to collaborate with EGLE regarding decisions
22 involving investigation and remedial actions. This approach helps minimize the possibility
23 of EGLE issuing a remediation order or undertaking the remediation itself at the

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 Company's expense. Consumers Energy seeks approval from EGLE of the most
2 cost-effective remediation that is protective of human health and the environment as
3 required by law.

4 **Q. Please describe soil and/or groundwater remediation systems in operation.**

5 A. Currently, there is one active groundwater remediation system at the MGP sites. The Cross
6 Street site remediation system consists of a groundwater air sparge system, installed in
7 2011. This system was deactivated in 2019 to evaluate groundwater conditions and allow
8 for in-situ soil stabilization of the impacted soils near the former holder location. The
9 system remained off until the spring of 2022 when groundwater concentrations began to
10 rebound. The system was expanded in 2024 to address the concentrations in wells outside
11 of the original capture area of the system. It is currently anticipated that the system will
12 need to operate for two years to address the concentrations present at the site.

13 **Q. Does the Company have any inactive soil and/or groundwater remediation systems?**

14 A. Yes. The multiphase system that consists of a Light Non-Aqueous Phase Liquid recovery
15 system, a groundwater pump and treatment system, and a Soil Vapor Extraction and
16 treatment system at the Jackson MGP site has been inactive since April 2016. The system
17 is slated for decommissioning in 2026.

18 **Q. Were there any MGP property ownership changes in the time period covered by this**
19 **filing?**

20 A. No.

21 **Q. Are the MGP costs described in your testimony reasonable and prudent?**

22 A. Yes, they are. They are reasonable and prudent costs of doing business.

HEATHER M. PRENTICE
U-21981 DIRECT TESTIMONY

1 **Q. Does this conclude your direct testimony?**

2 **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

HEATHER M. PRENTICE

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Consumers Energy Company
Manufactured Gas Plant Sites Information

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line No.	Location	Size (Acres)	Estimated Peak Plant Capacity (CFD)	Date Acquired or Built by CPCo	Date Natural Gas Arrived	Date Put on Standby	Date Plant Retired	Date Holder Retired	Current Owner	Current Use	Current Site Status
1	Alma	1.2	340,000	1934	1936	1936?	1948	1951	GPM Investments LLC Consumers Energy Messenger Properties LLC	Gasoline Station Regulator Station Parking lot	Remedial Action Monitoring
2	Alpena	1	250,000	1934	NA	1946(a)			Consumers Energy C. McCoy	Vacant lot Residential home	NFA (site proper) - 2021
3	Bay City	4.7	1,500,000	1922	1933	1924(b)	1942	1954	Bay Riverfront Development LLC Bay City	Parking lot Electrical substation / Vacant lot	NFA (site proper) - 2022 NFA (off-site) - 2024
4	Charlotte	1.7	50,000	1927	1929		1929(c)	1954	Consumers Energy	Regulator Station	NFA In preparation
5	Flint Court St	37.8	5,400,000	1927	1942	1942	1945	1953	Consumers Energy	Service Center	Remedial Action Monitoring
6	Flint East St.	6.5	6,000,000	1922	1942	1928	1951	1954	Consumers Energy United States Postal Service U of M - Flint City of Flint	Parking lot Post Office Parking lot East Blvd.	Remedial Action Monitoring
7	Grand Ledge	1	30,000	1926	1936?		1926(c)	1934	Consumers Energy CSX Railroad	Vacant lot Railroad Right-of-Way	NFA (site proper) - 2016
8	Hastings	0.8	240,000	1922	1936		1931(c)	1954	Consumers Energy Cary Display	Regulator Station Vacant Lot	NFA (site proper) - 2024
9	Ionia	2.6	50,000	1925	1936		1931(c)	1954	Consumers Energy	Vacant lot	NFA - 2013
10	Jackson	7.5	3,800,000	1922	1942	1942	1947	1956	Consumers Energy Jackson Glass Southridge Park Apartments City of Jackson	Fleet garage, vacant lot, regulator station Glass / windshield repair Apartment complex Franklin and Cooper ROWs	Remedial Action Monitoring
11	Kalamazoo	7	3,500,000	1917	1943	1943	1956	1958	Zoetis	Pharmaceuticals	NFA In preparation
12	Lansing	20	3,200,000	1925	1936	1936	1945	1956	Consumers Energy	Service Center	Remedial Action Monitoring
13	Manistee	0.7	150,000	1922	1950		1950	1952?	Consumers Energy American Legion 254 River Street, LLC City of Manistee	Vacant lot Parking lot Warehouse (driveway) Vacant Right-of-Way	NFA (Operational Site) - 2023 Remedial Action Monitoring (former Relief Holder Site) Certificate of Completion (Manistee River Sediments) - 2022
14	Marshall	1.6	190,000	1934	1943		1943	1963	City of Marshall	Assisted Living Center	NFA - 2019
15	Mt. Clemens	1.6	800,000	1934	1941	1941?	1942	1953	Consumers Energy Mt. Clemens DPW	Vacant Building, regulator station Public Works Yard	NFA (site proper) - 2021
16	Owosso	5.1	510,000	1934	1942		1935(d)	1954	Consumers Energy	Vacant lot and Regulator Station	Remedial Action Monitoring
17	Plymouth	1.1	120,000	1934	1942		1942	1955	Messina Concrete Junction Plymouth LLC Shiloh Management Corp	RedMix Plant Warehouse Office/Warehouse	Remedial Action Monitoring
18	Pontiac	9	4,500,000	1922	1942	1942	1949	1955	Consumers Energy City of Pontiac AKZO Nobel Coatings	Fenced Vacant Property Woodlots Parking Lot	Remedial Action Monitoring
19	Royal Oak	19	8,000,000	1932	1941	1941	1951	1954	Consumers Energy	Service Center	NFA - 2021
20	Saginaw	5.8	1,000,000	1922	1933	1924(b)	1942	1953	City of Saginaw Consumers Energy	Public Works Office Gas regulator station	Remedial Action Monitoring
21	St. Johns	0.7	50,000	1934	1942	1934?(e)		1952	FCM Development LLC	Parking Lot and residential apartments	NFA (site proper) - 2023
22	Sault Ste. Marie	1.5	240,000	1934	NA	1945(a)			MCM Marine, Inc. MCM Properties LLP	Marine contractor and construction company	Certificate of Completion - 2021
23	Zilwaukee	14	3,000,000	1924	1933	1933	1951	1953	Sargent Docks & Terminal Co.	Bulk Material Staging	NFA In preparation

(a) Date sold
(b) Switched to gas produced by Zilwaukee MGP
(c) Switched to gas produced by Lansing MGP
(d) Switched to gas produced by Flint MGP
(e) Switched to gas produced by Owosso MGP
? Date uncertain

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Case No.: U-21981

Exhibit: A-123 (HMP-2)

Page: 1 of 1

Witness: HMPrentice

Date: December 2025

Consumers Energy Company						
Line No.	MGP Environmental Response Cash Outflows - January 2025 to December 2025 by Phase & Site					
	SITE	RI	FS	RA	NFA	TOTAL
		2025	2025	2025	2025	2025
1	Alma	\$0	\$0	\$0	\$0	\$0
	Alpena	\$0	\$0	\$0	\$0	\$0
	Bay City	\$0	\$0	\$0	\$0	\$0
	Charlotte	\$0	\$0	\$0	\$37,000	\$37,000
	Flint Court	\$0	\$0	\$0	\$37,000	\$37,000
	Flint East	\$0	\$0	\$1,215,900	\$12,200	\$1,228,100
	Grand Ledge	\$0	\$0	\$0	\$0	\$0
	Hastings	\$0	\$0	\$0	\$0	\$0
	Ionia	\$0	\$0	\$0	\$0	\$0
	2	Jackson	\$0	\$0	\$20,000	\$42,500
3	Kalamazoo	\$0	\$0	\$0	\$14,000	\$14,000
4	Lansing	\$0	\$0	\$177,500	\$0	\$177,500
5	Manistee	\$0	\$0	\$0	\$11,200	\$11,200
6	Marshall	\$0	\$0	\$0	\$0	\$0
7	Mt. Clemens	\$0	\$0	\$0	\$0	\$0
8	Owosso	\$0	\$0	\$0	\$0	\$0
9	Plymouth	\$21,400	\$25,000	\$0	\$0	\$46,400
10	Pontiac	\$0	\$0	\$0	\$7,500	\$7,500
	Royal Oak	\$0	\$0	\$0	\$0	\$0
	Saginaw	\$0	\$0	\$0	\$0	\$0
	St. Johns	\$0	\$0	\$0	\$0	\$0
	SS Marie	\$0	\$0	\$0	\$0	\$0
	Zilwaukee	\$0	\$0	\$0	\$12,400	\$12,400
	TOTAL	\$21,400	\$25,000	\$1,413,400	\$173,800	\$1,633,600

TOTAL RI	TOTAL FS	TOTAL RA	NFA
\$21,400	\$25,000	\$1,413,400	\$173,800

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

HEATHER L. RAYL

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

HEATHER L. RAYL
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Heather L. Rayl, and my business address is One Energy Plaza, Jackson,
3 Michigan 49201.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
6 as a Senior Rates Analyst in the Revenue Requirements Section of the Rates and
7 Regulation Department.

8 **Q. Please state your educational background.**

9 A. I received both a Bachelor of Arts and a Master of Business Administration degree from
10 Michigan State University in 1993. I am also a Certified Public Accountant registered in
11 the state of Michigan.

12 **Q. Please describe your business experience.**

13 A. After receiving my degrees in 1993, I have held various positions in audit, accounting, and
14 finance with a focus on financial statement preparation and analysis, general ledger
15 analysis, and preparation and analysis of statutory annual reports.

16 In 2004, I started my career at Consumers Energy as a Senior Analyst in the
17 Accounting Research and External Financial Reporting Department. My responsibilities
18 included the research and documentation of numerous technical accounting topics for
19 departmental clients, including United States Generally Accepted Accounting Principles
20 issues, United States Securities and Exchange Commission issues, and utility/regulatory
21 accounting issues. I was also responsible for the preparation and documentation of
22 financial statement disclosures in the Company’s Forms 10-K and 10-Q, with a focus on
23 regulatory matters.

HEATHER L. RAYL
U-21981 DIRECT TESTIMONY

1 In 2013, I transferred to Consumers Energy's Rates and Regulation Department.
2 During my tenure, I have held positions in Revenue Requirements and Rate Design as a
3 Senior Rates Analyst.

4 **Q. What are your job responsibilities?**

5 A. I am responsible for conducting analyses to determine the Company's revenue
6 requirements and for preparing testimony and supporting exhibits for regulatory filings
7 submitted to the Michigan Public Service Commission ("MPSC" or the "Commission").

8 **Q. Have you previously testified in any proceedings before the Commission?**

9 A. Yes. I have filed testimony in Gas Rate Case Nos. U-18124, U-18424, U-21148, U-21308,
10 U-21490, and U-21806; Gas Cost Recovery ("GCR") Plan Case Nos. U-17334, U-17693,
11 U-17943, U-18151, U-21269, U-21437 and U-21606; GCR Reconciliation Case Nos.
12 U-16924-R, U-17133-R, U-17334-R, and U-17693-R; Gas Revenue Decoupling Case No.
13 U-18367; Renewable Energy Plan Case No. U-18231; and Investment Recovery
14 Mechanism Reconciliation Case No. U-20893.

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

16 A. The purpose of my direct testimony is to present: (i) the Company's revenue requirement
17 calculation for the historical year; (ii) the Company's revenue requirement calculation for
18 the projected test year; and (iii) the regulatory assets and liabilities included for recovery
19 in this case related to the sale of the Riverside Storage Field, the pension/Other Post-
20 Employment Benefits ("OPEB") volatility mechanism, and the SAP S/4 HANA
21 Implementation Project ("SAP Project").

HEATHER L. RAYL
U-21981 DIRECT TESTIMONY

1 **Q. How is your direct testimony organized?**

2 A. My direct testimony is divided into three sections consistent with the topics I will be
3 covering:

4 Section I: Historical Year

5 Section II: Projected Test Year

6 Section III: Regulatory Assets and Liabilities

7 **Q. Please describe the revenue requirements determination.**

8 A. In compliance with the Filing Requirements approved in Case No. U-18238, my direct
9 testimony presents the revenue requirement for the historical year, explains the
10 development of the revenue requirement for the projected test year, and reconciles the
11 historical and projected test years. The Company demonstrates in the instant case that it
12 requires a rate increase to earn a just and reasonable return.

13 **Q. Are you sponsoring any exhibits in this proceeding?**

14 A. Yes. I am sponsoring the historical year exhibits identified in Section I of my direct
15 testimony and the projected test year exhibits identified in Section II of my direct
16 testimony.

17 **Q. Were these exhibits prepared by you or under your direction and supervision?**

18 A. Yes.

19 **I. HISTORICAL YEAR**

20 **Q. What is the historical year used in your exhibits and supporting direct testimony?**

21 A. The Company selected calendar year 2024 as the historical year in the instant case.

HEATHER L. RAYL
U-21981 DIRECT TESTIMONY

Q. Please identify the exhibits that you are sponsoring to comply with the Commission's Filing Requirements for the historical year.

A. I am sponsoring the following exhibits to satisfy the Commission's historical year Filing Requirements:

Exhibit A-1 (HLR-1)	Schedule A-1	Revenue Deficiency (Sufficiency) for the Historical Year Ended December 31, 2024;
Exhibit A-1 (HLR-2)	Schedule A-2	Historical Financial Metrics - Gas Results Only;
Exhibit A-2 (HLR-3)	Schedule B-1	Rate Base for the Historical Year Ended December 31, 2024;
Exhibit A-2 (HLR-4)	Schedule B-2	Total Utility Plant for the Historical Year Ended December 31, 2024;
Exhibit A-2 (HLR-5)	Schedule B-3	Depreciation Reserve and Other Deductions for the Historical Year Ended December 31, 2024;
Exhibit A-2 (HLR-6)	Schedule B-4	Working Capital for the Historical Year Ended December 31, 2024;
Exhibit A-2 (HLR-7)	Schedule B-5	13-Month Average Balance Sheet for the Historical Year Ended December 31, 2024;
Exhibit A-2 (HLR-8)	Schedule B-6	Point-in-Time Balance Sheet for the Historical Year Ended December 31, 2024;
Exhibit A-3 (HLR-9)	Schedule C-1	Adjusted Net Operating Income for the Historical Year Ended December 31, 2024;
Exhibit A-3 (HLR-10)	Schedule C-2	Revenue Conversion Factor for the Historical Year Ended December 31, 2024;
Exhibit A-3 (HLR-11)	Schedule C-3	Operating Revenues for the Historical Year Ended December 31, 2024;

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1	Exhibit A-3 (HLR-12)	Schedule C-4	Cost of Gas Sold for the Historical
2			Year Ended December 31, 2024;
3	Exhibit A-3 (HLR-13)	Schedule C-5	Operation and Maintenance
4			Expenses for the Historical Year
5			Ended December 31, 2024;
6	Exhibit A-3 (HLR-14)	Schedule C-5.1	Operation and Maintenance
7			Expenses by Witness for the
8			Historical Year Ended
9			December 31, 2024;
10	Exhibit A-3 (HLR-15)	Schedule C-6	Depreciation and Amortization
11			Expenses for the Historical Year
12			Ended December 31, 2024;
13	Exhibit A-3 (HLR-16)	Schedule C-7	General Taxes for the Historical
14			Year Ended December 31, 2024;
15	Exhibit A-3 (HLR-17)	Schedule C-8	Federal Income Taxes for the
16			Historical Year Ended
17			December 31, 2024;
18	Exhibit A-3 (HLR-18)	Schedule C-9	State Income Taxes for the Historical
19			Year Ended December 31, 2024;
20	Exhibit A-3 (HLR-19)	Schedule C-10	Other (or Local) Taxes for the
21			Historical Year Ended
22			December 31, 2024;
23	Exhibit A-3 (HLR-20)	Schedule C-11	Allowance for Funds Used During
24			Construction for the Historical Year
25			Ended December 31, 2024;
26	Exhibit A-3 (HLR-21)	Schedule C-12	Income Tax Effect of Interest for the
27			Historical Year Ended
28			December 31, 2024;
29	Exhibit A-3 (HLR-22)	Schedule C-13	Interest Synchronization Adjustment
30			for the Historical Year Ended
31			December 31, 2024;
32	Exhibit A-4 (HLR-23)	Schedule D-1	Capital Structure and Rate of Return
33			Summary for the Historical Year
34			Ended December 31, 2024;

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Exhibit A-4 (HLR-24) Schedule D-2 Cost of Long-Term Debt (Excluding Securitization) for the Historical Year Ended December 31, 2024;

Exhibit A-4 (HLR-25) Schedule D-3 Cost of Short-Term Debt for the Historical Year Ended December 31, 2024;

Exhibit A-4 (HLR-26) Schedule D-4 Cost of Preferred Stock for the Historical Year Ended December 31, 2024; and

Exhibit A-4 (HLR-27) Schedule D-5 Cost of Common Shareholder's Equity for the Historical Year Ended December 31, 2024.

Q. Please discuss the organization and format of the historical year exhibits.

A. The organization and format of the historical year exhibits are specified by the MPSC's filing requirements. The exhibits are organized into schedules that present the development of the revenue sufficiency (Schedule A), rate base (Schedule B), adjusted net operating income ("NOI") (Schedule C), and rate of return (Schedule D).

Q. Who is sponsoring the historical year Schedule E exhibits?

A. Company witness Mustafa A. Sherwani sponsors the historical year Schedule E exhibits.

Q. Please describe the Schedule A exhibits for the historical period.

A. Exhibit A-1 (HLR-1), Schedule A-1, presents the computation of the revenue sufficiency for the year ended December 31, 2024. Exhibit A-1 (HLR-1), Schedule A-1 is developed from the financial data presented in Schedules B, C, and D described below.

Exhibit A-1 (HLR-2), Schedule A-2, is a multiple page exhibit that provides financial metrics on both a financial basis (pages 1 through 3) and a ratemaking basis (pages 4 through 6) for the years 2020 through 2024. The calculation of the return on common equity for each of these years can be found on pages 1 and 4.

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1 **Q. Please describe the Schedule B exhibits for the historical period.**

2 A. Exhibit A-2 (HLR-3), Schedule B-1, presents the calculation of the average rate base for
3 the year ended December 31, 2024. The total rate base on line 8 of Exhibit A-2 (HLR-3),
4 Schedule B-1, is carried forward to Exhibit A-1 (HLR-1), Schedule A-1, line 1.
5 Exhibit A-2 (HLR-4), Schedule B-2, through Exhibit A-2 (HLR-8), Schedule B-6, support
6 the development of the various components of historical rate base including net utility plant
7 and working capital.

8 **Q. Please describe the Schedule C exhibits for the historical year.**

9 A. Exhibit A-3 (HLR-9), Schedule C-1, presents the calculation of adjusted NOI for the year
10 ended December 31, 2024. The adjusted NOI disclosed on line 35 of Exhibit A-3 (HLR-9),
11 Schedule C-1, is carried forward to Exhibit A-1 (HLR-1), Schedule A-1, line 2.
12 Exhibit A-3 (HLR-10), Schedule C-2, through Exhibit A-3 (HLR-22), Schedule C-13,
13 support the development of the various components of adjusted NOI for the historical year.
14 Schedule C data for the historical year is generally sourced to the Company's
15 2024 Form P-522 Annual Report filed with the MPSC. In addition, Exhibit A-3 (HLR-14),
16 Schedule C-5.1, reconciles the historical year operating and maintenance ("O&M")
17 expense by account, by witness, with the O&M expense amounts filed in the Company's
18 2024 Form P-522 Annual Report.

19 **Q. Please describe the Schedule D exhibits for the historical year.**

20 A. Exhibit A-4 (HLR-23), Schedule D-1, presents the overall rate of return summary for the
21 year ended December 31, 2024. The total weighted cost of capital is shown on line 14,
22 column (h), and is carried forward to Exhibit A-1 (HLR-1), Schedule A-1, line 4.
23 Exhibit A-4 (HLR-24), Schedule D-2, through Exhibit A-4 (HLR-27), Schedule D-5,

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support the development of various components of the overall rate of return for the historical period, including (i) debt, (ii) preferred stock, (iii) common equity, and (iv) other sources of financing.

Q. Based on your review of the historical year exhibits, was there a revenue deficiency in the historical year?

A. No. I have calculated a revenue sufficiency of \$46.1 million for the 12-month period ended December 31, 2024.

Q. Please summarize the key findings from the historical year exhibits.

A. As presented on Exhibit A-1 (HLR-1), Schedule A-1, the key findings from the exhibits for the historical year ended December 31, 2024 are as follows:

	<i>(\$ In Thousands)</i>
Rate Base	\$ 10,001,178
Adjusted NOI	\$ 620,948
Overall Rate of Return	6.21%
Required Rate of Return	5.86%
Income Required	\$ 586,459
Income Sufficiency	\$ (34,489)
Revenue Conversion Factor	1.3381
Revenue Sufficiency	\$ (46,148)

Q. Do the above results include typical ratemaking adjustments such as weather, unusual, one-time, or out-of-period items, and regulatory disallowances?

A. Yes. The historical year presentation begins with the Company's booked results and ratemaking adjustments and normalizations are recognized, where appropriate, as summarized on Exhibit A-3 (HLR-9), Schedule C-1. I will describe the ratemaking adjustments and normalizations in Section II of my direct testimony, which covers the projected test year.

II. PROJECTED TEST YEAR

Q. What is the projected test year used in your exhibits and supporting testimony?

A. The Company selected the 12-month period ending October 31, 2027 as the projected test year in this proceeding.

Q. Please identify the exhibits that you are sponsoring to comply with the Commission's Filing Requirements for the projected test year.

A. The following exhibits are being submitted to support and satisfy the projected test year Filing Requirements:

Exhibit A-11 (HLR-28)	Schedule A-1	Revenue Deficiency (Sufficiency) for the Projected 12-Month Period Ending October 31, 2027;
Exhibit A-11 (HLR-29)	Schedule A-2	Financial Metrics – Ratemaking Basis – For the Projected 12-Month Period Ending October 31, 2027, Gas Results Only;
Exhibit A-11 (HLR-30)	Schedule A-3	Comparison of the Historical and Projected Revenue Requirement for the Projected 12-Month Period Ending October 31, 2027;
Exhibit A-12 (HLR-31)	Schedule B-1	Rate Base for the Projected 12-Month Period Ending October 31, 2027;
Exhibit A-12 (HLR-32)	Schedule B-2	Total Utility Plant for the Projected 12-Month Period Ending October 31, 2027;
Exhibit A-12 (HLR-33)	Schedule B-3	Depreciation Reserve and Other Deductions for the Projected 12-Month Period Ending October 31, 2027;
Exhibit A-12 (HLR-34)	Schedule B-4	Working Capital for the Projected 12-Month Period Ending October 31, 2027;

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1	Exhibit A-12 (HLR-35)	Schedule B-5	Capital Expenditures Summary for
2			the Projected 12-Month Period
3			Ending October 31, 2027;
4	Exhibit A-13 (HLR-36)	Schedule C-1	Adjusted Net Operating Income for
5			the Projected 12-Month Period
6			Ending October 31, 2027;
7	Exhibit A-13 (HLR-37)	Schedule C-1.1	Development of Adjusted Net
8			Operating Income for the Projected
9			12-Month Period Ending October 31,
10			2027;
11	Exhibit A-13 (HLR-38)	Schedule C-2	Calculation of the Revenue
12			Conversion Factor for the Projected
13			12-Month Period Ending October 31,
14			2027;
15	Exhibit A-13 (HLR-39)	Schedule C-3	Operating Revenues for the
16			Projected 12-Month Period Ending
17			October 31, 2027;
18	Exhibit A-13 (HLR-40)	Schedule C-4	Cost of Gas Sold for the Projected
19			12-Month Period Ending October 31,
20			2027;
21	Exhibit A-13 (HLR-41)	Schedule C-5	Operation and Maintenance
22			Expenses for the Projected 12-Month
23			Period Ending October 31, 2027;
24	Exhibit A-13 (HLR-42)	Schedule C-5.1	Summary of Inflation and Merit
25			Increases Included in Other
26			Operation and Maintenance
27			Expenses for the Projected 12-Month
28			Period Ending October 31, 2027;
29	Exhibit A-13 (HLR-43)	Schedule C-6	Depreciation and Amortization
30			Expenses for the Projected 12-Month
31			Period Ending October 31, 2027;
32	Exhibit A-13 (HLR-44)	Schedule C-7	General Taxes for the Projected
33			12-Month Period Ending October 31,
34			2027;
35	Exhibit A-13 (HLR-45)	Schedule C-8	Federal Income Taxes for the
36			Projected 12-Month Period Ending
37			October 31, 2027;

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1	Exhibit A-13 (HLR-46)	Schedule C-9	State Income Taxes for the Projected
2			12-Month Period Ending October 31,
3			2027;
4	Exhibit A-13 (HLR-47)	Schedule C-10	Other (or Local) Taxes for the
5			Projected 12-Month Period Ending
6			October 31, 2027;
7	Exhibit A-13 (HLR-48)	Schedule C-11	Allowance for Funds Used During
8			Construction for the Projected
9			12-Month Period Ending October 31,
10			2027;
11	Exhibit A-13 (HLR-49)	Schedule C-12	Income Tax Effect of Interest for the
12			Projected 12-Month Period Ending
13			October 31, 2027;
14	Exhibit A-13 (HLR-50)	Schedule C-13	Interest Synchronization Adjustment
15			for the Projected 12-Month Period
16			Ending October 31, 2027; and
17	Exhibit A-124 (HLR-51)		Pension and OPEB Volatility
18			Mechanism Regulatory
19			Asset/Liability and Amortization
20			Expense of the for the Projected 12-
21			Month Period Ending October 31,
22			2027.

Q. Please discuss the organization and format of the projected test year exhibits.

A. The projected test year exhibits are organized and formatted in a similar fashion to the historical period exhibits. The exhibits are organized into schedules that present the development of the revenue deficiency (Schedule A), rate base (Schedule B), and adjusted NOI (Schedule C). Company witness Marc R. Bleckman is sponsoring schedules that address rate of return (Schedule D). Company witness Sherwani is sponsoring sales, load, and customer data (Schedules E) exhibits. Company witness S. Austin Smith is sponsoring the cost-of-service study and present and proposed revenue. Company witness Lynne McCollum is sponsoring the proposed tariff sheets (Schedule F) exhibits.

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Q. Please summarize the key findings for the projected test year exhibits.

A. As presented on Exhibit A-11 (HLR-28), Schedule A-1, the key findings from the exhibits for the projected 12-month period ending October 31, 2027 are as follows:

	(\$ In Thousands)
Rate Base	\$ 12,488,293
Adjusted NOI	\$ 620,380
Overall Rate of Return	4.97%
Required Rate of Return	6.40%
Income Required	\$ 799,708
Income Deficiency	\$ 179,328
Revenue Conversion Factor	1.3381
Revenue Deficiency	\$ 239,956

Q. What inflation factors will the Company be using in its presentation?

A. The Company utilized the inflation factors published by S&P Global, a leader in the market of financial information and analytics. The inflation factors in the June 2025 edition of S&P Global's *U.S. Economic Outlook* publication were 2.8% for 2025, 2.4% for 2026, and 2.3% for 2027.¹ Exhibit A-13 (HLR-42), Schedule C-5.1, provides a summary of the inflation impacts included in the instant case.

Q. How has the Company addressed the filing requirement to reconcile the projected test year to the most recent calendar year?

A. The following exhibits reconcile the projected test year to the historical year:

- i. Exhibit A-11 (HLR-30), Schedule A-3;
- ii. Exhibit A-12 (HLR-34), Schedule B-4;
- iii. Exhibit A-13 (HLR-37), Schedule C-1.1;
- iv. Exhibit A-13 (HLR-41), Schedule C-5; and

¹ 2.1% based on a 10-month proration to align with the October 31, 2027 projected test year.

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v. Exhibit A-13 (HLR-42), Schedule C-5.1.

Q. Please explain Exhibit A-11 (HLR-29), Schedule A-2.

A. This exhibit presents the financial metrics for the projected test year as required by the MPSC's Filing Requirements. Column (b) shows the metrics assuming no rate relief is granted. Column (c) shows the metrics assuming the Company's full rate relief request is granted.

Q. Please explain Exhibit A-11 (HLR-30), Schedule A-3.

A. This exhibit presents a comparison of the historical and projected year revenue deficiency for Consumers Energy of \$240.0 million (column (f), line 13). Column (d) of the exhibit presents rate base and rate of return amounts for the historical period. Column (e) shows the changes resulting from adjustments as supported by various Company witnesses that were made in developing the projected test year revenue requirement. Column (f) shows the rate base, income requirement, and revenue requirement for the projected test year.

Q. What are the major differences between the historical year and the projected test year results shown on Exhibit A-11 (HLR-30), Schedule A-3?

A. The comparison of historical and projected results in Exhibit A-11 (HLR-30), Schedule A-3, shows that rate base increases by approximately \$2.5 billion (line 7) and the rate of return increases from 5.86% to 6.40% (line 8). In addition, adjusted NOI (line 10) decreases by approximately \$0.6 million from the historical period to the projected test year.

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1 **Q. Please describe Exhibit A-12 (HLR-31), Schedule B-1.**

2 A. Exhibit A-12 (HLR-31), Schedule B-1, is a summary presentation of the projected test year
3 rate base. The total rate base for the 12 months ending October 31, 2027 is \$12.5 billion
4 as shown on line 8.

5 **Q. Please describe Exhibit A-12 (HLR-32), Schedule B-2.**

6 A. Exhibit A-12 (HLR-32), Schedule B-2, shows the total utility plant for the projected test
7 year. The total on line 25 is carried forward to line 1 on Exhibit A-12 (HLR-31),
8 Schedule B-1.

9 **Q. Please describe how the projected test year average utility plant and related amounts**
10 **were developed.**

11 A. Utility plant and reserve balances for the projected test year were developed by calculating
12 a 13-month average of the balances from October 31, 2026 through October 31, 2027.
13 Actual calendar year 2024 balances for construction work-in-progress (“CWIP”), gross
14 plant, and accumulated provision for depreciation were used as the starting point. Projected
15 capital expenditures (including Allowance for Funds Used During Construction
16 (“AFUDC”)) and plant additions were added for the calendar year 2025, calendar year
17 2026, and for the 10 months ending October 31, 2027; followed by adjustments for
18 projected retirements, depreciation expense, cost of removal, the calculation of the ending
19 balances for CWIP, plant, and the accumulated provision for depreciation.

20 **Q. Please describe Exhibit A-12 (HLR-33), Schedule B-3.**

21 A. Exhibit A-12 (HLR-33), Schedule B-3, presents the depreciation reserve for the projected
22 test year by functional group. The total on line 18 is carried forward to line 2 on Exhibit
23 A-12 (HLR-31), Schedule B-1. The increase in projected depreciation reserve incorporates

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1 projected depreciation expense from Exhibit A-13 (HLR-43), Schedule C-6, which I
2 describe later in my testimony.

3 **Q. Please explain Exhibit A-12 (HLR-34), Schedule B-4.**

4 A. Exhibit A-12 (HLR-34), Schedule B-4, develops the Company's proposed projected test
5 year working capital. The starting point for this exhibit is the historical year working
6 capital (column (b)), which is adjusted to reflect the 13-month average June 2025 ending
7 balances shown in column (d), the most current study practical for inclusion at the time of
8 assembling the case. The June 2025 average balances are then adjusted to reflect changes
9 to:

- 10 i. cash based on projections sponsored by Company witness Bleckman;
- 11 ii. gas stored underground as sponsored by Company witness Timothy K. Joyce
12 and the corresponding adjustment to accounts payable;
- 13 iii. prepaid cloud computing balances sponsored by Company witness Stacy H.
14 Baker;
- 15 iv. pension and OPEB balances based on projections sponsored by Company
16 witness Kendra K. Grob;
- 17 v. the regulatory asset and liability related to the pension and OPEB volatility
18 mechanism discussed below in Section III of my testimony;
- 19 vi. accrued tax balances;
- 20 vii. deferred debits for a Standardization Engineering Analysis adjustment
21 sponsored by Company witness Michael P. Griffin;
- 22 viii. the regulatory asset for the loss on the sale of the Riverside Storage Facility
23 discussed below in Section III of my testimony; and
- 24 ix. the regulatory asset for the for SAP Project as sponsored by Company witness
25 Baker and discussed below in Section III of my testimony.

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1 **Q. Why did the Company use the Balance Sheet Method in determining working capital?**

2 A. Use of the Balance Sheet Method was mandated by the MPSC in Case No. U-7350. The
3 Filing Requirements also require that this method be used to develop the allowance for
4 working capital.

5 **Q. Please describe Exhibit A-12 (HLR-35), Schedule B-5.**

6 A. Exhibit A-12 (HLR-35), Schedule-B-5, provides a summary of capital spending as
7 supported by Company witnesses Baker, Matthew J. Foster, Griffin, Quentin A. Guinn,
8 Joyce, Joshua J. Judy, Kristine A. Pascarello, Lincoln D. Warriner, and Melissa N.
9 Wiersema. This exhibit provides capital spending for the bridge years and the projected
10 test year as well as the projected and approved test year capital spending in the Company's
11 previous gas rate case, Case No. U-21806.

12 **Q. Please describe Exhibit A-13 (HLR-36), Schedule C-1.**

13 A. Exhibit A-13 (HLR-36), Schedule C-1, presents the calculation of adjusted NOI for the
14 projected test year of \$620.4 million as shown on line 22. Total operating revenues (line 4)
15 are netted against total operating expenses (line 16) to arrive at NOI on line 17. Further
16 adjustments are made on lines 18, 20, and 21, which utilize normal ratemaking practices to
17 arrive at adjusted NOI on line 22.

18 **Q. Please explain Exhibit A-13 (HLR-37), Schedule C-1.1.**

19 A. Exhibit A-13 (HLR-37), Schedule C-1.1, presents the reconciliation of historical year NOI
20 to projected test year NOI. The exhibit presents revenues in columns (c) through (e),
21 expenses in columns (f) through (p), NOI in column (q), AFUDC in column (r), and
22 adjusted NOI in column (s). The exhibit begins with the historical year on line 1,
23 normalizing adjustments to the historical year on lines 2 through 15, and projected test year

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adjustments on lines 17 through 31. Total adjusted NOI for the projected test year is shown on line 32, column (s). In general, the revenue and expense adjustments are shown with their accompanying tax impacts to arrive at the adjusted NOI. The historic year NOI of \$514.5 million on line 1, column (s), ties to the historic NOI on line 19 of Exhibit A-3 (HLR-9), Schedule C-1.

Q. Please explain the adjustments on Exhibit A-13 (HLR-37), Schedule C-1.1.

A. The adjustments on lines 2 through 15 are made to comply with prior Commission orders and follow traditional ratemaking adjustments to historical results such as: (i) removing regulatory disallowances; (ii) normalizing for unusual, one-time, or out-of-period items; (iii) bringing certain revenues and expenses “above the line”; (iv) adjusting historical revenues to reflect “normal” weather; and (v) adjusting income taxes. Additional adjustments include certain O&M expense normalizations to better align the historic year with expected expense amounts in the projected test year. These adjustments are supported by my exhibits, supporting workpapers, and the exhibits of other Company witnesses.

The historical year adjusted NOI on Exhibit A-13 (HLR-37), Schedule C-1.1, line 16, column (s), of \$620.9 million ties to the adjusted NOI on Exhibit A-3 (HLR-9), Schedule C-1, line 35.

Q. How were the projected test year adjustments on Exhibit A-13 (HLR-37), Schedule C-1.1, developed?

A. These adjustments represent the movement from the historical year adjusted NOI to the projected test year adjusted NOI. The adjustments on lines 17 through 31 are developed from my exhibits and supporting workpapers and from the exhibits of Company witnesses Baker, Amy M. Conrad, Foster, Griffin, Grob, Guinn, Joyce, Pascarello, James P. Pnacek,

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1 Sherwani, and Brian J. Vanblarcum. The projected test year adjusted NOI on line 32 is the
2 result of netting the projected test year adjustments on lines 17 through 31 against the
3 historical year adjusted NOI on line 16. The projected test year adjusted NOI of
4 \$620.4 million on line 32, column (s), ties to the projected test year adjusted NOI on
5 Exhibit A-13 (HLR-36), Schedule C-1, line 22.

6 **Q. Please explain the projected test year adjustments on Exhibit A-13 (HLR-37),**
7 **Schedule C-1.1.**

8 A. Lines 17, 18, and 20 represent the changes in gross margin from the adjusted historical year
9 to the projected test year and are supported by Company witness Sherwani.

10 Line 19 represents the change in other revenues from the adjusted historical year to
11 the projected test year and is supported by my workpapers.

12 Lines 21 and 22 represent the change in lost and unaccounted for ("LAUF") and
13 company use gas, respectively, and are supported by Company witness Joyce.

14 Line 23 represents the change in other O&M expenses from the adjusted historical
15 year to the projected test year and are supported by Company witnesses Baker, Conrad,
16 Foster, Griffin, Grob, Guinn, Joyce, Pascarello, Pnacek, and Wiersema. The adjustments
17 on lines 21 through 23 are expanded on Exhibit A-13 (HLR-41), Schedule C-5 and
18 Exhibit A-13 (HLR-42), Schedule C-5.1.

19 Line 24 represents the change in the book depreciation expense from the adjusted
20 historical year to the projected test year. As stated above, the Company used the approved
21 book depreciation rates, projected capital expenditures, and assumed plant retirements to
22 determine the depreciation expense adjustment necessary to arrive at an appropriate level
23 of book depreciation expense for the projected test year.

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1 Line 25 represents the change in Manufactured Gas Plant (“MGP”) amortization
2 expense from the adjusted historical year to the projected test year, which is supported by
3 Company witness Foster, and the projected amortization of the Riverside Storage Field
4 regulatory asset as supported by my workpapers.

5 Line 26 represents an adjustment to real and personal property tax to the projected
6 test year amount supported by Company witness VanBlarcum and shown on
7 Exhibit A-13 (HLR-44), Schedule C-7, line 1.

8 Line 27 represents the change in historical year payroll and other general taxes to
9 the projected test year amount as shown on Exhibit A-13 (HLR-44), Schedule C-7, the sum
10 of lines 6 and 15.

11 Line 28 represents the impact of City Income Tax (“CIT”). The projected test year
12 CIT expense is shown on Exhibit A-13 (HLR-47), Schedule C-10.

13 Line 29 reflects the impact of Michigan Corporate Income Tax (“MCIT”). The
14 projected test year MCIT expense is shown on Exhibit A-13 (HLR-46), Schedule C-9.

15 Line 30 represents the Federal Income Tax (“FIT”) adjustments which result from
16 the other changes in revenues and expenses in the projected test year. Line 30 also reflects
17 the differences between the FIT expense calculated at the current federal statutory rate and
18 the actual total income tax expense. The projected test year FIT expense is shown on
19 Exhibit A-13 (HLR-45), Schedule C-8.

20 Line 31 represents an adjustment to AFUDC from the adjusted historical year to
21 the projected test year. The projected test year AFUDC is shown on
22 Exhibit A-13 (HLR-48), Schedule C-11. AFUDC is an accounting convention that
23 recognizes the costs, both interest and equity, of financing certain construction projects.

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1 The criteria for applying AFUDC to a construction project require on-site construction
2 activities of more than six months duration and an estimated plant cost (excluding AFUDC)
3 in excess of \$50,000. The recognition of the costs is through the transfer of interest and
4 equity cost from the income statement to CWIP on the balance sheet. The interest and
5 equity costs are capitalized in the same manner as construction labor and material costs
6 when the project is closed to plant-in-service. Projected AFUDC is comprised of two
7 components. The first is an AFUDC offset equal to the amount of AFUDC included in
8 CWIP. The second component removes the return on the AFUDC embedded in CWIP.
9 This additional credit results in a revenue requirement of zero for the AFUDC eligible
10 projects within CWIP.

11 **Q. Please describe Exhibit A-13 (HLR-38), Schedule C-2.**

12 A. Exhibit A-13 (HLR-38), Schedule C-2, shows the development of the revenue conversion
13 factor for the projected test year. The revenue conversion factor converts a utility's
14 after-tax income deficiency (or sufficiency) into the required pre-tax revenue requirement.
15 For the projected test year, the FIT rate is 21.00%, the MCIT rate is 5.24%, and the CIT
16 rate is 0.16%, which results in a revenue conversion factor of 1.3381.

17 **Q. Please explain Exhibit A-13 (HLR-39), Schedule C-3.**

18 A. Exhibit A-13 (HLR-39), Schedule C-3, presents the total operating revenues for the
19 projected test year. Line 1 and line 2 of this exhibit present the sales and transportation
20 revenue supported by Company witness Sherwani. Line 3 presents the other revenues
21 supported by my workpapers. The total on line 4 is carried forward to the Company's
22 projected adjusted NOI presentation on Exhibit A-13 (HLR-36), Schedule C-1, line 4.

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1 **Q. Please explain Exhibit A-13 (HLR-40), Schedule C-4.**

2 A. Exhibit A-13 (HLR-40), Schedule C-4, presents the cost of gas sold for the projected test
3 year. The projected test year cost of gas sold is supported by Company witness Sherwani.
4 This total is carried forward to line 5 of the Company's projected adjusted NOI
5 presentation on Exhibit A-13 (HLR-36), Schedule C-1.

6 **Q. Please explain Exhibit A-13 (HLR-41), Schedule C-5.**

7 A. Exhibit A-13 (HLR-41), Schedule C-5, presents the other O&M expenses for the projected
8 test year as compared to the historical year. The amounts on lines 1 through 28 were
9 provided by Company witnesses Baker, Conrad, Foster, Griffin, Grob, Guinn, Joyce,
10 Pascarello, Pnacek, and Wiersema and are supported in their direct testimony and exhibits.
11 Line 29 through 32 are supported by my workpapers. LAUF gas (line 1), company use gas
12 (line 2), and total O&M expense (line 36) are carried forward to lines 6, 7, and 8,
13 respectively, of the Company's projected adjusted NOI presentation on
14 Exhibit A-13 (HLR-36), Schedule C-1.

15 **Q. Please explain Exhibit A-13 (HLR-42), Schedule C-5.1.**

16 A. Exhibit A-13 (HLR-42), Schedule C-5.1 illustrates how historical O&M costs are adjusted
17 to reflect inflation, additional cost increases, and anticipated productivity gains. Column
18 (c) presents the historical O&M expenses. Column (d) shows the expected increase in
19 these costs based solely on projected inflation rates. Column (e) captures cost increases
20 beyond inflation, net of any projected productivity improvements. Column (f) represents
21 the total projected test year O&M expenses, calculated as the sum of columns (c), (d), and
22 (e). The amounts on lines 1 through 28 were provided by Company witnesses Baker,
23 Conrad, Foster, Griffin, Grob, Guinn, Joyce, Pascarello, Pnacek, and Wiersema and are

HEATHER L. RAYL
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supported in their direct testimony and exhibits. Line 29 through 32 are supported by my workpapers.

Q. Please explain Exhibit A-13 (HLR-43), Schedule C-6.

A. Exhibit A-13 (HLR-43), Schedule C-6, presents depreciation by functional grouping and amortization expenses for the projected test year. The total on lines 18 and 21 are carried forward to lines 9 and 10, respectively, of the Company's projected adjusted NOI presentation on Exhibit A-13 (HLR-36), Schedule C-1. The calculated depreciation expense and associated accumulated provision for depreciation presented uses the book depreciation rates approved by the Commission as follows:

1. the Settlement Agreement in Case No. U-21176 dated September 8, 2022 for gas utility plant balances; and
2. the Order in Case No. U-20849 dated December 9, 2021 for common utility plant.

Book depreciation expense was developed by applying the functional composite book depreciation rates to the average projected test year depreciable plant balances.

Q. Does the Company have a depreciation rate case pending before the Commission that could impact depreciation expense and, therefore, the revenue deficiency in this proceeding?

A. No.

Q. Please explain Exhibit A-13 (HLR-44), Schedule C-7, through Exhibit A-13 (HLR-48), Schedule C-11.

A. These exhibits present the following: (i) projected general taxes; (ii) projected FITs; (iii) projected state income taxes; (iv) projected other (or local) taxes; and (v) projected AFUDC. The total from each schedule is carried forward to the Company's projected adjusted NOI presentation on Exhibit A-13 (HLR-36), Schedule C-1.

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1 **Q. Please describe Exhibit A-13 (HLR-49), Schedule C-12.**

2 A. Exhibit A-13 (HLR-49), Schedule C-12, shows the calculation of pro forma interest
3 expense for the projected test year and the corresponding impact on income taxes.

4 **Q. Please describe Exhibit A-13 (HLR-50), Schedule C-13.**

5 A. Exhibit A-13 (HLR-50), Schedule C-13, shows the calculation of the tax effect of the
6 interest synchronization adjustment for the projected test year and the corresponding
7 impact on income taxes.

8 **Q. Why are Exhibit A-13 (HLR-49), Schedule C-12, and Exhibit A-13 (HLR-50),
9 Schedule C-13, included in the presentation?**

10 A. The purpose of these exhibits is to align the interest expense and the associated tax benefits
11 in the projected test year with the amount of rate base that is financed with debt and display
12 the alignment in a transparent manner.

13 **III. REGULATORY ASSETS AND LIABILITIES**

14 **A. Rate Impact from the sale of Riverside Storage Field**

15 **Q. What is the background regarding the Riverside Storage Field as established in Case
16 No. U-21656?**

17 A. In its July 23, 2024 Order in Case No. U-21656, the Commission approved the Company's
18 request for cost deferral accounting and the establishment of a regulatory asset for the loss
19 associated with the potential sale of the Riverside Storage Field. This approval permits the
20 Company to defer the loss on the sale of the Riverside Storage Field and record it as a
21 regulatory asset, subject to recovery in a general rate case.

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1 **Q. Has the Company executed a Purchase and Sale Agreement for the Riverside Storage**
2 **Field?**

3 A. Yes. The Company executed a Purchase and Sale Agreement in April 2025. As discussed
4 by Company witness Joyce, the transaction is expected to close in December 2025. The
5 Company currently anticipates a total loss of \$12.0 million from the sale.

6 **Q. How was the sale of the Riverside Storage Field addressed in the Company's prior**
7 **general rate case (Case No. U-21806)?**

8 A. In Case No. U-21806, the Company anticipated the sale of the Riverside Storage Field and
9 included adjustments to substitute the historical net book value of the assets with a "loss
10 on sale" regulatory asset in working capital, along with a proposed amortization schedule.
11 However, during the previous case, the prospective buyer withdrew their offer, and the
12 transaction did not close.

13 As the sale did not close, the MPSC Staff recommended adjustments to net book
14 value, working capital, amortization, depreciation, and property tax to properly reinstate
15 the Riverside Storage Field assets in Case No. U-21806. The Commission adopted these
16 adjustments in its final order in Case No. U-21806 and ordered that "*if the asset is sold*
17 *during the test year, any amount collected could offset the established regulatory asset*
18 *already in place until rates are reset in the next rate case*" (page 94).

19 **Q. How has the Company applied the Commissions' order in the previous case to the**
20 **instant case?**

21 A. In accordance with the Commission's Order in Case No. U-21806, the Company has
22 applied a \$1.2 million offset to the estimated loss, reflecting the Riverside Storage Field's
23 revenue requirement currently embedded in rates. This results in a net loss of

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1 \$10.8 million. The Company has adjusted projected working capital to reflect the
2 regulatory asset balance for the test year as shown on Exhibit A-12 (HLR-34), Schedule
3 B-4. Additionally, the Company requests amortization of the regulatory asset over a
4 five-year period and has included the associated amortization expense for the test year on
5 Exhibit A-13 (HLR-43), Schedule C-6.

6 **Q. Will the Company update the amortization expense in future rate cases?**

7 A. Yes. The Company has used its best estimate of the Riverside loss to reflect the impacts
8 within the instant case; however, actual transaction costs and standard closing adjustments
9 may ultimately affect the final recorded loss. Therefore, the Company proposes adjusting
10 the associated amortization expenses in future gas rate cases to reflect any necessary
11 changes based on the actual loss realized on the Riverside storage field.

12 **B. Pension/OPEB Volatility Mechanism**

13 **Q. Please explain Exhibit A-124 (HLR-51).**

14 A. Exhibit A-124 (HLR-51) calculates the projected test year regulatory asset and liability
15 balances, and the corresponding amortization expense, related to the Pension and OPEB
16 Volatility Mechanism approved by the Commission in Case Nos. U-21308, U-21490, and
17 U-21806. This volatility mechanism allows the Company to defer for future recovery or
18 refund pension and OPEB expenses above or below approved amounts. An average rate
19 base liability amount of \$11.3 million for the projected test year has been included in the
20 projected working capital on Exhibit A-12 (HLR-34), Schedule B-4, and a total of
21 \$(1.3) million of amortization expense has been included in the projected other O&M
22 expense on Exhibit A-13 (HLR-41), Schedule C-5.

1 **C. SAP Project Recovery**

2 **Q. Please describe the SAP Project.**

3 A. The SAP Project is a critical initiative to modernize the Company's existing Enterprise
4 Resource Planning SAP solution, which will reach the end of its mainstream vendor
5 maintenance on December 31, 2027. Timely completion of this project is essential.
6 Continuing to operate the system beyond its support date poses significant risks, including
7 noncompliance with regulatory requirements, disruption of core customer support
8 operations, and inability to apply vital security patches necessary for cyber security
9 protection. The Company has included this project in its two most recent rate cases, Case
10 Nos. U-21806 and U-21870, and further details are provided in the testimony of Company
11 witness Baker.

12 **Q. Has the Commission previously approved any special ratemaking treatment**
13 **associated with the SAP Project?**

14 A. Yes. In its September 30, 2025 Order in Case No. U-21806, the Commission approved the
15 Company's request to defer investment O&M expenses associated with the project and to
16 amortize the resulting regulatory asset over a 15-year period (page 227). The Commission
17 also approved the Company's request to amortize cloud computing costs over the same
18 15-year period. This ratemaking treatment avoids burdening customers with temporary
19 spikes in the Company's IT O&M expense during the project and instead spreads recovery
20 over the life of the asset. It also aligns cost recovery with the period during which the
21 project will provide benefits to both the Company and customers. The Company has made
22 the same request in its currently pending electric rate case, Case No. U-21870.

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1 **Q. Please describe amounts included in the instant case related to the SAP project.**

2 A. The Company has included \$16.7 million in capital spending for the bridge year and
3 \$14.7 million for the test year. Consistent with the Company's previous rate case, none of
4 the capital expenditures will be included in plant in service during the test year. As a result,
5 the case does not include any related depreciation expense and the return on construction
6 work in progress has been offset by AFUDC. In summary, capital spending for the SAP
7 Project does not affect the revenue requirement in this case.

8 Exhibit A-12 (HLR-34), Schedule B-4 reflects the projected regulatory asset
9 balance associated with deferred investment O&M expenses of \$29.8 million for the test
10 year as supported by Company witness Baker. Pursuant to the Commission's Order in
11 Case No. U-21806, the Company will amortize the deferred costs over a 15-year period.

12 **Q. Does the Company have an additional proposal regarding the amortization of SAP**
13 **Project costs?**

14 A. Yes. Pursuant to the Commission's Order in Case No. U-21806, the Company will recover
15 both capital and deferred O&M costs over a 15-year period. However, as described in the
16 testimony of Company witness Baker, there will be multiple releases of SAP Project
17 modules. Therefore, the Company proposes delaying the start of amortization of all SAP
18 Project-related costs until all releases are complete and the total costs can be reviewed by
19 the Commission to confirm their reasonableness and prudence. This approach streamlines
20 accounting practices, reduces administrative complexity, and simplifies tracking and
21 reporting of overall project related expenditures. Additionally, this approach ensures that
22 cost recovery matches the timing of benefits delivered to the Company and customers.

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1 **Q. Does this complete your direct testimony?**

2 **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

HEATHER L. RAYL

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Schedule: A-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Revenue Deficiency (Sufficiency)
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-1 (HLR-1)
Schedule: A-1
Page: 1 of 1
Witness: HLRayl
Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Rate base	Exhibit No.: A-2 (HLR-3)	10,001,178
2	Adjusted net operating income	Exhibit No.: A-3 (HLR-9)	620,948
3	Overall rate of return	Line 2 / Line 1	<u>6.21%</u>
4	Required rate of return	Exhibit No.: A-4 (HLR-23)	5.86%
5	Income requirements	Line 4 * Line 1	586,459
6	Income deficiency (sufficiency)	Line 5 - Line 2	<u>(34,489)</u>
7	Revenue conversion factor	Exhibit No.: A-3 (HLR-10)	1.3381
8	Revenue deficiency (sufficiency)	Line 6 * Line 7	<u><u>(46,148)</u></u>

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Financial Basis
GAS RESULTS ONLY
(\$000)

Case No.: U-21981
Exhibit No.: A-1 (HLR-2)
Schedule: A-2
Page: 1 of 6
Witness: HLRayl
Date: December 2025

		(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Calendar Year					
		2020	2021	2022	2023	2024	
1	Operating revenues	1,817,085	2,063,507	2,732,332	2,420,332	2,138,251	
2	Operating expenses	1,436,050	1,688,449	2,286,056	1,922,097	1,604,541	
3	Pre-tax operating income	381,035	375,058	446,276	498,235	533,710	
4	Income taxes	57,937	39,252	31,621	97,951	99,324	
5	Net operating income	323,098	335,805	414,655	400,284	434,386	
6	Other income and deductions	39,831	68,531	78,033	72,246	73,038	
7	AFUDC	804	2,725	2,007	5,808	17,593	
8	Interest charges	(102,531)	(104,642)	(116,431)	(162,571)	(196,249)	
9	Preferred stock dividends	(565)	(596)	(598)	(635)	(664)	
10	Net income available to common stockholders	260,638	301,824	377,666	315,132	328,104	
11	Average common equity	2,397,825	2,652,186	3,485,506	3,860,295	3,995,774	
12	Earned rate of return on common equity	10.87%	11.38%	10.84%	8.16%	8.21%	
13	Authorized rate of return on common equity	9.90% {1}	9.90% {1}	9.90% {2}	9.90% {3}	9.90% {4}	

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Financial Basis
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Case No.: U-21981
Exhibit No.: A-1 (HLR-2)
Schedule: A-2
Page: 2 of 6
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	Description	2020	2021	2022	2023	2024
	<u>EBIT Interest Coverage Ratio</u>					
14	Pre-tax operating income	381,035	375,058	446,276	498,235	533,710
15	Other income and deductions	39,831	68,531	78,033	72,246	73,038
16	AFUDC	804	2,725	2,007	5,808	17,593
17	Total EBIT	421,670	446,314	526,316	576,289	624,341
18	Interest charges	102,531	104,642	116,431	162,571	196,249
19	EBIT interest coverage ratio	4.11	4.27	4.52	3.54	3.18
	<u>EBITDA Interest Coverage Ratio</u>					
20	Total EBIT	421,670	446,314	526,316	576,289	624,341
21	Depreciation and amortization	282,447	304,101	329,281	337,716	325,562
22	Total EBITDA	704,117	750,415	855,597	914,005	949,903
23	Interest charges	102,531	104,642	116,431	162,571	196,249
24	EBITDA interest coverage ratio	6.87	7.17	7.35	5.62	4.84
	<u>Funds Flow from Operations (FFO) Interest Coverage Ratio</u>					
25	Net operating income	323,098	335,805	414,655	400,284	434,386
26	Depreciation and amortization	282,447	304,101	329,281	337,716	325,562
27	Deferred income taxes	35,229	15,474	36,367	94,463	37,858
28	AFUDC	804	2,725	2,007	5,808	17,593
29	Other major recurring non-cash items	-	-	-	-	-
30	Interest paid	97,469	99,352	106,720	149,285	181,029
	Less:					
31	Operating lease adjustment to depreciation	-	-	-	-	-
32	Subtotal	739,047	757,457	889,030	987,556	996,427
33	Interest charges	102,531	104,642	116,431	162,571	196,249
34	FFO interest coverage ratio	7.21	7.24	7.64	6.07	5.08

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Financial Basis
GAS RESULTS ONLY
(\$000)

Case No.: U-21981
Exhibit No.: A-1 (HLR-2)
Schedule: A-2
Page: 3 of 6
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	Description	2020	2021	2022	2023	2024
	<u>Overall Fixed Charge Coverage Ratio</u>					
35	Net income available to common stockholders	260,638	301,824	377,666	315,132	328,104
36	Interest charges	102,531	104,642	116,431	162,571	196,249
37	Subtotal numerator	363,169	406,465	494,097	477,702	524,353
38	Interest charges	102,531	104,642	116,431	162,571	196,249
39	Preferred stock dividends	565	596	598	635	664
40	Subtotal denominator	103,095	105,238	117,029	163,206	196,914
41	Overall fixed charge coverage ratio	3.52	3.86	4.22	2.93	2.66
	<u>Cash Flow Coverage of Dividends Ratio</u>					
42	Net income available to common stockholders	260,638	301,824	377,666	315,132	328,104
43	Depreciation and amortization	282,447	304,101	329,281	337,716	325,562
44	Deferred income taxes	35,229	15,474	36,367	94,463	37,858
45	Subtotal	578,314	621,398	743,314	747,311	691,523
46	Common dividends {5}	208,510	241,459	302,133	252,105	262,483
47	Cash flow coverage of dividends ratio	2.77	2.57	2.46	2.96	2.63
	<u>Common Dividend Payout Ratio</u>					
48	Common dividends {5}	208,510	241,459	302,133	252,105	262,483
49	Net income available to common stockholders	260,638	301,824	377,666	315,132	328,104
50	Common dividend payout ratio	80%	80%	80%	80%	80%
	<u>Permanent Capitalization</u>					
51	Long term debt	8,131,338	8,437,664	10,208,351	11,160,087	11,996,890
52	Preferred stock	37,315	37,315	37,315	37,315	37,315
53	Common equity	8,519,584	9,242,745	10,118,365	10,763,382	11,393,664
54	Total permanent capital	16,688,236	17,717,724	20,364,031	21,960,785	23,427,869
55	Long term debt	48.72%	47.62%	50.13%	50.82%	51.21%
56	Preferred stock	0.22%	0.21%	0.18%	0.17%	0.16%
57	Common equity	51.05%	52.17%	49.69%	49.01%	48.63%
58	Total permanent capital	100.00%	100.00%	100.00%	100.00%	100.00%

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Financial Metrics - Ratemaking Basis

GAS RESULTS ONLY

(\$000)

Case No.: U-21981

Exhibit No.: A-1 (HLR-2)

Schedule: A-2

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Witness: HLRayl

Date: December 2025

		(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Calendar Year					
		2020	2021	2022	2023	2024	
59	Operating revenues	1,802,875	2,041,152	2,715,535	2,399,920	2,115,440	
60	Operating expenses	1,397,637	1,633,461	2,196,076	1,852,976	1,562,803	
61	Pre-tax operating income	405,238	407,692	519,459	546,945	552,637	
62	Income taxes	39,960	18,306	6,303	73,864	60,925	
63	Net operating income	365,278	389,385	513,156	473,080	491,712	
64	Tax impact of pro forma interest on NOI	(1,118)	94	1,290	(611)	(5,117)	
65	AFUDC	804	2,725	2,007	5,808	17,593	
66	Interest charges	(98,115)	(104,863)	(121,339)	(159,910)	(175,872)	
67	Preferred stock dividends	(577)	(613)	(637)	(635)	(635)	
68	Net income available to common stockholders and JDITC	266,273	286,728	394,477	317,733	327,682	
69	Return assignable to JDITC	(2,060)	(2,159)	(2,514)	(2,423)	(2,293)	
70	Net income available to common stockholders	264,213	284,569	391,963	315,309	325,389	
71	Average common equity	2,830,883	3,268,716	3,748,368	3,956,553	4,117,780	
72	Earned rate of return on common equity	9.33%	8.71%	10.46%	7.97%	7.90%	
73	Net income effect of normalized weather	37,702	52,221	(18,871)	83,446	116,760	
74	Net income available to common stockholders, weather adjusted	301,914	336,790	373,092	398,756	442,149	
75	Earned return on equity, weather adjusted	10.67%	10.30%	9.95%	10.08%	10.74%	
76	Authorized return on equity	9.90% {1}	9.90% {1}	9.90% {2}	9.90% {3}	9.90% {4}	

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Financial Metrics - Ratemaking Basis

GAS RESULTS ONLY

(\$000)

Case No.: U-21981

Exhibit No.: A-1 (HLR-2)

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Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b)	(c)	(d)	(e)	(f)
		Calendar Year				
		2020	2021	2022	2023	2024
<u>EBIT Interest Coverage Ratio</u>						
77	Pre-tax operating income	405,238	407,692	519,459	546,945	552,637
78	AFUDC	804	2,725	2,007	5,808	17,593
79	Total EBIT	406,043	410,417	521,465	552,753	570,230
80	Interest charges, net of pro forma interest	96,996	104,957	122,629	159,299	170,755
81	EBIT interest coverage ratio	4.19	3.91	4.25	3.47	3.34
<u>EBITDA Interest Coverage Ratio</u>						
82	Total EBIT	406,043	410,417	521,465	552,753	570,230
83	Depreciation and amortization	291,550	313,763	338,116	345,988	333,419
84	Total EBITDA	697,593	724,180	859,581	898,740	903,648
85	Interest charges, net of pro forma interest	96,996	104,957	122,629	159,299	170,755
86	EBITDA interest coverage ratio	7.19	6.90	7.01	5.64	5.29
<u>Funds Flow from Operations (FFO) Interest Coverage Ratio</u>						
87	Net operating income	365,278	389,385	513,156	473,080	491,712
88	Depreciation and amortization	291,550	313,763	338,116	345,988	333,419
89	Deferred income tax	35,229	15,474	36,367	94,463	37,858
90	AFUDC	804	2,725	2,007	5,808	17,593
91	Other major recurring non-cash items	-	-	-	-	-
92	Interest paid	97,469	99,352	106,720	149,285	181,029
Less:						
93	Operating lease adjustment to depreciation	-	-	-	-	-
94	Subtotal	790,330	820,699	996,365	1,068,624	1,061,610
95	Interest charges, net of pro forma interest	96,996	104,957	122,629	159,299	170,755
96	FFO interest coverage ratio	8.15	7.82	8.13	6.71	6.22
<u>Overall Fixed Charge Coverage Ratio</u>						
97	Net income available to common stockholders	264,213	284,569	391,963	315,309	325,389
98	Interest charges, net of pro forma interest	96,996	104,957	122,629	159,299	170,755
99	Subtotal numerator	361,209	389,526	514,592	474,608	496,143
100	Interest charges, net of pro forma interest	96,996	104,957	122,629	159,299	170,755
101	Preferred stock dividends	577	613	637	635	635
102	Subtotal denominator	97,573	105,569	123,266	159,933	171,389
103	Overall fixed charge coverage ratio	3.70	3.69	4.17	2.97	2.89

Schedule A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Ratemaking Basis
GAS RESULTS ONLY
(\$000)

Case No.: U-21981
Exhibit No.: A-1 (HLR-2)
Schedule: A-2
Page: 6 of 6
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Calendar Year					
No	Description	2020	2021	2022	2023	2024
<u>Cash Flow Coverage of Dividends Ratio</u>						
104	Net income available to common stockholders	264,213	284,569	391,963	315,309	325,389
105	Depreciation and amortization	291,550	313,763	338,116	345,988	333,419
106	Deferred income tax	35,229	15,474	36,367	94,463	37,858
107	Subtotal	590,992	613,806	766,446	755,760	696,665
108	Common dividends {5}	211,370	227,655	313,570	252,247	260,311
109	Cash flow coverage of dividends ratio	2.80	2.70	2.44	3.00	2.68
<u>Common Dividend Payout Ratio</u>						
110	Common dividends {5}	211,370	227,655	313,570	252,247	260,311
111	Net income available to common stockholders	264,213	284,569	391,963	315,309	325,389
112	Common dividend payout ratio	80%	80%	80%	80%	80%
<u>Permanent Capitalization</u>						
113	Long term debt, excluding securitization	7,880,109	8,214,999	9,009,833	10,397,193	11,391,866
114	Preferred stock	37,315	37,315	37,315	37,315	37,315
115	Common equity	8,555,596	9,274,520	10,133,854	10,778,709	11,405,304
116	Total permanent capital	16,473,020	17,526,834	19,181,001	21,213,217	22,834,485
117	Long term debt, excluding securitization	47.84%	46.87%	46.97%	49.01%	49.89%
118	Preferred stock	0.23%	0.21%	0.19%	0.18%	0.16%
119	Common equity	51.94%	52.92%	52.83%	50.81%	49.95%

{1} Case No. U-20650 settlement agreement dated 09/10/2020; effective 10/01/2020

{2} Case No. U-21148 settlement agreement dated 07/07/2022; effective 10/01/2022

{3} Case No. U-21308 settlement agreement dated 08/30/2023; effective 10/01/2023

{4} Case No. U-21490 settlement agreement dated 07/23/2024; effective 10/01/2024

{5} CEC Co pays dividends to the parent as a total company. This number represents the company's 80% dividend policy applied to net income available to common stockholders

Schedule: B-1**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Rate Base

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-2 (HLR-3)

Schedule: B-1

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Total utility plant	Exhibit No.: A-2 (HLR-4)	12,919,985
2	Depreciation reserve	Exhibit No.: A-2 (HLR-5)	(4,144,459)
3	Customer advances for construction	Exhibit No.: A-2 (HLR-7), Column (e.2), Line 29	(29,532)
4	Net utility plant	Sum of Lines 1 through 3	8,745,994
5	Net unamortized manufactured gas plant	Exhibit No.: A-2 (HLR-7), Column (e.3), Line 36	33,602
6	Utility plant rate base	Line 4 + Line 5	8,779,596
7	Working capital	Exhibit No.: A-2 (HLR-6)	1,221,582
8	Total rate base	Line 6 + Line 7	10,001,178

Schedule: B-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Total Utility Plant
 For the Historical Year Ended December 31, 2024
 (\$000)

Case No.: U-21981
 Exhibit No.: A-2 (HLR-4)
 Schedule: B-2
 Page: 1 of 1
 Witness: HLRayl
 Date: December 2025

(a)		(b)	(c)	(d)
Line		FERC		
No	Description	Account Number	Source	Amount
1	Total plant-in-service	101	Exhibit No.: A-2 (HLR-7), Column (e.2), Line 3 - Line 4	12,497,487
2	Plant held for future use		WP-HLR-6, Utility Plant Tab, Acct 1051000	-
3	Plant held for future use - common		WP-HLR-6, Common Plant Tab, Acct 1052000	6,157
4	Total plant held for future use	105	Line 2 + Line 3	<u>6,157</u>
5	Construction work in progress	107	Exhibit No.: A-2 (HLR-7), Column (e.2), Line 7	416,341
6	Total utility plant		Line 1 + Line 4 + Line 5	<u><u>12,919,985</u></u>

Schedule: B-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation Reserve and Other Deductions
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-2 (HLR-5)
Schedule: B-3
Page: 1 of 1
Witness: HLRayl
Date: December 2025

(a)		(b)	(c)
Line No	Description	Source	Amount
1	Utility plant accumulated depreciation	Exhibit No.: A-2 (HLR-7), Column (e.2), Line 4	(2,534,776)
2	Common plant accumulated depreciation	Exhibit No.: A-2 (HLR-7), Column (e.2), Line 5	(263,042)
3	Cost of removal - regulatory liabilities	WP-HLR-6, Def. CR Tab, Acct 2800000	(2,701)
4	Cost of removal - gas regulatory liabilities	WP-HLR-6, Def. CR Tab, Acct 2802000	(1,343,940)
5	Total depreciation reserve and other deductions	Sum of Lines 1 through 4	<u>(4,144,459)</u>

Schedule: B-4**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Working Capital

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-2 (HLR-6)

Schedule: B-4

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Cash, cash equivalents, and restricted cash	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 10	16,763
2	Accounts and notes receivable	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 11	102,494
3	Fuel stock	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 12	-
4	Materials and supplies	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 13	56,239
5	Allowances	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 14	-
6	Gas stored underground	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 15	456,516
7	Prepayments	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 16	593,353
8	Accrued revenue	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 17	133,365
9	Deferred taxes	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 18	188,937
10	Deferred debits	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 19	266,169
11	Total assets	Sum of Lines 1 through 10	1,813,836
12	Debt, leases, and financial obligations	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 21	-
13	Notes payable	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 22	-
14	Accounts payable	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 23	278,867
15	Customer deposits	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 24	11,366
16	Accrued interest	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 25	43,557
17	Dividends payable	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 26	16,179
18	Accrued taxes	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 27	195,517
19	Other liabilities	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 28	30,840
20	Customer advances	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 29	-
21	Deferred income and investment taxes	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 30	-
22	Deferred credits	Exhibit No.: A-2 (HLR-7), Column (f.2), Line 31	15,928
23	Total liabilities	Sum of Lines 12 through 22	592,254
24	Total working capital	Line 11 - Line 23	1,221,582

Schedule: B-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 13-Month Average Balance Sheet
 For the Historical Year Ended December 31, 2024
 (In Dollars)

Case No.: U-21981
 Exhibit No.: A-2 (HLR-7)
 Schedule: B-5
 Page: 1 of 1
 Witness: HLRayl
 Date: December 2025

Source: WP-HLR-6

	(a)	(b)	(c.1)	(c.2)	(d.1)	(d.2)	(d.3)	(d.4)	(d.5)	(e.1)	(e.2)	(e.3)	(e.4)	(f.1)	(f.2)	(f.3)
Line No.	Description	Total	EXCLUDED		CAPITAL STRUCTURE					PLANT				WORKING CAPITAL		
			Rate Base	Sub. Invest.	LT Debt	ST Debt	ITC	Deferred Tax	Equity	Electric	Gas	MGP	Non-Utility	Electric	Gas	Non-Utility
1	Utility plant	\$ 30,611,459,689	\$ 763,754,402	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,820,893,776	\$ 12,026,811,510	\$ -	\$ -	\$ -	\$ -	\$ -
2	Common plant	1,170,687,957	2,278,533	-	-	-	-	-	-	691,576,300	476,833,124	-	-	-	-	-
3	Gross plant	31,782,147,646	766,032,936	-	-	-	-	-	-	18,512,470,077	12,503,644,634	-	-	-	-	-
4	Utility plant accumulated depreciation	(7,506,229,993)	(231,723,628)	-	-	-	-	-	-	(4,739,730,641)	(2,534,775,723)	-	-	-	-	-
5	Common plant accumulated depreciation	(668,119,132)	(6,085,741)	-	-	-	-	-	-	(399,991,222)	(283,042,169)	-	-	-	-	-
6	Total depreciation	(8,175,349,124)	(237,809,368)	-	-	-	-	-	-	(5,139,721,864)	(2,797,817,892)	-	-	-	-	-
7	Construction work in progress	1,256,791,456	-	-	-	-	-	-	-	840,450,645	416,340,811	-	-	-	-	-
8	Net plant	24,863,589,978	528,223,567	-	-	-	-	-	-	14,213,198,858	10,122,167,553	-	-	-	-	-
9	Other property	156,176,745	119,269,189	(6,985,511)	-	-	-	-	-	-	-	-	19,423,396	-	-	24,469,671
10	Cash, cash equivalents, and restricted cash	462,645,408	409,491,256	-	-	-	-	-	-	-	-	-	-	36,391,110	16,763,043	-
11	Accounts and notes receivable	410,631,380	16,510,796	-	-	-	-	-	-	-	-	-	-	280,140,712	102,494,141	11,485,731
12	Fuel stock	64,489,415	-	-	-	-	-	-	-	-	-	-	-	64,489,415	-	-
13	Materials and supplies	273,087,084	21	-	-	-	-	-	-	-	-	-	-	216,847,732	56,239,331	-
14	Allowances	10,399,018	10,384,730	-	-	-	-	-	-	-	-	-	-	14,288	-	-
15	Gas stored underground	456,516,126	-	-	-	-	-	-	-	-	-	-	-	-	456,516,126	-
16	Prepayments	1,531,927,677	5,570,637	-	-	-	-	-	-	-	-	-	-	933,003,981	593,353,059	-
17	Accrued revenue	465,775,771	3,220,234	-	-	-	-	-	-	-	-	-	-	329,190,907	133,364,630	-
18	Deferred taxes	2,250,571,750	73,899,615	-	-	-	-	1,715,327,198	-	-	-	-	-	272,279,081	188,937,082	328,172
19	Deferred debits	3,668,686,254	1,391,571,126	-	-	75,948,955	-	-	-	-	-	94,932,735	-	1,838,964,820	266,168,929	1,099,689
20	Total assets	34,614,496,605	2,557,941,172	(6,985,511)	75,948,955	-	-	1,715,327,198	-	14,213,198,858	10,122,167,553	94,932,735	19,423,396	3,971,322,646	1,813,836,342	37,383,263
21	Debt, leases, and financial obligations	(11,284,471,688)	(72,779,370)	-	(11,211,692,318)	-	-	-	-	-	-	-	-	-	-	-
22	Notes payable	(723,828,019)	(711,677,889)	-	-	(12,150,130)	-	-	-	-	-	-	-	-	-	-
23	Accounts payable	(760,542,118)	(2,346,538)	-	-	-	-	-	-	-	-	-	-	(474,206,445)	(278,866,663)	(5,122,472)
24	Customer deposits	(34,320,911)	-	-	-	-	-	-	-	-	-	-	-	(22,954,721)	(11,366,190)	-
25	Accrued interest	(116,616,961)	(6,513,327)	-	-	-	-	-	-	-	-	-	-	(66,062,180)	(43,556,997)	(484,456)
26	Dividends payable	(40,898,397)	-	-	-	-	-	-	-	-	-	-	-	(24,539,038)	(16,179,406)	(179,953)
27	Accrued taxes	(481,916,513)	-	-	-	-	-	-	-	-	-	-	-	(286,119,648)	(195,516,720)	(280,145)
28	Other liabilities	(237,524,277)	(131,773,453)	-	-	-	-	-	-	-	-	-	-	(72,727,551)	(30,840,136)	-
29	Customer advances	(96,005,032)	-	-	-	-	-	-	-	(66,472,817)	(29,532,215)	(2,183,136)	-	-	-	-
30	Deferred income and investment taxes	(6,040,340,857)	5,157,581	-	-	-	(123,935,547)	(5,921,562,890)	-	-	-	-	-	-	-	-
31	Deferred credits	(3,881,109,351)	(1,017,370,588)	-	-	(50,213,869)	-	-	-	(1,274,275,449)	(1,346,885,783)	(59,147,537)	-	(105,776,779)	(15,928,339)	(11,511,007)
32	Total liabilities	(23,697,574,124)	(1,937,303,585)	-	(11,211,692,318)	(62,363,999)	(123,935,547)	(5,921,562,890)	-	(1,340,748,267)	(1,376,417,997)	(61,330,673)	-	(1,052,386,362)	(592,254,452)	(17,578,033)
33	Common equity	(10,879,607,682)	14,722,821	-	-	-	-	-	(10,894,330,503)	-	-	-	-	-	-	-
34	Preferred stock	(37,314,800)	-	-	-	-	-	-	(37,314,800)	-	-	-	-	-	-	-
35	Total equity	(10,916,922,482)	14,722,821	-	-	-	-	-	(10,931,645,303)	-	-	-	-	-	-	-
36	Net assets	\$ -	\$ 635,360,408	\$ (6,985,511)	\$ (11,135,743,363)	\$ (62,363,999)	\$ (123,935,547)	\$ (4,206,235,692)	\$ (10,931,645,303)	\$ 12,872,450,591	\$ 8,745,749,556	\$ 33,602,062	\$ 19,423,396	\$ 2,918,936,283	\$ 1,221,581,890	\$ 19,805,230

Schedule: B-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Point-in-Time Balance Sheet
For the Historical Year Ended December 31, 2024
(In Dollars)

Case No.: U-21981
Exhibit No.: A-2 (HLR-6)
Schedule: B-6
Page: 1 of 1
Witness: HL Rayl
Date: December 2025

Source: WP-HLR-5

	(a)	(b)	(c.1)	(c.2)	(d.1)	(d.2)	(d.3)	(d.4)	(d.5)	(e.1)	(e.2)	(e.3)	(e.4)	(f.1)	(f.2)	(f.3)
Line No.	Description	Total	EXCLUDED		CAPITAL STRUCTURE					PLANT				WORKING CAPITAL		
			Rate Base	Sub. Invest.	LT Debt	ST Debt	ITC	Deferred Tax	Equity	Electric	Gas	MGP	Non-Utility	Electric	Gas	Non-Utility
1	Utility plant	\$ 30,938,785,294	\$ 778,859,929	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,621,021,196	\$ 12,538,904,168	\$ -	\$ -	\$ -	\$ -	\$ -
2	Common plant	1,290,001,874	1,962,646	-	-	-	-	-	-	762,384,645	525,054,583	-	-	-	-	-
3	Gross plant	32,228,787,167	780,822,575	-	-	-	-	-	-	18,383,405,841	13,064,558,751	-	-	-	-	-
4	Utility plant accumulated depreciatio	(7,372,603,550)	(283,970,663)	-	-	-	-	-	-	(4,529,457,150)	(2,559,175,737)	-	-	-	-	-
5	Common plant accumulated depreciatio	(785,118,089)	(6,191,785)	-	-	-	-	-	-	(469,888,003)	(309,038,301)	-	-	-	-	-
6	Total depreciaior	(8,157,721,640)	(290,162,449)	-	-	-	-	-	-	(4,999,345,153)	(2,668,214,038)	-	-	-	-	-
7	Construction work in progress	1,755,480,842	-	-	-	-	-	-	-	1,312,150,819	443,330,023	-	-	-	-	-
8	Net plant	25,826,546,370	490,660,127	-	-	-	-	-	-	14,696,211,507	10,639,674,736	-	-	-	-	-
9	Other property	154,347,447	119,075,684	(6,990,731)	-	-	-	-	-	-	-	-	17,792,823	-	-	24,469,671
10	Cash, cash equivalents, and restricted casl	45,263,702	3,371,969	-	-	-	-	-	-	-	-	-	-	28,680,481	13,211,252	-
11	Accounts and notes receivabl	468,848,071	37,224,762	-	-	-	-	-	-	-	-	-	-	304,108,627	106,852,789	20,661,893
12	Fuel stock	30,246,941	-	-	-	-	-	-	-	-	-	-	-	30,246,941	-	-
13	Materials and supplies	290,749,003	21	-	-	-	-	-	-	-	-	-	-	235,659,777	55,089,206	-
14	Allowances	9,020,124	9,005,836	-	-	-	-	-	-	-	-	-	-	14,288	-	-
15	Gas stored underground	435,354,565	-	-	-	-	-	-	-	-	-	-	-	-	435,354,565	-
16	Prepayments	1,607,708,357	5,570,637	-	-	-	-	-	-	-	-	-	-	980,492,340	621,645,380	-
17	Accrued revenue	598,304,295	2,879,878	-	-	-	-	-	-	-	-	-	-	343,725,032	251,699,385	-
18	Deferred taxes	2,426,198,086	93,643,000	-	-	-	-	1,651,499,678	-	-	-	-	-	401,689,810	278,885,666	479,931
19	Deferred debits	3,951,849,211	1,349,267,375	-	74,425,622	-	-	-	-	-	-	90,491,497	-	2,169,276,315	267,978,133	410,270
20	Total assets	35,844,436,174	2,110,699,288	(6,990,731)	74,425,622	-	-	1,651,499,678	-	14,696,211,507	10,639,674,736	90,491,497	17,792,823	4,493,893,611	2,030,716,377	46,021,766
21	Debt, leases, and financial obligation	(11,558,454,550)	(92,162,874)	-	(11,466,291,676)	-	-	-	-	-	-	-	-	-	-	-
22	Notes payable	(710,900,141)	(645,986,764)	-	-	(64,913,376)	-	-	-	-	-	-	-	-	-	-
23	Accounts payable	(918,391,213)	-	-	-	-	-	-	-	-	-	-	-	(564,679,251)	(344,054,340)	(9,657,622)
24	Customer deposits	(37,321,761)	-	-	-	-	-	-	-	-	-	-	-	(25,086,776)	(12,234,984)	-
25	Accrued interest	(120,478,559)	(9,173,866)	-	-	-	-	-	-	-	-	-	-	(66,782,816)	(44,032,136)	(489,741)
26	Dividends payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Accrued taxes	(791,993,238)	-	-	-	-	-	-	-	-	-	-	-	(470,153,138)	(321,379,061)	(461,039)
28	Other liabilities	(224,975,930)	(164,150,623)	-	-	-	-	-	-	-	-	(2,586,846)	-	(41,750,360)	(16,488,101)	-
29	Customer advances	(95,651,167)	-	-	-	-	-	-	-	(69,567,211)	(26,083,957)	-	-	-	-	-
30	Deferred income and investment taxe	(6,054,745,644)	7,218,445	-	-	-	(121,730,410)	(5,940,233,678)	-	-	-	-	-	-	-	-
31	Deferred credits	(3,900,544,998)	(996,061,007)	-	-	(51,094,331)	-	-	-	(1,312,820,447)	(1,360,960,560)	(57,424,303)	-	(86,265,725)	(20,158,966)	(15,759,659)
32	Total liabilities	(24,413,457,200)	(1,900,316,690)	-	(11,466,291,676)	(116,007,707)	(121,730,410)	(5,940,233,678)	-	(1,382,387,658)	(1,387,044,516)	(60,011,149)	-	(1,254,718,067)	(758,347,589)	(26,368,061)
33	Common equity	(11,393,664,174)	11,639,891	-	-	-	-	-	(11,405,304,064)	-	-	-	-	-	-	-
34	Preferred stock	(37,314,800)	-	-	-	-	-	-	(37,314,800)	-	-	-	-	-	-	-
35	Total equity	(11,430,978,974)	11,639,891	-	-	-	-	-	(11,442,618,864)	-	-	-	-	-	-	-
36	Net assets (liabilities)	\$ -	\$ 222,022,489	(6,990,731)	(11,391,866,054)	(116,007,707)	(121,730,410)	(4,288,734,000)	(11,442,618,864)	\$ 13,313,823,849	\$ 9,252,630,220	\$ 30,480,348	\$ 17,792,823	\$ 3,239,175,544	\$ 1,272,368,788	\$ 19,653,705

Schedule: C-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Adjusted Net Operating Income
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-3 (HLR-9)
Schedule: C-1
Page: 1 of 1
Witness: HLRayl
Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Sales revenues	Exhibit No.: A-3 (HLR-11)	1,940,126
2	Transportation revenues	Exhibit No.: A-3 (HLR-11)	117,949
3	Other revenues	Exhibit No.: A-3 (HLR-11)	57,365
4	Total operating revenues	Sum of Lines 1 through 3	2,115,440
5	Cost of gas sold	Exhibit No.: A-3 (HLR-12)	623,676
6	LAUF	Exhibit No.: A-3 (HLR-13), Line 3	13,329
7	Company use gas	Exhibit No.: A-3 (HLR-13), Line 4	(930)
8	Operations and maintenance	Exhibit No.: A-3 (HLR-13), Line 24	371,837
9	Depreciation	Exhibit No.: A-3 (HLR-15), Line 9	325,142
10	Amortization	Exhibit No.: A-3 (HLR-15), Line 13	8,277
11	Property taxes	Exhibit No.: A-3 (HLR-16), Line 1	169,594
12	General taxes	Exhibit No.: A-3 (HLR-16) Line 6 + Line 10	18,408
13	Other (local) taxes	Exhibit No.: A-3 (HLR-19)	1,160
14	State income taxes	Exhibit No.: A-3 (HLR-18)	27,106
15	Federal income taxes	Exhibit No.: A-3 (HLR-17)	60,925
16	Total operating expenses	Sum of Lines 5 through 15	1,618,524
17	Net operating income	Line 4 - Line 16	496,916
18	AFUDC	Exhibit No.: A-3 (HLR-20)	17,593
19	Net operating income, including AFUDC	Line 17 + Line 18	514,509
<u>Adjustments to Net Operating Income</u>			
20	Sales revenue weather adjustment	Exhibit No.: A-13 (HLR-37), Col. (q), Line 2	113,620
21	Transportation revenue weather adjustment	Exhibit No.: A-13 (HLR-37), Col. (q), Line 3	3,140
22	EWI surcharge revenues	Exhibit No.: A-13 (HLR-37), Col. (q), Line 4	(61,258)
23	Jobwork revenues	Exhibit No.: A-13 (HLR-37), Col. (q), Line 5	2,711
24	Interest income on cash operating accounts	Exhibit No.: A-13 (HLR-37), Col. (q), Line 6	572
25	Other revenues adjustments	Exhibit No.: A-13 (HLR-37), Col. (q), Line 7	(6,174)
26	EWI surcharge expenses	Exhibit No.: A-13 (HLR-37), Col. (q), Line 8	61,258
27	Jobwork expenses	Exhibit No.: A-13 (HLR-37), Col. (q), Line 9	(2,451)
28	Compensation expenses	Exhibit No.: A-13 (HLR-37), Col. (q), Line 10	68
29	Advertising expenses	Exhibit No.: A-13 (HLR-37), Col. (q), Line 11	-
30	Dues, donations, & lobbying expenses	Exhibit No.: A-13 (HLR-37), Col. (q), Line 12	265
31	Interest expense on security deposits	Exhibit No.: A-13 (HLR-37), Col. (q), Line 13	(194)
32	Income tax effect of interest	Exhibit No.: A-13 (HLR-37), Col. (q), Line 14	(5,362)
33	Interest synchronization adjustment	Exhibit No.: A-13 (HLR-37), Col. (q), Line 15	245
34	Total net operating income adjustments	Sum of Lines 20 through 33	106,439
35	Adjusted net operating income	Line 19 + Line 34	620,948

Schedule: C-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Revenue Conversion Factor

For the Historical Year Ended December 31, 2024

Case No.: U-21981

Exhibit No.: A-3 (HLR-10)

Schedule: C-2

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Income base - before taxes		100.0000
2	State income tax	Line 1 * 5.24% State Income Tax Rate	5.2400
3	Other (local) income tax	Line 1 * 0.16% Other (Local) Income Tax Rate	0.1600
4	Federal income tax base	Line 1 - Line 2 - Line 3	94.6000
5	Federal income tax	Line 4 * 21.00% Federal Income Tax Rate	19.8660
6	Income base - after taxes	Line 4 - Line 5	74.7340
7	Revenue conversion factor	Line 1 / Line 6	1.3381

Schedule: C-3**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Operating Revenue

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-11)

Schedule: C-3

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Sales revenues	Ex. A-15 (MAS-14), Col.(a), Line 5 + Line 9	1,940,126
2	Transportation revenues	Ex. A-15 (MAS-14), Col.(a), Line 8	117,949
	<u>Other Revenues</u>		
3	Forfeited discounts	P-522, p.300, Line 15	5,431
4	Miscellaneous service revenues	P-522, p.300, Line 16	20,326
	Revenue from transmission of gas of others, less	P-522, p.300, Line 17 - Sum of P-522,	
5	transporation revenues {a}	p.313.1, Col. (f), Line 3 through P-522,	13,773
6	Rent from gas property	p.313.1, Col. (f), Line 20	
7	Interdepartmental rents	P-522, p.300, Line 21	244
8	Other gas revenues	P-522, p.300, Line 22	-
9	Total other revenues	P-522, p.300, Line 23	17,591
		Sum of Lines 3 through 8	57,365
10	Total operating revenues	Line 1 + Line 2 + Line 9	2,115,440

Notes

- {a} Transportation revenues related to MCV, the Jackson Plant, and others under ACT 9 contract have been omitted from the calculation of total revenue from the transmission of gas of others. These are Act 9 contracts and not tariff rates. These contracts remain in other revenue so that customers benefit from the revenue derived from the assets they pay for.

Schedule: C-4**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Cost of Gas Sold

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-12)

Schedule: C-4

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Total purchased gas	P-522, p.321, Line 77	482,353
2	Gas withdrawn from storage	P-522, p.321, Line 86	399,266
3	Gas delivered to storage	P-522, p.321, Line 87	(245,013)
4	Total gas used in utility operations	P-522, p.321, Line 94	242
5	Synthetic gas supply expenses	P-522, p.321, Line 95a	21
6	Total production expenses	P-522, p.321, Line 97	<u>636,869</u>
7	Remove: Total gas used in utility operations	Line 4 * -1	(242)
8	Remove: Synthetic gas supply expenses	Line 5 * -1	(21)
9	Remove: LAUF	WP-HLR-7, line 15	(12,930)
10	Total cost of gas sold	Sum of Lines 6 through 9	<u><u>623,676</u></u>

Schedule: C-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Operation and Maintenance Expenses
 For the Historical Year Ended December 31, 2024
 (\$000)

Case No.: U-21981
 Exhibit No.: A-3 (HLR-13)
 Schedule: C-5
 Page: 1 of 1
 Witness: HLRayl
 Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
	<u>Lost and Unaccounted for Gas</u>		
1	LAUF	WP-HLR-7, line 15	12,930
2	Amortized gas storage losses	P-522, p.322, Line 110	400
3	LAUF, including storage losses	Line 1 + Line 2	<u>13,329</u>
	<u>Company Use Gas</u>		
4	Total gas used in utility operations	P-522, p.321, Line 94	242
5	Distribution expense adjustment	Exhibit No.: A-98 (TKJ-2), Line 2 Less P-522, p.321, Line 94	(1,172)
6	Gas used in utility operations per Company witness Exhibit No.: A-98 (TKJ-2), Line :	Line 4 + Line 5	<u>(930)</u>
	<u>Other O&M Expense</u>		
7	Underground storage expenses, net of amortized gas storage losses	P-522, p.322, Line 125 Less P-522, p.322, Line 110	27,690
8	Total transmission expenses	P-522, p.324, Line 201	48,854
9	Total distribution expenses	P-522, p.324, Line 229	128,414
10	Total customer accounts expenses	P-522, p.324, Line 237	50,999
11	Total customer service and information expenses	P-522, p.325, Line 244	86,704
12	Total sales expenses	P-522, p.325, Line 251	87
13	Total administrative and general expenses	P-522, p.325, Line 270	38,606
14	Total operation and maintenance expenses	Sum of lines 7 through 13	<u>381,355</u>
15	Include: cloud computing amortization included in O&M	Exhibit No.: A-3 (HLR-14), Line 115	17
16	Include: EICP operational incentive goals	Exhibit No.: A-3 (HLR-14), Line 116	740
17	Include: non-energy related uncollectible expense:	Exhibit No.: A-3 (HLR-14), Line 117	278
18	Exclude: RNG program expenses	Exhibit No.: A-3 (HLR-14), Line 94	(811)
19	Exclude: LIBA expenses	Exhibit No.: A-3 (HLR-14), Line 111	(377)
20	Exclude: one-time corporate card services agreement adjustment	Exhibit No.: A-3 (HLR-14), Line 112	158
21	Exclude: one-time consulting expenses	Exhibit No.: A-3 (HLR-14), Line 113	(2,239)
22	Exclude: MGP amortization expense	Exhibit No.: A-62 (MJF-6), p.1, Col. (u)	(8,213)
23	Exclude: gas used in utility operations included in storage and transmission expens	Exhibit No.: A-98 (TKJ-2), Line 2	930
24	Total other O&M expenses	Sum of Lines 14 through 23	<u>371,837</u>

Schedule: C-5.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Operation and Maintenance Expenses by Witness

For the Historical Year Ended December 31, 2024

(In Dollars)

Case No.: U-21981

Exhibit No.: A-3 (HLR-14)

Schedule: C-5.1

Page: 1 of 2

Witness: HLRayl

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	Account Number	Account Description	IT & Security Baker	Incentive Compensation Conrad	Corporate Foster	Transmission / Pipeline Griffin	Employee Benefits Grob	Facilities Guinn	Engineering Pascarello	Compression / Storage / Operations Pnacek	Other Rayl	Customer Experience Wiersma	Total O&M Expense Per Witnesses	MPSC P-522 O&M Expenses	Variance
1	98030010	(803) Natural Gas Transmission Line Purchases	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 482,353,469	\$ 482,353,469
2	98081010	(808.1) Gas Withdrawn from Storage - Debit	-	-	-	-	-	-	-	-	-	-	-	399,265,808	399,265,808
3	98082010	(808.2) Gas Delivered to Storage - Credit	-	-	-	-	-	-	-	-	-	-	-	(245,013,448)	(245,013,448)
4	98100010	(810) Gas Used for Compressor Station Fuel - Credit	-	-	-	-	-	-	-	-	-	-	-	1,729,579	1,729,579
5	98120010	(812) Gas Used for Other Utility Operations - Credit	-	-	-	-	-	-	-	-	-	-	-	(1,487,425)	(1,487,425)
6	98130010	(813) Other Gas Supply Expenses	-	-	-	-	-	-	-	-	-	-	-	20,921	20,921
7	98140010	(814) Operation Supervision and Engineering	-	-	-	-	-	-	113,673	144,249	-	-	257,922	257,921	(1)
8	98160010	(816) Wells Expenses	-	-	-	-	-	-	-	64,954	-	-	64,954	64,954	0
9	98170010	(817) Lines Expense	-	-	-	-	-	-	303,379	268,846	-	-	572,225	572,225	0
10	98180010	(818) Compressor Station Expenses	9,494	-	203,961	-	-	434,884	552,576	2,549,448	-	-	3,750,362	3,750,363	1
11	98190010	(819) Compressor Station Fuel and Power	-	-	-	-	-	-	-	1,145,976	-	-	1,145,976	3,989,373	2,843,397
12	98200010	(820) Measuring and Regulating Station Expenses	-	-	-	-	-	-	-	164,846	-	-	164,846	164,846	(0)
13	98230010	(823) Gas Losses	-	-	-	-	-	-	-	-	-	-	-	399,593	399,593
14	98240010	(824) Other Expenses	2,127,104	-	-	-	-	149,746	-	1,350,695	-	-	3,627,545	3,766,731	139,186
15	98300010	(830) Maintenance Supervision and Engineering	-	-	1,020,479	-	-	21,331	113,576	1,11,094	-	-	1,266,480	1,277,439	10,959
16	98320010	(832) Maintenance of Reservoirs and Wells	-	-	-	-	-	-	1,479,049	411,870	-	-	1,890,919	1,890,919	0
17	98330010	(833) Maintenance of Lines	-	-	-	-	-	73,239	303,379	2,961,650	-	-	3,358,268	3,358,269	1
18	98340010	(834) Maintenance of Compressor Station Equipment	-	-	30,505	-	-	293,752	489,203	7,783,608	-	-	8,597,068	8,597,068	(0)
19	98500010	(850) Operation Supervision and Engineering	37,499	-	336,202	-	-	-	4,913,696	1,598,219	-	-	6,885,616	6,885,613	(3)
20	98510010	(851) System Control and Load Dispatching	945,042	-	-	-	-	-	4,127,984	5,073,026	-	-	5,073,026	5,073,026	0
21	98530010	(853) Communication System Expenses	-	-	30,505	-	-	287,748	9,331	1,260,301	-	-	1,587,885	1,587,886	1
22	98540010	(854) Gas for Compressor Station Fuel	-	-	-	-	-	-	-	-	-	-	-	(4,567,614)	(4,567,614)
23	98550010	(855) Other Fuel and Power for Compressor Stations	-	-	-	-	-	-	-	525,251	-	-	525,251	525,251	0
24	98560010	(856) Mains Expenses	-	-	-	16,940,108	-	-	137,987	2,516,345	-	-	19,594,440	19,594,440	(0)
25	98570010	(857) Measuring and Regulating Station Expenses	-	-	-	-	-	30,258	396,918	1,374,688	-	-	1,801,864	2,456,787	654,923
26	98590010	(859) Other Expenses	1,303,050	-	-	3,024,956	-	-	225,504	1,072,313	-	-	5,625,824	5,625,824	0
27	98600010	(860) Rents	-	-	-	-	-	-	14,816	-	-	-	14,816	14,816	0
28	98610010	(861) Maintenance Supervision and Engineering	-	-	-	-	-	-	468,720	250,530	-	-	719,250	719,250	0
29	98630010	(863) Maintenance of Mains	-	-	-	2,665,473	-	-	137,451	2,331,163	-	-	5,134,086	5,134,086	(0)
30	98640010	(864) Maintenance of Compressor Station Equipment	-	-	30,505	-	-	94,115	9,331	3,665,108	-	-	3,799,060	3,799,059	(1)
31	98650010	(865) Maintenance of Measuring and Reg. Station Equipment	-	-	-	7,299	-	3,785	-	1,994,976	-	-	2,006,059	2,006,059	(0)
32	98700010	(870) Operation Supervision and Engineering	74,999	-	392,082	-	-	-	2,151,716	830,577	-	-	3,449,374	3,449,374	0
33	98720010	(872) Compressor Station Labor and Expenses	-	-	-	-	-	30,485	-	22,469	-	-	52,954	52,954	0
34	98740010	(874) Mains and Services Expenses	-	-	3,139,095	-	-	127,666	551,660	30,431,433	-	-	34,249,854	34,200,801	(49,053)
35	98750010	(875) Measuring and Regulating Station Expenses - General	-	-	-	-	-	-	-	4,910,367	-	-	4,910,367	4,910,368	1
36	98780010	(878) Meter and House Regulator Expenses	-	-	-	-	-	-	-	7,151,902	-	-	7,151,902	7,151,903	1
37	98790010	(879) Customer Installations Expenses	-	-	-	-	-	-	-	4,022,252	13,598,765	-	17,621,017	17,621,023	6
38	98800010	(880) Other Expenses	10,042,872	-	4,091,743	-	-	816,744	1,197,160	7,653,100	-	-	23,801,619	23,839,712	38,093
39	98850010	(885) Maintenance Supervision and Engineering	-	-	20,445	-	-	-	312,310	(497,347)	-	-	(164,592)	(164,592)	0
40	98860010	(886) Maintenance of Structures and Improvements	-	-	-	-	-	69,158	-	-	-	-	69,158	69,159	1
41	98870010	(887) Maintenance of Mains	-	-	-	888,877	-	-	-	9,403,884	-	-	10,292,761	10,292,761	(0)
42	98880010	(888) Maintenance of Compressor Station Equipment	-	-	-	-	-	-	-	17,518	-	-	17,518	17,518	(0)
43	98890010	(889) Maintenance of Meas. And Reg. Sta. Equip. - General	-	-	-	-	-	-	-	2,854,133	-	-	2,854,133	2,854,133	0
44	98920010	(892) Maintenance of Services	-	-	-	-	-	-	4,530	13,449,873	-	-	13,454,403	13,454,400	(3)
45	98930010	(893) Maintenance of Meters and House Regulators	-	-	-	-	-	-	-	10,491,052	-	-	10,491,052	10,491,052	0
46	98940010	(894) Maintenance of Other Equipment	-	-	57,701	-	-	21,331	-	94,673	-	-	173,705	173,704	(1)
47	99010020	(901) Supervision	633,694	-	245,983	-	-	345,422	255,245	96,205	-	4,213,564	5,790,113	5,790,112	(1)
48	99020020	(902) Meter Reading Expenses	-	-	-	-	-	-	-	2,866,872	-	-	2,866,872	2,866,873	1
49	99030020	(903) Customer Records and Collection Expenses	5,442,582	-	416,191	-	-	(74)	-	2,453,585	-	22,050,825	30,363,109	30,363,109	0
50	99041020	(904) Uncollectible Accounts	-	-	12,186,532	-	-	-	-	164,060	(94,011)	-	12,256,581	11,978,791	(277,790)
51	99050020	(905) Miscellaneous Customer Accounts Expense	-	-	-	-	-	-	-	-	-	80	80	80	0
52	99070020	(907) Supervision	-	-	-	-	-	-	-	-	-	372,304	372,304	372,304	0
53	99080020	(908) Customer Assistance Expenses	-	-	-	-	-	-	-	-	2,559,866	705,852	3,265,718	86,045,560	82,779,842
54	99090020	(909) Informational and Instructional Expenses	-	-	-	-	-	-	-	-	-	-	286,110	286,110	0
55	99160020	(916) Miscellaneous Sales Expenses	-	-	-	-	-	-	286,110	-	-	-	86,608	86,608	0
56	99200020	(920) Administrative and General Salaries	3,440,226	1,869,017	17,596,478	-	725,232	1,168,498	-	-	-	338,371	25,137,821	25,523,031	385,210
57	99210020	(921) Office Supplies and Expenses	2,593,906	-	839,257	-	2,267	2,109,438	-	-	-	3,722	5,548,590	5,306,744	(241,846)
58	99220020	(922) Administrative Expenses Transferred - Credit	-	(1,150,051)	(13,697,456)	-	-	-	-	-	-	-	(14,847,507)	(14,847,507)	0
59	99230020	(923) Outside Services Employed	10,203,343	-	5,003,662	-	572,724	999,836	-	125,000	-	130,083	17,034,646	19,362,401	2,327,755
60	99240020	(924) Property Insurance	-	-	1,857,279	-	-	-	-	-	-	-	1,857,279	1,857,279	(0)
61	99250020	(925) Injuries and Damages	-	-	13,983,322	-	-	-	-	-	-	-	13,983,322	22,195,918	8,212,596
62	99260020	(926) Employee Pensions and Benefits	-	-	(376,996)	-	(26,547,431)	-	-	-	-	-	(26,924,427)	(26,910,650)	13,777
63	99280020	(928) Regulatory Commission Expenses	-	-	660,146	-	-	-	-	-	-	-	660,146	660,145	(1)
64	99302020	(930.2) Miscellaneous General Expenses	-	-	2,223,805	-	-	-	-	-	-	545,320	2,769,126	3,193,056	423,930
65	99310020	(931) Rents	-	-	(19,025)	-	-	34,554	-	-	-	-	15,529	99,807	84,278
66	99350020	(935) Maintenance of General Plant	-	-	(58,304)	-	-	2,310,974	-	2,729	-	-	2,255,400	2,166,150	(89,250)

Schedule: C-5.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Operation and Maintenance Expenses by Witness
For the Historical Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-3 (HLR-14)
Schedule: C-5.1
Page: 2 of 2
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	Account Number	Account Description	IT & Security Baker	Incentive Compensation Conrad	Corporate Foster	Transmission / Pipeline Griffin	Employee Benefits Grob	Facilities Guinn	Engineering Pascarello	Compression / Storage / Operations Pnacek	Other Rayl	Customer Experience Wiersma	Total O&M Expense Per Witnesses	MPSC P-522 O&M Expenses	Variance
67	94040020	(404) Amortization of Utility Plant	16,546	-	-	-	-	-	-	-	-	-	16,546	-	(16,546)
68	94160000	(416) Merchandising, Jobbing, and Contract Work	0	-	-	-	-	-	-	-	838,201	-	838,201	-	(838,201)
69	94170020	(417.1) Nonutility Operations	-	-	-	-	-	-	-	-	2,441,822	-	2,441,822	-	(2,441,822)
70	94265010	(426) Other Deductions	-	739,933	(0)	-	(0)	-	237	-	0	-	740,169	-	(740,169)
71	94300001	(430) AR Fin Fees Int	-	-	2	-	-	-	-	-	-	-	2	-	(2)
72	94310000	(431) Other Interest Expense	-	-	-	-	-	-	-	-	259,490	-	259,490	-	(259,490)
73	---	Allocation and rounding adjustments	(75,422)	-	-	-	-	-	-	-	-	-	(75,422)	-	75,422
74	Total O&M expense		\$ 36,794,935	\$ 1,458,898	\$ 50,214,100	\$ 23,526,713	\$ (25,247,209)	\$ 9,422,890	\$ 18,555,539	\$ 130,110,467	\$ 19,604,133	\$ 28,446,727	\$ 292,887,192	\$ 1,018,623,279	\$ 725,736,087

Reconciliation of MPSC P-522 to Witness-Sponsored O&M Expense

75 Total MPSC P-522 O&M Expense, p. 325, Line 271
Variances:

\$ 1,018,623,279

76	94040020	(404) Amortization of Utility Plant	Include: cloud computing amortization classified as O&M expense	Col. (c), Line 67	16,546
77	94160000	(416) Merchandising, Jobbing, and Contract Work	Include: Utility jobwork expenses	WP-HLR-10	838,201
78	94170020	(417) Nonutility Operations	Include: Nonutility jobwork expenses	WP-HLR-10	2,441,822
79	94265010	(426) Other Deductions	Include: EICP operational incentive goals	Col. (d), Line 70	739,933
80	94310000	(431) Other Interest Expense	Include: Interest expense on security deposits	WP-HLR-15	259,490
81	98030010	(803) Natural Gas Transmission Line Purchases	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	(482,353,469)
82	98081010	(808.1) Gas Withdrawn from Storage - Debit	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	(399,265,808)
83	98082010	(808.2) Gas Delivered to Storage - Credit	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	245,013,448
84	98100010	(810) Gas Used for Compressor Station Fuel - Credit	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	(1,729,579)
85	98120010	(812) Gas Used for Other Utility Operations - Credit	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	1,487,425
86	98130010	(813) Other Gas Supply Expenses	Exclude: included in calculation of cost of gas sold	Included in Exhibit No.: A-3 (HLR-12)	(20,921)
87	98190010	(819) Compressor Station Fuel and Power	Exclude: included in calculation of company use gas	Included in Exhibit No.: A-3 (HLR-13), Line 6	(2,843,397)
88	98230010	(823) Gas Losses - amortization of storage losses	Exclude: included in calculation of LAUF gas	Exhibit No.: A-3 (HLR-13), Line 2	(399,593)
89	98240010	(824) Other Expenses	Exclude: included in calculation of company use gas	Included in Exhibit No.: A-3 (HLR-13), Line 6	(139,185)
90	98540010	(854) Gas for Compressor Station Fuel	Exclude: included in calculation of company use gas	Included in Exhibit No.: A-3 (HLR-13), Line 6	4,567,614
91	98570010	(857) Measuring and Regulating Station Expenses	Exclude: included in calculation of company use gas	Included in Exhibit No.: A-3 (HLR-13), Line 6	(654,922)
92	99041020	(904) Uncollectible Accounts	Exclude: non-energy related expenses	Col. (o), Line 50	277,790
93	99080020	(908) Customer Assistance Expenses	Exclude: EWR expenses	WP-HLR-9	(81,968,607)
94	99080020	(908) Customer Assistance Expenses	Exclude: RNG program expenses	Col. (o), Line 53	(811,235)
95	99200020	(920) Administrative and General Salaries	Exclude: corporate giving salaries expense disallowance	WP-HLR-12	(7,991)
96	99200020	(920) Administrative and General Salaries	Exclude: LIBA expenses	Included in Col. (o), Line 56	(377,211)
97	99210020	(921) Office Supplies and Expenses	Exclude: one-time corporate card services agreement adjustment	Col. (o), Line 57	157,570
98	99230020	(923) Outside Services Employed	Exclude: one-time consulting expenses	Included in Col. (o), Line 59	(2,238,500)
99	99250020	(925) Injuries and Damages	Exclude: MGP amortization included in amortization expense	Col. (o), Line 61	(8,212,595)
100	99260020	(926) Employee Pensions and Benefits	Exclude: corporate salaries (executive physicals) expense disallowance	WP-HLR-12	(13,778)
101	99302020	(930.2) Miscellaneous General Expenses	Exclude: corporate dues, donations & lobbying expense disallowance	WP-HLR-14	(423,930)
102	---	Allocation and rounding adjustments	Col. (o), Line 73		(75,204)
103	Total O&M expense per witnesses		Sum of Lines 75 through 102		292,887,192
104	Total O&M expense per Exhibit No.: A-13 (HLR-37)		Exhibit No.: A-13 (HLR-37), Col. (i), Line 16		292,962,452
105	Difference		Line 103 - Line 104		(75,260)

Reconciliation of MPSC P-522 to Exhibit No.: A-3 (HLR-13) and Exhibit No.: A-13 (HLR-37)

106	Total MPSC P-522 O&M Expense, p. 325, Line 271		Col. (n), Line 74	\$ 1,018,623,279
107	Exclude: cost of gas sold		Col. (n), Sum of Lines 81 through 86	(636,868,904)
108	Exclude: company use gas included in distribution expenses		Col. (n), Sum of Lines 87 and 89 through 91	930,109
109	Exclude: amortization of storage losses included in LAUF		Col. (n), Line 88	(399,593)
110	Exclude: RNG program expenses		Col. (n), Line 94	(811,235)
111	Exclude: LIBA expenses		Col. (n), Line 96	(377,211)
112	Exclude: one-time corporate card services agreement adjustment		Col. (n), Line 97	157,570
113	Exclude: one-time consulting expenses		Col. (n), Line 98	(2,238,500)
114	Exclude: amortization of MGP		Col. (n), Line 99	(8,212,595)
115	Include: cloud computing amortization		Col. (n), Line 76	16,546
116	Include: EICP operational incentive goals		Col. (n), Line 79	739,933
117	Include: non-energy related uncollectibles expenses		Col. (n), Line 92	277,790
118	Total adjusted MPSC P-522 O&M expense		Sum of Lines 106 through 117	371,837,188
119	Total O&M expense per Exhibit No.: A-3 (HLR-13)		Exhibit No.: A-3 (HLR-13), Line 24	371,837,188
120	Difference		Line 118 - Line 119	0
121	Total O&M expense per Exhibit No.: A-3 (HLR-13)		Exhibit No.: A-3 (HLR-13), Line 24	\$ 371,837,188
122	O&M adjustments/disallowances		Exhibit No.: A-13 (HLR-37), Col. (i), Sum of Lines 8 through 13	(78,874,792)
123	Total adjusted other O&M expense		Line 121 + Line 122; also see Col. (n), Line 103	292,962,396
124	Total adjusted other O&M expense per Exhibit No.: A-13 (HLR-37)		Exhibit No.: A-13 (HLR-37), Col. (i), Line 16	292,962,452
125	Difference		Line 123 - Line 124	(57)

Schedule: C-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation and Amortization Expenses
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-3 (HLR-15)
Schedule: C-6
Page: 1 of 1
Witness: HLRayl
Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
	<u>Depreciation Expenses</u>		
1	Intangible plant	P-522, p.337, Col.(g), Line 1	4,176
2	Underground gas storage plant	P-522, p.337, Col.(g), Line 5	32,429
3	Transmission plant	P-522, p.337, Col.(g), Line 8	65,919
4	Distribution plant	P-522, p.337, Col.(g), Line 9	189,206
5	General plant	P-522, p.337, Col.(g), Line 10	6,074
6	Allocated gas portion of common general plant	P-522, p.337, Col.(g), Line 13	27,291
7	Allocated gas portion of common limited term plant	P-522, p.337, Col.(g), Line 14	62
8	Exclude: cloud computing amortization included in O&M	Exhibit No.: A-3 (HLR-14), Col. (c), Line 67	(17)
9	Total depreciation expenses	Sum of Lines 1 through 8	<u>325,142</u>
	<u>Amortization Expenses</u>		
10	Amortization of utility plant acquisition adjustment	P-521, p.115, Col. (g), Line 9	64
11	Regulatory debits	P-521, p.115, Col. (g), Line 12	-
12	Include: Amortization of MGP	Exhibit No.: A-62 (MJF-6), p.1, Col. (u)	8,213
13	Total adjusted amortization expenses	Sum of Lines 10 through 12	<u>8,277</u>

Schedule: C-7**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

General Taxes

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-16)

Schedule: C-7

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Local real and personal property tax	P-521, p.262.1, Col.(j), Line 44	169,594
2	Federal unemployment tax	P-521, p.262.1, Col.(j), Line 4	54
3	Federal FICA tax	P-521, p.262.1, Col.(j), Line 6	12,180
4	Federal excise tax	P-521, p.262.1, Col.(j), Line 8	(5)
5	State unemployment tax	P-521, p.262.1, Col.(j), Lines 16 - 35	258
6	Total payroll taxes	Sum of Lines 2 through 5	<u>12,487</u>
7	State fuel tax	P-521, p.262.1, Col.(j), Lines 36 - 37	-
8	State MPSC assessment	P-521, p.262.1, Col.(j), Lines 38 - 39	5,780
9	State sales and use tax absorbed by company	P-521, p.262.1, Col.(j), Line 41	142
10	Other general taxes	Sum of Lines 7 through 9	<u>5,921</u>
11	Total general taxes	Line 1 + Line 6 + Line 10	<u><u>188,002</u></u>

Schedule: C-8**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Federal Income Taxes

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-17)

Schedule: C-8

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Federal income taxes	P-521, p.115, Col. (g), Line 15	43,755
2	Provision for deferred income taxes	P-521, p.115, Col. (g), Line 17	215,648
3	Provision for deferred income taxes - credit	P-521, p.115, Col. (g), Line 18	(177,390)
4	Investment tax credit adjustment, net	P-521, p.115, Col. (g), Line 19	(400)
5	Deferred state income tax expenses - historical year	Tax Department	(19,874)
6	Deferred other (local) income tax expenses - historical year	Tax Department	(814)
7	Total federal income taxes	Sum of Lines 1 through 6	<u>60,925</u>

Schedule: C-9

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

State Income Taxes

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-18)

Schedule: C-9

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	State income taxes	P-521, p.262.1, Col.(j), Lines 11 - 15	7,232
2	Deferred state income taxes	Tax Department	19,874
3	Total state income taxes	Line 1 + Line 2	<u>27,106</u>

Schedule: C-10

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Other (or Local) Taxes

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-19)

Schedule: C-10

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Other (local) income taxes	P-521, p.262.1, Col.(j), Line 45	346
2	Deferred other (local) income taxes	Tax Department	814
3	Total other (local) income taxes	Line 1 + Line 2	<u>1,160</u>

Schedule: C-11

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Allowance for Funds Used During Construction

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-20)

Schedule: C-11

Page: 1 of 1

Witness: HLRayl

Date: December 2025

	(a)	(b)	(c)
Line No	Description	Source	Amount
1	Total allowance for funds used during construction	WP-HLR-8	<u>17,593</u>

Schedule: C-12

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Income Tax Effect of Interest
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-3 (HLR-21)
Schedule: C-12
Page: 1 of 1
Witness: HLRayl
Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Rate base	Exhibit No.: A-2 (HLR-3)	10,001,178
2	Weighted cost of debt {a}	Exhibit No.: A-4 (HLR-23)	1.75%
3	Allowable interest expense	Line 1 * Line 2	174,901
4	Actual interest expense {b}	Line {b.7}	196,124
5	Increase/ (decrease) in allowable interest deduction	Line 3 - Line 4	(21,222)
6	Impact on taxable income	Line 5 * -1	21,222
7	Impact on local income taxes	Line 6 * 0.16% Other (Local) Income Tax Rate	34
8	Impact on state income taxes	Line 6 * 5.24% State Income Tax Rate	1,112
9	Impact on federal taxable income	Line 6 - Line 7 - Line 8	20,076
10	Impact on federal income taxes	Line 9 * 21.00% Federal Income Tax Rate	4,216
11	Total impact on net operating income	(Line 7 + Line 8 + Line 10) *-1	(5,362)

Notes

{a} Excludes JDITC

{b} Calculation of actual interest expense

{b.1}	Total fixed charges - financial basis	WP-HLR-8	191,891
{b.2}	Lease interest expense	SAP Account 99302020, Operational Account 8232004	126
{b.3}	Subtotal	Line {b.1} - Line {b.2}	191,765
{b.4}	AFUDC debt	WP-HLR-8	5,022
{b.5}	Subtotal	Line {b.3} + Line {b.4}	196,788
{b.6}	Preferred stock dividends	WP-HLR-8	664
{b.7}	Actual ratemaking interest expense	Line {b.5} - Line {b.6}	196,124

Schedule: C-13**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Interest Synchronization Adjustment

For the Historical Year Ended December 31, 2024

(\$000)

Case No.: U-21981

Exhibit No.: A-3 (HLR-22)

Schedule: C-13

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Rate base	Exhibit No.: A-2 (HLR-3)	10,001,178
2	JDITC debt-related portion of the capital structure	Exhibit No.: A-4 (HLR-23)	0.24%
3	Portion of rate base funded by JDITC	Line 1 * Line 2	<u>23,639</u>
4	Cost of JDITC - debt portion	Exhibit No.: A-4 (HLR-23)	4.10%
5	Allowable JDITC interest expense	Line 3 * Line 4	<u><u>970</u></u>
6	Impact on taxable income	Line 5 * -1	(970)
7	Impact on local income taxes	Line 6 * 0.16% Other (Local) Income Tax Rate	(2)
8	Impact on state income taxes	Line 6 * 5.24% State Income Tax Rate	(51)
9	Impact on federal taxable income	Line 6 - Line 7 - Line 8	<u>(918)</u>
10	Impact on federal income taxes	Line 9 * 21.00% Federal Income Tax Rate	(193)
11	Total impact on net operating income	(Line 7 + Line 8 + Line 10) *-1	<u><u>245</u></u>

Schedule: D-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure and Rate of Return Summary
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-4 (HLR-23)
Schedule: D-1
Page: 1 of 1
Witness: HLRayl
Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No	Description	Source	Capital Structure			Cost Rate	Weighted Cost			
			Amount	Percent Permanent Capital	Percent of Total Capital		Permanent Capital	Total Cost %	Conversion Factor	Pre-Tax Return
1	Long term debt	Exhibit No.: A-2 (HLR-7), Col. (d.1), Line 36	11,135,743	50.46%	42.09%	4.10% {1}	2.07%	1.73%		1.73%
2	Preferred stock	Exhibit No.: A-2 (HLR-7), Col. (d.5), Line 34	37,315	0.17%	0.14%	4.50% {2}	0.01%	0.01%	1.3381	0.01%
3	Common equity	Exhibit No.: A-2 (HLR-7), Col. (d.5), Line 33	10,894,331	49.37%	41.17%	9.90% {3}	4.89%	4.08%	1.3381	5.45%
4	Permanent capital	Sum of Lines 1 through 3	22,067,389							
5	Utility term loan	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 21	-		0.00%	9.18% {4}		0.00%		0.00%
6	Notes payable	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 22	12,150		0.05%	9.18% {4}		0.00%		0.00%
7	Advanced renewable reg liability	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 31	50,214		0.19%	9.18% {4}		0.02%		0.02%
8	Short term debt	Sum of Lines 5 through 7	62,364							
9	Deferred income taxes	Exhibit No.: A-2 (HLR-7), Col. (d.4), Line 36	4,206,236		15.90%	0.00%		0.00%		0.00%
10	Deferred JDITC - long term debt	See Note {5}	62,541		0.24%	4.10%		0.01%		0.01%
11	Deferred JDITC - preferred stock	See Note {5}	210		0.00%	4.50%		0.00%	1.3381	0.00%
12	Deferred JDITC - common equity	See Note {5}	61,185		0.23%	9.90%		0.02%	1.3381	0.03%
13	Total deferred JDITC	Exhibit No.: A-2 (HLR-7), Col. (d.3), Line 36	123,936							
14	Total	Sum of Lines 4, 8, 9, and 13	26,459,924					5.86%		7.25%

Notes

- {1} Exhibit No.: A-4 (HLR-24)
{2} Exhibit No.: A-4 (HLR-26)
{3} Exhibit No.: A-4 (HLR-27)
{4} Exhibit No.: A-4 (HLR-25)
{5} The total deferred JDITC balance on line 13 is allocated to lines 10 through 12 based on the percent of permanent capital in column (d)

Schedule: D-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Cost of Long-Term Debt (Excluding Securitization)
 For the Historical Year Ended December 31, 2024
 (\$000)

Case No.: U-21981
 Exhibit No.: A-4 (HLR-24)
 Schedule: D-2
 Page: 1 of 1
 Witness: HLRayl
 Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line		Original Issue	Stated	Interest Rate	Amount of	Price to	Underwriting	Net Proceeds	Cost Based	13-Mo Avg	
No	Description	Date	Maturity Date	%	Offering	Public %	& Financing Expense %	to the Company %	on Net Proceeds %	Amount Outstanding	Annual Cost
Mortgage Bonds											
1	3.125%	Aug-18-2014	Aug-31-2024	3.125%	250,000	99.90%	0.790%	99.11%	3.230%	173,077	5,356
2	3.190%	Dec-17-2012	Dec-16-2024	3.190%	51,500	100.00%	0.536%	99.46%	3.244%	47,538	1,593
3	5.240%	May-30-2023	May-15-2026	5.240%	115,000	100.00%	0.116%	99.88%	5.282%	115,000	6,072
4	3.68% (Private Placement)	Oct-01-2018	Oct-01-2027	3.680%	100,000	100.00%	0.159%	99.84%	3.701%	100,000	3,698
5	3.390%	Dec-17-2012	Dec-15-2027	3.390%	35,500	100.00%	0.540%	99.46%	3.436%	35,500	1,216
6	3.800%	Nov-13-2018	Nov-15-2028	3.800%	300,000	99.75%	0.752%	99.00%	3.922%	300,000	11,698
7	4.650%	Jan-10-2023	Mar-01-2028	4.650%	425,000	99.81%	0.833%	98.98%	4.875%	425,000	20,606
8	5.070%	May-30-2023	May-15-2029	5.070%	50,000	100.00%	0.232%	99.77%	5.115%	50,000	2,556
9	4.900%	Aug-04-2023	Feb-15-2029	4.900%	500,000	99.95%	0.806%	99.14%	5.079%	500,000	25,272
10	4.600%	Jan-09-2024	May-30-2029	4.600%	600,000	99.77%	0.704%	99.06%	4.798%	553,846	28,149
11	4.700%	Aug-05-2024	Jan-15-2030	4.700%	700,000	99.78%	0.712%	99.06%	4.898%	269,231	13,857
12	3.600%	Aug-11-2022	Aug-15-2032	3.600%	350,000	99.93%	0.850%	99.08%	3.711%	350,000	12,898
13	3.18% (Private Placement)	Sep-28-2017	Sep-28-2032	3.180%	40,000	100.00%	0.333%	99.67%	3.208%	40,000	1,281
14	3.18% (Private Placement)	Nov-15-2017	Nov-15-2032	3.180%	60,000	100.00%	0.332%	99.67%	3.208%	60,000	1,921
15	5.170%	May-30-2023	May-15-2032	5.170%	95,000	100.00%	0.340%	99.66%	5.218%	95,000	4,947
16	4.625%	Feb-23-2023	May-15-2033	4.625%	700,000	99.45%	0.847%	98.60%	4.799%	700,000	33,331
17	5.800%	Aug-11-2005	Sep-15-2035	5.800%	175,000	99.81%	1.046%	98.76%	5.888%	175,000	10,222
18	3.52% (Private Placement)	Sep-28-2017	Sep-28-2037	3.520%	125,000	100.00%	0.444%	99.56%	3.551%	125,000	4,428
19	3.52% (Private Placement)	Nov-15-2017	Nov-15-2037	3.520%	210,000	100.00%	0.443%	99.56%	3.551%	210,000	7,438
20	5.380%	May-30-2023	May-15-2037	5.380%	140,000	100.00%	0.524%	99.48%	5.434%	140,000	7,585
21	4.01% (Private Placement)	Oct-01-2018	Oct-01-2038	4.010%	215,000	100.00%	0.349%	99.65%	4.036%	215,000	8,659
22	6.170%	Sep-01-2010	Sep-01-2040	6.170%	50,000	100.00%	0.984%	99.02%	6.243%	50,000	3,101
23	4.970%	Oct-15-2010	Oct-15-2040	4.970%	50,000	100.00%	0.539%	99.46%	5.005%	50,000	2,494
24	4.310%	Dec-17-2012	Dec-15-2042	4.310%	263,000	100.00%	0.528%	99.47%	4.342%	263,000	11,381
25	3.950%	May-17-2013	May-15-2043	3.950%	425,000	99.84%	1.034%	98.81%	4.019%	425,000	16,908
26	4.100%	Nov-06-2015	Nov-15-2045	4.100%	250,000	99.91%	1.054%	98.86%	4.167%	250,000	10,345
27	3.250%	Aug-10-2016	Aug-15-2046	3.250%	450,000	99.22%	1.058%	98.16%	3.347%	450,000	12,936
28	3.950%	Feb-22-2017	Jul-15-2047	3.950%	350,000	99.58%	1.066%	98.52%	4.035%	350,000	13,995
29	4.050%	May-14-2018	May-15-2048	4.050%	550,000	98.97%	1.076%	97.89%	4.174%	550,000	20,632
30	4.350%	Nov-13-2018	Apr-15-2049	4.350%	550,000	99.62%	1.054%	98.56%	4.436%	550,000	24,184
31	3.750%	May-28-2019	Feb-15-2050	3.750%	300,000	98.83%	1.086%	97.75%	3.876%	300,000	10,535
32	3.100%	Sep-03-2019	Aug-15-2050	3.100%	550,000	99.29%	0.971%	98.32%	3.186%	550,000	13,989
33	3.500%	Mar-26-2020	Aug-01-2051	3.500%	575,000	100.00%	1.094%	98.91%	3.558%	575,000	18,366
34	2.650%	Aug-02-2021	Aug-15-2052	2.650%	300,000	99.92%	1.065%	98.85%	2.705%	300,000	8,061
35	4.200%	Aug-11-2022	Sep-01-2052	4.200%	450,000	99.93%	1.075%	98.85%	4.268%	450,000	19,067
36	3.86% (Private Placement)	Sep-28-2017	Sep-28-2052	3.860%	20,000	100.00%	0.777%	99.22%	3.901%	20,000	776
37	3.86% (Private Placement)	Nov-15-2017	Nov-15-2052	3.860%	30,000	100.00%	0.775%	99.22%	3.901%	30,000	1,165
38	4.28% (Private Placement)	Oct-01-2018	Oct-01-2057	4.280%	185,000	100.00%	0.676%	99.32%	4.316%	185,000	7,950
39	2.500%	May-13-2020	May-01-2060	2.500%	525,000	100.00%	1.047%	98.95%	2.542%	525,000	13,374
40	4.350%	Aug-18-2014	Aug-31-2064	4.350%	250,000	99.14%	0.999%	98.14%	4.443%	250,000	10,968
41	Floating Rate FMB (a)	Sep-19-2019	Sep-15-2069	2.993%	75,649	100.00%	1.993%	98.01%	3.071%	75,649	4,002
42	Floating Rate FMB (b)	May-20-2020	May-20-2070	2.684%	134,349	100.00%	1.291%	98.71%	2.731%	134,349	7,066
43	Floating Rate FMB (c)	Oct-07-2020	Oct-07-2070	2.048%	126,497	100.00%	1.250%	98.75%	2.089%	126,497	6,602
44	Total Mortgage Bonds									11,138,687	450,682
Other Long-Term Debt											
45	PCRB - MSF LORB - 2019	Oct-01-2019	Oct-01-2049	1.800%	75,000	100.00%	1.485%	98.52%	1.865%	75,000	1,672
46	PCRB - MSF LORB - 2021	Oct-07-2021	Apr-01-2035	0.875%	35,000	100.00%	1.500%	98.50%	0.994%	35,000	342
47	Total Other Long-Term Debt									110,000	2,014
Cost of Long-Term Debt Calculation											
48	Total Annual Cost										452,696
49	Amortization of Losses on Reacquired Debt with Refunding (including Call Premiums)										4,314
50	Total Long-Term Debt Annual Cost Balance										457,010
51	Total Long-Term Debt										11,248,687
52	Unamortized Debt Discount and Premium Expense										(31,371)
53	Unamortized Debt Issuance Costs										(81,573)
54	Total Long-Term Debt Balance per Exhibit No.: A-2 (HLR-7), Col. (d.1), Line 36										11,135,743
55	Average Cost of Long-Term Debt										4.10%

Notes

- [a] Interest rate for \$76M floating rate FMBs due 2069 is 3-mo SOFR minus 3.839 basis points, resetting quarterly on 3/15, 6/15, 9/15, and 12/15
 [b] Interest rate for \$134M floating rate FMBs due 2070 is 3-mo SOFR minus 3.839 basis points, resetting quarterly on 2/20, 5/20, 8/20, and 11/20
 [c] Interest rate for \$126M floating rate FMBs due 2070 is 3-mo SOFR minus 3.839 basis points, resetting quarterly on 1/7, 4/7, 7/7, and 10/7

Schedule: D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short-Term Debt
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-4 (HLR-25)
Schedule: D-3
Page: 1 of 1
Witness: HLRayl
Date: December 2025

(a)		(b)	(c)	(d)	(e)
Line	Description	Source	13-Mo Avg Amount Outstanding	Annual Cost {1}	Average Cost of Short-Term Debt
			[Col. (d) / Col. (c)]		
1	Utility term loan	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 21	-		
2	Notes payable	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 22	12,150		
3	Advanced renewable reg liability	Exhibit No.: A-2 (HLR-7), Col. (d.2), Line 31	50,214		
4	Total	Sum of Lines 1 through 3	62,364	5,723	9.18%

Notes

{1} SAP Accounts 8000000, 8020000, 8200000, 8220000, 8265001, and 8300000

Schedule: D-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Preferred Stock
For the Historical Year Ended December 31, 2024
(\$000)

Case No.: U-21981
Exhibit No.: A-4 (HLR-26)
Schedule: D-4
Page: 1 of 1
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line		Annual	Par	Discount /	Finance	Net	Number of	Total Value of		Annual
No	Description	Dividend	Value	(Premium)	Expense	Proceeds	Shares	Outstanding	Proceeds {1}	Dollar
						Received	Outstanding		Cost Rate %	Amount
1	Preferred stock	4.50	100	-	-	100	373,148	37,315	4.50%	1,679

Notes

{1} Exhibit No.: A-2 (HLR-7), Col. (d.5), Line 34

Schedule D-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Common Shareholders' Equity
For the Historical Year Ended December 31, 2024

Case No.: U-21981
Exhibit No.: A-4 (HLR-27)
Schedule: D-5
Page: 1 of 1
Witness: HLRayl
Date: December 2025

(a)

Line No	Description

- 1 The Company's authorized cost of common equity is 9.90%. This rate was approved by the Michigan Public Service Commission on July 23, 2024 in Gas Rate Case U-21490.

Schedule: A-1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Revenue Deficiency (Sufficiency)

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-11 (HLR-28)

Schedule: A-1

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Rate base	Exhibit No.: A-12 (HLR-31)	12,488,293
2	Adjusted net operating income	Exhibit No.: A-13 (HLR-36)	620,380
3	Overall rate of return	Line 2 / Line 1	<u>4.97%</u>
4	Required rate of return	Source: Exhibit No.: A-14 (MRB-1)	6.40%
5	Income requirement	Line 1 * Line 4	799,708
6	Income deficiency (sufficiency)	Line 5 - Line 2	<u>179,328</u>
7	Revenue conversion factor	Exhibit No.: A-13 (HLR-38)	1.3381
8	Revenue deficiency (sufficiency)	Line 6 * Line 7	<u><u>239,956</u></u>

Schedule: A-2**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Financial Metrics - Ratemaking Basis

For the Projected 12-Month Period Ending October 31, 2027

GAS RESULTS ONLY

(\$000)

Case No.: U-21981

Exhibit No.: A-11 (HLR-29)

Schedule: A-2

Page: 1 of 3

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	No Rate Relief	Full Rate Relief
1	Operating revenues	2,555,726	2,795,681
2	Operating expenses	1,826,307	1,826,307
3	Pre-tax operating income	729,418	969,374
4	Income taxes	121,860	182,487
5	Net operating income	607,558	786,887
6	Tax effect of pro forma interest on NOI	Included in Line 4	Included in Line 4
7	AFUDC	12,821	12,821
8	Interest charges, net of tax benefit	(241,310)	(241,310)
9	Preferred stock dividends	(614)	(614)
10	Net income available to common stockholders and JDITC	378,456	557,784
11	Return assignable to JDITC	(3,101)	(3,101)
12	Net income available to common stockholders	375,356	554,684
13	Average common equity	5,411,550	5,411,550
14	Earned rate of return on common equity	6.94%	10.25%
15	Authorized rate of return on common equity {1}	10.25%	10.25%

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Financial Metrics - Ratemaking Basis

For the Projected 12-Month Period Ending October 31, 2027

GAS RESULTS ONLY

(\$000)

Case No.: U-21981

Exhibit No.: A-11 (HLR-29)

Schedule: A-2

Page: 2 of 3

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	No Rate Relief	Full Rate Relief
	<u>EBIT Interest Coverage Ratio</u>		
16	Pre-tax operating income	729,418	969,374
17	AFUDC	12,821	12,821
18	Total EBIT	742,240	982,195
19	Interest charges, net of tax benefit	241,310	241,310
20	EBIT interest coverage ratio	3.08	4.07
	<u>EBITDA Interest Coverage Ratio</u>		
21	Total EBIT	742,240	982,195
22	Depreciation and amortization	392,471	392,471
23	EBITDA	1,134,711	1,374,666
24	Interest charges, net of tax benefit	241,310	241,310
25	EBITDA interest coverage ratio	4.70	5.70
	<u>FFO Interest Coverage Ratio {2}</u>		
26	Net operating income	607,558	786,887
27	Depreciation and amortization	392,471	392,471
28	Deferred income taxes	113,150	113,150
29	AFUDC	12,821	12,821
30	Other major recurring non-cash items	-	-
31	Interest paid	181,029	181,029
32	Less: #REF!	-	-
33	Subtotal	1,307,029	1,486,357
34	Interest charges, net of tax benefit	241,310	241,310
35	FFO interest coverage ratio	5.42	6.16
	<u>Overall Fixed Charge Coverage Ratio</u>		
36	Net income available to common stockholders	375,356	554,684
37	Interest charges, net of tax benefit	241,310	241,310
38	Subtotal numerator	616,666	795,994
39	Interest charges, net of tax benefit	241,310	241,310
40	Preferred stock dividends	614	614
41	Subtotal denominator	241,924	241,924
42	Overall fixed charge coverage ratio	2.55	3.29

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Financial Metrics - Ratemaking Basis

For the Projected 12-Month Period Ending October 31, 2027

GAS RESULTS ONLY

(\$000)

Case No.: U-21981

Exhibit No.: A-11 (HLR-29)

Schedule: A-2

Page: 3 of 3

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) No Rate Relief	(c) Full Rate Relief
<u>Cash Flow Coverage of Dividends Ratio</u>			
43	Net income available to common stockholders	375,356	554,684
44	Depreciation and amortization	392,471	392,471
45	Deferred taxes	113,150	113,150
46	Subtotal	880,976	1,060,305
47	Common dividends {3}	300,284	443,747
48	Cash flow coverage of dividends ratio	2.93	2.39
<u>Common Dividend Payout Ratio</u>			
49	Common dividends {3}	300,284	443,747
50	Net income available to common stockholders	375,356	554,684
51	Common dividend payout ratio	80%	80%
<u>Permanent Capitalization</u>			
52	Long term debt, excluding securitization	14,333,687	14,333,687
53	Preferred stock	37,315	37,315
54	Common equity	14,810,699	14,810,699
55	Permanent capitalization	29,181,701	29,181,701
56	Long term debt, excluding securitization	49.12%	49.12%
57	Preferred stock	0.13%	0.13%
58	Common equity	50.75%	50.75%
59	Permanent capitalization	100.00%	100.00%

Notes

- {1} The Company is requesting an ROE of 10.25% in this case
- {2} FFO = Funds Flow from Operations
- {3} Consumers Energy dividends to the parent as a total company. This number represents the Company's 80% dividend policy applied to Net Income Available to Common Stockholders

Schedule: A-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of the Historical and Projected Revenue Requirement

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-11 (HLR-30)

Schedule: A-3

Page: 1 of 1

Witness: HLRayl

Date: December 2025

(a)		(b)		(c)	(d)	(e)	(f)
Line No.	Description	Source		Historical Year	Change	Test Year	
		Historical Year	Projected Year				
1	Total utility plant	Exhibit No.: A-2 (HLR-3)	Exhibit No.: A-12 (HLR-31)	12,919,985	2,986,312	15,906,298	
2	Depreciation reserve	Exhibit No.: A-2 (HLR-3)	Exhibit No.: A-12 (HLR-31)	(4,144,459)	(663,498)	(4,807,958)	
3	Customer advances for construction	Exhibit No.: A-2 (HLR-3)	Exhibit No.: A-12 (HLR-31)	(29,532)	21,651	(7,881)	
4	Net utility plant	Sum Lines 1 through 3	Sum Lines 1 through 3	8,745,994	2,344,465	11,090,459	
5	Net unamortized manufactured gas plant	Exhibit No.: A-2 (HLR-3)	Exhibit No.: A-12 (HLR-31)	33,602	(18,832)	14,771	
6	Working capital	Exhibit No.: A-2 (HLR-3)	Exhibit No.: A-12 (HLR-31)	1,221,582	161,482	1,383,064	
7	Rate base	Sum Lines 4 through 6	Sum Lines 4 through 6	10,001,178	2,487,115	12,488,293	
8	Rate of return	Exhibit No.: A-4 (HLR-23)	Source: Exhibit No.: A-14 (MRB-1)	5.86%		6.40%	
9	Income requirement	Line 7 * Line 8	Line 7 * Line 8	586,459	213,249	799,708	
10	Adjusted net operating income	Exhibit No.: A-3 (HLR-9)	Exhibit No.: A-13 (HLR-36)	620,948	(568)	620,380	
11	Income deficiency (sufficiency)	Line 9 - Line 10	Line 9 - Line 10	(34,489)	213,817	179,328	
12	Revenue conversion factor	Exhibit No.: A-3 (HLR-10)	Exhibit No.: A-13 (HLR-38)	1.3381		1.3381	
13	Revenue deficiency (sufficiency)	Line 11 * Line 12	Line 11 * Line 12	(46,148)	286,104	239,956	

Schedule: B-1**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Rate Base

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (HLR-31)

Schedule: B-1

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Total utility plant	Exhibit No.: A-12 (HLR-32)	15,906,298
2	Depreciation reserve	Exhibit No.: A-12 (HLR-33)	(4,807,958)
3	Customer advances for construction	WP-HLR-22	(7,881)
4	Net utility plant	Sum of Lines 1 through 3	<u>11,090,459</u>
5	Net unamortized MGP	Exhibit No.: A-62 (MJF-6), p.2, Line 4 ¹	14,771
6	Utility plant rate base	Line 4 + Line 5	<u>11,105,229</u>
7	Working capital	Exhibit No.: A-12 (HLR-34)	1,383,064
8	Total rate base	Sum of Lines 6 through 7	<u><u>12,488,293</u></u>

Schedule: B-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Total Utility Plant

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (HLR-32)

Schedule: B-2

Page: 1 of 1

Witness: HLRayl

Date: December 2025

(a)		(b)	(c)	(d)
		FERC		
Line		Account		
No	Description	Number	Source	Amount
1	Distribution		WP-HLR-17, Col. (c), Line 1	9,365,699
2	Transmission		WP-HLR-17, Col. (c), Line 2	3,412,725
3	Transmission Other		WP-HLR-17, Col. (c), Line 3	38,040
4	UGS Amortization		WP-HLR-17, Col. (c), Line 4	17,372
5	UGS Depreciation		WP-HLR-17, Col. (c), Line 5	1,711,813
6	UGS Non-Current		WP-HLR-17, Col. (c), Line 6	24,223
7	G-Intangibles		WP-HLR-17, Col. (c), Line 7	43,893
8	C-Intangibles		WP-HLR-17, Col. (c), Line 8	200,174
9	NGP		WP-HLR-17, Col. (c), Line 9	8,453
10	G-GP Structures		WP-HLR-17, Col. (c), Line 10	112,529
11	G-GP Computers		WP-HLR-17, Col. (c), Line 11	7,318
12	G-GP Transportation		WP-HLR-17, Col. (c), Line 12	137,258
13	G-GP Other		WP-HLR-17, Col. (c), Line 13	65,391
14	C-GP Structures		WP-HLR-17, Col. (c), Line 14	164,268
15	C-GP Computers		WP-HLR-17, Col. (c), Line 15	27,044
16	C-GP Transportation		WP-HLR-17, Col. (c), Line 16	77,032
17	C-GP Other		WP-HLR-17, Col. (c), Line 17	96,426
18	Total plant-in-service	101	Sum of Lines 1 through 17	15,509,660
19	Plant purchased or sold	102		-
20	Experimental plant unclassified	103		-
21	Plant leased to others	104		-
22	Completed construction not classified	106		-
23	Plant held of future use	105		-
24	Construction work in progress	107	WP-HLR-18, Col. (c), Line 1	396,637
25	Total utility plant		Sum of Lines 18 through 24	15,906,298

Schedule B-3**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Depreciation Reserve and Other Deductions

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (HLR-33)

Schedule: B-3

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Distribution	WP-HLR-19, Col. (c), Line 1	3,349,408
2	Transmission	WP-HLR-19, Col. (c), Line 2	630,438
3	Transmission Other	WP-HLR-19, Col. (c), Line 3	19,301
4	UGS Amortization	WP-HLR-19, Col. (c), Line 4	6,115
5	UGS Depreciation	WP-HLR-19, Col. (c), Line 5	257,669
6	UGS Non-Current	WP-HLR-19, Col. (c), Line 6	-
7	G-Intangibles	WP-HLR-19, Col. (c), Line 7	22,674
8	C-Intangibles	WP-HLR-19, Col. (c), Line 8	169,095
9	NGP	WP-HLR-19, Col. (c), Line 9	8,163
10	G-GP Structures	WP-HLR-19, Col. (c), Line 10	17,721
11	G-GP Computers	WP-HLR-19, Col. (c), Line 11	3,464
12	G-GP Transportation	WP-HLR-19, Col. (c), Line 12	111,581
13	G-GP Other	WP-HLR-19, Col. (c), Line 13	29,538
14	C-GP Structures	WP-HLR-19, Col. (c), Line 14	66,421
15	C-GP Computers	WP-HLR-19, Col. (c), Line 15	13,453
16	C-GP Transportation	WP-HLR-19, Col. (c), Line 16	64,003
17	C-GP Other	WP-HLR-19, Col. (c), Line 17	38,914
18	Total depreciation reserve and other deductions	Sum Lines 1 through 17	<u><u>4,807,958</u></u>

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Working Capital
 For the Projected 12-Month Period Ending October 31, 2027
 (\$000)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
										Pension/OPEB				SAP S4 Regulatory	Total	Test Year Working
Line No.	Description	Historical Year Working Capital	Change	Avg. Working Capital	Cash Adjustment	GSU & A/P Adjustment	Prepaid Cloud Computing Adjustment	Pension Adjustment	OPEB Adjustment	Volatility Mechanism Adjustment	Accrued Tax Adjustment	SEA Adjustment	Riverside Reg Asset Adjustment	Asset Adjustment	Adjustments	Capital
1	Cash, cash equivalents, and restricted cash	16,763	28,949	45,713	(20,143)	-	-	-	-	-	-	-	-	-	(20,143)	25,570
2	Accounts and notes receivable	102,494	9,015	111,509	-	-	-	-	-	-	-	-	-	-	-	111,509
3	Materials and supplies	56,239	(667)	55,572	-	-	-	-	-	-	-	-	-	-	-	55,572
4	Gas stored underground	456,516	(46,641)	409,875	-	27,045	-	-	-	-	-	-	-	-	27,045	436,921
5	Prepayments	593,353	12,079	605,432	-	-	472	-	-	-	-	-	-	-	472	605,904
6	Accrued revenue	133,365	(2,789)	130,576	-	-	-	-	-	-	-	-	-	-	-	130,576
7	Deferred taxes	188,937	(1,707)	187,230	-	-	-	-	-	-	-	-	-	-	-	187,230
8	Deferred debits	266,169	1,208	267,377	-	-	-	66,167	90,177	-	-	(2,910)	9,720	29,757	192,911	460,288
9	Total assets	1,813,836	(552)	1,813,284	(20,143)	27,045	472	66,167	90,177	-	-	(2,910)	9,720	29,757	200,285	2,013,569
10	Accounts payable	278,867	54,476	333,342	-	6,453	-	-	-	-	-	-	-	-	6,453	339,795
11	Customer deposits	11,366	1,040	12,406	-	-	-	-	-	-	-	-	-	-	-	12,406
12	Accrued interest	43,557	1,032	44,589	-	-	-	-	-	-	-	-	-	-	-	44,589
13	Dividends payable	16,179	1,413	17,592	-	-	-	-	-	-	-	-	-	-	-	17,592
14	Accrued taxes	195,517	22,542	218,059	-	-	-	-	-	-	(45,906)	-	-	-	(45,906)	172,153
15	Other liabilities	30,840	(4,726)	26,114	-	-	-	-	-	-	-	-	-	-	-	26,114
16	Deferred credits	15,928	2,402	18,330	-	-	-	-	-	(475)	-	-	-	-	(475)	17,856
17	Total liabilities	592,254	78,178	670,433	-	6,453	-	-	-	(475)	(45,906)	-	-	-	(39,928)	630,505
18	Total working capital	1,221,582	(78,731)	1,142,851	(20,143)	20,592	472	66,167	90,177	475	45,906	(2,910)	9,720	29,757	240,213	1,383,064

Col.(b) : Exhibit No.: A-2 (HLR-6)
Col.(c) : Col.(d) - Col.(b)
Col.(d) : WP-HLR-23
Col.(e) : Testimony of Company Witness M. Bleckman
Col.(f) : WP-HLR-24
Col.(g) : WP-HLR-25
Col.(h) : WP-HLR-26
Col.(i) : WP-HLR-27
Col.(j) : WP-HLR-28
Col.(k) : WP-HLR-30
Col.(l) : Testimony of Company Witness M. Griffin
Col.(m) : WP-HLR-32
Col.(n) : WP-HLR-33
Col.(o) : Sum of Col.(e) through (n)
Col.(p) : Col.(d) + Col.(o)

Schedule: B-5

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Capital Expenditures Summary

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (HLR-35)

Schedule: B-5

Page: 1 of 1

Witness: HLRayl

Date: December 2025

			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
								Approved Capital Spending in	Projected Capital Spending in		
			Historical	Projected				U-21806	U-21806		
Line No.	Description	Source	12 Months Ended 12/31/2024	12 Months Ending 12/31/2025	10 Months Ending 10/31/2026	22 Months Ending 10/31/2026	12 Months Ending 10/31/2027	12 Months Ending 10/31/2026	12 Months Ending 10/31/2026		
1	Distribution and transmission	See Note {1}	808,704	822,412	812,823	1,635,235	958,723	808,691	943,729		
2	Compression and storage	Exhibit No.: A-12 (TKJ-4)	167,776	196,595	153,756	350,351	187,169	161,907	162,039		
3	Information technology and security	Exhibit No.: A-12 (SHB-4)	26,616	25,363	34,336	59,699	39,720	38,577	50,693		
4	Fleet	Exhibit No.: A-12 (JJJ-1)	9,446	9,837	9,187	19,023	9,759	13,532	13,532		
5	Operations support	See Note {2}	25,904	31,443	21,779	53,222	13,011	10,850	21,145		
6	Customer experience and operations	Exhibit No.: A-12 (MNW-1)	1,196	112	735	847	882	1,951	1,960		
7	Total capital expenditures	Sum of Lines 1 through 6	1,039,643	1,085,762	1,032,616	2,118,378	1,209,264	1,035,508	1,193,098		

Notes

{1} Distribution and transmission by witness

Michael P. Griffin	Exhibit No.: A-12 (MPG-2)	317,534	198,611	185,651	384,262	227,064
Kristine A. Pascarello	Exhibit No.: A-12 (KAP-3)	303,846	372,215	338,000	710,215	429,770
Lincoln D. Warriner	Exhibit No.: A-12 (LDW-1)	187,325	251,586	289,173	540,758	301,890

{2} Operations support by witness

Matthew J. Foster	Exhibit No.: A-12 (MJF-12)	702	722	614	1,336	755
Quentin A. Guinn	Exhibit No.: A-12 (QAG-1)	25,202	30,721	21,165	51,886	12,256

Schedule: C-1**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Adjusted Net Operating Income

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-36)

Schedule: C-1

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Sales revenues	Exhibit No.: A-13 (HLR-39)	2,401,012
2	Transportation revenues	Exhibit No.: A-13 (HLR-39)	123,822
3	Other revenues	Exhibit No.: A-13 (HLR-39)	30,892
4	Total operating revenues	Sum of Lines 1 through 3	<u>2,555,726</u>
5	Cost of gas sold	Exhibit No.: A-13 (HLR-40)	823,243
6	LAUF	Exhibit No.: A-13 (HLR-41), Line 1	12,899
7	Company use gas	Exhibit No.: A-13 (HLR-41), Line 2	7,052
8	Operations and maintenance	Exhibit No.: A-13 (HLR-41), Line 36	347,439
9	Depreciation	Exhibit No.: A-13 (HLR-43), Line 18	392,471
10	Amortization	Exhibit No.: A-13 (HLR-43), Line 21	9,083
11	Property taxes	Exhibit No.: A-13 (HLR-44), Line 1	213,600
12	General taxes	Exhibit No.: A-13 (HLR-44), Line 6 + Line 15	20,520
13	Other (local) taxes	Exhibit No.: A-13 (HLR-47)	912
14	State income taxes	Exhibit No.: A-13 (HLR-46)	28,159
15	Federal income taxes	Exhibit No.: A-13 (HLR-45)	92,790
16	Total operating expenses	Sum of Lines 5 through 15	<u>1,948,167</u>
17	Net operating income	Line 4 - Line 16	607,558
18	AFUDC	Exhibit No.: A-13 (HLR-48)	12,821
19	Net operating income, including AFUDC	Line 17 + Line 18	<u>620,380</u>
<u>Net Operating Income Adjustments</u>			
20	Income tax effect of interest {a}	----- Included in Lines 13, 14, and 15 -----	
21	Interest synchronization adjustment {a}	----- Included in Lines 13, 14, and 15 -----	
22	Total adjusted net operating income	Line 19	<u><u>620,380</u></u>

Notes

- {a} Income tax effect of interest and the interest synchronization adjustment are included in the calculation of local, state, and federal income tax. The separate calculations can be found on Exhibit No.: A-13 (HLR-49) and Exhibit No.: A-13 (HLR-50)

Schedule: C-1.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy CompanyDevelopment of Adjusted Net Operating Income
For the Projected 12-Month Period Ending October 31, 2027
(\$000)Case No.: U-21981
Exhibit No.: A-13 (HLR-37)
Schedule: C-1.1
Page: 1 of 1
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
Line No.	Description	Source	Sales Revenues	Transportation Revenues	Other Revenues	COGS	LAUF	Company Use Gas	Other O&M	Depreciation	Amortization	Property Taxes	General Taxes	CIT	SIT	FIT	NOI	AFUDC	Adjusted NOI
1	Net operating income - historical year	Exhibit No.: A-3 (HLR-9)	1,940,126	117,949	57,365	623,676	13,329	(930)	371,837	325,142	8,277	169,594	18,408	1,160	27,106	60,925	496,916	17,593	514,509
	Historical Adjustments																		
2	Sales revenue weather adjustment	Exh. A-15 (MAS-14), Col.(d), Line 5	152,032	-	-	-	-	-	-	-	-	-	-	243	7,966	30,203	113,620	-	113,620
3	Transportation revenue weather adjustment	Exh. A-15 (MAS-14), Col.(d), Line 8	-	4,202	-	-	-	-	-	-	-	-	-	7	220	835	3,140	-	3,140
4	EWR surcharge revenues	WP-HLR-9	(81,969)	-	-	-	-	-	-	-	-	-	-	(131)	(4,295)	(16,284)	(61,258)	-	(61,258)
5	Jobwork revenues	WP-HLR-10	-	-	3,627	-	-	-	-	-	-	-	-	6	190	721	2,711	-	2,711
6	Interest income on cash operating accounts	WP-HLR-11	-	-	766	-	-	-	-	-	-	-	-	1	40	152	572	-	572
7	Other revenues adjustments	WP-HLR-34, Lines 36 through 40	-	-	(8,262)	-	-	-	-	-	-	-	-	(13)	(433)	(1,641)	(6,174)	-	(6,174)
8	EWR surcharge expenses	WP-HLR-9	-	-	-	-	-	-	(81,969)	-	-	-	-	131	4,295	16,284	61,258	-	61,258
9	Jobwork expenses	WP-HLR-10	-	-	-	-	-	-	3,280	-	-	-	-	(5)	(172)	(652)	(2,451)	-	(2,451)
10	Compensation expenses	WP-HLR-12	-	-	-	-	-	-	(91)	-	-	-	-	0	5	18	68	-	68
11	Advertising expenses	WP-HLR-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Dues, donations, & lobbying expenses	WP-HLR-14	-	-	-	-	-	-	(354)	-	-	-	-	1	19	70	265	-	265
13	Interest expense on security deposits	WP-HLR-15	-	-	-	-	-	-	259	-	-	-	-	(0)	(14)	(52)	(194)	-	(194)
14	Income tax effect of interest	Exhibit No.: A-3 (HLR-21)	-	-	-	-	-	-	-	-	-	-	-	34	1,112	4,216	(5,362)	-	(5,362)
15	Interest synchronization adjustment	Exhibit No.: A-3 (HLR-22)	-	-	-	-	-	-	-	-	-	-	-	(2)	(51)	(193)	245	-	245
16	Adjusted net operating income - historical year	Sum of Lines 1 through 15	2,010,190	122,151	53,496	623,676	13,329	(930)	292,962	325,142	8,277	169,594	18,408	1,431	35,989	94,602	603,355	17,593	620,948
	Test Year Adjustments																		
17	Sales revenues		390,822	-	-	-	-	-	-	-	-	-	-	625	20,479	77,641	292,077	-	292,077
18	Transportation revenues		-	1,671	-	-	-	-	-	-	-	-	-	3	88	332	1,249	-	1,249
19	Other revenues		-	-	(22,604)	-	-	-	-	-	-	-	-	(36)	(1,184)	(4,491)	(16,893)	-	(16,893)
20	Cost of gas sold		-	-	-	199,567	-	-	-	-	-	-	-	(319)	(10,457)	(39,646)	(149,144)	-	(149,144)
21	LAUF		-	-	-	-	(430)	-	-	-	-	-	-	1	23	85	321	-	321
22	Company use gas		-	-	-	-	-	7,982	-	-	-	-	-	(13)	(418)	(1,586)	(5,965)	-	(5,965)
23	Other operation and maintenance		-	-	-	-	-	-	54,477	-	-	-	-	(87)	(2,855)	(10,822)	(40,713)	-	(40,713)
24	Depreciation		-	-	-	-	-	-	-	67,329	-	-	-	(108)	(3,528)	(13,376)	(50,318)	-	(50,318)
25	Amortization		-	-	-	-	-	-	-	-	806	-	-	(1)	(42)	(160)	(602)	-	(602)
26	Property taxes		-	-	-	-	-	-	-	-	-	44,006	-	(70)	(2,306)	(8,742)	(32,887)	-	(32,887)
27	Other general taxes		-	-	-	-	-	-	-	-	-	-	2,113	(3)	(111)	(420)	(1,579)	-	(1,579)
28	Other (local) income taxes		-	-	-	-	-	-	-	-	-	-	-	(510)	-	107	403	-	403
29	State income taxes		-	-	-	-	-	-	-	-	-	-	-	-	(7,518)	1,579	5,939	-	5,939
30	Federal income taxes		-	-	-	-	-	-	-	-	-	-	-	-	-	(2,315)	2,315	-	2,315
31	AFUDC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4,771)	(4,771)
32	Adjusted net operating income - projected test year	Exhibit No.: A-13 (HLR-36)	2,401,012	123,822	30,892	823,243	12,899	7,052	347,439	392,471	9,083	213,600	20,520	912	28,159	92,790	607,558	12,821	620,380

Schedule: C-2**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Calculation of the Revenue Conversion Factor

For the Projected 12-Month Period Ending October 31, 2027

Case No.: U-21981

Exhibit No.: A-13 (HLR-38)

Schedule: C-2

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Income base - before taxes		100.0000
2	State income tax	Line 1 * 5.24% State Income Tax Rate	5.2400
3	Other (local) income tax	Line 1 * 0.16% Other {Local} Income Tax Rate	0.1600
4	Federal income tax base	Line 1 - Line 2 - Line 3	94.6000
5	Federal income tax	Line 4 * 21.00% Federal Income Tax Rate	19.8660
6	Income base - after taxes	Line 4 - Line 5	74.7340
7	Revenue conversion factor	Line 1 / Line 6	1.3381

Schedule: C-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Operating Revenues

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-39)

Schedule: C-3

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Sales revenues	Exhibit No.: A-15 (MAS-14) Col.(h), Line 5	2,401,012
2	Transportation revenues	Exhibit No.: A-15 (MAS-14) Col.(h), Line 8 & 9	123,822
3	Other revenues	WP-HLR-34	30,892
4	Total operating revenues	Sum of Lines 1 through 3	<u>2,555,726</u>

Schedule: C-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Cost of Gas Sold

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-40)

Schedule: C-4

Page: 1 of 1

Witness: HLRayl

Date: December 2025

	(a)	(b)	(c)
Line No	Description	Source	Amount
1	Total cost of gas sold	Exhibit No.: A-15 (MAS-14) Col.(f), Line 11	823,243

Schedule: C-5

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Operation and Maintenance Expenses

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-41)

Schedule: C-5

Page: 1 of 1

Witness: HLRayl

Date: December 2025

	(a)	(b)	(c)	(d)	(e)
Line					
No	Description	Source	Historical Year	Change	Projected Year
1	LAUF	Exhibit No.: A-97 (TKJ-1)	13,329	(430)	12,899
2	Company use gas	Exhibit No.: A-97 (TKJ-1)	(930)	7,982	7,052
3	Compression and storage	Exhibit No.: A-120 (JPP-5)	22,109	4,288	26,397
4	Gas operations	Exhibit No.: A-120 (JPP-5)	108,001	37,642	145,643
5	Pipeline integrity	Exhibit No.: A-72 (MPG-1)	19,333	7,931	27,264
6	Transmission	Exhibit No.: A-72 (MPG-1)	4,194	721	4,915
7	Gas engineering and supply	Exhibit No.: A-111 (KPG-2)	18,556	1,117	19,673
8	Customer experience and operations	Exhibit No.: A-132 (MNW-5)	28,447	5,400	33,847
9	Operations support	Exhibit No.: A-82 (QAG-2)	9,423	245	9,668
10	Information technology and security - operations	Exhibit No.: A-17 (SHB-1)	31,064	7,550	38,614
11	Information technology and security - investments	Exhibit No.: A-19 (SHB-3)	5,731	435	6,166
12	Pension plans A/B	Exhibit No.: A-78 (KKG-1)	(33,955)	6,599	(27,356)
13	Defined company contribution plan	Exhibit No.: A-78 (KKG-1)	7,838	(130)	7,708
14	401(k) employees' savings plan	Exhibit No.: A-78 (KKG-1)	6,055	476	6,531
15	Active healthcare/ insurance/ LTD	Exhibit No.: A-78 (KKG-1)	19,846	436	20,282
16	Retiree healthcare and life insurance	Exhibit No.: A-78 (KKG-1)	(39,292)	2,706	(36,586)
17	Other benefits	Exhibit No.: A-78 (KKG-1)	2,128	104	2,232
18	Pension volatility mechanism deferral	Exhibit No.: A-78 (KKG-1)	4,400	(4,400)	-
19	OPEB volatility mechanism deferral	Exhibit No.: A-78 (KKG-1)	7,772	(7,772)	-
20	Pension volatility mechanism amortization	Exhibit No.: A-78 (KKG-1)	27	(113)	(86)
21	OPEB volatility mechanism amortization	Exhibit No.: A-78 (KKG-1)	(66)	(1,142)	(1,208)
22	Incentive compensation	Exhibit No.: A-53 (AMC-3)	1,459	(379)	1,080
23	Uncollectibles expense	Exhibit No.: A-57 (MJF-1)	12,187	4,954	17,140
24	Injuries and damages	Exhibit No.: A-57 (MJF-1)	2,136	51	2,187
25	MGP direct projected management expenses	Exhibit No.: A-57 (MJF-1)	632	444	1,076
26	Corporate services	Exhibit No.: A-57 (MJF-1)	23,434	1,737	25,171
27	Insurance expense	Exhibit No.: A-57 (MJF-1)	11,826	2,537	14,362
28	Corporate records digitization	Exhibit No.: A-57 (MJF-1)	-	740	740
29	Jobwork expenses	WP-HLR-10	3,280	(1,560)	1,720
30	ASP expenses	WP-HLR-10	13,505	(13,505)	-
31	Interest expense on security deposits	WP-HLR-15	259	-	259
32	Demand response amortization	Exhibit No.: A-3 (HLR-14)	2,560	(2,560)	-
33	Total operation and maintenance expenses	Sum of Lines 1 through 32	305,287	62,103	367,390
34	Less: LAUF	Line 1	13,329	(430)	12,899
35	Less: Company Use Gas	Line 2	(930)	7,982	7,052
36	Total other operation and maintenance expenses	Line 33 - Line 34 - Line 35	292,888	54,552	347,439

Schedule: C-5.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Inflation and Merit Increases Included in Operation and Maintenance Expenses
For the Projected 12-Month Period Ending October 31, 2027
(\$000)

Case No.: U-21981
Exhibit No.: A-13 (HLR-42)
Schedule: C-5.1
Page: 1 of 1
Witness: HLRayl
Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)
Line No.	Description	Source	Historical O&M for the 12 Months Ended	Inflation Applied to Projected Test Year	Scope / Cost Increases Net of Productivity Gains	Projected O&M for the 12 Months Ended
			12/31/2024	12/31/2025	12/31/2026	10/31/2027
(c) + (d) + (e)						
1	LAUF	Exhibit No.: A-97 (TKJ-1)	13,329	-	(430)	12,899
2	Company use gas	Exhibit No.: A-97 (TKJ-1)	(930)	-	7,982	7,052
3	Compression and storage	Exhibit No.: A-120 (JPP-5)	22,109	1,611	2,677	26,397
4	Gas operations	Exhibit No.: A-120 (JPP-5)	108,001	7,868	29,774	145,643
5	Pipeline integrity	Exhibit No.: A-72 (MPG-1)	19,333	1,408	6,522	27,264
6	Transmission	Exhibit No.: A-72 (MPG-1)	4,194	306	416	4,915
7	Gas engineering and supply	Exhibit No.: A-111 (KAP-2)	18,556	1,352	(235)	19,673
8	Customer experience and operations	Exhibit No.: A-132 (MNW-2)	28,447	2,072	3,328	33,847
9	Operations support	Exhibit No.: A-82 (QAG-2)	9,423	686	(441)	9,668
10	Information technology and security - operations	Exhibit No.: A-17 (SHB-1)	31,064	2,263	5,287	38,614
11	Information technology and security - investments	Exhibit No.: A-19 (SHB-3)	5,731	417	18	6,166
12	Pension plans A/B	Exhibit No.: A-78 (KKG-1)	(33,955)	-	6,599	(27,356)
13	Defined company contribution plan	Exhibit No.: A-78 (KKG-1)	7,838	-	(130)	7,708
14	401(k) employees' savings plan	Exhibit No.: A-78 (KKG-1)	6,055	-	476	6,531
15	Active healthcare/ insurance/ LTD	Exhibit No.: A-78 (KKG-1)	19,846	-	436	20,282
16	Retiree healthcare and life insurance	Exhibit No.: A-78 (KKG-1)	(39,292)	-	2,706	(36,586)
17	Other benefits	Exhibit No.: A-78 (KKG-1)	2,128	155	(51)	2,232
18	Pension volatility mechanism deferral	Exhibit No.: A-78 (KKG-1)	4,400	-	(4,400)	-
19	OPEB volatility mechanism deferral	Exhibit No.: A-78 (KKG-1)	7,772	-	(7,772)	-
20	Pension volatility mechanism amortization	Exhibit No.: A-78 (KKG-1)	27	-	(113)	(86)
21	OPEB volatility mechanism amortization	Exhibit No.: A-78 (KKG-1)	(66)	-	(1,142)	(1,208)
22	Incentive compensation	Exhibit No.: A-53 (AMC-3)	1,459	81	(460)	1,080
23	Uncollectibles expense	Exhibit No.: A-57 (MJF-1)	12,187	888	4,066	17,140
24	Injuries and damages	Exhibit No.: A-57 (MJF-1)	2,136	156	(105)	2,187
25	MGP direct projected management expenses	Exhibit No.: A-57 (MJF-1)	632	46	398	1,076
26	Corporate services	Exhibit No.: A-57 (MJF-1)	23,434	1,707	30	25,171
27	Insurance expense	Exhibit No.: A-57 (MJF-1)	11,826	861	1,675	14,362
28	Corporate records digitization	Exhibit No.: A-57 (MJF-1)	-	-	740	740
29	Jobwork expenses	WP-HLR-10	3,280	-	(1,560)	1,720
30	ASP expenses	WP-HLR-10	13,505	-	(13,505)	-
31	Interest expense on security deposits	WP-HLR-15	259	-	-	259
32	Demand response amortization	Exhibit No.: A-3 (HLR-14)	2,560	-	(2,560)	-
33	Total operation and maintenance expenses	Sum of Lines 1 through 32	305,287	21,877	40,226	367,390
34	Less: LAUF	Line 1	13,329	-	(430)	12,899
35	Less: Company use gas	Line 2	(930)	-	7,982	7,052
36	Net operation and maintenance expenses	Line 33 - Line 34 - Line 35	292,888	21,877	32,674	347,439

Schedule: C-6

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Depreciation and Amortization Expenses

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-43)

Schedule: C-6

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Distribution	WP-HLR-20, Col. (d), Line 57	235,202
2	Transmission	WP-HLR-20, Col. (d), Line 58	77,165
3	Transmission Other	WP-HLR-20, Col. (d), Line 59	-
4	UGS Amortization	WP-HLR-20, Col. (d), Line 60	120
5	UGS Depreciation	WP-HLR-20, Col. (d), Line 61	41,996
6	UGS Non-Current	WP-HLR-20, Col. (d), Line 62	-
7	G-Intangibles	WP-HLR-20, Col. (d), Line 63	5,939
8	C-Intangibles	WP-HLR-20, Col. (d), Line 64	10,735
9	NGP	WP-HLR-20, Col. (d), Line 65	-
10	G-GP Structures	WP-HLR-20, Col. (d), Line 66	2,949
11	G-GP Computers	WP-HLR-20, Col. (d), Line 67	1,483
12	G-GP Transportation	WP-HLR-20, Col. (d), Line 68	-
13	G-GP Other	WP-HLR-20, Col. (d), Line 69	4,034
14	C-GP Structures	WP-HLR-20, Col. (d), Line 70	2,498
15	C-GP Computers	WP-HLR-20, Col. (d), Line 71	5,374
16	C-GP Transportation	WP-HLR-20, Col. (d), Line 72	-
17	C-GP Other	WP-HLR-20, Col. (d), Line 73	4,976
18	Total depreciation expenses	Sum of Lines 1 through 17	<u>392,471</u>
19	MGP amortization	Exhibit No.: A-62 (MJF-6), p.1, Line 23, Col. (y	6,941
20	Riverside Storage Field regulatory asset amortization	WP-HLR-32	2,142
21	Total amortization expenses	Line 19 + Line 20	<u>9,083</u>
22	Total depreciation and amortization expenses	Line 18 + Line 21	<u>401,554</u>

Schedule: C-7**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

General Taxes

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-44)

Schedule: C-7

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Real and personal property taxes	Exhibit No.: A-125 (BJV-1), Line 10	213,600
	<u>Projected payroll taxes</u>		
2	Total payroll taxes - historical year	Exhibit No.: A-3 (HLR-16)	12,487
3	Inflation factor 2025	WP-HLR-35	102.80%
4	Inflation factor 2026	WP-HLR-35	102.40%
5	Inflation factor 2027	WP-HLR-35	101.92%
6	Total payroll taxes - projected year	Line 2 * Line 3 * Line 4 * Line 5	13,396
	<u>Projected other general taxes</u>		
7	State MPSC assessment	P-521, p.262.1, Col.(j), Lines 38 - 39	5,780
8	Total operating revenues - historical year	Exhibit No.: A-3 (HLR-9)	2,115,440
9	Average State MPSC assessment rate	Line 7 / Line 8	0.27%
10	Total operating revenues - projected year	Exhibit No.: A-13 (HLR-36)	2,555,726
11	Average State MPSC assessment rate	Line 9	0.27%
12	Projected State MPSC assessment	Line 10 * Line 11	6,982
13	Incremental change in State MPSC assessment	Line 12 - Line 7	1,203
14	Other general taxes - historical year	Exhibit No.: A-3 (HLR-16)	5,921
15	Total other general taxes - projected year	Line 13 + Line 14	7,124
16	Total general taxes	Line 1 + Line 6 + Line 15	234,120

Schedule: C-8

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Federal Income Taxes

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-45)

Schedule: C-8

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Operating revenues	Exhibit No.: A-13 (HLR-39)	2,555,726
2	Cost of gas sold	Exhibit No.: A-13 (HLR-40)	(823,243)
3	LAUF and company use gas	Exhibit No.: A-13 (HLR-41)	(19,951)
4	Other O&M expenses	Exhibit No.: A-13 (HLR-41)	(347,439)
5	Depreciation and amortization expenses	Exhibit No.: A-13 (HLR-43)	(401,554)
6	General taxes	Exhibit No.: A-13 (HLR-44)	(234,120)
7	State income taxes	Exhibit No.: A-13 (HLR-46), Line 22 * -1	(28,159)
8	Other (local) income taxes	Exhibit No.: A-13 (HLR-47), Line 19 * -1	(912)
9	Net operating income	Sum of Lines 1 through 8	700,348
10	Allowable interest expense	Exhibit No.: A-13 (HLR-49)	(239,936)
11	Allowable JDITC interest expense	Exhibit No.: A-13 (HLR-50)	(1,374)
12	Pre-tax operating income	Sum of Lines 9 through 11	459,038
<u>Permanent Differences</u>			
13	Meals and entertainment	Tax Department	458
14	Non-deductible parking	Tax Department	55
15	Total permanent differences	Line 13 + Line 14	513
<u>Temporary Differences</u>			
16	Book depreciation	Exhibit No.: A-13 (HLR-43), Line 18	392,471
17	Tax depreciation	Tax Department	(683,101)
18	263A - mixed service costs deduction	Tax Department	(22,213)
19	Contributions in aid of construction	Tax Department	21,598
20	Cost of removal	Tax Department	(55,211)
21	Gain/loss on ACRS/MACRS dispositions	Tax Department	-
22	Software expense	Tax Department	-
23	Tax interest during construction	Tax Department	14,301
24	Bad debt allowance	Tax Department	-
25	Gas cost recovery	Tax Department	-
26	Gas inventory adjustment	Tax Department	(25,972)
27	MGP reg liability	Exhibit No.: A-13 (HLR-43), Line 19	6,941
28	OPEB - book expense	Exhibit No.: A-13 (HLR-41), Line 16	(36,586)
29	OPEB - payments	Tax Department	(3,600)
30	Pension book expense	Exhibit No.: A-13 (HLR-41), Line 12	(27,356)
31	Pension - payments	Tax Department	-
32	Premium, discount & debt expense amortization	Tax Department	1,614
33	Real and personal property taxes	Tax Department	(31,486)
34	Regulatory liability - revenue reserves	Tax Department	-
35	Deferred state income taxes	Exhibit No.: A-13 (HLR-46), Line 21	28,548
36	Deferred city income taxes	Exhibit No.: A-13 (HLR-47), Line 18	847
37	Total temporary differences	Sum of Lines 16 through 36	(419,205)
38	Federal taxable income	Line 12 + Line 15 + Line 37	40,346
<u>Calculation of Current Federal Income Tax Expenses</u>			
39	Current federal income taxes	Line 38 * 21.00% Federal Income Tax Rate	8,473
40	Research & development credit	Tax Department	(285)
41	Total current federal income tax expenses	Line 39 + Line 40	8,188
<u>Calculation of Deferred Federal Income Tax Expenses</u>			
42	Deferred federal income taxes	(Line 37 * 21.00% Federal Income Tax Rate) * -1	88,033
43	TCJA Tracker - U-20309	Tax Department	1,494
44	FAS 109	Tax Department	(201)
45	Investment tax credit amortization	Tax Department	(418)
46	Repealed Medicare subsidy benefit	Tax Department	-
47	TCJA amortization - ARAM	Tax Department	(7,359)
48	TCJA amortization - non-ARAM	Tax Department	3,053
49	Total deferred federal income tax expenses	Sum of Lines 42 through 48	84,602
50	Total federal income taxes	Line 41 + Line 49	92,790

Schedule: C-9

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

State Income Taxes

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-46)

Schedule: C-9

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Operating revenues	Exhibit No.: A-13 (HLR-39)	2,555,726
2	Cost of gas sold	Exhibit No.: A-13 (HLR-40)	(823,243)
3	LAUF and company use gas	Exhibit No.: A-13 (HLR-41)	(19,951)
4	Other O&M expenses	Exhibit No.: A-13 (HLR-41)	(347,439)
5	Depreciation and amortization expenses	Exhibit No.: A-13 (HLR-43)	(401,554)
6	General taxes	Exhibit No.: A-13 (HLR-44)	(234,120)
7	Net operating income	Sum of Lines 1 through 6	729,418
8	Allowable interest expense	Exhibit No.: A-13 (HLR-49)	(239,936)
9	Allowable JDITC interest expense	Exhibit No.: A-13 (HLR-50)	(1,374)
10	Pre-tax operating income	Sum of Lines 7 through 9	488,108
11	Total permanent differences	Exhibit No.: A-13 (HLR-45), Line 15	513
12	Schedule M temp diff, excluding DSIT and DCIT	Exhibit No.: A-13 (HLR-45), Lines 16 - 34	(448,600)
13	Depreciation/gain-loss adjustment	Tax Department	(47,445)
14	State taxable income	Sum of Lines 10 through 13	(7,424)
15	Current state income taxes	Line 14 * 5.24% State Income Tax Rate	(389)
<u>Calculation of Deferred State Income Tax Expenses</u>			
16	Deferred state income tax expenses, tax effected	((Lines 12 + 13) * 5.24% State Income Tax Rate) * -1	25,993
17	FAS 109	Tax Department	378
18	Repealed Medicare subsidy benefit - state	Tax Department	-
19	Deferred - amortization of regulatory asset per U-15986	Tax Department	-
20	Deferred - amortization of state income tax transition reg asset	Tax Department	2,177
21	Deferred state income taxes	Sum of Lines 16 through 20	28,548
22	Total state income taxes	Line 15 + Line 21	28,159

Schedule: C-10

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Other (or Local) Taxes

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-47)

Schedule: C-10

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Operating revenues	Exhibit No.: A-13 (HLR-39)	2,555,726
2	Cost of gas sold	Exhibit No.: A-13 (HLR-40)	(823,243)
3	LAUF and company use gas	Exhibit No.: A-13 (HLR-41)	(19,951)
4	Other O&M expenses	Exhibit No.: A-13 (HLR-41)	(347,439)
5	Depreciation and amortization expenses	Exhibit No.: A-13 (HLR-43)	(401,554)
6	General taxes	Exhibit No.: A-13 (HLR-44)	(234,120)
7	State income taxes	Exhibit No.: A-13 (HLR-46)	(28,159)
8	Net operating income	Sum of Lines 1 through 7	701,260
9	Allowable interest expense	Exhibit No.: A-13 (HLR-49)	(239,936)
10	Allowable JDITC interest expense	Exhibit No.: A-13 (HLR-50)	(1,374)
11	Pre-tax operating income	Sum of Lines 8 through 10	459,950
12	Total permanent differences	Exhibit No.: A-13 (HLR-45), Line 15	513
13	Schedule M temp diff, excluding DCIT	Exhibit No.: A-13 (HLR-45), Lines 16 - 35	(420,052)
14	Other (local) taxable income	Sum of Lines 11 through 13	40,410
15	Current other (local) income taxes	Line 14 * 0.16% Other (Local) Income Tax Rate	65
<u>Calculation of Deferred Other (Local) Income Tax Expenses</u>			
16	Deferred other (local) income tax expenses, tax effected	(Line 13 * 0.16% Other (Local) Income Tax Rate) * -1	672
17	Deferred - amortization of reg asset	Tax Department	175
18	Total deferred other (local) income taxes	Line 16 + Line 17	847
19	Total other (local) income taxes	Line 15 + Line 18	912

Schedule: C-11

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allowance for Funds Used During Construction
For the Projected 12-Month Period Ending October 31, 2027
(\$000)

Case No.: U-21981
Exhibit No.: A-13 (HLR-48)
Schedule: C-11
Page: 1 of 1
Witness: HLRayl
Date: December 2025

	(a)	(b)	(c)
Line No	Description	Source	Amount
1	Total allowance for funds used during construction	WP-HLR-21	12,821

Schedule: C-12**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Income Tax Effect of Interest

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-49)

Schedule: C-12

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a) Description	(b) Source	(c) Amount
1	Rate base	Exhibit No.: A-12 (HLR-31)	12,488,293
2	Weighted cost of debt {1}	Exhibit No.: A-14 (MRB-1)	1.92%
3	Allowable interest expense	Line 1 * Line 2	239,936
4	Pro forma interest expense - historical year	Exhibit No.: A-3 (HLR-21)	174,901
5	Increase/ (decrease) in allowable interest deduction	Line 3 - Line 4	65,035
6	Impact on taxable income	Line 5 * -1	(65,035)
7	Impact on local income taxes	Line 6 * 0.16% Local Income Tax Rate	(104)
8	Impact on state income taxes	Line 6 * 5.24% State Income Tax Rate	(3,408)
9	Impact on federal taxable income	Line 6 - Line 7 - Line 8	(61,523)
10	Impact on federal income taxes	Line 9 * 21.00% Federal Income Tax Rate	(12,920)
11	Total impact on net operating income	(Line 7 + Line 8 + Line 10) * -1	16,432

Notes

{1} Excludes JDITC

Schedule: C-13

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Interest Synchronization Adjustment

For the Projected 12-Month Period Ending October 31, 2027

(\$000)

Case No.: U-21981

Exhibit No.: A-13 (HLR-50)

Schedule: C-13

Page: 1 of 1

Witness: HLRayl

Date: December 2025

Line No	(a)	(b)	(c)
	Description	Source	Amount
1	Rate base	Exhibit No.: A-12 (HLR-31)	12,488,293
2	JDITC debt-related portion of the capital structure	Source: Exhibit No.: A-14 (MRB-1)	0.24%
3	Portion of rate base funded by JDITC	Line 1 * Line 2	30,356
4	Cost of JDITC - debt portion	Source: Exhibit No.: A-14 (MRB-1)	4.53%
5	Allowable JDITC interest expense	Line 3 * Line 4	1,374
6	Allowable JDITC interest expense - historical year	Exhibit No.: A-3 (HLR-22)	970
7	Increase/ (decrease) in allowable JDITC interest expense	Line 5 - Line 6	404
8	Impact on taxable income	Line 7 * -1	(404)
9	Impact on local income taxes	Line 7 * 0.16% Local Income Tax Rate	(1)
10	Impact on state income taxes	Line 8 * 5.24% State Income Tax Rate	(21)
11	Impact on federal taxable income	Line 8 - Line 9 - Line 10	(382)
12	Impact on federal income taxes	Line 11 * 21.00% Federal Income Tax Rate	(80)
13	Total impact on net operating income	(Line 9 + Line 10 + Line 12) * -1	102

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Pension and OPEB Volatility Mechanism
Regulatory Asset/Liability Amortization Expense
(\$000)

Case No.: U-21981
Exhibit No.: A-124 (HLR-51)
Page: 1 of 1
Witness: HLRayl
Date: December 2024

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line No.	Description	Source	2023	2024	2025	2026	2027
1	Pension volatility mechanism asset / (liability)	WP-KKG-3 through 6	\$ 266	\$ (4,400)	\$ (16)	\$ 3,949	
2	2023 pension volatility mechanism amortization	Line 1, col. (c) / 10 years	-	27	27	27	27
3	2024 pension volatility mechanism amortization	Line 1, col. (d) / 10 years	-	-	(440)	(440)	(440)
4	2025 pension volatility mechanism amortization	Line 1, col. (e) / 10 years	-	-	-	(2)	(2)
5	2026 pension volatility mechanism amortization	Line , col. (f) / 10 years	-	-	-	-	395
6	Total amortization expense	Sum of Lines 2 through 5	-	27	(413)	(415)	(20)
7	OPEB volatility mechanism asset / (liability)	WP-KKG-3 through 6	(655)	(7,772)	(4,801)	1,383	
8							
9	2023 OPEB volatility mechanism amortization	Line 7, col. (c) / 10 years	-	(65)	(65)	(65)	(65)
10	2024 OPEB volatility mechanism amortization	Line 7, col. (d) / 10 years	-	-	(777)	(777)	(777)
11	2025 OPEB volatility mechanism amortization	Line 7, col. (e) / 10 years	-	-	-	(480)	(480)
12	2026 OPEB volatility mechanism amortization	Line 7, col. (f) / 10 years	-	-	-	-	138
13	Total amortization expense	Sum of Lines 9 through 12	-	(65)	(843)	(1,323)	(1,184)
			12 Months Ending 10/31/2026	12 Months Ending 10/31/2027	Average Balance 10/31/2027		
14	Test year pension amortization expense	(Line 6, col. (e)) ÷ 12 * 2) + (Line 6, col. (f)) ÷ 12 * 10)			(86)		
15	Test year OPEB amortization expense	(Line 13, col. (e)) ÷ 12 * 2) + (Line 13, col. (f)) ÷ 12 * 10)			(1,207)		
16	Total test year amortization expense	Line 14 + Line 15			<u>(1,293)</u>		
17	Pension volatility mechanism deferred balance	See Notes {1}, {2}, and {3} below, respectively	(3,417)	618	(1,399)		
18	OPEB volatility mechanism deferred balance	See Notes {4}, {5}, and {6} below, respectively	(11,217)	(8,627)	(9,922)		

Notes

- {1} Sum of Line 1, col. (c) through (e) - Sum of Line 6, col. (c) through (e) - ((Line 6, col. (f) ÷ 12) * 10)
{2} Sum of Line 1, col. (c) through (f) - Sum of Line 6, col. (c) through (f) - ((Line 6, col. (g) ÷ 12) * 10)
{3} (Line 17, col. (c) + line 17, col. (d)) ÷ 2
{4} Sum of Line 7, col. (c) through (e) - Sum of Line 13, col. (c) through (e) - ((Line 13, col. (f) ÷ 12) * 10)
{5} Sum of Line 7, col. (c) through (f) - Sum of Line 13, col. (c) through (f) - ((Line 13, col. (g) ÷ 12) * 10)
{6} (Line 18, col. (c) + line 18, col. (d)) ÷ 2

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

MUSTAFA A. SHERWANI

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MUSTAFA A. SHERWANI
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Mustafa A. Sherwani, and my business address is One Energy Plaza, Jackson,
3 Michigan 49201.

4 **Q. By whom are you employed?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”).

6 **Q. What is your position with Consumers Energy?**

7 A. I am a Senior Sales Forecasting Analyst in the Financial Planning & Analysis Department.

8 **Q. Please state your educational background.**

9 A. I graduated from University of Windsor in October 2011, with a Bachelor of Commerce in
10 Honors Business Administration degree. I have also obtained CPA, CA (Certified
11 Professional Accountant and Chartered Accountant) designation in July of 2013. In
12 addition, I have completed the regulatory accounting course for utility ratemaking and
13 forecasting.

14 **Q. What is your regulatory experience?**

15 A. Prior to joining the Company, from October 2011 through May 2022, I worked in both
16 public accounting and corporate industry. I started in Public Accounting in positions of
17 Staff Accounting and worked up to a Senior Associate/Manager. I then worked in corporate
18 industry as an Accounting Analyst and Financial Analyst. I joined Consumers Energy in
19 May 2022 as a Senior Financial Analyst (supporting the gas utility) in the Financial
20 Planning and Analysis Department. I joined the Sales Forecasting team in January 2024,
21 and now perform the gas sales forecasting duties.

MUSTAFA A. SHERWANI
U-21981 DIRECT TESTIMONY

Q. Have you previously testified in any proceedings before the Michigan Public Service Commission (“MPSC” or the “Commission”)?

A. Yes, I provided testimony and exhibits for the Company’s 2024 Gas Rate Case No. U-21806 and Gas Cost Recovery Plan Case No. U-21606.

Q. Please explain the purpose of your direct testimony in this proceeding.

A. I am presenting the Company’s forecasted gas delivery and customer count levels used to design test year rates in this case. I will discuss the observed historic gas deliveries, customer counts, and operating revenues. My direct testimony will address the development of the forecasts used in this case.

Q. Are you sponsoring any exhibits in this case?

A. Yes. I am providing the following exhibits:

Exhibit A-5 (MAS-1)	Schedule E-1	Annual Service Area Deliveries by Major Customer Classes and System Output 5-Year Historical;
Exhibit A-5 (MAS-2)	Schedule E-1a	Summary of 2024 Historical Year Revenues;
Exhibit A-5 (MAS-3)	Schedule E-2	2024 Historical Year Consumption and Customer Counts;
Exhibit A-5 (MAS-4)	Schedule E-3	2024 Historical Year Operating Revenues;
Exhibit A-15 (MAS-5)	Schedule E-1	Market Outlook: 5-Year Annual Calendar Gas Forecast by Class;
Exhibit A-15 (MAS-6)	Schedule E-2	Test-Year Cycle Gas Deliveries Forecast by Class;
Exhibit A-15 (MAS-7)	Schedule E-3	Test-Year Cycle Gas Deliveries by Rate Schedule;
Exhibit A-15 (MAS-8)	Schedule E-4	Test-Year Authorized Tolerance Levels by Rate Schedule;

MUSTAFA A. SHERWANI
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1	Exhibit A-15 (MAS-9)	Schedule E-5	Market Outlook: 5-Year Average
2			Customer Forecast by Class;
3	Exhibit A-15 (MAS-10)	Schedule E-6	Test-Year Customer Count Forecast
4			by Class;
5	Exhibit A-15 (MAS-11)	Schedule E-7	Test-Year Total Customer Count
6			Forecast by Rate Schedule;
7	Exhibit A-15 (MAS-12)	Schedule E-8	Calculation of Test-Year Projected
8			Income Assistance Enrollments;
9	Exhibit A-15 (MAS-13)	Schedule E-9	Calculation of Test-Year Excess
10			Peak Consumption;
11	Exhibit A-15 (MAS-14)	Schedule E-10	Transition from 2024 Historic
12			Actuals to 12 Months Ending
13			October 2027 Test-Year Revenues,
14			Deliveries, and Customers;
15	Exhibit A-15 (MAS-15)	Schedule E-11	Gas Income Assistance Customer
16			Count (RIA and LIAC); and
17	Exhibit A-15 (MAS-16)	Schedule E-12	Market Outlook: 2026-2035 Annual
18			Calendar Gas Forecast by Class.

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

20 A. Yes.

21 **Q. Please explain the current weather normalization process.**

22 A. The Company contracted with Itron to develop a set of economic models to quantify the
23 weather affects. The models developed by Itron take into consideration the various weather
24 responses by rate class (residential, commercial, and industrial), customer counts, weather
25 trends, billing days, and responses at various temperature levels (55 degrees Fahrenheit
26 versus 65 degrees Fahrenheit).

27 **Q. How well do the econometric models explain the observed variations in gas deliveries?**

28 A. Six main econometric models are used to explain the variation in gas delivery by class
29 (residential, commercial, and industrial) and service type (sales and transportation). For

MUSTAFA A. SHERWANI
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instance, the total variation in residential gas deliveries due to temperature is explained using a residential sales model and residential transportation model. Similar models are used for commercial and industrial gas deliveries. The model is robust and performs well in explaining the variation in gas deliveries.

Q. How accurate was this weather normalization process in 2024?

A. Consumers Energy's weather adjusted calendar deliveries for 2024 totaled approximately 302.4 Bcf, compared to the Company's budgeted calendar deliveries of approximately 311.6 Bcf, or roughly 3.0% below the Company's anticipated deliveries.

Q. Please explain Exhibit A-5 (MAS-1), Schedule E-1.

A. Exhibit A-5 (MAS-1), Schedule E-1, is a summary of the five-year Historical Annual Service Area Deliveries by Major Customer Classes and System Output. This exhibit is filed in accordance with the Commission's directive in Case No. U-18238.

Q. Please provide a summary of the 2024 operating revenue based on the actual customer and gas delivery levels for the historical year.

A. The 2024 historical operating revenue is presented in Exhibit A-5 (MAS-2), Schedule E-1a, by rate schedule. A detailed summary of customer counts and deliveries is provided in Exhibit A-5 (MAS-3), Schedule E-2, by rate schedule and type of service (sales, customer choice, transportation, and aggregation). The components of the 2024 historical operating revenues are shown in Exhibit A-5 (MAS-4), Schedule E-3. These exhibits are also filed in accordance with the Commission's directive in Case No. U-18238.

Q. Please summarize Consumers Energy's gas forecasting process.

A. In general, the gas forecasts are based on regression analysis, a mathematical and statistical technique that correlates the relationship between dependent variables (deliveries and

MUSTAFA A. SHERWANI
U-21981 DIRECT TESTIMONY

customer counts) and independent variables (economics and/or weather). Applying these relationships to expected independent variables allows the Company to project the corresponding movements in dependent variables. The four major classes of gas deliveries (sales plus transportation) that are forecast are residential, commercial, industrial, and interdepartmental. For each of these classes, monthly forecasts are developed on a cycle billed (billing month) basis and then adjusted to calendar month amounts using the methodology described later in my direct testimony. Moreover, the impact of exogenous factors – e.g., incremental energy efficiency – is applied ex post.

Q. Please describe the different models used to develop the gas deliveries and customer count forecasts.

A. Regression analysis is used to develop forecast models that estimate numerical coefficients applied to weather and economic indicators to estimate future gas consumption. The regression models were evaluated against various measures to ensure that reasonable forecasts were generated. For instance, each model was reviewed to validate that the drivers were theoretically sound, model coefficients were statistically significant, and model variables explained historical and current market conditions.

Q. Please briefly describe the economic data used in the forecast process.

A. Historical and projected service sector employment and manufacturing employment are included as independent variables in the forecasting process. These indicators are from the forecasts of Michigan economic activity obtained from S&P Global (formerly IHS Markit).

Q. Please briefly describe the weather data used in the forecast process.

A. The gas delivery forecasts assume normal weather based on the 15-year mean. Under this method, the daily temperature is used to calculate monthly heating degree days. The

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1 15-year mean of the monthly heating degree days is then used to represent future expected
2 weather impacts.

3 **Q. Why does the Company use the regression model approach to forecast sales?**

4 A. Regression modeling has been approved by the Commission in Case Nos. U-17643,
5 U-17882, U-18124, U-18424, U-20322, U-20650, U-21148, U-21308, U-21490, and
6 U-21806. Regression analysis is a statistical process used to predict an outcome based on
7 the relationship between a dependent variable (deliveries, average usage, or customers) and
8 independent variable(s) (weather and economy). For instance, a regression model is used
9 to predict average residential monthly usage based primarily on future expectations of
10 normal weather occurring during the test year. Each model is evaluated for reasonableness
11 – i.e., is it theoretically logical – and statistical significance as part of the forecasting
12 process. Regression analysis is used to develop gas delivery and customer count forecast
13 models based on weather and economic variables. Each model is selected based on its
14 ability to properly explain variations in historical data – i.e., how well it fits the data –
15 along with the statistical significance of the model coefficients. Particularly, I evaluate
16 regression model performance based on the adjusted coefficient of multiple determination
17 (R_a^2) and Mean Absolute Percent Error (“MAPE”). In addition, I also examine the
18 t-statistics and p-values associated with the model coefficients.

19 **Q. Please explain the use of R_a^2 and MAPE.**

20 A. Both of these statistical tests are used to evaluate how well the models fit the historical
21 data, and also provide a good indication of how well the models will perform in the forecast
22 period. The R_a^2 measures the ability of the models to explain variations in the historical
23 data. An R_a^2 of unity suggests that a model explains all of the variations in the data;

1 whereas, an R_a^2 of zero suggests it explains none of the variations. For example, if
2 regression models have R_a^2 values above 0.9, this suggests that at least 90% of the variation
3 in the data is explained by the models. In most cases, the models used in the Company's
4 forecasting process have values in excess of 0.95. In addition, I consider the MAPE values
5 to gauge overall model performance. Essentially, the MAPE is used to measure the model
6 errors in which smaller values suggest better model performance. MAPE values between
7 5% and 10% are generally considered ideal, although higher values may also be deemed
8 acceptable based on other considerations, such as the R_a^2 . The regression models used in
9 the Company's forecasting process generally have MAPE values below 10%.

10 **Q. Please explain the criteria used when considering the t-statistics and p-values**
11 **associated with the model coefficients.**

12 A. Regression analysis is used to develop models that minimize the variance between the
13 actual data and estimates from the models based on the relationship between dependent
14 and independent variables. A numerical coefficient (β) is estimated for each independent
15 variable in the model and represents the best linear unbiased estimate for that variable's
16 contribution toward explaining the dependent variable. The t-statistics and p-values are
17 used to gauge the relevance of each independent variable in the model. The t-statistics and
18 p-values measure the statistical significance of including a particular independent variable
19 based on a probability distribution. A t-statistic above 2 and p-value below 5% for a
20 particular β suggests the independent variable is statistically significant and is appropriate
21 to include in the regression model. Independent variables with t-statistics below 2 and
22 p-values above 5% suggest the variable should be excluded from the model since it does
23 little to explain the dependent variable. In addition, I also consider the direction (positive

MUSTAFA A. SHERWANI
U-21981 DIRECT TESTIMONY

or negative coefficient sign) and magnitude of each coefficient when determining to include or exclude variables from the models.

Q. You claim the regression model approach produces superior results. How accurate has the Company's forecast been historically?

A. The Company's forecast accuracy can be seen in the table below. The standard deviation from 2016 through 2024 is 4 Bcf and the MAPE is only 0.9%. Note: calendar year data is presented:

Year	Gas Budget Forecast	Weather Normal Actuals	Difference	
			Bcf	%
2016	303	304	1	0.3%
2017	302	306	4	1.3%
2018	303	303	0	0.1%
2019	303	307	4	1.4%
2020	298	300	1	0.5%
2021	303	302	-1	-0.2%
2022	310	309	-1	-0.5%
2023	311	308	-3	-0.9%
2024	312	302	-9	-3.0%

Q. Did you complete any other out of period testing?

A. Yes, though it has less significance than the prior testing, I also tested the model performance against data prior to the period used to develop the regression models.

Q. What was the result of this testing?

A. The Regression models showed good performance; a table of results by model are shown below for the years 2011 and 2012.

	Res Sales	Res Trans	Com Sales	Com Trans	Ind Sales	Ind Trans
MAPE	7.34%	10.09%	11.85%	6.75%	8.53%	4.54%

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1 **Q. What is the forecast of natural gas deliveries for the test year and five-year outlook?**

2 A. Total calendar deliveries are expected to increase from historic weather normal actuals of
3 302.1 Bcf in 2024 through the test year. Over the next five years, total deliveries are
4 projected to reach 308.4 Bcf by 2030. However, the growth or loss in gas deliveries is not
5 symmetric across all classes. The total and class level gas delivery annual forecasts for
6 2026 through 2030 are provided in Exhibit A-15 (MAS-5), Schedule E-1. Exhibit A-15
7 (MAS-6), Schedule E-2, provides the 12 months ending October 2027 test year 15-year
8 calendar weather normalized deliveries on a monthly basis, by class, in accordance with
9 Commission filing requirements.

10 **Q. Please explain the process used to separate the test year deliveries by rate schedule.**

11 A. The test year forecast is allocated to the various rate schedules based on the 2024 historical
12 deliveries. The results of the allocation process are provided in Exhibit A-15 (MAS-7),
13 Schedule E-3, and Exhibit A-15 (MAS-8), Schedule E-4.

14 **Q. Please describe the forecast of customer count levels in the test year and five-year
15 outlook.**

16 A. Total customer counts are projected to increase 1.3% from 1,827,344 in 2024 to 1,851,766
17 in the 12 months ending October 2027 test year. Over the next five years, the customer
18 level is expected to increase 0.4% per annum with most of this growth occurring within the
19 residential class. The total and class level forecasts are provided in Exhibit A-15 (MAS-9),
20 Schedule E-5, and Exhibit A-15 (MAS-10), Schedule E-6.

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U-21981 DIRECT TESTIMONY

1 **Q. Please describe the process used to separate the customer forecasts by rate schedule.**

2 A. The test year customer forecast is allocated to the various rate schedules based on the 2024
3 historical customer count levels. The results of the allocation process are provided in
4 Exhibit A-15 (MAS-11), Schedule E-7.

5 **Q. Please discuss the process used to forecast the level of consumption and customers**
6 **enrolled in the Company's income assistance program.**

7 A. To address Commission Staff's concerns in Case No. U-21806 regarding the Company's
8 presentation of exhibits and testimony related to Residential Income Assistance ("RIA")
9 projections, the Company projected the number of income-assistance customers based on
10 a three-year historical average, and included the calculation of that average in Exhibit A-15
11 (MAS-15), Schedule E-11. The number of expected enrollments is approximately 82,000
12 customers per month based on a 3-year average of the most recent history (July 2022 to
13 June 2025). This comprises approximately 70,000 RIA customers and 12,000 LIAC
14 customers based on the Commission-approved LIAC customer count (see Exhibit A-15
15 (MAS-15), Schedule E-11). The total projected monthly RIA and LIAC customers shown
16 in column (d) of Exhibit A-15 (MAS-12), Schedule E-8, is slightly higher or lower than
17 the 82,000 monthly customer average based on the total number of Rate Schedule A
18 Residential customers projected for those months. The average residential usage for the
19 test year is applied to this level of customers to develop the consumption set forth in
20 Exhibit A-15 (MAS-12), Schedule E-8.

21 **Q. Please describe the process used to forecast the level of excess peak demand.**

22 A. The test year excess peak demand consumption associated with residential multi-dwelling
23 service is based on the peak month consumption and customer levels in accordance with

MUSTAFA A. SHERWANI
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the Company's natural gas tariffs and is provided in Exhibit A-15 (MAS-13),
Schedule E-9.

Q. Is heating electrification included in the gas load forecast?

A. Yes, the Company assumes heating electrification in the gas load forecast as follows:

Year	BCF Loss
2026	-
2027	0.2
2028	0.6
2029	0.9
2030	1.4

Q. Please provide a summary of the change in revenues, customers, and gas deliveries from the 2024 historical year to the test year.

A. Exhibit A-15 (MAS-14), Schedule E-10, provides a summary of the change in revenue, customer levels, and gas deliveries from the 2024 historical year to the 12 months ending October 2027 test year.

Q. Did the Company provide forecasted yearly sales for each major customer class for the 10-year GPD horizon to comply with the Commission's requirements in Case No. U-21806?

A. Yes, it is provided in Exhibit A-15 (MAS-16) Schedule E-12.

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

MUSTAFA A. SHERWANI

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Schedule E-1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Annual Service Area Deliveries by Major Customer Classes and System Output

5-Year Historical

(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-5 (MAS-1)

Schedule: E-1

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line No.	(a) Year	(b) Residential	(c) Commercial	(d) Industrial	(e) Inter- Departmental	(f) Total	(g) LAUF Gas Volumes MMcf	(h) % of Output	(i) Sendout
1	2020	153,675	75,525	53,805	304	283,310	5,917	2.1	289,227
2	2021	147,363	76,844	57,056	400	281,662	5,206	1.8	286,868
3	2022	164,154	84,938	64,871	666	314,629	3,798	1.2	318,427
4	2023	142,260	77,230	62,667	161	282,317	5,055	1.8	287,372
5	2024	<u>135,708</u>	<u>73,289</u>	<u>59,439</u>	<u>124</u>	<u>268,559</u>	<u>6,291</u>	<u>2.3</u>	<u>274,850</u>

Schedule E-1a**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy Company

Summary of 2024 Historical Year Revenues

(\$000)

Case No.: U-21981

Exhibit No.: A-5 (MAS-2)

Schedule: E-1a

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

(a)		(b)	(c)
Line	Description	Operating Revenues	Source
	Gas Sales		
	Residential Service		
1	Single Family Dwelling A	\$ 1,390,988	WP-MAS-5
2	Multifamily Dwelling A-1	47,043	WP-MAS-5
3	Total Residential Service	1,438,031	
	General Service		
4	Small Service GS-1	335,646	WP-MAS-5
5	Medium Service GS-2	117,787	WP-MAS-5
6	Large Service GS-3	48,661	WP-MAS-5
7	Outdoor Lighting GL	1	WP-MAS-5
8	Total General Service	502,096	
9	Total Gas Sales	1,940,126	
	Transportation		
10	Small Transport ST	44,458	WP-MAS-6
11	Large Transport LT	30,069	WP-MAS-6
12	Extra-large Transport XLT	31,980	WP-MAS-6
13	Extra-Extra-large Transport XXLT	11,442	WP-MAS-6
14	Total Transportation	117,949	
15	Total Tariff Revenues	2,058,075	
16	Miscellaneous Revenues	57,365	WP-MAS-6
17	Total Revenues	\$ 2,115,440	P522 page 305B Line 16

Schedule E-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

2024 Historical Year Consumption and Customer Counts
(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-5 (MAS-3)

Schedule: E-2

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	Description	(a) Customer Count (1)	(b)	(c)
		12-month Average	Year End	MMcf Consumption
	Gas Sales			
	Residential Service			
1	Single Family Dwelling A	1,560,566	1,565,361	121,095
2	Multifamily Dwelling A-1	6,450	6,436	3,133
3	Total Residential Service	1,567,016	1,571,797	124,228
	General Service			
4	Small Service GS-1	101,030	102,583	22,708
5	Medium Service GS-2	10,734	10,584	12,234
6	Large Service GS-3	359	369	3,840
7	Outdoor Lighting GL	6	6	1
8	Total General Service	112,129	113,542	38,782
9	Total Gas Sales	1,679,145	1,685,339	163,010
	Customer Choice			
	Residential Service			
10	Single Family Dwelling A	120,672	119,575	8,738
11	Multifamily Dwelling A-1	2,574	2,587	1,842
12	Total Residential Service	123,246	122,162	10,580
	General Service			
13	Small Service GS-1	14,783	14,596	4,686
14	Medium Service GS-2	6,427	6,321	9,204
15	Large Service GS-3	266	257	2,712
16	Total General Service	21,476	21,174	16,602
17	Total Customer Choice	144,722	143,336	27,182
	Transportation			
18	Small Transport ST	1,317	1,377	17,025
19	Large Transport LT	320	269	17,634
20	Extra-large Transport XLT	126	126	25,513
21	Extra-Extra-large Transport XXLT	3	3	15,931
22	Total Transportation	1,766	1,775	76,103
	Aggregation			
	Residential Service			
23	Single Family Dwelling A	84	82	7
24	Multifamily Dwelling A-1	73	73	76
25	Total Residential Service	157	155	83
	General Service			
26	Small Service GS-1	728	732	183
27	Medium Service GS-2	807	801	1,861
28	Large Service GS-3	21	18	138
29	Total General Service	1,556	1,551	2,181
30	Total Aggregation	1,713	1,706	2,264
31	Total Customers & Deliveries	1,827,346	1,832,156	268,559

Notes

(1) Includes contiguous accounts

Schedule E-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
2024 Historical Year Operating Revenues
(\$000)

Case No.: U-21981
Exhibit No.: A-5 (MAS-4)
Schedule: E-3
Page: 1 of 1
Witness: MASHerwani
Date: December 2025

Line	Description	(a) Tariff	(b) Fuel	(c) Energy Optimization	(d) Operating Revenues
	Gas Sales				
	Residential Service				
1	Single Family Dwelling A	\$ 872,243	\$ 352,797	\$ 36,396	\$ 1,261,436
2	Multifamily Dwelling A-1	17,625	9,001	930	27,556
3	Total Residential Service	889,868	361,797	37,327	1,288,992
	General Service				
4	Small Service GS-1	203,404	68,740	11,177	283,322
5	Medium Service GS-2	(13,572)	33,939	1,221	21,588
6	Large Service GS-3	13,041	11,090	1,892	26,022
7	Outdoor Lighting GL	1	-	-	1
8	Total General Service	202,875	113,768	14,291	330,934
9	Total Gas Sales	1,092,742	475,566	51,617	1,619,925
	Customer Choice				
	Residential Service				
10	Single Family Dwelling A	63,505	63,253	2,741	129,499
11	Multifamily Dwelling A-1	10,228	8,246	571	19,045
12	Total Residential Service	73,733	71,499	3,312	148,545
	General Service				
13	Small Service GS-1	24,606	24,211	2,424	51,241
14	Medium Service GS-2	40,175	42,961	4,774	87,910
15	Large Service GS-3	9,257	11,390	1,422	22,069
16	Total General Service	74,038	78,561	8,620	161,219
17	Total Customer Choice	147,771	150,061	11,932	309,764
	Transportation				
18	Small Transport ST	35,789	-	8,668	44,458
19	Large Transport LT	27,997	-	2,072	30,069
20	Extra-large Transport XLT	30,803	-	1,177	31,980
21	Extra-Extra-large Transport XXL	11,034	-	408	11,442
22	Total Transportation	94,590	-	11,917	117,949
	Aggregation				
	Residential Service				
23	Single Family Dwelling A	51	-	2	53
24	Multifamily Dwelling A-1	418	-	24	442
25	Total Residential Service	469	-	26	495
	General Service				
26	Small Service GS-1	989	-	94	1,084
27	Medium Service GS-2	7,327	-	962	8,289
28	Large Service GS-3	500	-	70	570
29	Total General Service	8,816	-	1,127	9,943
30	Total Aggregation	9,285	-	1,153	10,437
31	Total Delivery	\$ 1,344,388	\$ 625,626	\$ 76,619	\$ 2,058,075

Schedule E-1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Market Outlook: 5-Year Annual Calendar Gas Forecast by Class
(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-5)

Schedule: E-1

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)	(g) LAUF Gas Volumes		(h)	(i)
	Year	Residential	Commercial	Industrial	Inter- departmental	Total	MMcf	% of Output	Sendout	
1	2026 Fcst	158,503	84,610	68,225	75	311,413	3,496 ⁽²⁾	1.1	314,909	
2	2027 Fcst	158,022	84,698	67,735	78	310,532	3,496	1.1	314,028	
3	2028 Fcst	157,394	84,591	67,480	81	309,545	3,496	1.1	313,041	
4	2029 Fcst	156,850	84,459	67,425	82	308,816	3,496	1.1	312,312	
5	2030 Fcst	156,452	84,395	67,507	84	308,438	3,496	1.1	311,934	
6	CAGR (26 - 30)	-0.3%	-0.1%	-0.3%	2.9%	-0.2%	0.0%			-0.2%

Notes

(1) CAGR - Compound Annual Growth Rates

(2) Exhibit A-99 (TKJ-3), line 14, column (f)

Schedule E-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Test-Year Cycle Gas Deliveries Forecast by Class

15-Year (2010 - 2024) Weather Normal

(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-6)

Schedule: E-2

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line	Service	Mth/Yr	Residential	Commercial	Industrial	Inter-departmental	Total
1	Deliveries	Nov-26	11,046	5,813	5,069	3	21,931
2	Deliveries	Dec-26	20,238	9,738	6,024	5	36,005
3	Deliveries	Jan-27	26,952	12,835	7,674	11	47,472
4	Deliveries	Feb-27	28,096	13,818	8,474	11	50,399
5	Deliveries	Mar-27	25,601	12,471	7,747	9	45,827
6	Deliveries	Apr-27	17,617	9,316	6,918	8	33,859
7	Deliveries	May-27	10,485	6,016	5,374	6	21,881
8	Deliveries	Jun-27	4,921	3,615	3,917	2	12,456
9	Deliveries	Jul-27	3,060	2,655	3,947	3	9,665
10	Deliveries	Aug-27	2,723	2,572	4,021	3	9,319
11	Deliveries	Sep-27	2,926	2,661	4,241	16	9,845
12	Deliveries	Oct-27	4,464	3,191	4,428	1	12,084
13	Deliveries	Annual	158,128	84,703	67,834	78	310,743
14	Sales	Nov-26	10,970	3,924	512	2	15,408
15	Sales	Dec-26	20,100	7,163	990	5	28,258
16	Sales	Jan-27	26,771	9,749	1,339	11	37,870
17	Sales	Feb-27	27,859	10,075	1,441	11	39,387
18	Sales	Mar-27	25,394	9,077	1,316	9	35,796
19	Sales	Apr-27	17,440	6,344	944	8	24,736
20	Sales	May-27	10,360	3,826	543	6	14,735
21	Sales	Jun-27	4,856	1,965	276	1	7,098
22	Sales	Jul-27	3,025	1,398	191	1	4,615
23	Sales	Aug-27	2,693	1,322	189	1	4,205
24	Sales	Sep-27	2,895	1,388	195	1	4,480
25	Sales	Oct-27	4,430	1,840	244	1	6,514
26	Sales	Annual	156,792	58,072	8,180	57	223,101
27	Transport	Nov-26	76	1,889	4,557	1	6,523
28	Transport	Dec-26	138	2,575	5,034	-	7,747
29	Transport	Jan-27	182	3,085	6,335	-	9,602
30	Transport	Feb-27	237	3,743	7,033	-	11,012
31	Transport	Mar-27	207	3,394	6,431	-	10,032
32	Transport	Apr-27	177	2,972	5,974	-	9,123
33	Transport	May-27	125	2,190	4,831	-	7,147
34	Transport	Jun-27	65	1,650	3,641	1	5,358
35	Transport	Jul-27	35	1,257	3,756	2	5,050
36	Transport	Aug-27	30	1,250	3,832	2	5,114
37	Transport	Sep-27	31	1,273	4,046	15	5,365
38	Transport	Oct-27	34	1,352	4,184	-	5,569
39	Transport	Annual	1,336	26,631	59,654	21	87,642

Schedule E-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Test-Year Cycle Gas Deliveries by Rate Schedule
 15-Year (2010 - 2024) Weather Normal
 (Consumption in MMcf)

Case No.: U-21981
 Exhibit No.: A-15 (MAS-7)
 Schedule: E-3
 Page: 1 of 1
 Witness: MASHerwani
 Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
		TOTAL DELIVERIES										
		Residential		General Service				Transportation				
Line	Month	A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	XXLT	Total
1	Nov-26	10,468	510	1,812	2,123	633	-	1,471	1,465	2,169	1,280	21,931
2	Dec-26	19,352	769	3,544	3,996	956	-	1,731	1,615	2,634	1,409	36,005
3	Jan-27	25,864	928	4,961	5,370	1,179	-	2,259	1,962	2,922	2,027	47,472
4	Feb-27	26,942	941	5,148	5,554	1,309	-	2,820	2,264	3,217	2,205	50,399
5	Mar-27	24,568	848	4,563	4,979	1,291	-	2,504	2,010	3,052	2,011	45,827
6	Apr-27	16,787	672	3,110	3,592	920	-	2,113	1,867	2,861	1,938	33,859
7	May-27	9,938	434	1,787	2,156	593	-	1,629	1,566	2,136	1,643	21,881
8	Jun-27	4,634	229	899	1,097	333	-	1,240	1,286	1,735	1,004	12,456
9	Jul-27	2,862	166	620	747	262	-	949	1,127	1,508	1,424	9,665
10	Aug-27	2,550	146	581	699	263	-	972	1,124	1,430	1,555	9,319
11	Sep-27	2,745	154	605	746	269	-	922	1,098	1,597	1,710	9,845
12	Oct-27	4,204	229	776	1,019	342	-	949	1,116	1,859	1,590	12,084
13	Annual	150,912	6,026	28,405	32,078	8,349	-	19,561	18,500	27,117	19,795	310,743
		26,942	941	5,148	5,554	1,309	-	2,820	2,264	3,217	2,205	50,399
		SALES										
		Residential		General Service				Transportation				
Line	Month	A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	XXLT	Total
14	Nov-26	10,468	502	1,801	2,011	626	-	-	-	-	-	15,408
15	Dec-26	19,350	750	3,516	3,698	944	-	-	-	-	-	28,258
16	Jan-27	25,862	909	4,926	5,011	1,162	-	-	-	-	-	37,870
17	Feb-27	26,940	920	5,104	5,135	1,288	-	-	-	-	-	39,387
18	Mar-27	24,566	828	4,526	4,606	1,271	-	-	-	-	-	35,796
19	Apr-27	16,785	655	3,072	3,319	905	-	-	-	-	-	24,736
20	May-27	9,936	424	1,784	2,007	585	-	-	-	-	-	14,735
21	Jun-27	4,633	223	892	1,023	328	-	-	-	-	-	7,098
22	Jul-27	2,862	163	617	717	256	-	-	-	-	-	4,615
23	Aug-27	2,549	144	578	676	258	-	-	-	-	-	4,205
24	Sep-27	2,744	151	602	718	264	-	-	-	-	-	4,480
25	Oct-27	4,204	226	771	977	336	-	-	-	-	-	6,514
26	Annual	150,899	5,893	28,188	29,899	8,222	-	-	-	-	-	223,101
		26,940	920	5,104	5,135	1,288	-	-	-	-	-	39,387
		TRANSPORTATION										
		Residential		General Service				Transportation				
Line	Month	A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	XXLT	Total
27	Nov-26	0.548	8	11	112	6	-	1,471	1,465	2,169	1,280	6,523
28	Dec-26	1.527	20	28	298	12	-	1,731	1,615	2,634	1,409	7,747
29	Jan-27	1.678	19	35	358	17	-	2,259	1,962	2,922	2,027	9,602
30	Feb-27	2.040	22	44	419	21	-	2,820	2,264	3,217	2,205	11,012
31	Mar-27	2.227	20	37	374	21	-	2,504	2,010	3,052	2,011	10,032
32	Apr-27	1.578	17	38	273	15	-	2,113	1,867	2,861	1,938	9,123
33	May-27	1.341	11	3	150	8	-	1,629	1,566	2,136	1,643	7,147
34	Jun-27	0.603	6	7	74	5	-	1,240	1,286	1,735	1,004	5,358
35	Jul-27	0.196	3	3	30	6	-	949	1,127	1,508	1,424	5,050
36	Aug-27	0.161	3	3	23	5	-	972	1,124	1,430	1,555	5,114
37	Sep-27	0.237	3	3	27	5	-	922	1,098	1,597	1,710	5,365
38	Oct-27	0.239	3	5	42	6	-	949	1,116	1,859	1,590	5,569
39	Annual	12.376	133	217	2,179	127	-	19,561	18,500	27,117	19,795	87,642

Schedule E-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Test-Year Authorized Tolerance Levels by Rate Schedule

(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-8)

Schedule: E-4

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	Description	(a) Nov-26	(b) Dec-26	(c) Jan-27	(d) Feb-27	(e) Mar-27	(f) Apr-27	(g) May-27	(h) Jun-27	(i) Jul-27	(j) Aug-27	(k) Sep-27	(l) Oct-27	(m) Annual
Small Transport ST														
1	2% ATL	2	2	4	4	3	3	2	2	1	1	1	1	26
2	4% ATL	14	16	16	19	18	20	16	13	9	8	9	10	167
3	6.5% ATL	143	158	178	225	191	145	109	94	91	92	89	84	1,599
4	7.5% ATL	28	32	44	50	45	38	30	22	20	18	18	19	365
5	8.5% ATL	1,284	1,523	2,017	2,523	2,246	1,906	1,473	1,109	828	853	806	837	17,404
6	9.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
7	10.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Total ATL	<u>1,471</u>	<u>1,731</u>	<u>2,259</u>	<u>2,820</u>	<u>2,504</u>	<u>2,113</u>	<u>1,629</u>	<u>1,240</u>	<u>949</u>	<u>972</u>	<u>922</u>	<u>949</u>	<u>19,561</u>
Large Transport LT														
9	2% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
10	4% ATL	63	74	86	100	89	95	77	68	55	47	53	52	859
11	6.5% ATL	199	224	271	311	288	262	219	187	172	154	148	143	2,580
12	7.5% ATL	15	18	22	29	24	22	16	13	10	10	9	9	197
13	8.5% ATL	1,188	1,299	1,582	1,824	1,609	1,488	1,254	1,019	891	913	888	911	14,865
14	9.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
15	10.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Total ATL	<u>1,465</u>	<u>1,615</u>	<u>1,962</u>	<u>2,264</u>	<u>2,010</u>	<u>1,867</u>	<u>1,566</u>	<u>1,286</u>	<u>1,127</u>	<u>1,124</u>	<u>1,098</u>	<u>1,116</u>	<u>18,500</u>
Extra-large Transport XLT														
17	2% ATL	553	597	518	530	497	486	264	142	104	141	259	498	4,588
18	4% ATL	135	162	161	160	151	167	133	140	145	137	131	133	1,755
19	6.5% ATL	883	1,133	1,302	1,416	1,428	1,314	1,026	898	817	709	720	756	12,402
20	7.5% ATL	96	95	105	118	99	104	106	100	80	90	78	83	1,154
21	8.5% ATL	502	646	837	994	877	789	607	454	362	352	409	388	7,216
22	9.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
23	10.5% ATL	-	-	-	-	-	-	-	-	-	-	-	-	-
24	Total ATL	<u>2,169</u>	<u>2,634</u>	<u>2,922</u>	<u>3,217</u>	<u>3,052</u>	<u>2,861</u>	<u>2,136</u>	<u>1,735</u>	<u>1,508</u>	<u>1,430</u>	<u>1,597</u>	<u>1,859</u>	<u>27,117</u>
Extra-Extra-large Transport XXLT														
25	4% ATL	<u>1,280</u>	<u>1,409</u>	<u>2,027</u>	<u>2,205</u>	<u>2,011</u>	<u>1,938</u>	<u>1,643</u>	<u>1,004</u>	<u>1,424</u>	<u>1,555</u>	<u>1,710</u>	<u>1,590</u>	<u>19,795</u>
26	Total ATL	<u>1,280</u>	<u>1,409</u>	<u>2,027</u>	<u>2,205</u>	<u>2,011</u>	<u>1,938</u>	<u>1,643</u>	<u>1,004</u>	<u>1,424</u>	<u>1,555</u>	<u>1,710</u>	<u>1,590</u>	<u>19,795</u>

Schedule E-5

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Market Outlook: 5-Year Average Customer Forecast by Class
(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-9)

Schedule: E-5

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Year	Residential	Commercial	Industrial	Inter- departmental	Total
1	2026 Fcst	1,706,968	134,056	3,992	58	1,845,074
2	2027 Fcst	1,714,426	134,593	3,992	58	1,853,069
3	2028 Fcst	1,721,480	135,081	3,992	58	1,860,611
4	2029 Fcst	1,727,804	135,526	3,992	58	1,867,380
5	2030 Fcst	<u>1,733,239</u>	<u>135,941</u>	<u>3,992</u>	<u>58</u>	<u>1,873,230</u>
6	CAGR (26 - 30)	0.38%	0.35%	0.00%	0.00%	0.38%

Notes

(1) CAGR - Compound Annual Growth Rates

Schedule E-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Test-Year Customer Count Forecast by Class
 Billed & Contiguous Customers
 (Monthly Customer Counts)

Case No.: U-21981
 Exhibit No.: A-15 (MAS-10)
 Schedule: E-6
 Page: 1 of 1
 Witness: MASHerwani
 Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line	Service	Month	Residential	Commercial	Industrial	Inter- departmental	Total
1	Deliveries	Nov-26	1,707,126	134,132	3,992	57	1,845,308
2	Deliveries	Dec-26	1,710,813	135,010	3,992	57	1,849,872
3	Deliveries	Jan-27	1,713,096	135,284	3,992	57	1,852,430
4	Deliveries	Feb-27	1,713,784	135,418	3,992	57	1,853,251
5	Deliveries	Mar-27	1,714,073	135,437	3,992	57	1,853,559
6	Deliveries	Apr-27	1,715,869	134,686	3,992	57	1,854,605
7	Deliveries	May-27	1,714,564	134,441	3,992	57	1,853,054
8	Deliveries	Jun-27	1,715,861	134,153	3,992	57	1,854,064
9	Deliveries	Jul-27	1,713,839	133,886	3,992	57	1,851,775
10	Deliveries	Aug-27	1,712,850	133,737	3,992	57	1,850,636
11	Deliveries	Sep-27	1,712,891	133,863	3,992	57	1,850,802
12	Deliveries	Oct-27	1,713,743	134,048	3,992	57	1,851,840
13	Deliveries	Annual	1,713,209	134,508	3,992	57	1,851,766
14	Sales	Nov-26	1,706,921	131,358	3,445	57	1,841,780
15	Sales	Dec-26	1,710,607	132,234	3,445	57	1,846,343
16	Sales	Jan-27	1,712,890	132,507	3,445	57	1,848,900
17	Sales	Feb-27	1,713,578	132,639	3,445	57	1,849,720
18	Sales	Mar-27	1,713,867	132,657	3,445	57	1,850,027
19	Sales	Apr-27	1,715,663	131,905	3,445	57	1,851,071
20	Sales	May-27	1,714,358	131,659	3,445	57	1,849,519
21	Sales	Jun-27	1,715,656	131,370	3,445	57	1,850,528
22	Sales	Jul-27	1,713,633	131,103	3,445	57	1,848,238
23	Sales	Aug-27	1,712,644	130,952	3,445	57	1,847,099
24	Sales	Sep-27	1,712,685	131,077	3,445	57	1,847,264
25	Sales	Oct-27	1,713,537	131,262	3,445	57	1,848,301
26	Sales	Annual	1,713,003	131,727	3,445	57	1,848,232
27	Transport	Nov-26	206	2,774	547	-	3,527
28	Transport	Dec-26	206	2,776	547	-	3,529
29	Transport	Jan-27	206	2,777	547	-	3,530
30	Transport	Feb-27	206	2,778	547	-	3,532
31	Transport	Mar-27	206	2,780	547	-	3,533
32	Transport	Apr-27	206	2,781	547	-	3,534
33	Transport	May-27	206	2,782	547	-	3,535
34	Transport	Jun-27	206	2,783	547	-	3,536
35	Transport	Jul-27	206	2,784	547	-	3,537
36	Transport	Aug-27	206	2,784	547	-	3,538
37	Transport	Sep-27	206	2,785	547	-	3,538
38	Transport	Oct-27	206	2,786	547	-	3,539
39	Transport	Annual	206	2,781	547	-	3,534

Schedule E-7

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Test-Year Total Customer Count Forecast by Rate Schedule
(Monthly Customer Counts)

Case No.: U-21981

Exhibit No.: A-15 (MAS-11)

Schedule: E-7

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
TOTAL CUSTOMERS											
Line	Month	Residential		General Service				Transportation			Total
		A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	
1	Nov-26	1,697,927	9,152	120,687	15,212	525	-	1,404	273	126	3
2	Dec-26	1,701,594	9,171	121,571	15,207	523	-	1,404	273	126	3
3	Jan-27	1,703,865	9,184	121,914	15,142	519	-	1,405	273	126	3
4	Feb-27	1,704,549	9,187	122,129	15,063	516	-	1,405	273	126	3
5	Mar-27	1,704,836	9,189	122,242	14,973	512	-	1,406	273	126	3
6	Apr-27	1,706,623	9,198	121,660	14,809	505	-	1,406	273	126	3
7	May-27	1,705,324	9,191	121,534	14,694	500	-	1,407	273	127	3
8	Jun-27	1,706,615	9,198	121,369	14,576	495	-	1,407	273	127	3
9	Jul-27	1,704,604	9,187	121,223	14,460	491	-	1,407	273	127	3
10	Aug-27	1,703,620	9,182	121,183	14,355	486	-	1,408	273	127	3
11	Sep-27	1,703,660	9,182	121,392	14,275	482	-	1,408	273	127	3
12	Oct-27	1,704,508	9,187	121,654	14,201	479	-	1,408	273	127	3
13	Annual	20,447,724	110,209	1,458,558	176,965	6,033	-	16,873	3,278	1,518	36
14	Average	1,703,977	9,184	121,547	14,747	503	-	1,406	273	126	3
BILLED											
Line	Month	Residential		General Service				Transportation			Total
		A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	
15	Nov-26	1,697,927	9,152	120,653	15,156	478	-	685	101	24	3
16	Dec-26	1,701,594	9,171	121,537	15,150	477	-	685	101	24	3
17	Jan-27	1,703,865	9,184	121,879	15,085	474	-	685	101	24	3
18	Feb-27	1,704,549	9,187	122,094	15,005	471	-	685	101	24	3
19	Mar-27	1,704,836	9,189	122,206	14,915	468	-	685	101	24	3
20	Apr-27	1,706,623	9,198	121,624	14,752	463	-	686	101	24	3
21	May-27	1,705,324	9,191	121,497	14,637	459	-	686	101	24	3
22	Jun-27	1,706,615	9,198	121,332	14,519	455	-	686	101	24	3
23	Jul-27	1,704,604	9,187	121,186	14,402	451	-	686	101	24	3
24	Aug-27	1,703,620	9,182	121,145	14,297	447	-	686	101	24	3
25	Sep-27	1,703,660	9,182	121,353	14,217	444	-	686	101	24	3
26	Oct-27	1,704,508	9,187	121,615	14,143	441	-	686	101	24	3
27	Annual	20,447,724	110,209	1,458,123	176,279	5,528	-	8,227	1,211	289	36
28	Average	1,703,977	9,184	121,510	14,690	461	-	686	101	24	3
CONTIGUOUS											
Line	Month	Residential		General Service				Transportation			Total
		A	A-1	GS-1	GS-2	GS-3	GL	ST	LT	XLT	
29	Nov-26	-	-	33	56	47	-	719	172	102	-
30	Dec-26	-	-	34	57	46	-	719	172	102	-
31	Jan-27	-	-	35	57	45	-	720	172	102	-
32	Feb-27	-	-	35	57	44	-	720	172	102	-
33	Mar-27	-	-	36	57	44	-	720	172	102	-
34	Apr-27	-	-	36	57	42	-	721	172	102	-
35	May-27	-	-	37	57	42	-	721	172	102	-
36	Jun-27	-	-	37	57	41	-	721	172	102	-
37	Jul-27	-	-	37	57	40	-	721	172	102	-
38	Aug-27	-	-	38	57	39	-	721	172	103	-
39	Sep-27	-	-	39	58	38	-	722	172	103	-
40	Oct-27	-	-	39	58	37	-	722	172	103	-
41	Annual	-	-	435	687	504	-	8,646	2,067	1,229	-
42	Average	-	-	36	57	42	-	721	172	102	-

Schedule E-8

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Calculation of Test-Year Projected Income Assistance Enrollments

(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-12)

Schedule: E-8

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

		(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Single Family Dwelling Rate Schedule A						
Line	Month	Standard		Income Assistance		Total		
		Customers	Consumption	Customers	Consumption	Customers	Consumption	
1	Nov-26	1,616,218	9,964	81,709	504	1,697,927	10,468	
2	Dec-26	1,619,709	18,419	81,885	931	1,701,594	19,350	
3	Jan-27	1,621,870	24,617	81,995	1,245	1,703,865	25,862	
4	Feb-27	1,622,521	25,643	82,028	1,296	1,704,549	26,940	
5	Mar-27	1,622,795	23,384	82,041	1,182	1,704,836	24,566	
6	Apr-27	1,624,496	15,978	82,127	808	1,706,623	16,785	
7	May-27	1,623,259	9,458	82,065	478	1,705,324	9,936	
8	Jun-27	1,624,488	4,410	82,127	223	1,706,615	4,633	
9	Jul-27	1,622,574	2,724	82,030	138	1,704,604	2,862	
10	Aug-27	1,621,637	2,427	81,983	123	1,703,620	2,549	
11	Sep-27	1,621,675	2,612	81,985	132	1,703,660	2,744	
12	Oct-27	1,622,482	4,002	82,026	202	1,704,508	4,204	
13	Annual	<u>19,463,723</u>	<u>143,638</u>	<u>984,001</u>	<u>7,262</u>	<u>20,447,724</u>	<u>150,899</u>	
14	Average	<u>1,621,977</u>		<u>82,000</u>		<u>1,703,977</u>		

Schedule E-9**MICHIGAN PUBLIC SERVICE COMMISSION**Consumers Energy CompanyCalculation of Test-Year Excess Peak Consumption
(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-13)

Schedule: E-9

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	(a) Description	(b) Calculation	(c) Source
1	Peak month consumption	941	Exhibit No.: A-15 (MAS-7), page 1, column c
2	Peak month customer count	9,187	Exhibit No.: A-15 (MAS-11), page 1, column c
3	Base level consumption per customer	<u>92</u>	Tariff Sheet D-12.00
4	Base level consumption	845	(line 2 x line 3) / 1000
5	Excess peak consumption per month	96	line 1 - line 4
6	Number of months	<u>12</u>	Tariff Sheet D-10.00
7	Annual excess peak consumption	<u>1,153</u>	line 5 x line 6

Schedule E-10

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Transition from 2024 Historic Actuals to 12 Months Ending October 2027

Test-Year Revenues, Deliveries, and Customers

Case No.: U-21981

Exhibit No.: A-15 (MAS-14)

Schedule: E-10

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	Description	(a) 2024 Actuals	(b) GCR	(c) Surcharges	(d) Weather Normalization	(e) Change in Determinants	(f) Test Year GCR Factor	(g) Proforma	(h) 12 Months Ending October 2027 Test-Year
Less Non-Base Tariff Items									
	Revenues (\$000)								
	Gas Sales ⁽¹⁾								
1	Delivery	\$ 1,244,856	\$ -	\$ -	\$ 152,032	\$ 16,225	\$ -	\$ 164,656	\$ 1,577,769
2	Fuel	595,750	(595,750)	-	-	-	823,243	-	823,243
	Surcharges								
3	Energy Optimization	69,644	-	(69,644)	-	-	-	-	-
4	PEM/OEM	-	-	-	-	-	-	-	-
5	Total Gas Sales	1,910,250	(595,750)	(69,644)	152,032	16,225	823,243	164,656	2,401,012
	Transportation								
6	Delivery	105,624	-	-	4,202	8,495	-	5,010	123,330
	Surcharges								
7	Energy Optimization	12,325	-	(12,325)	-	-	-	-	-
8	Total Transportation	117,949	-	(12,325)	4,202	8,495	-	5,010	123,330
9	Transmission-Only								491
10	Provisions for Refund	29,877	(29,877)	-	-	-	-	-	-
11	Miscellaneous Revenue ⁽²⁾	57,365	(57,365)	-	-	-	-	-	-
12	Total Revenue (\$000)	<u>\$ 2,115,440</u>	<u>\$ (682,991)</u>	<u>\$ (81,969)</u>	<u>\$ 156,234</u>	<u>\$ 24,720</u>	<u>\$ 823,243</u>	<u>\$ 169,666</u>	<u>\$ 2,524,834</u>
	Deliveries (MMcf)								
13	Gas Sales ⁽¹⁾	192,457	-	-	30,804	2,508	-	-	225,770
14	Transportation	76,103	-	-	2,750	6,121	-	-	84,973
15	Total Deliveries (MMcf)	<u>268,559</u>	<u>-</u>	<u>-</u>	<u>33,555</u>	<u>8,629</u>	<u>-</u>	<u>-</u>	<u>310,743</u>
	Customer Count (12 Mo. Avg)								
	Gas Sales ⁽¹⁾								
16	Billed Count	1,825,438	-	-	-	24,387	-	-	1,849,825
17	Contiguous Count	142	-	-	-	(6)	-	-	136
	Transportation								
18	Billed Count	797	-	-	-	14	-	-	811
19	Contiguous Count	969	-	-	-	26	-	-	995
20	Total Customer Count (Avg)	<u>1,827,346</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>24,420</u>	<u>-</u>	<u>-</u>	<u>1,851,766</u>

Notes

(1) Includes aggregate billed transportation accounts.

(2) Test-Year miscellaneous revenues excluded and presented in the Revenue Requirements testimony

Schedule E-11

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Income Assistance Customer Count (RIA and LIAC)

Case No.: U-21981
Exhibit No.: A-15 (MAS-15)
Schedule: E-11
Page: 1 of 1
Witness: MASHerwani
Date: December 2025

Most recent history: July 2022 to June 2025

Line No.		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
1	2025	73,417	73,671	78,117	78,846	79,127	77,289	-	-	-	-	-	-	76,745
2	2024	84,403	84,721	88,725	89,774	89,192	84,509	81,543	79,992	77,612	74,509	73,905	73,573	81,872
3	2023	76,329	77,680	84,149	86,110	94,137	89,102	91,224	91,016	88,030	98,221	84,955	84,371	87,110
4	2022	58,988	60,762	67,760	74,709	79,002	81,083	80,652	76,684	62,056	85,439	76,496	76,178	73,317

Total RIA and LIAC - 3 year most recent avg. 81,827
Forecasted LIAC - Commission Approved LIAC count 12,000
Forecasted RIA 69,827
Forecasted RIA (Rounded) ~ **70,000** Rounded

Schedule E-12

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Market Outlook: 2026-2035 Annual Calendar Gas Forecast by Class
(Consumption in MMcf)

Case No.: U-21981

Exhibit No.: A-15 (MAS-16)

Schedule: E-12

Page: 1 of 1

Witness: MASHerwani

Date: December 2025

Line	(a) Year	(b) Residential Sales	(c) Commercial Sales	(d) Industrial Sales	(e) Inter-Dept Sales	(f) Residential Trans.	(g) Commercial Trans.	(h) Industrial Trans.	(i) Inter-Dept Trans.	(j) Total
1	2026 Fcst	157,152	58,047	8,352	57	1,352	26,563	59,873	18	311,413
2	2027 Fcst	156,689	58,071	8,156	57	1,333	26,627	59,579	21	310,532
3	2028 Fcst	156,071	58,024	8,039	59	1,323	26,567	59,441	22	309,545
4	2029 Fcst	155,540	57,993	7,983	60	1,310	26,466	59,442	22	308,816
5	2030 Fcst	155,150	58,021	7,966	62	1,302	26,374	59,541	22	308,438
6	2031 Fcst	154,959	58,299	8,010	64	1,295	26,358	59,851	23	308,858
7	2032 Fcst	155,002	58,516	8,029	68	1,289	26,331	60,128	24	309,387
8	2033 Fcst	155,057	58,767	8,031	73	1,286	26,335	60,455	30	310,034
9	2034 Fcst	154,834	58,989	8,041	77	1,282	26,321	60,838	31	310,412
10	2035 Fcst	154,482	59,106	8,050	78	1,275	26,244	61,216	32	310,483
11	CAGR (26 - 35)	-0.4%	0.5%	-0.9%	8.2%	-1.4%	-0.3%	0.6%	15.5%	-0.1%

Notes

(1) CAGR - Compound Annual Growth Rates

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

S. AUSTIN SMITH

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

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INTRODUCTION

Q. Please state your name and business address.

A. My name is S. Austin Smith, 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 position with Consumers Energy?

A. I am a Senior Rate Analyst in the Cost and Pricing Section of the Legal, Rates and Regulatory Department.

Q. Please state your educational background and work experience.

A. I received a Bachelor of Business Administration degree with an emphasis in Accounting in April 2014 from Alma College. In Spring 2019, I earned a Master of Business Administration degree from Spring Arbor University.

In August 2016, I began employment as a Rates Analyst in the Pricing Section of the Legal, Rates & Regulatory Department at Consumers Energy. My responsibilities include preparing various electric and gas rate analyses, cost of service, rate design, research, and validating electric and gas charges as part of the Company’s billing process. In September 2024 I was promoted to my current position.

Q. Have you previously filed testimony with the Michigan Public Service Commission (“MPSC” or the “Commission”)?

A. Yes. I have filed testimony in the following cases:

Case No. U-17771 (Amended) Energy Optimization Plan;

Case No. U-18261 EWR Plan;

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Case No. U-18331 EWR Reconciliation;
Case No. U-20028 EWR Reconciliation;
Case No. U-20275 Electric Self-Implementation Reconciliation;
Case No. U-20356 Gas Revenue Decoupling Reconciliation;
Case No. U-20671 Gas Revenue Decoupling Reconciliation;
Case No. U-21205 EWR Reconciliation;
Case No. U-21233 Demand Response Reconciliation;
Case No. U-21344 Gas Revenue Decoupling Reconciliation;
Case No. U-21410 Demand Response Reconciliation;
Case No. U-21490 General Gas Rate Case;
Case No. U-21784 Residual Balance of Voluntary Refund Mechanism;
Case No. U-21806 General Gas Rate Case; and
Case No. U-21906 Demand Response Reconciliation.

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

A. The purpose of my direct testimony is to present the Company’s gas Cost-of-Service Study (“COSS”) for the 12-month period ending October 31, 2027 (“test year”), and to present the Company’s proposed rate design, which collects the proposed revenue requirement from customers in an equitable manner reflecting the cost of providing service and taking into consideration rate impacts.

Q. Is the Company proposing any changes to the COSS methodologies previously approved by the Commission?

A. Yes. Because the Company is proposing changes to the COSS methodologies approved by the Commission in prior cases, in accordance with the Commission’s rate case filing

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requirements established in Case No. U-18238, the Company is sponsoring two versions of the COSS. The first COSS (Version 1) employs the methodologies previously adopted by the Commission in Case No. U-21806 updated for the financial information and supporting data sponsored by other witnesses in this case. The second COSS (Version 2) starts with the Version 1 COSS and incorporates four Company proposals. The Company is proposing to: (1) break out Transmission Plant and Storage Plant into categories that align with the current Commission approved cost drivers; (2) create an Average and Peak (“A&P”) Distribution allocator that excludes transmission only customer volumes; (3) consolidate the pension and payroll cost line items; and (4) consolidate certain small Other Revenue accounts.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit A-16 (SAS-1)	Schedule F-1	Gas Cost-of-Service Study – Version 1 - Projected 12 Month Period: November 2026 – October 2027;
Exhibit A-16 (SAS-2)	Schedule F-1.1	Gas Cost-of-Service Study – Version 2 - Projected 12 Month Period: November 2026 – October 2027;
Exhibit A-134 (SAS-3)		Gas Cost-of-Service Study – Allocation of Home Products Credit;
Exhibit A-16 (SAS-4)	Schedule F-2	Summary of Present and Proposed Revenue by Rate Schedule;
Exhibit A-16 (SAS-5)	Schedule F-2.1	Summary of Present and Proposed Rates by Rate Schedule;
Exhibit A-16 (SAS-6)	Schedule F-2.2	Calculation of Rate Design Targets;
Exhibit A-16 (SAS-7)	Schedule F-3	Present and Proposed Revenue Detail;

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Exhibit A-16 (SAS-8) Schedule F-4 Comparison of Present and Proposed Monthly Bills;

Exhibit A-135 (SAS-9) Development of Rates for Transportation ATL Services;

Exhibit A-136 (SAS-10) Calculation of Test Year Discount and Carrying Cost Rates for the Customer Attachment Program; and

Exhibit A-137 (SAS-11) Calculation of Home Products Credit.

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

A. Yes.

Q. How is your direct testimony organized?

A. My direct testimony is organized as follows:

I. COST OF SERVICE OVERVIEW

II. TEST YEAR COST OF SERVICE – VERSION 1

III. TEST YEAR COST OF SERVICE – VERSION 2

IV. SUMMARY OF PROPOSED RATE DESIGN CHANGES

V. ALLOCATION OF THE PROPOSED REVENUE DEFICIENCY

VI. TYPICAL BILLS

VII. CUSTOMER ATTACHMENT PROGRAM DISCOUNT AND CARRYING COST

VIII. HOME PRODUCTS CREDIT CALCULATION

I. COST OF SERVICE OVERVIEW

Q. What is COSS?

A. A COSS is a three-part analysis that quantifies the utility's cost to serve each rate class. It provides the utility and stakeholders with important information regarding each rate class's contribution to the total revenue requirement and the nature of those costs. Ultimately, the

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information provided by the COSS is used to guide rate design among other goals or objectives. The fundamental guiding principle used to assign costs in the COSS is cost causation. In other words, the costs assigned to a customer or group of customers should reflect how those customers drive or influence the utility's costs.

Q. What are the three parts or steps involved in performing a COSS?

A. The first step is functionalization, followed by classification, and finally allocation. Cost functionalization involves the identification and separation of plant and expenses into specific categories based on the activity or "function" that each cost is incurred to provide or support. Consumers Energy's functional cost categories are Transmission, Distribution, and Storage. Cost classification, the second step, involves the categorization of functionalized costs according to the primary cost drivers. The final step is cost allocation. Allocation assigns costs to each customer class using a variety of factors that correlate to the identified cost drivers. Common allocation factors include the number of customers, throughput or usage, and peak consumption among others. This process is relatively standard across the utility industry and supported by the National Association of Regulatory Utility Commissioners Gas Distribution Rate Design Manual.

II. TEST YEAR COST OF SERVICE – VERSION 1

Q. Please describe Exhibit A-16 (SAS-1), Schedule F-1.

A. Exhibit A-16 (SAS-1), Schedule F-1, is a 10-page exhibit that summarizes the results of the Version 1 COSS. As explained earlier in my testimony, the Version 1 COSS employs the methodologies previously adopted by the Commission in Case No. U-21806 updated for the financial information and supporting data sponsored by other witnesses in this case. The Company also made routine updates for historical and test year data that are used to

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1 derive COSS cost detail and the various functional, classification, and allocation factors.
2 Page 1 of the exhibit summarizes the results of the COSS; total Company gas information
3 for the test year is found in column (d) while columns (e) through (l) breakout the cost to
4 serve for each rate class. Total rate base by rate is shown on line 15 with the return on rate
5 base shown on line 16. Adjusted net operating income is shown on line 14 and is calculated
6 by subtracting test year total expenses from revenue, adjusting for Allowance for Funds
7 Used During Construction. The associated income and revenue deficiencies are shown on
8 lines 17 and 18, respectively, and are supported by Company witness Heather L. Rayl. The
9 proposed base rate design revenue target for each rate class, which is shown on line 22, is
10 found by removing cost of gas sold and miscellaneous revenue from the total cost of
11 service. Page 1 provides a breakout of the proposed base rate design revenue target by rate
12 class for each functional cost category (transmission, storage, and distribution). Exhibit A-
13 16 (SAS-1), Schedule F-1, pages 2 through 5, provide detail on rate base, operating and
14 maintenance ("O&M"), and revenue that supports the summary information presented on
15 Exhibit A-16 (SAS-4), Schedule F-2, pages 1 and 2. Exhibit A-16 (SAS-1), Schedule F-1,
16 pages 6 through 10, support the functionalization, classification, and allocation factors
17 utilized in the COSS.

18 **Q. What updates were made to Version 1 of the COSS?**

19 A. The Company made routine updates for historic and test year data. In addition, Version 1
20 of the COSS includes a couple updates to improve and simplify the presentation of costs
21 in the COSS model including: (a) moving certain O&M cost line items under Total O&M
22 and (b) removing the COSS model classification step which is not used to allocate costs or

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design rates. These updates simplify the presentation of costs in the COSS and do not impact the Commission approved cost allocation methodologies.

A. O&M Cost Display

Q. Please explain why the Company moved various O&M cost line items under Total O&M.

A. Over time, as additional O&M costs have been added to the COSS these items have inadvertently been included below the total O&M line (e.g. Business Customer Care, Customer Contact Center, Interest on Customer Deposits, Uncollectible Expense, and Pension & Benefits Expense). Moving these items under the O&M expense category simplifies model presentation and ensures the accuracy of cost allocations that rely upon the Total O&M value.

Q. Does this change affect how these costs are allocated in the COSS?

A. No. The underlying COSS treatment and allocation of these expenses remains unchanged.

B. Removal of Cost Classification

Q. Please explain why the Company removed the COSS classification of costs.

A. The Company removed the cost classification step in the COSS because it added significant model and formula complexity and was not relied on to allocate costs or design rates. Because it was not used, its removal has no impact on the COSS results or rate design.

Q. Why is it appropriate to remove the cost classification if it does not change the results?

A. Maintaining the cost classification modeling when it serves no functional role in the COSS or rate design creates unnecessary formula complexity. Greater formula complexity increases the likelihood of formula errors when used by the Company and stakeholders. The COSS continues to display the customer costs for each class calculated in accordance

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with the approved MPSC method as amended by the Commission Order in Case No. U-21806.

III. TEST YEAR COST OF SERVICE – VERSION 2

Q. Please describe Exhibit A-16 (SAS-2), Schedule F-1.1 and explain how it differs from the Version 1 COSS (Exhibit A-16 (SAS-1), Schedule F-1).

A. Exhibit A-16 (SAS-2), Schedule F-1.1 is a 10-page exhibit that starts with the Version 1 COSS (Exhibit A-16 (SAS-1), Schedule F-1) and incorporates the four Company proposals cited earlier in my testimony to: (1) break out Transmission Plant and Storage Plant into categories that align with the current Commission approved cost drivers; (2) create an A&P Distribution allocator that excludes transmission only customer volumes; (3) consolidate the pension and payroll cost line items; and (4) consolidate certain small Other Revenue accounts. The page and line references in the Version 1 COSS also apply to Version 2. A summary of the results of the Version 2 COSS results and how it compares to Version 1 for each rate class is shown in Table 1.

Table 1: Summary of COSS Impacts by Rate (\$ in Millions)

Description	Total	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
Present Revenue	\$ 1,702	\$ 1,238	\$ 171	\$ 139	\$ 30	\$ 47	\$ 33	\$ 34	\$ 10
Version 1 Update	\$ 240	\$ 151	\$ 26	\$ 26	\$ 6	\$ 8	\$ 4	\$ 8	\$ 11
Version 1 COSS	\$ 1,942	\$ 1,389	\$ 197	\$ 165	\$ 35	\$ 55	\$ 37	\$ 43	\$ 21
	14.1%	12.2%	15.0%	18.7%	18.6%	17.3%	13.4%	23.8%	106.9%
Breakout Transmission/Storage Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
A&P Dist Allocator for Other Dist Plant	\$ -	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.0)	\$ 0.0	\$ 0.0
Consolidate Pension & Payroll	\$ -	\$ 1.2	\$ (0.2)	\$ (0.4)	\$ (0.1)	\$ (0.1)	\$ (0.1)	\$ (0.1)	\$ (0.1)
Consolidation of Other Revenue	\$ -	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
Version 2 COSS	\$ 1,942	\$ 1,390	\$ 197	\$ 164	\$ 35	\$ 54	\$ 37	\$ 42	\$ 21
	14.1%	12.3%	14.9%	18.4%	18.2%	17.0%	13.0%	23.5%	106.3%

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A. **Transmission-Only Transportation Service Rate (TOT)**

Q. Why is the Company proposing changes to its breakout of transmission and storage plant and allocation of other distribution costs in the COSS?

A. As the Company sees an increase in customers taking service on its Rate Transmission Only Tariff (“TOT”), it has become increasingly important to ensure that the COSS clearly distinguishes costs and volumes associated with the transmission system from those associated with storage and distribution functions. This is because the Company uses the transmission COSS results to design the TOT rate.

Q. How is the Company proposing to change its breakout of transmission and storage plant?

A. The Company is proposing to expand the breakout of transmission and storage plant in the COSS to align with current Commission approved allocators and cost drivers. Because a portion of transmission plant is believed to support bringing gas to and from storage and storage plant is believed to support system balancing and peak day delivery those costs are allocated both on storage utilization and peak demand. Table 2 below illustrates the breakout and treatment of storage and transmission plant in the Version 1 COSS and Table 3 illustrates the breakout in the Version 2 COSS.

Table 2: Version 1 COSS Storage & Transmission Plant		
Cost	Function	Allocation
Transmission Plant		
To/From Storage	Transmission	107: 50% Storage & 50% Peak Demand
Other Transmission	Transmission	104: A&P Transmission
Storage Plant	Storage	107: 50% Storage & 50% Peak Demand

Table 3: Version 2 COSS Storage & Transmission Plant		
Cost	Function	Allocation
Transmission Plant		
To/From Storage	Storage	116: 100% Storage

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System Balancing	Transmission	117: 100% Peak Demand
Other Transmission	Transmission	104: A&P Transmission
Storage Plant		
Storage	Storage	116: 100% Storage
System Balancing	Transmission	117: 100% Peak Demand

Because the Version 2 COSS breakout maintains the existing COSS logic, these changes have no impact on the allocation of costs between COSS classes. To facilitate this breakout, the Company created three new allocators: 116 which reflects each class's storage utilization, 117 which captures peak day use, and 118 which captures each class's assignment of storage plant. Allocator 118 replaces allocator 107 where it was applied in the COSS to capture the allocation of total storage plant.

Q. How is the Company proposing to change the allocation of other distribution plant?

A. In instances where other distribution plant costs are allocated using allocator 104 (A&P Transmission) the Company is proposing to use a new allocator (120: A&P Distribution). This is because allocator 104 includes all customer volumes including transmission-only customers. As a result, distribution costs were inadvertently allocated to rate classes who were not causing the costs. The new allocator ensures that only those customers who take service from the distribution system influence distribution cost responsibility. Because current transmission-only volumes are small, the impact of this change is de minimis and is shown in Table 1.

B. Pension Expense and Payroll Tax

Q. Please explain the Company's proposal to consolidate pension & benefits and payroll tax expenses.

A. The Company is proposing to consolidate pension & benefits expense and payroll tax line items into single total line items for each cost category. Under the current structure, these

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amounts are broken out into multiple functional cost lines including Production, Storage, Transmission, Distribution, Customer Accounting, Customer Service, Sales, and Administrative & General resulting in 16 different line items. This presentation is inconsistent with other shared O&M costs that rely on the functionalization factor to assign costs by function and adds additional complexity with little value. The Version 2 COSS uses Labor to functionalize these costs.

Q. How does this change affect the allocation of costs among customer classes?

A. As shown in Table 1 above, Residential customers would see less than a 0.1% increase while General Service and Transportation classes will experience decreases of 0.2% and 0.3% respectively.

C. Consolidation of Other Revenue

Q. Please explain the Company's proposal to consolidate certain Other Revenue accounts.

A. The Company is proposing to clean up and simplify the presentation of Other Revenue by consolidating several small revenue accounts. Currently, 11 separate line items fall under Other Revenue; in Version 2 other revenue has been consolidated into six line items of which only four contain revenue in the test year. Most of the revenue line items that were consolidated were combined with line items sharing the same allocation factor. Two revenue items: Rent from Gas Property and Interest on Cash Operating Accounts are assigned different allocators in Version 2. Rent from Gas Property, which was previously broken out and allocated on allocator 204 (Total Transmission Plant) and Interest on Cash Operating Accounts which was allocated on allocator 209 (Total O&M), were combined with other miscellaneous revenue which is allocated on allocator 111 (Present Revenue).

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1 The relatively small size of these accounts (\$1.0 million combined) make it reasonable to
2 include these amounts in miscellaneous revenue.

3 **Q. How will this proposal impact customer classes?**

4 A. The impact to any rate class is shown in Table 1 and is less than 0.1% for any given class.

5 **Q. Please describe Exhibit A-134 (SAS-3) Allocation of Home Products Credit.**

6 A. Exhibit A-134 (SAS-3) proposes to allocate the projected revenue generated by the Home
7 Products Credit using Allocator 209 (Total O&M excluding Admin and General) as was
8 approved in Case No. U-21806.

9 **IV. SUMMARY OF PROPOSED RATE DESIGN CHANGES**

10 **Q. Please describe Exhibit A-16 (SAS-4), Schedule F-2.**

11 A. Exhibit A-16 (SAS-4), Schedule F-2, provides a summary of the proposed changes in
12 revenue by rate schedule. The proposed change is derived from the calculated difference
13 between test year present revenue and proposed revenue that incorporates the Company's
14 revenue deficiency. The present and proposed revenues shown in Exhibit A-16 (SAS-4),
15 Schedule F-2, are calculated by applying the test year billing determinants provided by
16 Company witness Mustafa A. Sherwani to present rates, as well as to the rates being
17 proposed by the Company in this case.

18 **Q. What rates were used to calculate present revenue?**

19 A. The Company applied the rates approved by the Commission in the Case No. U-21806,
20 September 30, 2025 Order ("September 30 Order") to the test year billing determinants to
21 calculate present revenue in Exhibit A-16 (SAS-4), Schedule F-2.

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1 **Q. Please describe the Company's objectives and approach to rate design in this case.**

2 A. Generally, the Company has designed rates so that the revenue recovered from each
3 customer class reflects the adjusted costs for that class in the Company's Version 2 test
4 year COSS. The Company also considers: (i) establishing rates that promote efficient use
5 of the Company's gas system and promoting energy efficiency; (ii) establishing rates that
6 promote a favorable business climate; and (iii) designing rates that provide the Company
7 with a fair opportunity to collect its revenue requirements. The proposed gas delivery
8 revenue and associated rate increases/(decreases) for each rate class are shown on Exhibit
9 A-16 (SAS-4), Schedule F-2, page 2.

10 **Residential Rates**

11 The Company is proposing to maintain its existing residential rate structure for Rate
12 Schedules A and A-1, which includes a fixed monthly customer charge and volumetric
13 distribution charges. The proposed increase in distribution for Rates A and A-1 is 11.8%
14 and 9.6% respectively, as shown on Exhibit A-16 (SAS-4), Schedule F-2, page 2. The total
15 proposed increase for the residential class is 8.0% when including the forecasted cost of
16 the gas commodity, as shown on Exhibit A-16 (SAS-4), Schedule F-2, page 1.

17 **General Service Rates**

18 The Company is proposing to maintain its existing rate structure for General
19 Service Rate Schedules GS-1, GS-2, and GS-3. The proposed increase in distribution for
20 the General Service rate class is 18.0%, as shown on Exhibit A-16 (SAS-4), Schedule F-2,
21 page 2. The total proposed increase for the General Service class is 10.5% when including
22 the forecasted cost of the gas commodity, as shown on Exhibit A-16 (SAS-4), Schedule

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1 F-2, page 1. The proposed rates maintain the currently established economic breakeven
2 points between the General Service Rate Schedules, GS-1, GS-2, and GS-3.

3 **Transportation Rates**

4 The Company is proposing to maintain its existing transportation rate structure with
5 Rate Schedules ST, LT, XLT, and XXL. The proposed increase for the Transportation
6 rate class is 26.7%, as shown on Exhibit A-16 (SAS-4), Schedule F-2, page 1. The
7 proposed rates maintain the currently established economic breakeven points between the
8 Transportation Rate Schedules ST, LT, and XLT.

9 **Transmission-Only Transportation Rate**

10 The Transmission Only (“TOT”) Rate offers one single rate – a volumetric charge
11 of \$0.6229 per Mcf based on current revenue, as shown on Exhibit A-16 (SAS-5), Schedule
12 F-2.1, page 3 and Exhibit A-16 (SAS-7), Schedule F-3, page 10. The Company is
13 proposing to maintain the Commission-approved rate design methodology in Case No. U-
14 21806.

15 **Q. How is the Company proposing to treat revenues collected under Rate TOT?**

16 A. The Company proposes to classify Rate TOT revenues as base rate revenue rather than as
17 Other Revenue. This represents a change from prior cases, where Rate TOT revenue—
18 like revenue from Act 9 contracts—was categorized as Other Revenue and used as an offset
19 to the Company’s revenue requirement.

20 **Q. Why is the Company proposing this change in how Rate TOT revenue is categorized?**

21 A. Rate TOT is an approved tariff rate and represents regulated tariff service subject to the
22 Commission’s jurisdiction. For that reason, it is appropriate for Rate TOT revenue to be
23 treated the same as other tariff rate revenues and included as part of the Company’s

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jurisdictional base rate revenue. This change improves consistency and transparency by aligning the treatment of Rate TOT revenues with all other tariff-based transportation revenues.

Q. Are you proposing any changes to Multifamily Dwelling Service Rate A-1?

A. Yes. Rate A-1 was created for multifamily residential customers under the historical assumption that these customers required larger or more costly service installations than those on the standard Residential Rate A class. In Case No. U-7650, the Commission approved the Excess Peak Demand Charge as part of a redesign to recover higher expected connection costs from these customers. After a review of the Company's current connection costs, the Company found that there was little difference between the cost to connect a Residential Rate A customer and a Residential Rate A-1 customer. The Company is proposing to eliminate the Excess Peak Demand Charge on Rate A-1.

Q. Why is the Company proposing to remove the Excess Peak Demand Charge but maintain the Rate A-1 schedule itself?

A. Although Rate A-1 is now essentially identical to Rate A from a rate design standpoint, the Company proposes to retain it for regulatory and operational reasons. Specifically, Michigan Administrative Rule R 460.139(4) requires the Company to provide shutoff notices to tenants when a landlord fails to pay utility bills. Maintaining Rate A-1 allows the Company to identify multi-tenant accounts and ensure compliance with this requirement, thereby preserving critical tenant protections.

Q. Are you proposing any changes to the Gas Transportation Service Class?

A. Yes. The Company is proposing to remove the \$70 per-meter Remote Meter Charge currently applied to some customers taking service on Rate XLT and Rate XXLTL.

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1 **Q. Why are you proposing to remove this charge?**

2 A. The charge was introduced more than 20 years ago in Case No. U-13000 to recover costs
3 associated with early remote-metering technology. Those costs are becoming less relevant
4 given today's standard metering capabilities. Therefore, the Company is proposing to
5 remove this charge.

6 **V. ALLOCATION OF THE PROPOSED REVENUE DEFICIENCY**

7 **Q. Please describe Exhibit A-16 (SAS-6), Schedule F-2.2.**

8 A. In Exhibit A-16 (SAS-6), Schedule F-2.2, I calculated the revenue targets used for
9 designing rates, including proposed adjustments to the test year revenue requirement by
10 rate schedule. Page 1, line 1 of this exhibit shows test year revenues based on the
11 Company's test year COSS (Version 2), as shown in Exhibit A-16 (SAS-2), Schedule F-
12 1.1. This is followed by the Company's proposed adjustments to the COSS, as shown on
13 page 1, line 6 of Exhibit A-16 (SAS-6), Schedule F-2.2, which results in the revenue target
14 used for designing the Company's proposed rates.

15 **Q. How did the Company develop the test year revenue targets for each class shown on**
16 **Exhibit A-16 (SAS-6), Schedule F-2.2?**

17 A. As shown on Exhibit A-16 (SAS-6), Schedule F-2.2, page 1, line 1, the Company started
18 with the test year COSS. The COSS was adjusted for the Residential Income Assistance
19 ("RIA") provision and the Low-Income Assistance Credit ("LIAC") to assign cost
20 responsibility for these assistance programs to all rate schedules, as shown on Exhibit A-16
21 (SAS-5), Schedule F-2.2, page 1, line 2. Furthermore, the COSS was adjusted to reflect
22 the storage adjustment for Rate XXLT, as shown on Exhibit A-16 (SAS-6), Schedule F-2.2,
23 page 1, line 3. Consistent with the methodology approved by the Commission in prior gas

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cases, the COSS was also adjusted to maintain economic breakeven points within the General Service and Transportation rate classes. In the interest of rate stability and to moderate rate impacts for customers on Rate GS-1, the Company is proposing to shift proposed revenue. Approximately \$2.96 million has been shifted from Rate GS-2 and Rate GS-3 into Rate GS-1. Approximately \$1.24 million was shifted from Rate XLT to Rate ST and Rate LT. The adjusted cost of service was compared to the test year present revenue to determine the revenue deficiency by class. This deficiency was then adjusted for incremental late payments to determine the adjusted deficiency. The adjusted deficiency was added to the test year present revenue, resulting in the rate design targets by rate schedule as shown on Exhibit A-16 (SAS-6), Schedule F-2.2, page 1, line 11.

Q. How did the Company allocate the low-income credits associated with the RIA credit and LIAC?

A. The allocation of the RIA credit and LIAC is shown on Exhibit A-16 (SAS-6), Schedule F-2.2, page 2. The credits are allocated to each rate class based on that class's pro rata share of the total revenue requirement from the COSS.

Q. What is the basis for allocating the RIA credit and LIAC among all rate schedules?

A. The Company is maintaining the allocation ordered by the Commission in its June 3, 2010, Order in Case No. U-15985 (Michigan Consolidated Gas Company's gas general rate case) ("U-15985 Order"). The Order states:

The ALJ found that the revenue shortfall should be recovered from all rate classes, on the basis of Allocation Factor No. 20 rather than on the basis of throughput. [U-15985 Order, page 91.]

The Commission adopts the findings and recommendations of the ALJ. For the electric utilities, this shortfall is spread to all customer classes and the Commission is not persuaded that gas should be treated differently. See, MCL 460.11 (3).

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The Commission further finds that spreading it on the basis of cost of service plus the cost of gas is fair and reasonable. [U-15985 Order, page 92.]

Q. Please describe Exhibit A-16 (SAS-7), Schedule F-3.

A. Exhibit A-16 (SAS-7), Schedule F-3, calculates the test year proposed gas rates required to collect the revenue requirement derived from the test year calculation of rate design targets shown in Exhibit A-16 (SAS-6), Schedule F-2.2, page 1, line 11 for each rate schedule, based on the billing determinants provided by Company witness Sherwani. Both the present and proposed gas prices are applied to the billing determinants to calculate the test year revenue on Exhibit A-16 (SAS-4), Schedule F-2. The rates from Exhibit A-16 (SAS-7), Schedule F-3, are the source of the proposed rates that appear in the redlined tariffs filed by Company witness Lynne McCollum in this Case.

Q. How does the Company propose to design rates to recover the residential revenue requirement?

A. The Company calculated a residential customer charge using the methodology originally adopted by the Commission in Case No. U-4331, January 18, 1974 Order, page 30. This methodology limits the customer charge to only those costs associated directly with supplying service to a customer, such as costs associated with metering, the service lateral, and customer billing. Additionally, in compliance with the September 30 Order, I have calculated the residential Customer Charge using historical costs only. Using this methodology, the Company calculated a residential customer charge of \$20.20 per month.

The Company proposes a residential customer charge for Rates A and A-1 of \$20.00 per month. This proposal reflects a \$3.00 increase from the current \$17.00 residential customer charge. The increase in the customer charge also results in a corresponding increase to the low-income RIA monthly credit. The more revenue collected

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1 via the fixed customer charge, the greater the proportion of the RIA customer's bill is offset
2 by the fixed monthly credit.

3 **Q. Does the proposed increase in the residential customer charge result in a change to**
4 **the volumetric distribution charge?**

5 A. Yes. The proposed \$3.00 increase in the customer charge results in a volumetric
6 distribution charge of \$6.3310. If there were no increase to the customer charge, the
7 resulting volumetric distribution charge would be \$6.7125.

8 **Q. Is the Company proposing to update Contiguous Charges for both General Service**
9 **and Transportation customers?**

10 A. Yes. Prior to Case No. U-21806, Contiguous¹ Charges had not been updated for four
11 consecutive rate cases and remain below the levels indicated by the COSS. In the interest
12 of continued gradualism, the Company is proposing to increase the Contiguous Charges,
13 but below the amounts informed by the COSS.

14 **Q. How does the Company propose to set rates to recover the revenue requirement for**
15 **the General Service Rate Schedules GS-1, GS-2, and GS-3?**

16 A. Consistent with the September 30 Order, the Company is proposing principal customer
17 charges, contiguous customer charges, and volumetric distribution charges to collect the
18 proposed revenues. These rate changes maintain the economic breakeven points between
19 Rate Schedules GS-1 and GS-2 at 1,000 Mcf annually and between Rate GS-2 and Rate
20 GS-3 at 10,000 Mcf annually, as well as provide for the recovery of the annual revenue

¹ Contiguous Facilities are defined in Company Tariff C4.7. Under Tariff C4.7, subsection C, these facilities are billed under the provisions of their *Principal* account's rate schedule, paying the Contiguous Customer Charge and the applicable Distribution Charge or Transportation rate in effect for the *Principal* account.

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1 requirement for the General Service rate class. These rate changes are shown in Exhibit
2 A-16 (SAS-5), Schedule F-2.1.

3 **Q. How does the Company propose to set rates to recover the Transportation class's**
4 **revenue requirement?**

5 A. Consistent with the September 30 Order, the Company is proposing principal customer
6 charges, contiguous customer charges, and distribution charges to collect the
7 Transportation proposed revenues. The principal customer charges for LT and XLT are
8 set to maintain the economic breakeven points. The Company proposes to update the
9 contiguous customer charges from \$105 to \$195, \$210, and \$400 for ST, LT, and XLT
10 contiguous accounts respectively. These rate changes maintain the economic breakeven
11 point between Rate ST and Rate LT at 100,000 Mcf annually and the breakeven point
12 between Rate LT and Rate XLT at 500,000 Mcf annually, as well as provide for recovery
13 of the annual revenue requirement for the Transportation class. Furthermore, as approved
14 in the September 30 Order, the Company is maintaining Rate XXLT's minimum annual
15 eligibility requirement of 4 Bcf. These rate changes are shown in Exhibit A-16 (SAS-5),
16 Schedule F-2.1.

17 **Q. Please explain economic breakeven points.**

18 A. An economic breakeven point is the point of volumetric usage where revenue collected
19 from one rate would equal revenue collected on a different rate.

20 **Q. Is the Company proposing to reset the economic breakeven points?**

21 A. No. The Company's proposed rates in this case maintain the breakeven points established
22 in Case No. U-18124, and subsequently approved in Case No. U-18424, Case No.

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1 U-20322, Case No. U-20650, Case No. U-21148, Case No. U-21308, Case No. U-21490,
2 and Case No. U-21806.

3 **Q. Why does the Company strive to maintain economic breakeven points as part of the**
4 **rate design?**

5 A. Maintaining breakeven points allows for greater precision in revenue prediction and,
6 therefore, greater accuracy in setting rates and minimizes confusion for customers. When
7 economic breakeven points change, customers have an economic incentive to switch from
8 their existing rate to a more economical rate. This can result in under and over-recovery
9 of costs if many customers shift rates. In addition, frequent shifts from rate to rate on a
10 large scale can create volatility in revenues received by the Company. This makes it
11 difficult to accurately predict future revenues for ratemaking and planning purposes.
12 Maintaining economic breakeven points minimizes volatility by eliminating any economic
13 incentive to change rates when the customer use has not changed, while simultaneously
14 establishing cost-based rates for the General Service class.

15 **Q. Please explain Authorized Tolerance Levels (“ATL”).**

16 A. An ATL is a percentage of a transportation customer’s annual contract quantity (“ACQ”).
17 The ATL is the percentage of the ACQ which the transportation customer can have in
18 storage at the end of any given month without incurring additional Load Balance charges.
19 The ACQ is based on the highest 12 consecutive months during the contract’s 36-month
20 lookback period. The ACQ is calculated either at the beginning of the contract or during
21 the periodic review, which occurs every five years.

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1 **Q. Is the Company proposing changes to the ATLs offered?**

2 A. No. Exhibit A-135 (SAS-9) provides the credit calculation, and Exhibit A-16 (SAS-7),
3 Schedule F-3, provides the revenue calculation for each transportation rate class, consistent
4 with the structure approved in the September 30 Order.

5 **Q. Is the Company proposing changes to the transportation charge adjustment**
6 **associated with the ATLs?**

7 A. No. Consistent with the September 30 Order, the Company has directly adjusted the per
8 Mcf storage cost based on the ratio of the ATL tiers and the weighted average ATL of
9 6.5%. This results in a cost per Mcf for each tier of ATL, including the 8.5% tier. The
10 Company then adjusted each of the tiers by the 8.5% tier to keep the 8.5% tier as the neutral
11 default level. Exhibit A-135 (SAS-9), provides this adjustment calculation.

12 **Q. Is the Company proposing any other changes related to the 4.0% ATL adjustment**
13 **for Rate XXLT?**

14 A. No. Consistent with the September 30 Order, the Company has spread the 4.0% ATL
15 adjustment given to Rate XXLT back to all other transportation rate schedules by directly
16 adjusting the per Mcf storage cost based on the ratio of the ATL tiers and the weighted
17 average ATL of 6.5%.

18 **Q. In the development of Rate Design, does the Company separate Gas Customer Choice**
19 **(“GCC”) sales from Gas Cost Recovery (“GCR”) sales?**

20 A. No. The rate design calculates delivery charges for all customers. GCC and GCR
21 customers pay the same delivery charges, thus there is no need to separate GCC sales from
22 GCR sales. Only total sales are needed as separating them has no impact on rate design.

1 **VI. TYPICAL BILLS**

2 **Q. Please describe Exhibit A-16 (SAS-8), Schedule F-4.**

3 A. Exhibit A-16 (SAS-8), Schedule F-4, provides the impacts resulting from the proposed gas
4 rates and rate design changes for customers on each rate schedule at various usage levels.
5 This exhibit is used to gauge the distribution of the rate impacts across the population of
6 customers taking gas service under the various rate schedules.

7 **VII. CUSTOMER ATTACHMENT PROGRAM DISCOUNT AND CARRYING**
8 **COST**

9 **Q. Please explain Exhibit A-136 (SAS-10).**

10 A. Exhibit A-136 (SAS-10) provides the calculation of the test year discount and carrying cost
11 rates for the Customer Attachment Program (“CAP”) and is used to support the changes to
12 the CAP tariff sheet sponsored by Company witness McCollum.

13 **VIII. HOME PRODUCTS CREDIT CALCULATION**

14 **Q. Please describe Exhibit A-137 (SAS-11).**

15 A. The Settlement Agreement in Case No. U-21490 provides for the Company to share three
16 fourths of the gain related to the Home Energy Products sale or \$82,500,000 over a
17 three-year period from October 1, 2024 through September 30, 2027 through the Home
18 Products Credit. Exhibit A-137 (SAS-11) calculates a credit to each rate schedule to
19 provide \$27,500,000 over an eleven-month period effective on and after November 1, 2026
20 using the same methodology as approved in Case No. U-21490 and Case No. U-21806.
21 Exhibit A-137 (SAS-11) shows the proposed volumetric credit per Mcf, by rate schedule.
22 This was calculated using Company witness Sherwani’s forecasted test year sales. The
23 proposed refund was allocated to the customer classes using the allocation provided in
24 Exhibit A-134 (SAS-3).

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1 **Q. Why is the Company proposing to distribute eleven-twelfths of the annual Home**
2 **Products Credit amount (i.e., \$25,208,000 instead of \$27,500,000) in this case?**

3 A. The Settlement Agreement approved in Case No. U-21490 requires the Company to return
4 \$82,500,000 over a 36-month period running from October 1, 2024 through September 30,
5 2027. By the time the test year of this case begins, the Company will have billed this credit
6 for 25 months leaving 11 months of the credit to be billed. As a result, in this case the
7 Company will distribute 11 months' worth of the annual credit, or 11/12ths of the annual
8 amount, which equals \$25,208,000. This ensures the total credit returned over the full
9 36-month period remains consistent with the amount approved in Case No. U-21490.

10 **Q. Does this complete your direct testimony?**

11 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
S. AUSTIN SMITH
ON BEHALF OF
CONSUMERS ENERGY COMPANY

December 2025

Line No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Service Revenue		2,524,834	1,816,409	275,139	249,203	60,261	46,517	32,544	34,378	10,383
2	Other Revenue		30,892	20,217	3,312	3,320	795	958	736	988	566
3	Total Revenue		2,555,726	1,836,626	278,451	252,522	61,056	47,475	33,280	35,366	10,950
4	Expenses:										
5	Cost of Gas Sold (COGS)		823,243	578,563	104,015	110,326	30,340	-	-	-	-
6	O & M Expense		347,439	260,274	34,447	24,838	5,194	8,318	5,407	6,047	2,913
7	Depreciation & Amortization Expense		401,554	286,668	40,479	34,217	7,272	11,752	7,950	8,958	4,259
8	Lost and Unaccounted for (LAUF) Gas		12,899	9,066	1,630	1,729	475	-	-	-	-
9	Taxes		355,981	255,920	35,840	30,002	6,460	10,220	7,152	7,716	2,670
10	Company Use		7,052	4,956	891	945	260	-	-	-	-
11	Total Expenses		1,948,167	1,395,446	217,302	202,055	50,000	30,290	20,509	22,722	9,842
12	Net Operating Income		607,558	441,180	61,149	50,467	11,056	17,185	12,771	12,644	1,107
13	Test Year AFUDC		12,821	8,677	1,367	1,316	302	373	268	337	182
14	Adjusted Net Operating Income		620,380	449,857	62,516	51,783	11,357	17,558	13,039	12,981	1,289
15	Total Rate Base		12,488,293	8,788,088	1,275,417	1,112,449	242,152	367,868	254,358	298,285	149,678
16	Return on Rate Base @ 6.40%		799,708.07	562,759	81,673	71,237	15,507	23,557	16,288	19,101	9,585
17	Income Deficiency/(Sufficiency)		179,328	112,903	19,158	19,455	4,149	5,999	3,249	6,120	8,296
18	Revenue Deficiency/(Sufficiency)		239,956	151,073	25,634	26,032	5,552	8,027	4,348	8,189	11,100
19	Rev Requirement/Total Cost of Service		2,795,681	1,987,699	304,086	278,554	66,608	55,502	37,628	43,555	22,050
20	Less: Cost of Gas Sold (Test Yr)		823,243	578,563	104,015	110,326	30,340	-	-	-	-
21	Less: Miscellaneous Revenue (TY)		30,892	20,217	3,312	3,320	795	958	736	988	566
22	Proposed Rate Design Revenue		1,941,546	1,388,919	196,759	164,909	35,473	54,544	36,892	42,567	21,483
23	Summary of Proposed Rate Design Revenue (with "Other Items")										
24	Transmission Related Cost		439,590	264,834	48,182	52,594	12,710	16,867	13,453	18,836	12,115
25	Customer Charge (MPSC Method)		-	-	-	-	-	-	-	-	-
26	Other		439,590	264,834	48,182	52,594	12,710	16,867	13,453	18,836	12,115
27	Storage Related Cost		281,755	178,171	32,350	35,509	8,782	7,604	5,883	8,263	5,192
28	Customer Charge (MPSC Method)		-	-	-	-	-	-	-	-	-
29	Other		281,755	178,171	32,350	35,509	8,782	7,604	5,883	8,263	5,192
30	Distribution Related Cost		1,220,201	945,913	116,228	76,806	13,982	30,073	17,555	15,468	4,176
31	Customer Charge (MPSC Method)		474,667	415,229	39,082	12,699	1,437	3,491	1,016	1,627	85
32	Other		745,534	530,684	77,146	64,106	12,544	26,582	16,539	13,841	4,091
33	Total		1,941,546	1,388,919	196,759	164,909	35,473	54,544	36,892	42,567	21,483
34	Customer Charge (MPSC Method)		474,667	415,229	39,082	12,699	1,437	3,491	1,016	1,627	85
35	Other		1,466,880	973,689	157,677	152,209	34,036	51,054	35,875	40,940	21,399
36	Mcf Thruput		311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
37	Customer Count		1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Gas Cost-of-Service Study

Projected 12 Month Period: November 2026-October 2027

(\$000)

Schedule F-1

Case No.: U-21981

Exhibit No.: A-16 (SAS-1)

Schedule: F-1

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Witness: SASmith

Date: December 2025

Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Production Plant	102	120,982	85,024	15,286	16,213	4,459	-	-	-	-
2	Storage Plant										
3	Storage Plant- Traditional Storage	107	1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
4	Storage Plant- System Balancing	107	-	-	-	-	-	-	-	-	-
5	Total Storage Plant		1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
6	Transmission Plant										
7	Transmission To/From Storage- Traditional Storage	107	1,988,077	1,248,333	227,113	249,882	61,056	57,326	44,394	62,547	37,425
8	Transmission To/From Storage- System Balancing	104	-	-	-	-	-	-	-	-	-
9	Other Transmission	104	1,462,689	823,616	150,378	162,449	37,831	78,430	63,967	89,724	56,294
10	Total Transmission Plant		3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
9	Distribution Plant										
10	Distribution Plant - Other	105	-	-	-	-	-	-	-	-	-
11	Other - Fee Land & Easements (374)	104	36,620	20,620	3,765	4,067	947	1,964	1,601	2,246	1,409
12	Other - Structures and Improvements (375)	104	84,212	47,418	8,658	9,353	2,178	4,515	3,683	5,166	3,241
13	Other - Compressor Station Equipment (377)	104	38,995	21,958	4,009	4,331	1,009	2,091	1,705	2,392	1,501
14	Other - M & R General (378)	119	441,288	273,309	48,613	52,414	11,005	23,671	15,545	12,535	4,196
15	Other - Meter Installations (382)	108	36,825	31,988	3,131	1,092	127	258	80	141	7
16	Mains - High Pressure Capable	105	512,523	284,891	52,244	56,458	13,365	27,521	22,042	34,022	21,979
17	Mains - Non-High Pressure Capable	106	2,707,155	1,726,247	304,686	328,313	66,666	145,210	88,403	47,629	-
18	Services & Meters	108	5,508,081	4,784,597	468,274	163,349	19,015	38,640	12,036	21,052	1,118
19	Total Distribution Plant		9,365,699	7,191,028	893,381	619,377	114,311	243,871	145,097	125,183	33,451
20	Total Plant In Service (excl. GC&I)		14,690,855	10,448,985	1,486,463	1,268,307	271,506	430,187	292,611	332,619	160,177
21	General, Common & Intangible	206	818,806	582,382	82,849	70,690	15,133	23,977	16,309	18,539	8,928
22	Total Test Year Plant in Service		15,509,660	11,031,367	1,569,312	1,338,997	286,638	454,164	308,920	351,157	169,105

MICHIGAN PUBLIC SERVICE COMMISSION

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Schedule F-1

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Date: December 2025

Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Construction Work in Progress (CWIP)										
2	Production	202	-	-	-	-	-	-	-	-	-
3	Storage	107	185,912	116,736	21,238	23,367	5,710	5,361	4,151	5,849	3,500
4	Transmission	204	31,553	18,945	3,452	3,770	904	1,241	991	1,392	857
5	Distribution	205	93,918	72,111	8,959	6,211	1,146	2,446	1,455	1,255	335
6	GC&I	206	85,255	60,638	8,626	7,360	1,576	2,496	1,698	1,930	930
7	Total CWIP		396,637	268,430	42,275	40,709	9,336	11,544	8,295	10,427	5,622
8	Accumulated Depreciation										
9	Production	202	(8,163)	(5,737)	(1,031)	(1,094)	(301)	-	-	-	-
10	Storage	107	(263,784)	(165,633)	(30,134)	(33,155)	(8,101)	(7,606)	(5,890)	(8,299)	(4,966)
11	Transmission	204	(649,740)	(390,124)	(71,077)	(77,637)	(18,619)	(25,561)	(20,403)	(28,671)	(17,646)
12	Distribution	205	(3,349,408)	(2,571,692)	(319,495)	(221,505)	(40,881)	(87,214)	(51,890)	(44,769)	(11,963)
13	GC&I	206	(536,862)	(381,848)	(54,321)	(46,349)	(9,922)	(15,721)	(10,693)	(12,155)	(5,854)
14	Total Accumulated Depreciation		(4,807,958)	(3,515,033)	(476,059)	(379,740)	(77,824)	(136,103)	(88,877)	(93,894)	(40,428)
15	Working Capital										
16	Cash & Cash Equivalents	209	762,049	570,867	75,555	54,477	11,392	18,245	11,860	13,264	6,390
17	Accounts Receivable	111	111,509	80,222	12,152	11,006	2,661	2,054	1,437	1,518	459
18	Materials and Supplies	209	55,572	41,630	5,510	3,973	831	1,330	865	967	466
19	Gas Stored Underground	107	199,958	125,555	22,843	25,133	6,141	5,766	4,465	6,291	3,764
20	Gas Stored Underground- Working Gas	102	236,963	166,534	29,940	31,756	8,733	-	-	-	-
21	Real & Personal Property Taxes	206	187,230	133,169	18,944	16,164	3,460	5,483	3,729	4,239	2,041
21	Other Assets	206	-	-	-	-	-	-	-	-	-
22	Deferred Debits	206	460,288	327,383	46,573	39,738	8,507	13,478	9,168	10,421	5,019
23	Total Assets		2,013,569	1,445,361	211,516	182,247	41,725	46,357	31,524	36,701	18,138
24	Accounts Payable	102	339,795	238,803	42,932	45,537	12,523	-	-	-	-
25	Dividends Declared	215	17,592	12,789	1,768	1,455	318	496	368	364	33
26	Customer Deposits	111	12,406	9,472	1,289	1,016	241	190	116	68	13
27	Accrued Interest	206	44,589	31,715	4,512	3,850	824	1,306	888	1,010	486
28	Accrued Taxes - Federal	215	64	47	6	5	1	2	1	1	0
29	Accrued Taxes - State	215	(418)	(304)	(42)	(35)	(8)	(12)	(9)	(9)	(1)
30	Accrued Taxes - R&PP Tax & Other	206	172,507	122,697	17,455	14,893	3,188	5,051	3,436	3,906	1,881
31	Other Liabilities	206	26,114	18,574	2,642	2,254	483	765	520	591	285
32	Deferred Credits	206	17,856	12,700	1,807	1,542	330	523	356	404	195
33	Total Liabilities		630,505	446,491	72,369	70,518	17,900	8,321	5,677	6,336	2,892
34	Total Working Capital		1,383,064	998,869	139,147	111,729	23,825	38,035	25,847	30,365	15,246
35	Test Year Unamortized MGP Expense	206	14,771	10,506	1,495	1,275	273	433	294	334	161
36	Test Year Retainers & Customer Advances	205	(7,881)	(6,051)	(752)	(521)	(96)	(205)	(122)	(105)	(28)
37	Other Adjustments to Rate Base		6,889	4,454	743	754	177	227	172	229	133
38	Total Test Year Rate Base		12,488,293	8,788,088	1,275,417	1,112,449	242,152	367,868	254,358	298,285	149,678

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Gas Cost-of-Service Study

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Schedule F-1

Case No.: U-21981

Exhibit No.: A-16 (SAS-1)

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Witness: SASmith

Date: December 2025

Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	O&M Expense										
2	Production	202	-	-	-	-	-	-	-	-	-
3	Storage	107	28,559	17,933	3,263	3,590	877	824	638	899	538
4	Transmission	204	49,671	29,824	5,434	5,935	1,423	1,954	1,560	2,192	1,349
5	Distribution	205	130,561	100,245	12,454	8,634	1,594	3,400	2,023	1,745	466
6	Customer Accounting	110	39,672	36,253	2,572	312	11	408	79	37	1
7	Customer Service & Information	109	669	619	44	5	0	1	0	0	0
8	Customer Assistance	109	4,145	3,835	272	33	1	3	1	0	0
9	Business Customer Care Expense	114	2,549	-	1,976	496	18	45	9	4	0
10	Customer Contact Center Expense	115	13,767	13,250	509	6	-	1	0	-	-
11	Interest on Customer Deposits	111	259	198	27	21	5	4	2	1	0
12	Uncollectible Expense	111	17,140	13,087	1,781	1,404	332	263	161	94	18
13	Pension & Benefit Expense (Version 1)										
14	Production- Pension & Benefits Expense	202	-	-	-	-	-	-	-	-	-
15	Storage- Pension & Benefits Expense	107	(1,679)	(1,054)	(192)	(211)	(52)	(48)	(37)	(53)	(32)
16	Transmission- Pension & Benefits Expense	204	(2,755)	(1,654)	(301)	(329)	(79)	(108)	(87)	(122)	(75)
17	Distribution- Pension & Benefits Expense	205	(15,486)	(11,890)	(1,477)	(1,024)	(189)	(403)	(240)	(207)	(55)
18	Customer Accounting (Billing)- Pension & Benefits Expense	110	(2,956)	(2,702)	(192)	(23)	(1)	(30)	(6)	(3)	(0)
19	Customer Service- Pension & Benefits Expense	109	(500)	(462)	(33)	(4)	(0)	(0)	(0)	(0)	(0)
20	Sales Expense- Pension & Benefits Expense	209	(7)	(6)	(1)	(0)	(0)	(0)	(0)	(0)	(0)
21	Administrative & General- Pension & Benefits Expense	209	(4,019)	(3,011)	(399)	(287)	(60)	(96)	(63)	(70)	(34)
22	Total Pension & Benefit Expense (Version 2)	206	-	-	-	-	-	-	-	-	-
23	Total O&M Expense		259,590	194,465	25,738	18,557	3,881	6,215	4,040	4,518	2,177
24	Administrative & General Expense	209	87,849	65,809	8,710	6,280	1,313	2,103	1,367	1,529	737
25	Depreciation & Amortization Expense										
26	Production	202	-	-	-	-	-	-	-	-	-
27	Storage	107	44,258	27,790	5,056	5,563	1,359	1,276	988	1,392	833
28	Transmission	204	77,165	46,332	8,441	9,220	2,211	3,036	2,423	3,405	2,096
29	Distribution	205	235,202	180,589	22,436	15,554	2,871	6,124	3,644	3,144	840
30	GC&I	206	44,929	31,956	4,546	3,879	830	1,316	895	1,017	490
31	Total Depreciation & Amortization Expense		401,554	286,668	40,479	34,217	7,272	11,752	7,950	8,958	4,259
32	Test Year Lost and Unaccounted for (LAUF) Gas	102	12,899	9,066	1,630	1,729	475	-	-	-	-
33	Test Year Company Use	102	7,052	4,956	891	945	260	-	-	-	-
34	Taxes										
35	Payroll Taxes (Version 1)										
36	Production	202	-	-	-	-	-	-	-	-	-
37	Storage	107	821	515	94	103	25	24	18	26	15
38	Transmission	204	1,347	809	147	161	39	53	42	59	37
39	Distribution	205	7,571	5,813	722	501	92	197	117	101	27
40	Customer Accounting (Billing)	110	1,445	1,321	94	11	0	15	3	1	0
41	Customer Service	109	244	226	16	2	0	0	0	0	0
42	Sales Expense	209	4	3	0	0	0	0	0	0	0
43	Administrative & General	209	1,965	1,472	195	140	29	47	31	34	16
44	Total Payroll Taxes (Version 2)	206	-	-	-	-	-	-	-	-	-
45	Test Year Property Taxes	206	213,600	151,925	21,613	18,441	3,948	6,255	4,254	4,836	2,329
46	Test Year Federal, State & City Income Tax	215	124,672	90,631	12,531	10,313	2,256	3,517	2,607	2,581	236
47	TCJA Amortization	208	(2,812)	(1,979)	(287)	(250)	(55)	(83)	(57)	(67)	(34)
48	Test Year Miscellaneous Taxes	112	7,124	5,186	716	579	125	195	136	144	43
49	Total Other Taxes		355,981	255,920	35,840	30,002	6,460	10,220	7,152	7,716	2,670
50	Total Test Year Expenses Excluding COGS & Company Use		1,117,873	811,928	112,396	90,784	19,401	30,290	20,509	22,722	9,842
51	Test Year Cost of Gas Sold (COGS)		823,243	578,563	104,015	110,326	30,340	-	-	-	-

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Gas Cost-of-Service Study

Projected 12 Month Period: November 2026-October 2027

(\$000)

Schedule F-1

Case No.: U-21981

Exhibit No.: A-16 (SAS-1)

Schedule: F-1

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Witness: SASmith

Date: December 2025

Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLTL
1	Service Revenue Including Cost of Gas Sold		2,524,834	1,816,409	275,139	249,203	60,261	46,517	32,544	34,378	10,383
2	Other Revenues										
3	Forfeited Discounts & Misc	111	5,431	3,907	592	536	130	100	70	74	22
4	Misc Service Rev (ASP)	102	-	-	-	-	-	-	-	-	-
5	Rev from Transmission of Gas of Others	204	17,897	10,746	1,958	2,138	513	704	562	790	486
6	Rent from Gas Property	204	244	147	27	29	7	10	8	11	7
7	Joint Commodities Mrkt Agrmt Rev	102	-	-	-	-	-	-	-	-	-
8	GCR related charges to Transport Customers	102	-	-	-	-	-	-	-	-	-
9	Gas Merchant-Buy/Sell Contracts	107	-	-	-	-	-	-	-	-	-
10	Rev from Storage Agrmts (GM, MCV & others)	107	1,530	961	175	192	47	44	34	48	29
11	Administrative Customer Acctg charges for GCC	110	1,451	1,326	94	11	0	15	3	1	0
12	Interest on Cash Operating Accounts	209	766	560	77	60	13	19	13	15	8
13	Miscellaneous	111	3,573	2,571	389	353	85	66	46	49	15
14	Total Other Test Year Revenues		\$ 30,892	\$ 20,217	\$ 3,312	\$ 3,320	\$ 795	\$ 958	\$ 736	\$ 988	\$ 566
15	Total Test Year Revenues		\$ 2,555,726	\$ 1,836,626	\$ 278,451	\$ 252,522	\$ 61,056	\$ 47,475	\$ 33,280	\$ 35,366	\$ 10,950

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Cost-of-Service Study
Projected 12 Month Period: November 2026-October 2027
(\$000)

Schedule F-1

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Functionalization Factors		1	2	3	4	5
Description	Source	Factor	Total System	Distribution	Transmission	Storage
CWIP	INTERNAL- Input Line 56	CWIP	396,637	148,270	52,280	196,087
				37.4%	13.2%	49.4%
Distribution	N/A	DIST	1	1	0	0
				100.0%	0.0%	0.0%
O&M Expense	INTERNAL- Input Line 112	O&M	259,590 \$	189,813 \$	46,916 \$	26,880
				72.0%	17.8%	10.2%
O&M/Plant in Service	INTERNAL- 50/50 Weighting of O&M & PIS	O&M/PIS	-	-	-	-
				67.9%	21.1%	11.1%
Plant in Service	INTERNAL- Input Line 47	PIS	14,690,855 \$	9,365,699 \$	3,571,748 \$	1,753,408
				63.8%	24.3%	11.9%
Rate Base	INTERNAL- Input Line 88	RB	12,488,293 \$	7,012,735 \$	3,216,556 \$	2,259,003
				56.2%	25.8%	18.1%
Total Revenue	INTERNAL- Input Line 142	REV	2,524,834	1,590,619	592,644	341,571
				63.0%	23.5%	13.5%
Storage	N/A	STOR	1	-	-	1
				0.0%	0.0%	100.0%
Taxable Income	INTERNAL- Input- Summary & Expense	TAXABLEINC	742,815	406,144	204,360	132,310
				54.7%	27.5%	17.8%
Transmission	N/A	TRAN	1	-	1	-
				0.0%	100.0%	0.0%
Labor	N/A	LABOR	1	69%	20%	11%
				69.1%	19.6%	11.3%

Schedule F-1

Allocation Factors- Total System		1	2	3	4	5	6	7	8	9	10
Description	Source	Factor	Total System	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
Total Annual Throughput	WP-SAS-8	101	311,531,894	156,937,785 50.38%	28,405,233 9.12%	32,077,898 10.30%	8,348,701 2.68%	19,615,226 6.30%	19,235,255 6.17%	27,116,731 8.70%	19,795,064 6.35%
GCR Throughput	WP-SAS-8	102	223,101,058	156,792,103 70.28%	28,188,224 12.63%	29,898,638 13.40%	8,222,094 3.69%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Transportation Throughput	WP-SAS-8	103	88,430,836	145,683 0.16%	217,009 0.25%	2,179,260 2.46%	126,607 0.14%	19,615,226 22.18%	19,235,255 21.75%	27,116,731 30.66%	19,795,064 22.38%
A&P (Transmission)	WP-SAS-8	104	1.0000	0.5631 56.31%	0.1028 10.28%	0.1111 11.11%	0.0259 2.59%	0.0536 5.36%	0.0437 4.37%	0.0613 6.13%	0.0385 3.85%
A&P (High Pressure)	WP-SAS-9	105	1.0000	0.5559 55.59%	0.1019 10.19%	0.1102 11.02%	0.0261 2.61%	0.0537 5.37%	0.0430 4.30%	0.0664 6.64%	0.0429 4.29%
A&P (Non-High Pressure)	WP-SAS-9	106	1.0000	0.6377 63.77%	0.1125 11.25%	0.1213 12.13%	0.0246 2.46%	0.0536 5.36%	0.0327 3.27%	0.0176 1.76%	0.0000 0.00%
A&P (50% Storage 50% Peak Month)	WP-SAS-10	107	1.0000	0.6279 62.79%	0.1142 11.42%	0.1257 12.57%	0.0307 3.07%	0.0288 2.88%	0.0223 2.23%	0.0315 3.15%	0.0188 1.88%
Weighted Customer	WP-SAS-15	108	1,971,456	1,712,506 86.87%	167,605 8.50%	58,466 2.97%	6,806 0.35%	13,830 0.70%	4,308 0.22%	7,535 0.38%	400 0.02%
Number of Customers	WP-SAS-15	109	1,851,766	1,713,161 92.51%	121,547 6.56%	14,747 0.80%	503 0.03%	1,406 0.08%	273 0.01%	126 0.01%	3 0.00%
Weighted/Average Customer	WP-SAS-15	110	1.0000	0.9138 91.38%	0.0648 6.48%	0.0079 0.79%	0.0003 0.03%	0.0103 1.03%	0.0020 0.20%	0.0009 0.09%	0.0000 0.00%
Present Revenue (Including COGS)	Exhibit A-16 (SAS-4), Sch F-2	111	2,524,834 100%	1,816,409 71.94%	275,139 10.90%	249,203 9.87%	60,261 2.39%	46,517 1.84%	32,544 1.29%	34,378 1.36%	10,383 0.41%
Present Delivery Revenue (Excluding COGS)	Exhibit A-16 (SAS-4), Sch F-2	112	1,701,591 100%	1,237,846 72.75%	171,125 10.06%	138,877 8.16%	29,922 1.76%	46,517 2.73%	32,544 1.91%	34,378 2.02%	10,383 0.61%
N/A		113									
BCC	WP-SAS-20	114	1.00	0.0000 0.00%	0.7753 77.53%	0.1944 19.44%	0.0070 0.70%	0.0178 1.78%	0.0036 0.36%	0.0018 0.18%	0.0000 0.00%
CCC	WP-SAS-20	115	1.00	0.9625 96.25%	0.0370 3.70%	0.0004 0.04%	0.0000 0.00%	0.0001 0.01%	0.0000 0.00%	0.0000 0.00%	0.0000 0.00%
100% Storage Utilization		116	1.00	0.6740 67.40%	0.1220 12.20%	0.1378 13.78%	0.0359 3.59%	0.0070 0.70%	0.0066 0.66%	0.0097 0.97%	0.0071 0.71%
100% Peak Day		117	1.00	0.5819 58.19%	0.1065 10.65%	0.1136 11.36%	0.0256 2.56%	0.0507 5.07%	0.0380 3.80%	0.0532 5.32%	0.0306 3.06%
Total Storage Plant	INTERNAL- Total COSS, Page , Line 5	118	1,753,408	1,100,983 62.79%	200,305 11.42%	220,386 12.57%	53,849 3.07%	50,560 2.88%	39,154 2.23%	55,164 3.15%	33,007 1.88%
M&R Weighted Composite	WP-SAS-10	119	1.00	0.6193 61.93%	0.1102 11.02%	0.1188 11.88%	0.0249 2.49%	0.0536 5.36%	0.0352 3.52%	0.0284 2.84%	0.0095 0.95%
A&P (Distribution)	WP-SAS-10	120	1.00	0.5641 56.41%	0.1030 10.30%	0.1113 11.13%	0.0259 2.59%	0.0537 5.37%	0.0420 4.20%	0.0615 6.15%	0.0386 3.86%
Total Revenue	INTERNAL- COSS PAGE 1, Line 3	201	2,555,726	1,836,626 71.86%	278,451 10.90%	252,522 9.88%	61,056 2.39%	47,475 1.86%	33,280 1.30%	35,366 1.38%	10,950 0.43%
Total Production Plant	INTERNAL- Total COSS, Page , Line 1	202	120,982	85,024 70.28%	15,286 12.63%	16,213 13.40%	4,459 3.69%	- 0.00%	- 0.00%	- 0.00%	- 0.00%
Total Transmission Plant	INTERNAL- Total COSS, Page , Line 10	204	3,450,766	2,071,950 60.04%	377,491 10.94%	412,330 11.95%	98,887 2.87%	135,756 3.93%	108,361 3.14%	152,271 4.41%	93,719 2.72%
Total Distribution Plant	INTERNAL- Total COSS, Page , Line 19	205	9,365,699	7,191,028 76.78%	893,381 9.54%	619,377 6.61%	114,311 1.22%	243,871 2.60%	145,097 1.55%	125,183 1.34%	33,451 0.36%
Total Plant in Service (excl. GC&I)	INTERNAL- COSS , Line 32	206	14,690,855	10,448,985 71.13%	1,486,463 10.12%	1,268,307 8.63%	271,506 1.85%	430,187 2.93%	292,611 1.99%	332,619 2.26%	160,177 1.09%
Total CWIP	INTERNAL- COSS PAGE 5, Line	207	396,637	268,430 67.68%	42,275 10.66%	40,709 10.26%	9,336 2.35%	11,544 2.91%	8,295 2.09%	10,427 2.63%	5,622 1.42%
Rate Base	INTERNAL- COSS , Line	208	12,488,293	8,788,088 70.37%	1,275,417 10.21%	1,112,449 8.91%	242,152 1.94%	367,868 2.95%	254,358 2.04%	298,285 2.39%	149,678 1.20%
Total O&M (excl. A&G)	INTERNAL- COSS PAGE 4, Line 23,,	209	263,617	197,482 74.91%	26,137 9.91%	18,845 7.15%	3,941 1.49%	6,311 2.39%	4,103 1.56%	4,588 1.74%	2,210 0.84%
Total O&M Expense	INTERNAL- COSS PAGE 4, Line 23,24,	214	351,466	263,291 74.91%	34,847 9.91%	25,125 7.15%	5,254 1.49%	8,415 2.39%	5,470 1.56%	6,117 1.74%	2,947 0.84%
Pretax NOI	INTERNAL- COSS (Multiple Pages & Lines)	215	742,815	87,124 30.05%	74,661 25.75%	61,448 21.19%	13,444 4.64%	20,955 7.23%	15,532 5.36%	15,380 5.30%	1,405 0.48%
Total Depreciation Expense	INTERNAL- COSS , Line	216	401,554	286,668 71.39%	40,479 10.08%	34,217 8.52%	7,272 1.81%	11,752 2.93%	7,950 1.98%	8,958 2.23%	4,259 1.06%

Schedule F-1

Case No.: U-21981
Exhibit No.: A-16 (SAS-1)
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Allocation Factors- Transmission System

		4	5	6	7	8	9	10	11
Factor	Transmission System	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXL
	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
101	100%	50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%
	223,101,058	156,792,103	28,188,224	29,898,638	8,222,094	0	0	0	0
102	100%	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	88,430,836	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064
103	100%	0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%
	1.0000	0.5631	0.1028	0.1111	0.0259	0.0536	0.0437	0.0613	0.0385
104	100%	56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%
	1.0000	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429
105	100%	55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.29%
	1.0000	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	0.0000
106	100%	63.77%	11.25%	12.13%	2.46%	5.36%	3.27%	1.76%	0.00%
	1.0000	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188
107	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	1,971,456	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400
108	100%	86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%
	1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3
109	100%	92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%
	1.0000	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000
110	100%	91.38%	6.48%	0.79%	0.03%	1.03%	0.20%	0.09%	0.00%
	592,644	378,300	69,038	74,531	18,411	15,450	12,423	18,073	6,418
111	100%	63.83%	11.65%	12.58%	3.11%	2.61%	2.10%	3.05%	1.08%
	392,491	237,635	43,750	47,708	11,034	15,450	12,423	18,073	6,418
112	100%	60.55%	11.15%	12.16%	2.81%	3.94%	3.17%	4.60%	1.64%
113									
		0.0000	0.7753	0.1944	0.0070	0.0178	0.0036	0.0018	0.0000
114	100%	0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
		0.9625	0.0370	0.0004	0.0000	0.0001	0.0000	0.0000	0.0000
115	100%	96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
116		67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
	1.00	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
117		58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
\$	-	-	-	-	-	-	-	-	-
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
118	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
119		61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
\$	1.00	0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
		56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
120	612,891	390,537	71,268	76,964	18,996	16,219	13,037	18,938	6,933
201	100%	63.72%	11.63%	12.56%	3.10%	2.65%	2.13%	3.09%	1.13%
	120,982	85,024	15,286	16,213	4,459	-	-	-	-
202	100%	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
204	100%	60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	-	-	-	-	-	-	-	-	-
205	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	3,571,748	2,156,974	392,777	428,544	103,346	135,756	108,361	152,271	93,719
206	100%	60.39%	11.00%	12.00%	2.89%	3.80%	3.03%	4.26%	2.62%
	52,280	31,463	5,731	6,257	1,504	2,029	1,620	2,276	1,401
207	100%	60.18%	10.96%	11.97%	2.88%	3.88%	3.10%	4.35%	2.68%
	3,216,556	1,936,023	352,659	385,023	92,544	124,752	99,579	139,944	86,033
208	100%	60.19%	10.96%	11.97%	2.88%	3.88%	3.10%	4.35%	2.67%
	46,916	28,170	5,132	5,606	1,344	1,846	1,473	2,070	1,274
209		60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	61,835	37,557	6,843	7,474	1,792	2,461	1,964	2,760	1,699
214		60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	204,360	124,033	23,062	25,136	5,592	8,295	6,712	10,047	1,481
215	100%	60.69%	11.29%	12.30%	2.74%	4.06%	3.28%	4.92%	0.72%
	88,089	52,929	9,643	10,531	2,527	3,451	2,755	3,871	2,382
216	100%	60.09%	10.95%	11.96%	2.87%	3.92%	3.13%	4.39%	2.70%

Schedule F-1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Gas Cost-of-Service Study

Projected 12 Month Period: November 2026-October 2027

(\$000)

Case No.:

U-21981

Exhibit No.:

A-16 (SAS-1)

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Witness:

SASmith

Date:

December 2025

Allocation Factors- Distribution System

Factor	Distribution System	4	5	6	7	8	9	10	11
		Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
101		50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%
	223,101,058	156,792,103	28,188,224	29,898,638	8,222,094	0	0	0	0
102		70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	88,430,836	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064
103		0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%
	1.0000	0.5631	0.1028	0.1111	0.0259	0.0536	0.0437	0.0613	0.0385
104		56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%
	1.0000	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429
105		55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.29%
	1.0000	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	-
106		63.77%	11.25%	12.13%	2.46%	5.36%	3.27%	1.76%	0.00%
	1.0000	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188
107		62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	1,971,456	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400
108		86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%
	1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3
109		92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%
	1.0000	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000
110		91.38%	6.48%	0.79%	0.03%	1.03%	0.20%	0.09%	0.00%
	1,590,619	1,214,479	165,239	130,323	30,845	24,410	14,917	8,738	1,669
111		76.35%	10.39%	8.19%	1.94%	1.53%	0.94%	0.55%	0.10%
	\$ 1,065,786	\$ 845,634	\$ 98,928	\$ 59,988	\$ 11,503	\$ 24,410	\$ 14,917	\$ 8,738	\$ 1,669
112		79.34%	9.28%	5.63%	1.08%	2.29%	1.40%	0.82%	0.16%
113		-	-	-	-	-	-	-	-
	1.00	-	0.7753	0.1944	0.0070	0.0178	0.0036	0.0018	0.0000
114		0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
	1.00	0.9625	0.0370	0.0004	-	0.0001	0.0000	-	-
115		96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
116		67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
	1.00	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
117		58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
	-	-	-	-	-	-	-	-	-
118		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
119		61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
	1.00	0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
120		56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
	1,598,379	1,220,615	165,985	130,842	30,964	24,528	14,983	8,782	1,680
201		76.37%	10.38%	8.19%	1.94%	1.53%	0.94%	0.55%	0.11%
	-	-	-	-	-	-	-	-	-
202		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
204		60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	9,365,699	7,191,028	893,381	619,377	114,311	243,871	145,097	125,183	33,451
205		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%
	9,365,699	7,191,028	893,381	619,377	114,311	243,871	145,097	125,183	33,451
206		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%
	148,270	113,842	14,143	9,805	1,810	3,861	2,297	1,982	530
207		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%
	7,012,735	5,418,542	662,250	441,807	79,000	183,775	108,824	93,589	24,947
208		77.27%	9.44%	6.30%	1.13%	2.62%	1.55%	1.33%	0.36%
	189,821	152,433	17,934	9,861	1,771	3,691	2,029	1,672	430
209		80.30%	9.45%	5.19%	0.93%	1.94%	1.07%	0.88%	0.23%
	253,077	203,230	23,910	13,147	2,361	4,920	2,705	2,230	574
214		80.30%	9.45%	5.19%	0.93%	1.94%	1.07%	0.88%	0.23%
	406,144	331,234	35,857	19,100	3,889	9,145	6,049	1,194	(323)
215		81.56%	8.83%	4.70%	0.96%	2.25%	1.49%	0.29%	-0.08%
	263,845	202,582	25,168	17,449	3,220	6,870	4,088	3,527	942
216		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%

Schedule F-1

Case No.: U-21981
Exhibit No.: A-16 (SAS-1)
Schedule: F-1
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Witness: SASmith
Date: December 2025

Allocation Factors- Storage System

		4	5	6	7	8	9	10	11
Factor	Storage System	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
101	100%	50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%
	223,101,058	156,792,103	28,188,224	29,898,638	8,222,094	0	0	0	0
102	100%	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	88,430,836	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064
103	100%	0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%
	1.0000	0.5631	0.1028	0.1111	0.0259	0.0536	0.0437	0.0613	0.0385
104	100%	56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%
	1.0000	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429
105	100%	55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.29%
	1.0000	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	0.0000
106	100%	63.77%	11.25%	12.13%	2.46%	5.36%	3.27%	1.76%	0.00%
	1.0000	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188
107	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	1,971,456	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400
108	100%	86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%
	1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3
109	100%	92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%
	1.0000	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000
110	100%	91.38%	6.48%	0.79%	0.03%	1.03%	0.20%	0.09%	0.00%
	341,571	223,631	40,862	44,349	11,006	6,656	5,204	7,566	2,297
111	100%	65.47%	11.96%	12.98%	3.22%	1.95%	1.52%	2.22%	0.67%
	\$ 243,313	\$ 154,577	\$ 28,448	\$ 31,181	\$ 7,385	\$ 6,656	\$ 5,204	\$ 7,566	\$ 2,297
112	100%	63.53%	11.69%	12.82%	3.04%	2.74%	2.14%	3.11%	0.94%
113		-	0.78	0.19	0.01	0.02	0.00	0.00	0.00
114	100%	0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
		0.96	0.04	0.00	-	0.00	0.00	-	-
115	100%	96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
116		67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
	1.00	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
117		58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
	1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
118		62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
119		61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
	1.00	0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
120		56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
	344,455	225,474	41,198	44,716	11,096	6,729	5,260	7,646	2,337
201	100%	65.46%	11.96%	12.98%	3.22%	1.95%	1.53%	2.22%	0.68%
	-	-	-	-	-	-	-	-	-
202	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
204	100%	60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	-	-	-	-	-	-	-	-	-
205	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
206	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	196,087	123,125	22,401	24,646	6,022	5,654	4,379	6,169	3,691
207	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	2,259,003	1,433,523	260,508	285,618	70,608	59,341	45,955	64,752	38,697
208	100%	63.46%	11.53%	12.64%	3.13%	2.63%	2.03%	2.87%	1.71%
	26,880	16,879	3,071	3,379	826	775	600	846	506
209		62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	90,136	67,675	9,047	6,665	1,416	2,005	1,276	1,403	649
214		75.08%	10.04%	7.39%	1.57%	2.22%	1.42%	1.56%	0.72%
	132,310	84,723	15,742	17,212	3,963	3,515	2,771	4,138	247
215	100%	64.03%	11.90%	13.01%	3.00%	2.66%	2.09%	3.13%	0.19%
	49,620	31,157	5,668	6,237	1,524	1,431	1,108	1,561	934
216	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%

Line No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXL
1	Service Revenue		2,524,834	1,816,409	275,139	249,203	60,261	46,517	32,544	34,378	10,383
2	Other Revenue		30,892	20,237	3,318	3,331	799	948	728	976	556
3	Total Revenue		2,555,726	1,836,646	278,457	252,533	61,060	47,464	33,272	35,353	10,939
4	Expenses:										
5	Cost of Gas Sold (COGS)		823,243	578,563	104,015	110,326	30,340	-	-	-	-
6	O & M Expense		347,439	261,685	34,239	24,294	5,059	8,186	5,278	5,880	2,818
7	Depreciation & Amortization Expense		401,554	286,672	40,480	34,217	7,272	11,752	7,942	8,959	4,259
8	Lost and Unaccounted for (LAUF) Gas		12,899	9,066	1,630	1,729	475	-	-	-	-
9	Taxes		355,981	255,173	35,953	30,294	6,533	10,289	7,215	7,804	2,719
10	Company Use		7,052	4,956	891	945	260	-	-	-	-
11	Total Expenses		1,948,167	1,396,115	217,207	201,805	49,938	30,227	20,436	22,643	9,797
12	Net Operating Income		607,558	440,531	61,251	50,728	11,122	17,238	12,836	12,711	1,143
13	Test Year AFUDC		12,821	8,677	1,367	1,316	302	373	268	337	182
14	Adjusted Net Operating Income		620,380	449,208	62,617	52,044	11,424	17,611	13,104	13,048	1,324
15	Total Rate Base		12,488,293	8,791,561	1,274,942	1,111,181	241,837	367,560	253,852	297,901	149,460
16	Return on Rate Base @ 6.40%		799,708.07	562,982	81,643	71,156	15,486	23,537	16,256	19,077	9,571
17	Income Deficiency/(Sufficiency)		179,328	113,774	19,026	19,113	4,063	5,927	3,151	6,029	8,247
18	Revenue Deficiency/(Sufficiency)		239,956	152,239	25,458	25,574	5,436	7,930	4,217	8,067	11,034
19	Rev Requirement/Total Cost of Service		2,795,681	1,988,884	303,915	278,107	66,497	55,395	37,489	43,420	21,974
20	Less: Cost of Gas Sold (Test Yr)		823,243	578,563	104,015	110,326	30,340	-	-	-	-
21	Less: Miscellaneous Revenue (TY)		30,892	20,237	3,318	3,331	799	948	728	976	556
22	Proposed Rate Design Revenue		1,941,546	1,390,085	196,583	164,451	35,358	54,447	36,761	42,445	21,418
23	Summary of Proposed Rate Design Revenue (with "Other Items")										
24	Transmission Related Cost		437,482	263,537	47,946	52,337	12,647	16,795	13,396	18,756	12,068
25	Customer Charge (MPSC Method)		-	-	-	-	-	-	-	-	-
26	Other		437,482	263,537	47,946	52,337	12,647	16,795	13,396	18,756	12,068
27	Storage Related Cost		280,646	177,469	32,222	35,369	8,748	7,574	5,860	8,230	5,174
28	Customer Charge (MPSC Method)		-	-	-	-	-	-	-	-	-
29	Other		280,646	177,469	32,222	35,369	8,748	7,574	5,860	8,230	5,174
30	Distribution Related Cost		1,223,419	949,078	116,415	76,744	13,963	30,078	17,505	15,459	4,176
31	Customer Charge (MPSC Method)		474,667	415,229	39,082	12,699	1,437	3,491	1,016	1,627	85
32	Other		748,752	533,848	77,333	64,045	12,526	26,587	16,488	13,832	4,092
33	Total		1,941,546	1,390,085	196,583	164,451	35,358	54,447	36,761	42,445	21,418
34	Customer Charge (MPSC Method)		474,667	415,229	39,082	12,699	1,437	3,491	1,016	1,627	85
35	Other		1,466,880	974,855	157,501	151,751	33,920	50,956	35,744	40,818	21,333
36	Mcf Thruput		311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
37	Customer Count		1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Gas Cost-of-Service Study

Projected 12 Month Period: November 2026-October 2027

(\$000)

Schedule F-1.1

Case No.: U-21981

Exhibit No.: A-16 (SAS-2)

Schedule: F-1.1

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Witness: SASmith

Date: December 2025

Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Production Plant	102	120,982	85,024	15,286	16,213	4,459	-	-	-	-
2	Storage Plant										
3	Storage Plant- Traditional Storage	116	876,704	590,870	106,946	120,773	31,433	6,142	5,809	8,515	6,216
4	Storage Plant- System Balancing	117	876,704	510,113	93,359	99,613	22,416	44,417	33,344	46,649	26,792
5	Total Storage Plant		1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
6	Transmission Plant										
7	Transmission To/From Storage- Traditional Storage	116	994,038	669,950	121,259	136,937	35,640	6,964	6,587	9,654	7,048
8	Transmission To/From Storage- System Balancing	117	994,038	578,384	105,854	112,945	25,416	50,362	37,807	52,893	30,377
9	Other Transmission	104	1,462,689	823,616	150,378	162,449	37,831	78,430	63,967	89,724	56,294
10	Total Transmission Plant		3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
9	Distribution Plant										
10	Distribution Plant - Other	105	-	-	-	-	-	-	-	-	-
11	Other - Fee Land & Easements (374)	120	36,620	20,659	3,772	4,075	949	1,966	1,536	2,251	1,412
12	Other - Structures and Improvements (375)	120	84,212	47,508	8,674	9,370	2,182	4,521	3,533	5,176	3,248
13	Other - Compressor Station Equipment (377)	120	38,995	21,999	4,017	4,339	1,011	2,093	1,636	2,397	1,504
14	Other - M & R General (378)	119	441,288	273,309	48,613	52,414	11,005	23,671	15,545	12,535	4,196
15	Other - Meter Installations (382)	108	36,825	31,988	3,131	1,092	127	258	80	141	7
16	Mains - High Pressure Capable	105	512,523	284,891	52,244	56,458	13,365	27,521	22,042	34,022	21,979
17	Mains - Non-High Pressure Capable	106	2,707,155	1,726,247	304,686	328,313	66,666	145,210	88,403	47,629	-
18	Services & Meters	108	5,508,081	4,784,597	468,274	163,349	19,015	38,640	12,036	21,052	1,118
19	Total Distribution Plant		9,365,699	7,191,198	893,411	619,411	114,319	243,881	144,813	125,202	33,463
20	Total Plant In Service (excl. GC&I)		14,690,855	10,449,155	1,486,494	1,268,341	271,514	430,197	292,327	332,638	160,190
21	General, Common & Intangible	206	818,806	582,391	82,851	70,692	15,133	23,977	16,293	18,540	8,928
22	Total Test Year Plant in Service		15,509,660	11,031,546	1,569,344	1,339,033	286,647	454,174	308,620	351,178	169,118

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Consumers Energy Company

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Schedule F-1.1

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Exhibit No.: A-16 (SAS-2)

Schedule: F-1.1

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Date: December 2025

Line No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Construction Work in Progress (CWIP)										
2	Production	202	-	-	-	-	-	-	-	-	-
3	Storage	118	185,912	116,736	21,238	23,367	5,710	5,361	4,151	5,849	3,500
4	Transmission	204	31,553	18,945	3,452	3,770	904	1,241	991	1,392	857
5	Distribution	205	93,918	72,112	8,959	6,211	1,146	2,446	1,452	1,256	336
6	GC&I	206	85,255	60,639	8,626	7,360	1,576	2,497	1,696	1,930	930
7	Total CWIP		396,637	268,433	42,275	40,709	9,336	11,544	8,291	10,427	5,622
8	Accumulated Depreciation										
9	Production	202	(8,163)	(5,737)	(1,031)	(1,094)	(301)	-	-	-	-
10	Storage	118	(263,784)	(165,633)	(30,134)	(33,155)	(8,101)	(7,606)	(5,890)	(8,299)	(4,966)
11	Transmission	204	(649,740)	(390,124)	(71,077)	(77,637)	(18,619)	(25,561)	(20,403)	(28,671)	(17,646)
12	Distribution	205	(3,349,408)	(2,571,752)	(319,506)	(221,517)	(40,883)	(87,218)	(51,789)	(44,775)	(11,967)
13	GC&I	206	(536,862)	(381,854)	(54,322)	(46,350)	(9,922)	(15,721)	(10,683)	(12,156)	(5,854)
14	Total Accumulated Depreciation		(4,807,958)	(3,515,100)	(476,071)	(379,753)	(77,827)	(136,107)	(88,765)	(93,901)	(40,433)
15	Working Capital										
16	Cash & Cash Equivalents	209	762,049	573,963	75,096	53,285	11,096	17,954	11,577	12,897	6,181
17	Accounts Receivable	111	111,509	80,222	12,152	11,006	2,661	2,054	1,437	1,518	459
18	Materials and Supplies	209	55,572	41,856	5,476	3,886	809	1,309	844	941	451
19	Gas Stored Underground	118	199,958	125,555	22,843	25,133	6,141	5,766	4,465	6,291	3,764
20	Gas Stored Underground- Working Gas	102	236,963	166,534	29,940	31,756	8,733	-	-	-	-
21	Real & Personal Property Taxes	206	187,230	133,171	18,945	16,165	3,460	5,483	3,726	4,239	2,042
21	Other Assets	206	-	-	-	-	-	-	-	-	-
22	Deferred Debits	206	460,288	327,389	46,574	39,739	8,507	13,479	9,159	10,422	5,019
23	Total Assets		2,013,569	1,448,690	211,026	180,970	41,408	46,045	31,208	36,308	17,915
24	Accounts Payable	102	339,795	238,803	42,932	45,537	12,523	-	-	-	-
25	Dividends Declared	215	17,592	12,756	1,773	1,468	322	499	371	368	35
26	Customer Deposits	111	12,406	9,472	1,289	1,016	241	190	116	68	13
27	Accrued Interest	206	44,589	31,715	4,512	3,850	824	1,306	887	1,010	486
28	Accrued Taxes - Federal	215	64	47	6	5	1	2	1	1	0
29	Accrued Taxes - State	215	(418)	(303)	(42)	(35)	(8)	(12)	(9)	(9)	(1)
30	Accrued Taxes - R&PP Tax & Other	206	172,507	122,699	17,455	14,893	3,188	5,052	3,433	3,906	1,881
31	Other Liabilities	206	26,114	18,574	2,642	2,255	483	765	520	591	285
32	Deferred Credits	206	17,856	12,700	1,807	1,542	330	523	355	404	195
33	Total Liabilities		630,505	446,462	72,374	70,532	17,903	8,324	5,675	6,340	2,894
34	Total Working Capital		1,383,064	1,002,228	138,651	110,438	23,504	37,720	25,534	29,968	15,021
35	Test Year Unamortized MGP Expense	206	14,771	10,506	1,495	1,275	273	433	294	334	161
36	Test Year Retainers & Customer Advances	205	(7,881)	(6,051)	(752)	(521)	(96)	(205)	(122)	(105)	(28)
37	Other Adjustments to Rate Base		6,889	4,454	743	754	177	227	172	229	133
38	Total Test Year Rate Base		12,488,293	8,791,561	1,274,942	1,111,181	241,837	367,560	253,852	297,901	149,460

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Line No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	O&M Expense										
2	Production	202	-	-	-	-	-	-	-	-	-
3	Storage	118	28,559	17,933	3,263	3,590	877	824	638	899	538
4	Transmission	204	49,671	29,824	5,434	5,935	1,423	1,954	1,560	2,192	1,349
5	Distribution	205	130,561	100,247	12,454	8,635	1,594	3,400	2,019	1,745	466
6	Customer Accounting	110	39,672	36,253	2,572	312	11	408	79	37	1
7	Customer Service & Information	109	669	619	44	5	0	1	0	0	0
8	Customer Assistance	109	4,145	3,835	272	33	1	3	1	0	0
9	Business Customer Care Expense	114	2,549	-	1,976	496	18	45	9	4	0
10	Customer Contact Center Expense	115	13,767	13,250	509	6	-	1	0	-	-
11	Interest on Customer Deposits	111	259	198	27	21	5	4	2	1	0
12	Uncollectible Expense	111	17,140	13,087	1,781	1,404	332	263	161	94	18
13	Pension & Benefit Expense (Version 1)										
14	Production- Pension & Benefits Expense	202	-	-	-	-	-	-	-	-	-
15	Storage- Pension & Benefits Expense	118	-	-	-	-	-	-	-	-	-
16	Transmission- Pension & Benefits Expense	204	-	-	-	-	-	-	-	-	-
17	Distribution- Pension & Benefits Expense	205	-	-	-	-	-	-	-	-	-
18	Customer Accounting (Billing)- Pension & Benefits Expense	110	-	-	-	-	-	-	-	-	-
19	Customer Service- Pension & Benefits Expense	109	-	-	-	-	-	-	-	-	-
20	Sales Expense- Pension & Benefits Expense	209	-	-	-	-	-	-	-	-	-
21	Administrative & General- Pension & Benefits Expense	209	-	-	-	-	-	-	-	-	-
22	Total Pension & Benefit Expense (Version 2)	206	(27,403)	(19,727)	(2,751)	(2,286)	(482)	(787)	(525)	(580)	(267)
23	Total O&M Expense		259,590	195,519	25,581	18,152	3,780	6,116	3,944	4,393	2,106
24	Administrative & General Expense	209	87,849	66,166	8,657	6,143	1,279	2,070	1,335	1,487	713
25	Depreciation & Amortization Expense										
26	Production	202	-	-	-	-	-	-	-	-	-
27	Storage	118	44,258	27,790	5,056	5,563	1,359	1,276	988	1,392	833
28	Transmission	204	77,165	46,332	8,441	9,220	2,211	3,036	2,423	3,405	2,096
29	Distribution	205	235,202	180,593	22,436	15,555	2,871	6,125	3,637	3,144	840
30	GC&I	206	44,929	31,957	4,546	3,879	830	1,316	894	1,017	490
31	Total Depreciation & Amortization Expense		401,554	286,672	40,480	34,217	7,272	11,752	7,942	8,959	4,259
32	Test Year Lost and Unaccounted for (LAUF) Gas	102	12,899	9,066	1,630	1,729	475	-	-	-	-
33	Test Year Company Use	102	7,052	4,956	891	945	260	-	-	-	-
34	Taxes										
35	Payroll Taxes (Version 1)										
36	Production	202	-	-	-	-	-	-	-	-	-
37	Storage	107	-	-	-	-	-	-	-	-	-
38	Transmission	204	-	-	-	-	-	-	-	-	-
39	Distribution	205	-	-	-	-	-	-	-	-	-
40	Customer Accounting (Billing)	110	-	-	-	-	-	-	-	-	-
41	Customer Service	109	-	-	-	-	-	-	-	-	-
42	Sales Expense	209	-	-	-	-	-	-	-	-	-
43	Administrative & General	209	-	-	-	-	-	-	-	-	-
44	Total Payroll Taxes (Version 2)	206	13,396	9,644	1,345	1,117	235	385	257	283	130
45	Test Year Property Taxes	206	213,600	151,927	21,613	18,441	3,948	6,255	4,250	4,836	2,329
46	Test Year Federal, State & City Income Tax	215	124,672	90,396	12,567	10,406	2,280	3,537	2,629	2,607	250
47	TCJA Amortization	208	(2,812)	(1,980)	(287)	(250)	(54)	(83)	(57)	(67)	(34)
48	Test Year Miscellaneous Taxes	112	7,124	5,186	716	579	125	195	136	144	43
49	Total Other Taxes		355,981	255,173	35,953	30,294	6,533	10,289	7,215	7,804	2,719
50	Total Test Year Expenses Excluding COGS & Company Use		1,117,873	812,596	112,301	90,534	19,339	30,227	20,436	22,643	9,797
51	Test Year Cost of Gas Sold (COGS)		823,243	578,563	104,015	110,326	30,340	-	-	-	-

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Line. No.	(a) Summary Description	(c) Allocation	(d) Total	(e) Residential	(f) Rate GS-1	(g) Rate GS-2	(h) Rate GS-3	(i) Rate ST	(j) Rate LT	(k) Rate XLT	(l) Rate XXLT
1	Service Revenue Including Cost of Gas Sold		2,524,834	1,816,409	275,139	249,203	60,261	46,517	32,544	34,378	10,383
2	Other Revenues										
3	Forfeited Discounts & Misc	111	10,014	7,204	1,091	988	239	184	129	136	41
4	Misc Service Rev (ASP)	102	-	-	-	-	-	-	-	-	-
5	Rev from Transmission of Gas of Others	204	17,897	10,746	1,958	2,138	513	704	562	790	486
6	Rent from Gas Property	204	-	-	-	-	-	-	-	-	-
7	Joint Commodities Mrkt Agrmt Rev	102	-	-	-	-	-	-	-	-	-
8	GCR related charges to Transport Customers	102	-	-	-	-	-	-	-	-	-
9	Gas Merchant-Buy/Sell Contracts	107	-	-	-	-	-	-	-	-	-
10	Rev from Storage Agrmts (GM, MCV & others)	118	1,530	961	175	192	47	44	34	48	29
11	Administrative Customer Acctg charges for GCC	110	1,451	1,326	94	11	0	15	3	1	0
12	Interest on Cash Operating Accounts	209	-	-	-	-	-	-	-	-	-
13	Miscellaneous	111	-	-	-	-	-	-	-	-	-
14	Total Other Test Year Revenues		\$ 30,892	\$ 20,237	\$ 3,318	\$ 3,331	\$ 799	\$ 948	\$ 728	\$ 976	\$ 556
15	Total Test Year Revenues		\$ 2,555,726	\$ 1,836,646	\$ 278,457	\$ 252,533	\$ 61,060	\$ 47,464	\$ 33,272	\$ 35,353	\$ 10,939

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Functionalization Factors

Functionalization Factors			1	2	3	4	5
Description	Source	Factor	Total System		Distribution	Transmission	Storage
CWIP				396,637	148,270	52,280	196,087
	INTERNAL- Input Line 56	CWIP			37.4%	13.2%	49.4%
Distribution				1	1	0	0
	N/A	DIST			100.0%	0.0%	0.0%
O&M Expense				259,590	\$ 189,824	\$ 44,297	\$ 25,469
	INTERNAL- Input Line 112	O&M			73.1%	17.1%	9.8%
O&M/Plant in Service				-	-	-	-
	INTERNAL- 50/50 Weighting of O&M & PIS	O&M/PIS			68.4%	20.7%	10.9%
Plant in Service				14,690,855	\$ 9,365,699	\$ 3,571,748	\$ 1,753,408
	INTERNAL- Input Line 47	PIS			63.8%	24.3%	11.9%
Rate Base				12,488,293	\$ 7,021,974	\$ 3,210,502	\$ 2,255,818
	INTERNAL- Input Line 88	RB			56.2%	25.7%	18.1%
Total Revenue				2,524,834	1,590,619	592,644	341,571
	INTERNAL- Input Line 142	REV			63.0%	23.5%	13.5%
Storage				1	-	-	1
	N/A	STOR			0.0%	0.0%	100.0%
Taxable Income				742,815	402,257	206,908	133,650
	INTERNAL- Input- Summary & Expense	TAXABLEINC			54.2%	27.9%	18.0%
Transmission				1	-	1	-
	N/A	TRAN			0.0%	100.0%	0.0%
Labor				1	69%	20%	11%
	N/A	LABOR			69.1%	19.6%	11.3%

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Allocation Factors- Total System

		1	2	3	4	5	6	7	8	9	10
Description	Source	Factor	Total System	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XLT
Total Annual Throughput	WP-SAS-8	101	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
GCR Throughput	WP-SAS-8	102	223,101,058	50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%
Transportation Throughput	WP-SAS-8	103	88,430,836	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
A&P (Transmission)	WP-SAS-8	104	1.00	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064
A&P (High Pressure)	WP-SAS-9	105	1.00	0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%
A&P (Non-High Pressure)	WP-SAS-9	106	1.00	56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%
A&P (50% Storage 50% Peak Month)	WP-SAS-10	107	1.00	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429
Weighted Customer	WP-SAS-15	108	1,971,456	55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.29%
Number of Customers	WP-SAS-15	109	1,851,766	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	0.0000
Weighted/Average Customer	WP-SAS-15	110	1.00	63.77%	11.25%	12.13%	2.46%	5.36%	4.37%	6.13%	3.85%
Present Revenue (Including COGS)	Exhibit A-16 (SAS-4), Sch F-2	111	2,524,834	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188
Present Delivery Revenue (Excluding COGS)	Exhibit A-16 (SAS-4), Sch F-2	112	1,701,591	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
N/A		113	1.00	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400
BCC	WP-SAS-20	114	1.00	86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%
CCC	WP-SAS-20	115	1.00	1,713,161	121,547	14,747	503	1,406	273	126	3
100% Storage Utilization	WP-SAS-10	116	1.00	92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%
100% Peak Day	WP-SAS-19	117	1.00	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000
Total Storage Plant	INTERNAL- Total COSS, (\$000), Line 5	118	1,753,408	91.38%	6.48%	0.79%	0.03%	1.03%	0.00%	0.00%	0.00%
M&R Weighted Composite	WP-SAS-21	119	1.00	1,816,409	275,130	249,203	60,361	46,517	32,544	34,378	10,383
A&P (Distribution)	WP-SAS-9	120	1.00	71.94%	10.90%	9.87%	2.39%	1.84%	1.29%	1.36%	0.41%
Total Revenue	INTERNAL- COSS PAGE 1, Line 3	201	2,555,726	1,237,846	171,125	138,877	29,922	46,517	32,544	34,378	10,383
Total Production Plant	INTERNAL- Total COSS, Page , Line 1	202	120,982	72.75%	10.06%	8.16%	1.76%	2.73%	1.91%	2.02%	0.61%
Total Transmission Plant	INTERNAL- Total COSS, Page , Line 10	204	3,450,766	0.0000	0.7753	0.1944	0.0070	0.0178	0.0036	0.0018	0.0000
Total Distribution Plant	INTERNAL- Total COSS, Page , Line 19	205	9,365,699	0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
Total Plant in Service (excl. GC&I)	INTERNAL- COSS , Line 32	206	14,690,855	0.9625	0.0370	0.0004	0.0000	0.0001	0.0000	0.0000	0.0000
Total CWIP	INTERNAL- COSS PAGE 5, Line	207	396,637	96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
Rate Base	INTERNAL- COSS , Line	208	12,488,293	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
Total O&M (excl. A&G)	INTERNAL- COSS PAGE 4, Line 23,,	209	259,590	67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
Total O&M Expense	INTERNAL- COSS PAGE 4, Line 23,24,	214	347,439	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
Pretax NOI	INTERNAL- COSS (Multiple Pages & Lines)	215	742,815	58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
Total Depreciation Expense	INTERNAL- COSS , Line	216	401,554	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
				62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
				0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
				61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
				0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
				56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
				1,836,646	278,457	252,533	61,060	47,464	33,272	35,353	10,939
				71.86%	10.90%	9.88%	2.39%	1.86%	1.30%	1.38%	0.43%
				85,024	15,286	16,213	4,459	-	-	-	-
				70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
				2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
				60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
				7,191,198	893,411	619,411	114,319	243,881	144,813	125,202	33,463
				76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%
				10,449,155	1,486,494	1,268,341	271,514	430,197	292,327	332,638	160,190
				71.13%	10.12%	8.63%	1.85%	2.93%	1.99%	2.26%	1.09%
				268,433	42,275	40,709	9,336	11,544	8,291	10,427	5,622
				67.68%	10.66%	10.26%	2.35%	2.91%	2.09%	2.63%	1.42%
				8,791,561	1,274,942	1,111,181	241,837	367,560	253,852	297,901	149,460
				70.40%	10.21%	8.90%	1.94%	2.93%	2.03%	2.39%	1.20%
				195,519	25,581	18,152	3,780	6,116	3,944	4,393	2,106
				75.32%	9.85%	6.99%	1.46%	2.36%	1.52%	1.69%	0.81%
				261,685	34,239	24,294	5,059	8,186	5,278	5,880	2,818
				75.32%	9.85%	6.99%	1.46%	2.36%	1.52%	1.69%	0.81%
				87,828	74,875	62,001	13,582	21,077	15,665	15,534	1,489
				30.07%	25.64%	21.23%	4.65%	7.22%	5.36%	5.32%	0.51%
				286,672	40,480	34,217	7,272	11,752	7,942	8,959	4,259
				71.39%	10.08%	8.52%	1.81%	2.93%	1.98%	2.23%	1.06%

Allocation Factors- Transmission System

		4	5	6	7	8	9	10	11
Factor	Transmission System	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064
101	100%	50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%
	223,101,058	156,792,103	28,188,224	29,898,638	8,222,094	0	0	0	0
102	100%	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	88,430,836	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064
103	100%	0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%
	1,000	0.5631	0.1028	0.1111	0.0259	0.0536	0.0437	0.0613	0.0385
104	100%	56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%
	1,000	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429
105	100%	55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.29%
	1,000	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	0.0000
106	100%	63.77%	11.25%	12.13%	2.46%	5.36%	3.27%	1.76%	0.00%
	1,000	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188
107	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
	1,971,456	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400
108	100%	86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%
	1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3
109	100%	92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%
	1,000	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000
110	100%	91.38%	6.48%	0.79%	0.03%	1.03%	0.20%	0.09%	0.00%
	592,644	378,300	69,038	74,531	18,411	15,450	12,423	18,073	6,418
111	100%	63.82%	11.65%	12.58%	3.11%	2.61%	2.10%	3.05%	1.08%
	392,491	237,635	43,750	47,708	11,034	15,450	12,423	18,073	6,418
112	100%	60.55%	11.15%	12.16%	2.81%	3.94%	3.17%	4.60%	1.64%
113		0.0000	0.7753	0.1944	0.0070	0.0178	0.0036	0.0018	0.0000
	100%	0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
114		0.9625	0.0370	0.0004	0.0000	0.0001	0.0000	0.0000	0.0000
	100%	96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
115	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
	1.00	67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
116		0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
	1.00	58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
117	\$ -	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
118		61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
119	\$ 1.00	0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
	1.00	56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
120		612,891	390,546	71,270	76,965	18,996	16,216	13,034	18,935
201	100%	63.72%	11.63%	12.56%	3.10%	2.65%	2.13%	3.09%	1.13%
	120,982	85,024	15,286	16,213	4,459	-	-	-	-
202	100%	70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%
	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
204	100%	60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
	-	-	-	-	-	-	-	-	-
205	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	3,571,748	2,156,974	392,777	428,544	103,346	135,756	108,361	152,271	93,719
206	100%	60.39%	11.00%	12.00%	2.89%	3.80%	3.03%	4.26%	2.62%
	52,280	31,463	5,731	6,257	1,504	2,029	1,620	2,276	1,401
207	100%	60.18%	10.96%	11.97%	2.88%	3.88%	3.10%	4.35%	2.68%
	3,210,502	1,932,328	351,987	384,291	92,366	124,536	99,407	139,702	85,884
208	100%	60.19%	10.96%	11.97%	2.88%	3.88%	3.10%	4.35%	2.68%
	44,297	26,579	4,843	5,290	1,268	1,750	1,397	1,963	1,208
209	-	60.00%	10.93%	11.94%	2.86%	3.95%	3.15%	4.43%	2.73%
	59,288	35,573	6,482	7,081	1,697	2,342	1,869	2,627	1,617
214		60.00%	10.93%	11.94%	2.86%	3.95%	3.15%	4.43%	2.73%
	206,908	125,596	23,347	25,446	5,667	8,383	6,782	10,146	1,540
215	100%	60.70%	11.28%	12.30%	2.74%	4.05%	3.28%	4.90%	0.74%
	88,089	52,929	9,643	10,531	2,527	3,451	2,755	3,871	2,382
216	100%	60.09%	10.95%	11.96%	2.87%	3.92%	3.13%	4.39%	2.70%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Gas Cost-of-Service Study
 Projected 12 Month Period: November 2026-October 2027
 (\$000)

Allocation Factors- Distribution System

Factor	Distribution		Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
	System									
101	311,531,894	156,937,785	28,405,233	32,077,898	8,348,701	19,615,226	19,235,255	27,116,731	19,795,064	
		50.38%	9.12%	10.30%	2.68%	6.30%	6.17%	8.70%	6.35%	
102	223,101,058	156,792,103	28,188,224	29,898,638	8,222,094	0	0	0	0	
		70.28%	12.63%	13.40%	3.69%	0.00%	0.00%	0.00%	0.00%	
103	88,430,836	145,683	217,009	2,179,260	126,607	19,615,226	19,235,255	27,116,731	19,795,064	
		0.16%	0.25%	2.46%	0.14%	22.18%	21.75%	30.66%	22.38%	
104	1.0000	0.5631	0.1028	0.1111	0.0239	0.0536	0.0487	0.0613	0.0385	
		56.31%	10.28%	11.11%	2.59%	5.36%	4.37%	6.13%	3.85%	
105	1.0000	0.5559	0.1019	0.1102	0.0261	0.0537	0.0430	0.0664	0.0429	
		55.59%	10.19%	11.02%	2.61%	5.37%	4.30%	6.64%	4.2%	
106	1.0000	0.6377	0.1125	0.1213	0.0246	0.0536	0.0327	0.0176	-	
		63.77%	11.25%	12.13%	2.46%	5.36%	3.27%	1.76%	0.00%	
107	1.0000	0.6279	0.1142	0.1257	0.0307	0.0288	0.0223	0.0315	0.0188	
		62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%	
108	1,971,456	1,712,506	167,605	58,466	6,806	13,830	4,308	7,535	400	
		86.87%	8.50%	2.97%	0.35%	0.70%	0.22%	0.38%	0.02%	
109	1,851,766	1,713,161	121,547	14,747	503	1,406	273	126	3	
		92.51%	6.56%	0.80%	0.03%	0.08%	0.01%	0.01%	0.00%	
110	1.0000	0.9138	0.0648	0.0079	0.0003	0.0103	0.0020	0.0009	0.0000	
		91.38%	6.48%	0.79%	0.03%	1.03%	0.20%	0.09%	0.00%	
111	1,590,619	1,214,479	165,239	130,323	30,845	24,410	14,917	8,738	1,669	
		76.35%	10.39%	8.19%	1.94%	1.53%	0.94%	0.55%	0.10%	
112	\$ 1,065,786	\$ 845,634	\$ 98,928	\$ 59,988	\$ 11,503	\$ 24,410	\$ 14,917	\$ 8,738	\$ 1,669	
		79.34%	9.28%	5.63%	1.08%	2.29%	1.40%	0.82%	0.16%	
113										
114	1.00	-	0.7753	0.1944	0.0070	0.0178	0.0036	0.0018	0.0000	
		0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%	
115	1.00	0.9625	0.0370	0.0004	-	0.0001	0.0000	-	-	
		96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%	
116	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071	
		67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%	
117	1.00	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306	
		58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%	
118	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	0.00%	
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
119	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095	
		61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%	
120	1.00	0.5641	0.1030	0.1113	0.0239	0.0537	0.0420	0.0615	0.0386	
		56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%	
201	1,598,379	1,220,621	165,988	130,851	30,967	24,522	14,979	8,774	1,675	
		76.37%	10.38%	8.19%	1.94%	1.53%	0.94%	0.55%	0.10%	
202	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
204	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719	
		60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%	
205	9,365,699	7,191,198	893,411	619,411	114,319	243,881	144,813	125,202	33,463	
		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%	
206	9,365,699	7,191,198	893,411	619,411	114,319	243,881	144,813	125,202	33,463	
		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%	
207	148,270	113,845	14,144	9,806	1,810	3,861	2,293	1,982	530	
		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%	
208	7,021,974	5,427,710	662,811	441,672	78,961	183,774	108,561	93,547	24,939	
		77.30%	9.44%	6.29%	1.22%	2.62%	1.55%	1.33%	0.36%	
209	189,824	152,948	17,829	9,660	1,730	3,632	1,978	1,629	418	
		80.57%	9.39%	5.09%	0.91%	1.91%	1.04%	0.86%	0.22%	
214	254,063	204,708	23,863	12,929	2,315	4,861	2,648	2,181	560	
		80.57%	9.39%	5.09%	0.91%	1.91%	1.04%	0.86%	0.22%	
215	402,257	327,425	35,632	19,174	3,910	9,142	6,084	1,209	(321)	
		81.40%	8.86%	4.77%	0.97%	2.27%	1.51%	0.30%	-0.08%	
216	263,845	202,586	25,169	17,450	3,221	6,870	4,080	3,527	943	
		76.78%	9.54%	6.61%	1.22%	2.60%	1.55%	1.34%	0.36%	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Gas Cost-of-Service Study
Projected 12 Month Period: November 2026-October 2027
(\$000)

Schedule F-1.1

Case No.: U-21981
Exhibit No.: A-16 (SAS-2)
Schedule: F-1.1
Page: 10 of 10
Witness: SASmith
Date: December 2025

Allocation Factors- Storage System

Factor	Storage System	4	5	6	7	8	9	10	11
		Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
101	311,531,894 100%	156,937,785 50.38%	28,405,233 9.12%	32,077,898 10.30%	8,348,701 2.68%	19,615,226 6.30%	19,235,255 6.17%	27,116,731 8.70%	19,795,064 6.35%
102	223,101,058 100%	156,792,103 70.28%	28,188,224 12.63%	29,898,438 13.40%	8,222,094 0	0 0.00%	0 0.00%	0 0.00%	0 0.00%
103	88,430,836 100%	145,683 0.16%	217,009 0.25%	2,179,260 2.46%	126,607 0.14%	19,615,226 22.18%	19,235,255 21.75%	27,116,731 30.66%	19,795,064 22.38%
104	1.0000 100%	0.5631 56.31%	0.1028 10.28%	0.1111 11.11%	0.0259 2.59%	0.0536 5.36%	0.0437 4.37%	0.0613 6.13%	0.0385 3.85%
105	1.0000 100%	0.5559 55.59%	0.1019 10.19%	0.1102 11.02%	0.0261 2.61%	0.0537 5.37%	0.0430 4.30%	0.0664 6.64%	0.0429 4.29%
106	1.0000 100%	0.6377 63.77%	0.1125 11.25%	0.1213 12.13%	0.0246 2.46%	0.0536 5.36%	0.0327 3.27%	0.0176 1.76%	0.0000 0.00%
107	1.0000 100%	0.6279 62.79%	0.1142 11.42%	0.1257 12.57%	0.0307 3.07%	0.0288 2.88%	0.0223 2.23%	0.0315 3.15%	0.0188 1.88%
108	1,971,456 100%	1,712,506 86.87%	167,605 8.50%	58,466 2.97%	6,806 0.35%	13,830 0.70%	4,308 0.22%	7,535 0.38%	400 0.02%
109	1,851,766 100%	1,713,161 92.51%	121,547 6.56%	14,747 0.80%	503 0.03%	1,406 0.08%	273 0.01%	126 0.01%	3 0.00%
110	1.0000 100%	0.9138 91.38%	0.0648 6.48%	0.0079 0.79%	0.0003 0.03%	0.0103 1.03%	0.0020 0.20%	0.0009 0.09%	0.0000 0.00%
111	341,571 100%	223,631 65.47%	40,862 11.96%	44,349 12.98%	11,006 3.22%	6,656 1.95%	5,204 1.52%	7,566 2.22%	2,297 0.67%
112	\$ 243,313 100%	\$ 154,577 63.53%	\$ 28,448 11.69%	\$ 31,181 12.82%	\$ 7,385 3.04%	\$ 6,656 2.74%	\$ 5,204 2.14%	\$ 7,566 3.11%	\$ 2,297 0.94%
113		-	0.78	0.19	0.01	0.02	0.00	0.00	0.00
114	100%	0.00%	77.53%	19.44%	0.70%	1.78%	0.36%	0.18%	0.00%
115	100%	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00%
116	1.00	96.25%	3.70%	0.04%	0.00%	0.01%	0.00%	0.00%	0.00%
117	1.00	0.6740	0.1220	0.1378	0.0359	0.0070	0.0066	0.0097	0.0071
118	1.00	67.40%	12.20%	13.78%	3.59%	0.70%	0.66%	0.97%	0.71%
119	1.00	0.5819	0.1065	0.1136	0.0256	0.0507	0.0380	0.0532	0.0306
120	1,753,408	58.19%	10.65%	11.36%	2.56%	5.07%	3.80%	5.32%	3.06%
121	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007	3,158%
122	1.00	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
123	1.00	0.6193	0.1102	0.1188	0.0249	0.0536	0.0352	0.0284	0.0095
124	1.00	61.93%	11.02%	11.88%	2.49%	5.36%	3.52%	2.84%	0.95%
125	1.00	0.5641	0.1030	0.1113	0.0259	0.0537	0.0420	0.0615	0.0386
126	1.00	56.41%	10.30%	11.13%	2.59%	5.37%	4.20%	6.15%	3.86%
201	344,455	225,478	41,199	44,717	11,097	6,727	5,258	7,644	2,335
202	100%	65.46%	11.96%	12.98%	3.22%	1.95%	1.53%	2.22%	0.68%
203	-	-	-	-	-	-	-	-	-
204	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
205	3,450,766	2,071,950	377,491	412,330	98,887	135,756	108,361	152,271	93,719
206	100%	60.04%	10.94%	11.95%	2.87%	3.93%	3.14%	4.41%	2.72%
207	-	-	-	-	-	-	-	-	-
208	0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
209	1,753,408	1,100,983	200,305	220,386	53,849	50,560	39,154	55,164	33,007
210	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
211	196,087	123,125	22,401	24,646	6,022	5,654	4,379	6,169	3,691
212	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
213	2,255,818	1,431,523	260,144	285,218	70,510	59,249	45,884	64,652	38,637
214	100%	63.46%	11.53%	12.64%	3.13%	2.63%	2.03%	2.87%	1.71%
215	25,469	15,992	2,910	3,201	782	734	569	801	479
216	-	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%
217	89,708	67,752	8,943	6,470	1,368	1,963	1,238	1,353	621
218	1.00	75.52%	9.97%	7.21%	1.52%	2.19%	1.38%	1.51%	0.69%
219	133,650	85,569	15,896	17,381	4,005	3,552	2,799	4,179	270
220	100%	64.02%	11.89%	13.00%	3.00%	2.66%	2.09%	3.13%	0.20%
221	49,620	31,157	5,668	6,237	1,524	1,431	1,108	1,561	934
222	100%	62.79%	11.42%	12.57%	3.07%	2.88%	2.23%	3.15%	1.88%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allocation of Home Products Credit (\$000)

Case No.: U-21981
Exhibit No.: A-134 (SAS-3)
Page: 1 of 1
Witness: SASmith
Date: December 2025

Line No	Description	Total Gas	Source
1	Home Products Credit	\$ (25,208)	Settlement in case U-21490

Line No	Description	Alloc	Total (a)	Residential (a)	Rate GS-1 (b)	Rate GS-2 (c)	Rate GS-3 (d)	Rate ST (e)	Rate LT (f)	Rate XLT (g)	Rate XXLT (h)
	<u>Home Products Credit</u>										
2	Total O&M (excluding Admin & General) ⁽¹⁾	209	100%	75.32%	9.85%	6.99%	1.46%	2.36%	1.52%	1.69%	0.81%
3	Allocation of Home Products Credit		\$ (25,208)	\$ (18,986.51)	\$ (2,484.17)	\$ (1,762.66)	\$ (367.05)	\$ (593.90)	\$ (382.96)	\$ (426.62)	\$ (204.46)

Source:

(1) Exhibit A-16 (SAS-2), Schedule F-1.1, Page 7

Schedule F-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Present and Proposed Revenue by Rate Schedule

Total Revenue

Case No.: U-21981

Exhibit No.: A-16 (SAS-4)

Schedule: F-2

Page: 1 of 2

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b)	(c)	(d) Difference		(e)
		Present Revenue	Proposed Revenue	Revenue	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 XXL	10,383	19,584	9,201	88.6	
13	Total Transportation	123,330	156,268	32,938	26.7	
	Transmission-Only Transportation Service					
14	Transmission-Only Rate TOT	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	\$ 2,764,789	239,956	9.5	

Notes

⁽¹⁾ Includes aggregate billed transportation accounts.

Schedule F-2

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Present and Proposed Revenue by Rate Schedule

Delivery Revenue

Case No.: U-21981

Exhibit No.: A-16 (SAS-4)

Schedule: F-2

Page: 2 of 2

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b)	(c)	(d) Difference		(e)
		Present Revenue	Proposed Revenue	Revenue		Percent
		\$000	\$000	\$000		%
	Residential Service					
1	Single Family Dwelling A	\$ 1,201,030	\$ 1,343,216	\$ 142,185		11.8
2	Multifamily Dwelling A-1	<u>36,816</u>	<u>40,356</u>	<u>3,540</u>		<u>9.6</u>
3	Total Residential Service	1,237,846	1,383,571	145,725		11.8
	General Service					
4	Small Service GS-1	171,125	201,778	30,653		17.9
5	Medium Service GS-2	138,877	163,608	24,731		17.8
6	Large Service GS-3	<u>29,922</u>	<u>35,781</u>	<u>5,860</u>		<u>19.6</u>
7	Total General Service	339,923	401,167	61,244		18.0
8	Total Gas Sales ⁽¹⁾	1,577,769	1,784,738	206,969		13.1
	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 XXL	<u>10,383</u>	<u>19,584</u>	<u>9,201</u>		<u>88.6</u>
13	Total Transportation	123,330	156,268	32,938		26.7
	Transmission-Only Transportation Service					
14	Transmission-Only Rate TOT	<u>491</u>	<u>561</u>	<u>70</u>		<u>14.2</u>
15	Total Transmission-Only	491	561	70		14.2
16	Total Service (Delivery Only)	<u>1,701,591</u>	<u>\$ 1,941,568</u>	<u>\$ 239,977</u>		<u>14.1</u>
17	Additional Late Payment Charge Revenue	0	540	540		
18	Revenue Increase/(Decrease) Due to Rounding	0	(561)	(561)		
19	Revenue (Sufficiency)/Deficiency	<u>\$ 1,701,591</u>	<u>\$ 1,941,546</u>	<u>239,956</u>		<u>14.1</u>

Notes

⁽¹⁾ Includes aggregate billed transportation accounts.

Schedule F-2.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Present and Proposed Rates by Rate Schedule

Case No.: U-21981

Exhibit No.: A-16 (SAS-5)

Schedule: F-2.1

Page: 1 of 3

Witness: SASmith

Date: December 2025

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 Program	\$/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	19,969.91
24	Customer Charge - Contiguous	\$/Mth	105.00	400.00
25	Remote Meter Charge	\$/Mth	70.00	-
26	Distribution Charge	\$/Mcf	1.0928	1.3843

Schedule F-2.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Present and Proposed Rates by Rate Schedule

Case No.: U-21981

Exhibit No.: A-16 (SAS-5)

Schedule: F-2.1

Page: 2 of 3

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b) Units	(c) Present	(d) Proposed
	Extra Extremely Large Transport XXLT			
27	Customer Charge - Principal	\$/Mth	35,089.70	66,237.89
28	Remote Meter Charge	\$/Mth	70.00	-
29	Distribution Charge	\$/Mcf	0.4601	0.8679
	Authorized Tolerance Level (ST, LT, XLT, XXLT) ⁽¹⁾			
30	2.0% ATL	\$/Mcf	(0.0738)	(0.1459)
31	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)
34	8.5% ATL	\$/Mcf	-	-
35	9.5% ATL	\$/Mcf	0.0113	0.0225
36	10.5% ATL	\$/Mcf	0.0227	0.0449
	Customer Attachment Program			
37	Discount Rate	%	7.08	7.43
38	Carrying Cost Rate	%	8.73	9.19
	Other Transportation			
39	Authorized Gas Use Charge	\$/Mcf	1.00	1.00
40	Unauthorized Gas Use Charge	\$/Mcf	10.00	10.00
41	Load Balancing Charge	\$/MMBtu	0.25	0.25
42	EUT Gas In Kind	%	2.57	2.38
	Non-Transmitting Gas Meter - Automated Meter Reading (AMR) Provision			
43	One Time Charge Prior to AMR Install	\$/Customer	109.94	109.94
44	One Time Charge After AMR Install	\$/Customer	177.53	177.53
45	Monthly Charge	\$/Customer	6.03	6.03

Notes

⁽¹⁾ 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)

Schedule F-2.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Present and Proposed Rates by Rate Schedule

Case No.: U-21981

Exhibit No.: A-16 (SAS-5)

Schedule: F-2.1

Page: 3 of 3

Witness: SASmith

Date: December 2025

	(a)	(b)	(c)	(d)
Line				
No.	Description	Units	Present	Proposed
	Transmission-Only Service			
46	Transmission-Only Transportation Service Rate TOT			
47	Transmission Charge	\$/Mcf	0.6229	0.7114

Schedule F-2.2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Calculation of Rate Design Targets
 (\$000)

Case No.: U-21981
 Exhibit No.: A-16 (SAS-6)
 Schedule: F-2.2
 Page: 1 of 2
 Witness: SASmith
 Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
No.	Description	Source	Total	Residential	GS-1	GS-2	GS-3	ST	LT	XLT	XXLT
1	Cost of Service Study (COSS)	Exhibit A-16 (SAS-2), Schedule F-1, page 1, line 22	\$ 1,941,546	\$ 1,390,085	\$ 196,583	\$ 164,451	\$ 35,358	\$ 54,447	\$ 36,761	\$ 42,445	\$ 21,418
2	Adjustment - Low Income Provision Credits	Exhibit A-16 (SAS-6), page 2, column (e)	-	(6,106)	2,300	2,105	503	419	284	329	166
3	Adjustment - Storage	A-135 (SAS-9) and WP-SAS-10	-	-	-	-	-	600	568	832	(2,000)
4	COSS, Net	Sum Lines 1 - 3	1,941,546	1,383,978	198,883	166,556	35,861	55,466	37,612	43,606	19,584
5	Adjustment - Rate Stability		-	-	2,957	(2,891)	(66)	144	1,099	(1,242)	-
6	Adjusted COSS	Sum Lines 4 - 5	1,941,546	1,383,978	201,840	163,665	35,795	55,610	38,711	42,363	19,584
7	Test Year Present Revenue	Exhibit A-16 (SAS-7), pages 1-10	1,701,591	1,237,846	171,125	138,877	29,922	46,517	32,544	34,378	10,383
8	Revenue (Sufficiency)/Deficiency	Line 6 - Line 7	239,956	146,132	30,715	24,788	5,874	9,094	6,167	7,985	9,201
9	Incremental Late Payments	WP-SAS-2	540	407	62	57	14	-	-	-	-
10	Adjusted Revenue (Sufficiency)/Deficiency	Line 8 - Line 9	239,416	145,725	30,653	24,731	5,860	9,094	6,167	7,985	9,201
11	Rate Design Targets	Line 7 + Line 10	\$ 1,941,006	\$ 1,383,571	\$ 201,778	\$ 163,608	\$ 35,781	\$ 55,610	\$ 38,711	\$ 42,363	\$ 19,584
12	% Rate Increase	(Line 11 - Line 7) / Line 7		11.8%	17.9%	17.8%	19.6%	19.5%	18.9%	23.2%	88.6%
<u>Calculation of Rate Stability Adjustment</u>											
13	COSS, Net of Provision Credits	Line 1+ Line 2	\$ 1,941,546	\$ 1,383,978	\$ 198,883	\$ 166,556	\$ 35,861	\$ 55,466	\$ 37,612	\$ 43,606	\$ 19,584
14	COSS % Rate Increase	(Line 13 - Line 7) / Line 7	14.1%	11.8%	16.2%	19.9%	19.9%	19.2%	15.6%	26.8%	88.6%
15	% Rate Increase - Stability Target				17.9%	17.8%	19.6%	19.5%	18.9%	23.2%	
16	Adjusted Rate Design Target	Line 7 * (1 + Line 15)	-	-	201,840	163,665	35,795	55,610	38,711	42,363	-
17	Rate Stability Adjustment	Line 16 - Line 13	-	\$ -	\$ 2,957	\$ (2,891)	\$ (66)	\$ 144	\$ 1,099	\$ (1,242)	\$ -
					-			-			

Notes

\$ 2,957 Shifted into GS-1 from GS-2 and GS-3
 \$ 1,242 Shifted into ST and LT from XLT
 No adjustments have been made to Residential or XXLT. These rates are cost based.

Schedule F-2.2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Calculation of Rate Design Targets
 Allocation of Low Income Provision Credits
 (\$000)

Case No.: U-21981
 Exhibit No.: A-16 (SAS-6)
 Schedule: F-2.2
 Page: 2 of 2
 Witness: SASmith
 Date: December 2025

Line No.	(a) Description	(b) COS % of Total COS	(c) RIA Discount Allocation	(d) LIAC Discount Allocation	(e) Total	(f)	(g)	(h)	(i)	(j)
Sales										
1	Residential A and A1	71.14%	\$ 11,952	\$ 3,101	\$ 15,053					
2	Subtotal Residential	71.14%	11,952	3,101	15,053					
3	General Service - Rate GS-1	10.87%	1,826	474	2,300					
4	General Service - Rate GS-2	9.95%	1,671	434	2,105					
5	General Service - Rate GS-3	2.38%	400	104	503					
6	Subtotal General Service	23.20%	3,897	1,011	4,908					
7	Transportation Service - Rate ST	1.98%	333	86	419					
8	Transportation Service - Rate LT	1.34%	225	58	284					
9	Transportation Service - Rate XLT	1.55%	261	68	329					
10	Transportation Service - Rate XXLT	0.79%	132	34	166					
11	Subtotal Transportation	5.66%	951	247	1,198					
12	Total Low Income Provision Credits	100.00%	\$ 16,800	\$ 4,359	\$ 21,159					
		Total	Residential	Rate GS-1	Rate GS-2	Rate GS-3	Rate ST	Rate LT	Rate XLT	Rate XXLT
13	Total Cost of Service ⁽¹⁾⁽²⁾	\$ 2,795,681	\$ 1,988,884	\$ 303,915	\$ 278,107	\$ 66,497	\$ 55,395	\$ 37,489	\$ 43,420	\$ 21,974
14	Cost of Service Percentage	100.00%	71.14%	10.87%	9.95%	2.38%	1.98%	1.34%	1.55%	0.79%

Notes

⁽¹⁾ Exhibit A-16 (SAS-2), Schedule F-1, page 1, line 19

⁽²⁾ Includes the cost of fuel

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Present and Proposed Revenue Detail

Residential Single Family Dwelling A

Case No.: U-21981

Exhibit No.: A-16 (SAS-7)

Schedule: F-3

Page: 1 of 10

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)	(g)
No.	Description	Billing Determinants	Units	Rates	Revenue	Rates	Revenue
		Quantity		\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	1,703,977	Mthly	17.00	\$ 347,611	20.00	\$ 408,954
2	Distribution Mcf/mth ⁽²⁾	150,912	MMcf	5.7786	872,058	6.3310	955,420
	Provisions						
3	Income Assistance - RIA ⁽³⁾	70,000	Mthly	(17.00)	(14,280)	(20.00)	(16,800)
4	Income Assistance - LIAC ⁽³⁾	12,000	Mthly	(30.27)	(4,359)	(30.27)	(4,359)
5	Total Delivery				1,201,030		1,343,216
	Fuel						
6	GCR Sales ⁽⁴⁾	150,899	MMcf	3.6900	556,818	3.6900	556,818
7	Alternative Fuel Sales ⁽⁵⁾	12,376	MMcf	-	-	-	-
8	Total Fuel	150,912			556,818		556,818
9	Total Service (Delivery & Fuel)				\$ 1,757,849		\$ 1,900,034

⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽²⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽³⁾ Sum of column (b) lines 3 and 4 agrees to Exhibit A-15 (MAS-12), Schedule E-8, line 14, column (d)

⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁵⁾ Exhibit A-15 (MA-7), Schedule E-3

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Present and Proposed Revenue Detail

Residential Multifamily Dwelling A-1

Case No.: U-21981

Exhibit No.: A-16 (SAS-7)

Schedule: F-3

Page: 2 of 10

Witness: SASmith

Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)
		Billing Determinants			Present		Proposed	
Line		Quantity						
No.	Description	Present	Proposed	Units	Rates	Revenue	Rates	Revenue
					\$/unit	\$000	\$/unit	\$000
	Delivery							
1	Customer ⁽¹⁾	9,184		Mthly	17.00	\$ 1,874	20.00	\$ 2,204
2	Excess Peak Mcf/Mth ⁽²⁾	1,153	1,153	MMcf	0.1035	119	-	-
3	Distribution Mcf/Mth ⁽³⁾	6,026		MMcf	5.7786	34,823	6.3310	38,152
4	Total Delivery					36,816		40,356
	Fuel							
5	GCR Sales ⁽⁴⁾	5,893		MMcf	3.6900	21,745	3.6900	21,745
6	Alternative Fuel Sales ⁽⁵⁾	133		MMcf	-	-	-	-
7	Total Fuel	6,026				21,745		21,745
8	Total Service (Delivery & Fuel)					\$ 58,560		\$ 62,100

Notes

⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽²⁾ Exhibit A-15 (MAS-13), Schedule E-9, line 7, column (b)

⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁵⁾ Exhibit A-15 (MA-7), Schedule E-3

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Present and Proposed Revenue Detail
 General Small Service GS-1

Case No.: U-21981
 Exhibit No.: A-16 (SAS-7)
 Schedule: F-3
 Page: 3 of 10
 Witness: SASmith
 Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d) Present		(f) Proposed	
		(c) Quantity	(c) Units	(e) Rates	(e) Revenue	(g) Rates	(g) Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	121,510	Mthly	21.00	\$ 30,621	27.00	\$ 39,369
2	Contiguous Account ⁽²⁾	36	Mthly	21.00	9	27.00	12
3	Distribution Mcf/Mth ⁽³⁾	28,405	MMcf	4.9461	140,495	5.7171	162,397
4	Total Delivery				171,125		201,778
	Fuel						
5	GCR Sales ⁽⁴⁾	28,188	MMcf	3.6900	104,015	3.6900	104,015
6	Alternative Fuel Sales ⁽⁵⁾	217	MMcf	-	-	-	-
7	Total Fuel	28,405			104,015		104,015
8	Total Service (Delivery & Fuel)				\$ 275,139		\$ 305,792

Notes

- ⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁵⁾ Exhibit A-15 (MA-7), Schedule E-3

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Present and Proposed Revenue Detail

General Medium Service GS-2

Case No.: U-21981

Exhibit No.: A-16 (SAS-7)

Schedule: F-3

Page: 4 of 10

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d)	(e)	(f)	(g)
		Quantity	Units	Rates	Revenue	Rates	Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	14,690	Mthly	133.73	\$ 23,574	144.85	\$ 25,534
2	Contiguous Account ⁽²⁾	57	Mthly	45.00	31	75.00	51
3	Distribution Mcf/Mth ⁽³⁾	32,078	MMcf	3.5935	115,272	4.3027	138,022
4	Total Delivery				138,877		163,608
	Fuel						
5	GCR Sales ⁽⁴⁾	29,899	MMcf	3.6900	110,326	3.6900	110,326
6	Alternative Fuel Sales ⁽⁵⁾	2,179	MMcf	-	-	-	-
7	Total Fuel	32,078			110,326		110,326
8	Total Service (Delivery & Fuel)				\$ 249,203		\$ 273,934

Notes

⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁵⁾ Exhibit A-15 (MA-7), Schedule E-3

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Present and Proposed Revenue Detail
 General Large Service GS-3

Case No.: U-21981
 Exhibit No.: A-16 (SAS-7)
 Schedule: F-3
 Page: 5 of 10
 Witness: SASmith
 Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d) Present		(f) Proposed	
		(b) Quantity	(c) Units	(d) Rates	(e) Revenue	(f) Rates	(g) Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	461	Mthly	330.17	\$ 1,825	375.28	\$ 2,075
2	Contiguous Account ⁽²⁾	42	Mthly	125.00	63	185.00	93
3	Distribution Mcf/Mth ⁽³⁾	8,349	MMcf	3.3578	28,033	4.0262	33,614
4	Total Delivery				29,922		35,781
	Fuel						
5	GCR Sales ⁽⁴⁾	8,222	MMcf	3.6900	30,340	3.6900	30,340
6	Alternative Fuel Sales ⁽⁵⁾	127	MMcf	-	-	-	-
7	Total Fuel	8,349			30,340		30,340
8	Total Service (Delivery & Fuel)				\$ 60,261		\$ 66,121

Notes

- ⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁵⁾ Exhibit A-15 (MA-7), Schedule E-3

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Test Year Present and Proposed Revenue Detail
 Small Transport ST

Case No.: U-21981
 Exhibit No.: A-16 (SAS-7)
 Schedule: F-3
 Page: 6 of 10
 Witness: SASmith
 Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d) Present		(f) Proposed	
		(b) Quantity	(c) Units	(d) Rates	(e) Revenue	(f) Rates	(g) Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	686	Mthly	1,160.00	\$ 9,544	1,320.00	\$ 10,860
2	Contiguous Account ⁽²⁾	721	Mthly	105.00	908	195.00	1,686
3	Distribution Mcf/Mth ⁽³⁾	19,561	MMcf	1.8446	36,083	2.2067	43,165
	Authorized Tolerance Level ⁽⁴⁾						
4	2.0% ATL	26	MMcf	(0.0738)	(2)	(0.1459)	(4)
5	4.0% ATL	167	MMcf	(0.0511)	(9)	(0.1010)	(17)
6	6.5% ATL	1,599	MMcf	(0.0227)	(36)	(0.0449)	(72)
7	7.5% ATL	365	MMcf	(0.0113)	(4)	(0.0225)	(8)
8	8.5% ATL	17,404	MMcf	-	-	-	-
9	9.5% ATL	-	MMcf	0.0113	-	0.0225	-
10	10.5% ATL	-	MMcf	0.0227	-	0.0449	-
11	Total Delivery				<u>\$ 46,483</u>		<u>\$ 55,610</u>

Notes

- ⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁴⁾ Exhibit A-15 (MA-8), Schedule E-4

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Present and Proposed Revenue Detail
 Large Transport LT

Case No.: U-21981
 Exhibit No.: A-16 (SAS-7)
 Schedule: F-3
 Page: 7 of 10
 Witness: SASmith
 Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d) Present		(f) Proposed	
		(b) Quantity	(c) Units	(d) Rates	(e) Revenue	(f) Rates	(g) Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	101	Mthly	4,685.01	\$ 5,674	5,223.81	\$ 6,326
2	Contiguous Account ⁽²⁾	172	Mthly	105.00	217	210.00	434
3	Distribution Mcf/Mth ⁽³⁾	18,500	MMcf	1.4216	26,300	1.7382	32,157
	Authorized Tolerance Level ⁽⁴⁾						
4	2.0% ATL	-	MMcf	(0.0738)	-	(0.1459)	-
5	4.0% ATL	859	MMcf	(0.0511)	(44)	(0.1010)	(87)
6	6.5% ATL	2,580	MMcf	(0.0227)	(59)	(0.0449)	(116)
7	7.5% ATL	197	MMcf	(0.0113)	(2)	(0.0225)	(4)
8	8.5% ATL	14,865	MMcf	-	-	-	-
9	9.5% ATL	-	MMcf	0.0113	-	0.0225	-
10	10.5% ATL	-	MMcf	0.0227	-	0.0449	-
11	Total Delivery				<u>\$ 32,086</u>		<u>\$ 38,711</u>

Notes

- ⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7
⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3
⁽⁴⁾ Exhibit A-15 (MA-8), Schedule E-4

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Present and Proposed Revenue Detail

Extremely Large Transport XLT

Case No.: U-21981

Exhibit No.: A-16 (SAS-7)

Schedule: F-3

Page: 8 of 10

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(d) Present		(f) Proposed	
		(c) Quantity	(c) Units	(e) Rates	(e) Revenue	(g) Rates	(g) Revenue
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Customer ⁽¹⁾	24	Mthly	18,384.33	\$ 5,306	19,969.91	\$ 5,763
2	Contiguous Account ⁽²⁾	102	Mthly	105.00	\$ 129	400.00	492
3	Remote Meters ⁽³⁾	39	Mthly	70.00	\$ 33	-	-
4	Distribution Mcf/Mth ⁽⁴⁾	27,117	MMcf	1.0928	\$ 29,633	1.3843	37,538
	Authorized Tolerance Level ⁽⁵⁾						
5	2.0% ATL	4,588	MMcf	(0.0738)	\$ (339)	(0.1459)	(670)
6	4.0% ATL	1,755	MMcf	(0.0511)	\$ (90)	(0.1010)	(177)
7	6.5% ATL	12,402	MMcf	(0.0227)	\$ (282)	(0.0449)	(557)
8	7.5% ATL	1,154	MMcf	(0.0113)	\$ (13)	(0.0225)	(26)
9	8.5% ATL	7,216	MMcf	-	\$ -	-	-
10	9.5% ATL	-	MMcf	0.0113	\$ -	0.0225	-
11	10.5% ATL	-	MMcf	0.0227	\$ -	0.0449	-
12	Total Delivery				<u>\$ 34,378</u>		<u>\$ 42,363</u>

Notes

⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽²⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽³⁾ WP-SAS-3

⁽⁴⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁵⁾ Exhibit A-15 (MA-8), Schedule E-4

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Present and Proposed Revenue Detail

Extra Extremely Large Transport XXLT

Case No.: U-21981

Exhibit No.: A-16 (SAS-7)

Schedule: F-3

Page: 9 of 10

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b) Billing Determinants		(c)	(d) Present		(e)	(f) Proposed		(g)
		Quantity	Units		Rates		Revenue	Rates		Revenue
					\$/unit		\$000	\$/unit		\$000
	Delivery									
1	Customer ⁽¹⁾	3	Mthly		35,089.70	\$	1,273	66,237.89	\$	2,403
2	Remote Meters ⁽²⁾	3	Mthly		70.00		3	-		-
3	Distribution Mcf/Mth ⁽³⁾	19,795	MMcf		0.4601		9,108	0.8679		17,181
	Authorized Tolerance Level ⁽⁴⁾									
	2.0% ATL	-	MMcf		(0.0227)		-	(0.0449)		-
4	Total Delivery						<u>\$ 10,383</u>			<u>\$ 19,584</u>

Notes

⁽¹⁾ Exhibit A-15 (MA-11), Schedule E-7

⁽²⁾ WP-SAS-3

⁽³⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽⁴⁾ Customers on XXLT are only eligible for the 2.0% ATL credit, less the 4.0% ATL credit because the 4.0% ATL credit is already included in the rate via the adjustment calculated on Exhibit A-16 (SAS-6).

Schedule F-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail
Transmission Only Transportation Service Rate (TOT)

Case No.: U-21981
Exhibit No.: A-16 (SAS-7)
Schedule: F-3
Page: 10 of 10
Witness: SASmith
Date: December 2025

(a)		(b)	(c)	(d)	(e)	(f)	(g)
Line		Billing Determinants		Present		Proposed	
No.	Description	Quantity	Units	Rates	Revenue	Rates	Revenue ⁽¹⁾
				\$/unit	\$000	\$/unit	\$000
	Delivery						
1	Transmission Mcf/Mth	789	MMcf	0.6229	491	0.7114	561
2	Total Delivery				\$ 491		\$ 561

Notes

Schedule F-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of Present and Proposed Monthly Bills

Residential Single Family Dwelling A

(Excluding Income Assistance)

Case No.: U-21981

Exhibit No.: A-16 (SAS-8)

Schedule: F-4

Page: 1 of 5

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)
No.	Monthly Use	Present Net Monthly Bill	Proposed Net Monthly Bill	Increase Amount	Percent	Proposed Unit Cost
	Mcf	\$	\$	\$	%	\$/Mcf
1	5	64.34	70.10	5.76	8.96	14.02
2	10	111.69	120.21	8.52	7.63	12.02
3	15	159.03	170.31	11.29	7.10	11.35
4	20	206.37	220.42	14.05	6.81	11.02
5	25	253.72	270.52	16.81	6.63	10.82
6	30	301.06	320.63	19.57	6.50	10.69
7	40	395.74	420.84	25.10	6.34	10.52

	Present	Proposed
Customer Charge (\$/Mth)	17.00	20.00
Distribution Charge (\$/Mcf)	5.7786	6.3310
GCR Factor (\$/Mcf)	3.6900	3.6900

Schedule F-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of Present and Proposed Monthly Bills

Residential Single Family Dwelling A

(Including Income Assistance)

Case No.: U-21981

Exhibit No.: A-16 (SAS-8)

Schedule: F-4

Page: 2 of 5

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)
No.	Monthly Use	Present Net Monthly Bill	Proposed Net Monthly Bill	Increase Amount	Percent	Proposed Unit Cost
	Mcf	\$	\$	\$	%	\$/Mcf
8	5	47.34	50.10	2.76	5.83	10.02
9	10	94.69	100.21	5.52	5.83	10.02
10	15	142.03	150.31	8.29	5.83	10.02
11	20	189.37	200.42	11.05	5.83	10.02
12	25	236.72	250.52	13.81	5.83	10.02
13	30	284.06	300.63	16.57	5.83	10.02
14	40	378.74	400.84	22.10	5.83	10.02

	Present	Proposed
Customer Charge (\$/Mth)	17.00	20.00
Income Assistance (\$/Mth)	(17.00)	(20.00)
Distribution Charge (\$/Mcf)	5.7786	6.3310
GCR Factor (\$/Mcf)	3.6900	3.6900

Schedule F-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of Present and Proposed Monthly Bills

General Small Service GS-1

Case No.: U-21981

Exhibit No.: A-16 (SAS-8)

Schedule: F-4

Page: 3 of 5

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)
No.	Monthly Use	Present Net Monthly Bill	Proposed Net Monthly Bill	Increase Amount	Percent	Proposed Unit Cost
	Mcf	\$	\$	\$	%	\$/Mcf
15	2	38.27	45.81	7.54	19.71	22.91
16	10	107.36	121.07	13.71	12.77	12.11
17	15	150.54	168.11	17.57	11.67	11.21
18	25	236.90	262.18	25.28	10.67	10.49
19	40	366.44	403.29	36.84	10.05	10.08
20	50	452.81	497.36	44.55	9.84	9.95
21	80	711.89	779.57	67.68	9.51	9.74

	Present	Proposed
Customer Charge (\$/Mth)	21.00	27.00
Distribution Charge (\$/Mcf)	4.9461	5.7171
GCR Factor (\$/Mcf)	3.6900	3.6900

Schedule F-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of Present and Proposed Monthly Bills

General Medium Service GS-2

Case No.: U-21981

Exhibit No.: A-16 (SAS-8)

Schedule: F-4

Page: 4 of 5

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)
No.	Monthly Use	Present Net Monthly Bill	Proposed Net Monthly Bill	Increase Amount	Percent	Proposed Unit Cost
	Mcf	\$	\$	\$	%	\$/Mcf
22	100	862.08	944.12	82.04	9.52	9.44
23	200	1,590.43	1,743.39	152.96	9.62	8.72
24	500	3,775.48	4,141.21	365.73	9.69	8.28
25	600	4,503.83	4,940.49	436.66	9.70	8.23
26	700	5,232.18	5,739.76	507.58	9.70	8.20
27	800	5,960.53	6,539.03	578.50	9.71	8.17
28	1000	7,417.23	8,137.58	720.35	9.71	8.14

	Present	Proposed
Customer Charge (\$/Mth)	133.73	144.85
Distribution Charge (\$/Mcf)	3.5935	4.3027
GCR Factor (\$/Mcf)	3.6900	3.6900

Schedule F-4

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Comparison of Present and Proposed Monthly Bills

General Large Service GS-3

Case No.: U-21981

Exhibit No.: A-16 (SAS-8)

Schedule: F-4

Page: 5 of 5

Witness: SASmith

Date: December 2025

Line	(a)	(b)	(c)	(d)	(e)	(f)
No.	Monthly Use	Present Net Monthly Bill	Proposed Net Monthly Bill	Increase Amount	Percent	Proposed Unit Cost
	Mcf	\$	\$	\$	%	\$/Mcf
29	100	1,034.95	1,146.90	111.95	10.82	11.47
30	200	1,739.73	1,918.52	178.79	10.28	9.59
31	500	3,854.07	4,233.38	379.31	9.84	8.47
32	600	4,558.85	5,005.00	446.15	9.79	8.34
33	700	5,263.63	5,776.62	512.99	9.75	8.25
34	800	5,968.41	6,548.24	579.83	9.71	8.19
35	1000	7,377.97	8,091.48	713.51	9.67	8.09

	Present	Proposed
Customer Charge (\$/Mth)	330.17	375.28
Distribution Charge (\$/Mcf)	3.3578	4.0262
GCR Factor (\$/Mcf)	3.6900	3.6900

Line No.	(a) Description	(b) Storage Revenue Requirement (\$000) ⁽¹⁾	(c) Transportation Throughput (MMcf) ⁽²⁾	(d) Storage Cost Per Mcf of Throughput (b / c)	(e)	(f)
1	Storage Related Cost	\$ 26,838	84,973	\$ 0.3158		
	ATL as a Percent of ACQ	Present Rates	Proposed Per Mcf of Throughput Adjustment	Storage Cost Difference from Average Per Mcf by ATL Level	Initial Adjusted ATL Throughput Adjustment	Percentage Adjustment To Match XXLT 4% ⁽³⁾
2	2.00%	\$ (0.0738)	\$ (0.1459)	\$ (0.2189)	\$ (0.3148)	46.36%
3	4.00%	\$ (0.0511)	\$ (0.1010)	\$ (0.1221)	\$ (0.2179)	46.36%
4	6.50%	\$ (0.0227)	\$ (0.0449)	\$ (0.0010)	\$ (0.0969)	46.36%
5	7.50%	\$ (0.0113)	\$ (0.0225)	\$ 0.0474	\$ (0.0484)	46.36%
6	8.50%	\$ -	\$ -	\$ 0.0959	\$ -	46.36%
7	9.50%	\$ 0.0113	\$ 0.0225	\$ 0.1443	\$ 0.0484	46.36%
8	10.50%	\$ 0.0227	\$ 0.0449	\$ 0.1927	\$ 0.0969	46.36%
11					XXLT Adjustment ⁽³⁾	\$ (2,000.04)
12						\$ (2,000.04)
						\$ -

Notes

⁽¹⁾ Exhibit A-16 (SAS-2), Schedule F-1, page 1, line 27, columns (i) - (l)

⁽²⁾ Exhibit A-15 (MA-7), Schedule E-3

⁽³⁾ Adopted methodology from MPSC Staff approved in Case No. U-20322. Directly adjusted the per Mcf storage cost based on the ratio of the ATL tiers and the average ATL of 6.5% (Calculated in WP-SAS-4). This results in a cost per Mcf for each tier of ATL. Then adjusted each of the tiers' adjustments by the percentage necessary to result in the same storage cost adjustment for XXLT at a 4% ATL.

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy CompanyCalculation of Test Year Discount and Carrying Cost Rates
for the Customer Attachment Program

Case No.: U-21981

Exhibit No.: A-136 (SAS-10)

Page: 1 of 1

Witness: SASmith

Date: December 2025

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)
		Capital Structure			After Tax Weighted Cost of Permanent Capital	Pre Tax Weighted Cost of Permanent Capital
		Amount Outstanding (\$000,000) ⁽¹⁾	% of Permanent Capital	Cost Rate ⁽¹⁾		
1	Long-Term Debt	14,334	49%	4.53%	2.22%	2.22%
2	Preferred Stock	37	0.13%	4.50%	0.01%	0.01%
3	Common Equity	<u>14,811</u>	50.75%	10.25%	5.20%	6.96%
4	Total Permanent Capital	<u>\$ 29,182</u>				
5	Discount Rate				7.43%	
6	Carrying Cost Rate					9.19%

Notes⁽¹⁾ Exhibit A-14 (MRB-1), Schedule D-1, page 1

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy Company

Calculation of Home Products Credit

Case No.: U-21981

Exhibit No.: A-137 (SAS-11)

Page: 1 of 1

Witness: SASmith

Date: December 2025

Line No.	Description	(a) Test Year Sales ⁽¹⁾ MMcf	(b) Home Products Gain Share \$000	(c) Home Products Total Credit \$/Mcf (b) / (a)
1	Residential Service	152,505	\$ (18,987)	\$ (0.1245)
	General Service			
2	Small Service GS-1	27,629	(2,484)	\$ (0.0899)
3	Medium Service GS-2	31,059	(1,763)	\$ (0.0568)
4	Large Service GS-3	8,007	(367)	\$ (0.0458)
5	Total General Service	66,695	(4,614)	
	Transportation			
6	Small Transport ST	18,612	(594)	\$ (0.0319)
7	Large Transport LT	17,384	(383)	\$ (0.0220)
8	Extremely Large Transport XLT	25,258	(427)	\$ (0.0169)
9	Extra Extremely Large Transport XXLT	18,205	(204)	\$ (0.0112)
10	Total Transportation	79,460	(1,608)	
11	Total	298,659	\$ (25,208)	

Notes⁽¹⁾ Through September 2027

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

BRIAN J. VANBLARCUM

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

BRIAN J. VANBLARCUM
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Brian J. VanBlarcum, and my address is One Energy Plaza, Jackson, Michigan
3 49201.

4 **Q. By whom are you employed?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”).

6 **Q. What is your position with Consumers Energy?**

7 A. I am a Tax Director in the Company’s Corporate Tax Department.

8 **Q. Please briefly describe your educational background.**

9 A. I am a graduate of Western Michigan University where I earned a Bachelor of Business
10 Administration degree in Finance.

11 **Q. Please describe your business experience.**

12 A. I started with the Company in 2004 as a General Accounting Analyst with the Company’s
13 Property Accounting team. In 2019, I was appointed to my current position as Tax Director
14 with the Company’s Corporate Tax Department.

15 **Q. Are you a certified assessor?**

16 A. I am a Michigan Certified Assessing Officer certified by the State of Michigan’s State Tax
17 Commission and a member of the Michigan Assessors Association.

18 **Q. What are your responsibilities as Tax Director?**

19 A. I am responsible for the administration of the Company’s real and personal property taxes.
20 This includes: (i) managing the Company’s self-declaration of personal property located
21 within the state of Michigan; (ii) overseeing property tax matters concerning the
22 Company’s land, generating sites, and other real property; and (iii) supervising tax
23 payments to approximately 1,500 taxing authorities. I am also responsible for the

BRIAN J. VANBLARCUM
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1 calculation of federal and state tax depreciation related to the Company's fixed assets and
2 the associated deferred income taxes.

3 **Q. Have you previously testified before the Michigan Public Service Commission**
4 **(“MPSC” or the “Commission”)?**

5 **A.** Yes, I sponsored testimony in the following cases:

- 6 • Gas Rate Case No. U-15506;
- 7 • Electric Rate Case No. U-15645;
- 8 • Electric Rate Case No. U-16191;
- 9 • Gas Rate Case No. U-16418;
- 10 • Electric Rate Case No. U-17087;
- 11 • Electric Rate Case No. U-17735;
- 12 • Gas Rate Case No. U-17882;
- 13 • Electric Rate Case No. U-17990;
- 14 • Gas Rate Case No. U-18124;
- 15 • Electric Rate Case No. U-18322;
- 16 • Gas Rate Case No. U-18424;
- 17 • Electric Rate Case No. U-20134;
- 18 • Gas Rate Case No. U-20322;
- 19 • Gas Rate Case No. U-20650;
- 20 • Electric Rate Case No. U-20697;
- 21 • Gas Rate Case No. U-21148;
- 22 • Electric Rate Case No. U-21224;
- 23 • Gas Rate Case No. U-21308;

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- Electric Rate Case No. U-21389;
- Gas Rate Case No. U-21490;
- Electric Rate Case No. U-21585;
- Gas Rate Case No. U-21806; and
- Electric Rate Case No. U-21870.

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

A. My direct testimony identifies the Property Tax Rate for the test year (12 months ending October 31, 2027) and explains how the rate was derived. I am also supporting the amount of test year excess deferred federal income taxes being returned to gas customers as a result of the Tax Cuts and Jobs Act of 2017 (“TCJA”) and the Commission’s September 26, 2019 Order in the Company’s Calculation C Case No. U-20309.

Q. Have you prepared any exhibits to accompany your direct testimony?

A. Yes. I am sponsoring:

Exhibit A-125 (BJV-1)	Development of the Property Tax Rate for the Test Year; and

Exhibit A-126 (BJV-2)	Amortization of Excess Deferred Federal Income Taxes for the Test Year and Tax Reform Regulatory Liability & Amortization.

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

A. Yes.

Development of the Property Tax Rate for the Test Year

Q. What is the Property Tax Rate for the test year?

A. As indicated on Exhibit A-125 (BJV-1), page 1, line 16, the Property Tax Rate for the test year is 0.013931555.

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1 **Q. How did you calculate the Property Tax Rate for the test year?**

2 A. The Property Tax Rate for the gas business was calculated using the Company's prorated
3 Gas Property Tax Expense in Exhibit A-125 (BJV-1), page 1, line 10, divided by the total
4 of the 2026 estimated year-end plant-in-service in Exhibit A-125 (BJV-1), page 1, line 11,
5 plus one-half of the estimated 2026 Construction Work in Progress in Exhibit A-125
6 (BJV-1), page 1, line 14.

7 **Q. What is included in the Gas Property Taxes Paid – 2026 Estimate on**
8 **Exhibit A-125 (BJV-1), page 1, line 1?**

9 A. The Consumers Energy 2025 taxes paid of \$208.7 million on behalf of the gas portion of
10 the business represents estimated property taxes to be paid in 2026.

11 **Q. What is included in the Gas Property Taxes on 2026 Plant Investment on**
12 **Exhibit A-125 (BJV-1), page 1, line 2?**

13 A. The \$19.5 million increase is the estimated property taxes on the 2026 net additions that
14 will be included in the 2027 property tax liability. This is calculated by taking the capital
15 additions, less retirements, times the first year State Tax Commission multiplier table value
16 to recognize a depreciation allowance, which is then multiplied by the statutory reduction
17 of 50% of true cash value to get the assessed value, then multiplied by Consumers Energy's
18 composite millage rate of 49.7863 to obtain the estimated tax amount. This calculation is
19 shown on Exhibit A-125 (BJV-1), page 2, line 9.

20 **Q. What is included in the Gas Property Taxes on Real Property Taxable Value**
21 **Increases – Inflation on Exhibit A-125 (BJV-1), page 1, line 3?**

22 A. The \$0.1 million increase for the Real Property Taxable Value relates to the Michigan
23 Constitution of 1963, Article IX, Section 3, allowing local assessors to raise real property

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1 taxable values by the lesser of 5% or the Consumer Price Index ("CPI"). For 2027, the
2 Company's property tax model assumes a CPI rate of 2.3%. This calculation is shown on
3 Exhibit A-125 (BJV-1), page 3.

4 **Q. What is the result of including the Gas Property Taxes on 2026 Plant Investment and**
5 **the Gas Property Taxes on Real Property Taxable Value Increase on the estimated**
6 **2027 property tax amount paid by the gas business?**

7 A. The result of including these additional items is an estimated 2027 property tax amount to
8 be paid for the gas business of \$228.3 million as shown on Exhibit A-125 (BJV-1), page 1,
9 line 4.

10 **Q. How is this paid amount converted to an expense amount?**

11 A. Since the Company expenses property taxes based on the fiscal year of the taxing
12 authorities, 50.0% of the 2026 estimated gas property tax payments for Consumers Energy
13 is added to the 2027 estimated gas payments since that amount will be expensed in 2027,
14 while subtracting 50.0% of the 2027 estimated gas payments that will be expensed in 2028,
15 arriving at a total 2027 property tax expense of \$218.5 million as shown on Exhibit A-125
16 (BJV-1), page 1, line 7.

17 **Q. What is the next step in calculating the tax rate for the test year?**

18 A. For the test year, property tax expense was prorated for the period November 1, 2026
19 through October 31, 2027 using a monthly budgeted sales percentage applied to the 2026
20 and 2027 estimated annual property tax expense amounts. The result of factoring property
21 tax expense monthly for the test year is a prorated Gas Property Tax Expense of
22 \$213.6 million. The Prorated Property Tax Expense for the test year is divided by the 2026

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estimated year-end plant-in-service plus one-half of 2026 Estimated Construction Work in Progress to arrive at an average tax rate of 0.013931555.

Amortization of Excess Deferred Federal Income Taxes for the Test Year

Q. On September 26, 2019, the Commission issued an Order in the Company's Calculation C Case No. U-20309. What specific issues did the September 26, 2019 Order in Case No. U-20309 address?

A. The Commission's September 26, 2019 Order in the Company's Calculation C Case No. U-20309 authorized the amount and time period under which the Company will refund to gas customers \$451,588,000 of excess deferred federal income taxes as a result of the TCJA lowering the corporate income tax rate from 35% to 21%. As part of the settlement terms in Case No. U-21148, the Commission approved an adjustment to reduce this amount by \$4,174,259 to correct an overstatement of the TCJA remeasurement. The Commission authorized three different amortization periods: (i) Protected plant balances over an amortization period determined using the average rate assumption method ("ARAM"), (ii) Non-Protected plant balances amortized over 44 years, and (iii) Unprotected non-plant balances amortized over 10 years. Exhibit A-126 (BJV-2), page 2, referenced as Exhibit A-6 (SBM-4) in Case No. U-20309, provides the projected annual amortization of these balances based on the periods approved by the Commission.

Q. What impact did the settlement terms in Case No. U-20650 have on the unprotected non-plant balance?

A. The settlement in Case No. U-20650 accelerated the amortization of the remaining unprotected, non-plant balance to the period October 1, 2021 through September 30, 2022.

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As of October 1, 2022, the regulatory liability balance has been fully refunded to customers. Therefore, no amortization has been included in this case.

Q. What additional amount of excess deferred taxes related to the TCJA has the Company proposed to charge to customers in this case?

A. As shown on Exhibit A-126 (BJV-2), page 1, line 22, the Company has proposed to charge an additional \$1,493,000 of excess deferred taxes (\$2,003,000 of regulatory asset after gross-up for taxes) in this case. This amount represents the Company's regulatory asset recorded as of year-end 2023 which was calculated as the difference between the actual amount of excess deferred taxes for the year and the estimated amount included in rates. The Company's most recently filed report to the Case No. U-20309 docket, which calculates the \$2,003,000 regulatory balance, is included as Exhibit A-126 (BJV-2), page 3.

Q. Based on the Commission's September 26, 2019 Order in Case No. U-20309 and the additional amount described above, what amount of excess deferred federal income tax has the Company proposed to return to customers in this case?

A. Exhibit A-126 (BJV-2), page 1, provides a calculation of the test year excess deferred federal income taxes included in this case based on the periods approved by the Commission in Case No. U-20309. Overall, the Company reduced Federal Income Tax Expense for the test year by \$2.813 million to reflect the amortization periods and amounts discussed above. This amount is shown on Company witness Heather L. Rayl's Exhibit A-13 (HLR-45), Schedule C-8, lines 43, 47, and 48 as TCJA Tracker – U-20309, TCJA Amortization – ARAM, and TCJA – Non ARAM.

BRIAN J. VANBLARCUM
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1 **Q. Are the excess deferred federal income tax amounts refunded to gas customers in the**
2 **test year estimates or actuals?**

3 A. The amounts included in this case are estimates as the Commission's September 26, 2019
4 Order in Case No. U-20309 requires an annual reconciliation of the actual amount of excess
5 deferred federal income tax in a given year and the estimated amount included in rates.
6 The Company will file this reconciliation in the Case No. U-20309 docket by March 31 of
7 each year.

8 **Q. Does this conclude your direct testimony?**

9 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

BRIAN J. VANBLARCUM

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Development of the Property Tax Rate for the Test Year

Case No.: U-21981
Exhibit No.: A-125 (BJV-1)
Page: 1 of 3
Witness: BJVanBlarcum
Date: December 2025

Line No.	(a) Description	(b) Amount (millions)	(c) Amount (millions)	(d) Amount (millions)	(e) Source
1	Gas Property Taxes Paid - 2026 Estimate			\$ 208.7	WP BJV-5, L-4
2	Gas Property Taxes on 2026 Plant Investment			19.5	Ex. A-125 (BJV-1), p.2, L-9
3	Gas Property Taxes on Real Property Taxable Value Increases - Inflation			0.1	Ex. A-125 (BJV-1), p.3, L-4
4	Gas Property Taxes to be Paid - 2027			\$ 228.3	
5	2026 Fiscal Year Property Taxes expensed in 2027			104.4	(Line 1 * 50.0%) ¹
6	2027 Property Taxes expensed in 2028			(114.2)	(Line 4 * 50.0%) ¹
7	Gas Property Tax Expense - 2027			<u>\$ 218.5</u>	
8	Prorated Gas Property Tax Expense (November - December 2026)			48.7	WP-BJV-5, L-9
9	Prorated Gas Property Tax Expense (January - October 2027)			164.9 ⁴	
10	Prorated Gas Property Tax Expense			<u>213.6</u>	(L-8 + L-9)
11	2026 Estimated Year-End Plant-in-Service		\$ 15,135.2 ²		
12	2026 Estimated Construction Work-in-Progress	\$ 393.8 ³			
13	@ 50%	<u>50.00%</u>			
14	2026 Estimated Construction Work-in-Progress		<u>\$ 196.9</u>		
15	Estimated Taxable Plant			<u>\$15,332.1</u>	(L-11 + L-14)
16	Property Tax Rate			<u>0.013931555</u>	(L-10/L-15)

Footnotes

¹ The 50.0% factor is from the 2024 CE Property Tax Fiscal Year Study

² Plant in Service Balance as of 12-31-2026; Plant Model U-21981.xlsx; PIS(WP-HLR-17); Cell AH30

³ Construction Work in Progress Balance as of 12-31-2025; Plant Model U-21981.xlsx; CWIP(WP-HLR-18); Cell AI30

⁴ Development of 2027 Prorated Property Tax Expense

2027 PT Expense	\$	218.5	Ex. A-125 (BJV-1), p.1, L-7
Jan-Oct Expense Ratio		75.46%	Plant Model U-21981.xlsx; Input, Cells B200-K200
Prorated 2027 PT Expense	<u>\$</u>	<u>164.9</u>	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Development of the 2027 Property Taxes
 on 2026 Plant Investment

Case No.: U-21981
 Exhibit No.: A-125 (BJV-1)
 Page: 2 of 3
 Witness: BJVanBlarcum
 Date: December 2025

Line No.	(a) Description	(b) Amount (millions)	(c) Source
1	Assessed Value of Personal Property (millions)		
2	Year-end 2026 Estimated Taxable Closings less Retirements	\$ 831.3	¹
3	First Year STC Multiplier	<u>94.0%</u>	²
4	True Cash Value of Personal Property (millions)	\$ 781.4	
5	Statutory Factor for Assessed Value	<u>50%</u>	³
6	New Plant - Assessed Value	\$ 390.7	
7	Estimated Property Tax (millions)		
8	Estimated Composite Millage Rate	<u>49.7863</u>	⁴
9	Estimated 2027 Property Taxes Paid	<u>\$ 19.5</u>	

Footnotes

¹ 2027 Gas Rate Case Property Tax Model

² Michigan Dept of Treasury Form 3589 - 1st year multiplier for Gas Distribution and Transmission Equipment

³ Article IX, Section 3 of Constitution of Michigan of 1963

⁴ CE Composite Millage Rate.xls

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy CompanyDevelopment of the 2027 Estimated Gas Portion of
Real Property Taxable Value Increase

Case No.: U-21981

Exhibit No.: A-125 (BJV-1)

Page: 3 of 3

Witness: BJVanBlarcum

Date: December 2025

Line No.	(a) Description	(b) Amount (millions)	(c) Source
1	2027 Estimated Gas Portion of Real Property Tax Increase (millions)		
2	2027 Real Property Taxable Value - Estimated Gas Portion	\$ 1.1 ¹	
3	2027 Estimated Composite Millage Rate	<u>49.7863</u> ²	
4	2027 Estimated Gas Portion of Real Property Taxable Value increase	<u>\$ 0.1</u>	

Footnotes¹ 2027 CE Property Tax Budget² CE Composite Millage Rate.xls

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Amortization of Excess Deferred Federal
Income Taxes for the Test Year

Case No.: U-21981
Exhibit No.: A-126 (BJV-2)
Page: 1 of 3
Witness: BJVanBlarcum
Date: December 2025

	(a)	(b)	(c)	(d)
Line No.	Description	Projected Regulatory ¹ Liability Amortization	Projected Annual ² Excess Deferred Tax	Proration to Test Year
1	Protected Plant Balance - Subject to ARAM			
2	2026	(10,284,000)	(7,668,584)	(1,278,097)
3	2027	(9,785,000)	(7,296,489)	(6,080,407)
4				
5	TCJA Amortization - ARAM			(7,359,000)
6				
7				
8				
9	Non-Protected Plant Balance - 44 years			
10	2026	4,094,000	3,052,818	508,803
11	2027	4,094,000	3,052,818	2,544,015
12				
13				
14	Non-Protected Other Balance - 10 years ³			
15	2026	-	-	-
16	2027	-	-	-
17				
18	TCJA Amortization - Non ARAM			3,053,000
19				
20				
21				
22	TCJA Regulatory Asset	2,002,541	1,493,257	1,493,000
23				
24				
25	Total Test Year Excess Deferred Taxes			(2,813,000)

¹ Based on the Company's regulatory liability amortization schedule approved in Case No. U-20309.

² Adjustment to pre-tax based on 1.341056 gross-up factor used in Case No. U-20309.

³ The Non-Protected Other Balance was fully refunded to customers as part of the U-20650 settlement agreement.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Case No.: U-21981
Exhibit No.: A-126 (BJV-2)
Page: 2 of 3
Witness: BJVanBlarcum
Date: December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

CE Gas
Projected Tax Reform Regulatory Liability & Amortization
(\$000)

Case No.: U-20309
Exhibit No.: A-6 (SBM-4)
Page: 1 of 1
Witness: SBMcIntosh
Date: April 2019

	(a)	(b)	(c)	(d)	(e)
Line No.	Description	Plant Diff *	Oth Plant Diff ***	All Other	Total Gas
1	Amortization Period	ARAM	44	10	
2					
3	Tax Reform Regulatory Asset (Liability) After Gross Up	\$ (552,353)	\$ 184,295	\$ (79,356)	\$ (447,414)
4					
5	Amortization Schedule				
6	**2019	(2,849)	1,023	(1,984)	(3,810)
7	**2020	(9,473)	4,094	(7,936)	(13,315)
8	2021	(9,729)	4,094	(7,936)	(13,571)
9	2022	(9,873)	4,094	(7,936)	(13,715)
10	2023	(9,532)	4,094	(7,936)	(13,374)
11	2024	(9,375)	4,094	(7,936)	(13,217)
12	2025	(10,020)	4,094	(7,936)	(13,862)
13	2026	(10,284)	4,094	(7,936)	(14,126)
14	2027	(9,785)	4,094	(7,936)	(13,627)
15	2028	(9,753)	4,094	(7,936)	(13,594)
16	2029	(10,340)	4,094	(5,952)	(12,198)
17	2030	(10,773)	4,094	-	(6,680)
18	2031	(10,919)	4,094	-	(6,825)
19	2032	(11,389)	4,094	-	(7,295)
20	2033	(11,877)	4,094	-	(7,784)
21	2034	(12,460)	4,094	-	(8,366)
22	2035	(13,242)	4,094	-	(9,148)
23	2036	(14,059)	4,094	-	(9,966)
24	2037	(14,146)	4,094	-	(10,052)
25	2038	(14,240)	4,094	-	(10,146)
26	2039	(14,259)	4,094	-	(10,166)
27	2040	(14,242)	4,094	-	(10,148)
28	2041	(14,257)	4,094	-	(10,163)
29	2042	(14,317)	4,094	-	(10,224)
30	2043	(14,371)	4,094	-	(10,277)
31	2044	(14,355)	4,094	-	(10,261)
32	2045	(14,314)	4,094	-	(10,221)
33	2046	(14,270)	4,094	-	(10,177)
34	2047	(14,252)	4,094	-	(10,158)
35	2048	(14,235)	4,094	-	(10,141)
36	2049 - 2063 ***	(195,362)	64,556	-	(130,806)
37		\$ (552,353)	\$ 184,295	\$ (79,356)	\$ (447,414)

* Subject to the normalization provisions of the Internal Revenue Code.

** Assumes Deferred Tax Expense adjustment in U-20322 test period.

*** Includes a \$4,174,259 beginning balance adjustment related to AFUDC approved by the Commission in U-21148.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Case No.: U-21981
Exhibit No.: A-126 (BJV-2)
Page: 3 of 3
Witness: BJVanBlarcum
Date: December 2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
CE Gas
Tax Reform Regulatory Liability & Amortization

Case No.: U-20309
Date: March 2025

	(1) Beginning Balance	(1-A) Rate Change Gross-up Adjustment ^(C)	(2) Amount Refunded	(3) Regulatory Asset (Liability)	(2-A) Regulatory Asset/(Liability) Refunded ^(C)	(3-A) Remaining Regulatory Asset/ (Liability)	(4) Ending Balance
2019	\$ (451,588,375)		\$ 4,277,605	\$ (875,788) ^(D)	\$ 875,788 ^(D)	\$ -	\$ (446,434,982)
Beginning Balance Adj ^B	\$ 4,174,259		\$ -	\$ -	\$ -	\$ -	\$ (442,260,723)
2020	\$ (442,260,723)		\$ 13,315,000	\$ (1,352,859) ^(E)	\$ 1,352,859	\$ -	\$ (427,592,864)
2021	\$ (427,592,864)		\$ 31,207,624	\$ (4,671,652) ^(F)	\$ 1,449,613	\$ (3,222,039)	\$ (391,713,588)
2022	\$ (391,713,588)		\$ 49,166,110	\$ 3,405,670 ^(G)	\$ -	\$ 3,405,670	\$ (345,953,148)
2023	\$ (345,953,148)	\$ 529,590	\$ 5,438,000	\$ 2,002,541	\$ -	\$ 2,002,541	\$ (341,988,099)
2024	\$ (341,988,099)		\$ 5,269,000	\$ 1,443,342	\$ -	\$ 1,443,342	\$ (338,162,441)

^(B) In its original U-20309 filing, the Company inadvertently included in its unprotected plant balance a remeasurement of excess deferred taxes associated with AFUDC timing differences. A subsequent reconciliation of the 2019 TCIA balance highlighted this discrepancy. The Company reflected this proposed change in Case No. U-21148 and the Commission subsequently approved the adjustment in its July 7, 2022 order.

^(C) Gross-up change to the regulatory liability balance due to a statutory or apportionment rate change.

^(D) Included in Case No. U-21148.

^(E) Included in Case No. U-21308.

^(F) Included in Case No. U-21490.

^(G) Included in Case No. 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

DIRECT TESTIMONY

OF

LINCOLN D. WARRINER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

LINCOLN D. WARRINER
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Lincoln D. Warriner, and my business address is 1945 West Parnall Road,
3 Jackson, Michigan 49201.

4 **Q. By whom are you employed?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”).

6 **Q. What is your current position with Consumers Energy?**

7 A. My current position is Senior Strategy Manager in the Gas Engineering and Supply
8 Department.

9 **Q. What are your responsibilities as Senior Strategy Manager?**

10 A. I assist the Gas Engineering and Supply and Gas Operations departments with asset
11 lifecycle oversight, guidance, and leadership of the Natural Gas Delivery Plan (“NGDP”)
12 development, implementation, recovery, and verification of results focused on the
13 Company’s investment and operation of gas distribution assets.

14 **Q. Please describe your professional work experience.**

15 A. I have been employed by Consumers Energy for more than 38 years. I was promoted to
16 the position of Senior Strategy Manager in Gas Engineering and Supply during 2021. My
17 experience with the Company is summarized as follows:

18 I began working for the Company in June 1987 as a Region Accountant at the Grand
19 Rapids Service Center. While there, I performed various reviews of internal accounting
20 control procedures and workflow processes. In 1989, I transferred to a similar position at
21 the Lansing Service Center. In 1991, I took a position as a Management Systems and
22 Planning Analyst in the Southern Region Administration and Planning Department. My
23 primary responsibility in this position was to provide analytical support to region

LINCOLN D. WARRINER
U-21981 DIRECT TESTIMONY

1 management on issues concerning Operating and Maintenance (“O&M”) and construction
2 budgets and other performance measurements. In February 1994, I took a position as an
3 Administrative Supervisor responsible for the supervision of several administrative
4 functions including region accounts payable, miscellaneous accounts receivable, cash
5 receipts and disbursements, payroll, records center, and mail room operations. In February
6 1995, I transferred to the Electric Strategic Business Unit (“SBU”) Planning Department,
7 which was subsequently consolidated within the Rates and Business Support Department.
8 In that department, I was responsible for coordinating the development of financial plans,
9 budgets, analysis, and forecasts for the Electric SBU. My responsibilities expanded within
10 the Rates and Business Support Department to include the electric deliveries and peak
11 demand forecasts, as well as supervisory responsibility for the Company’s electric revenue
12 forecasts and gas deliveries forecasts. In October 2012, I accepted a new position
13 supporting the Smart Energy Development Project by maintaining the project business
14 case, evaluating the estimated costs and benefits of the project, partnering with operating
15 departments to plan for the realization of project benefits, and providing analytical support
16 for various regulatory filings. In January 2016, I accepted a new position as a Financial
17 Benchmarking Analyst in the Economic Portfolio Management Section of the Distribution
18 Operations, Engineering, and Transmission Department. In this role, I supported the
19 Company’s strategic capital allocation, long-term financial planning, and annual budgeting
20 and forecasting processes. In July 2017, my position transitioned into the Rate
21 Case/Controls section of the Gas Strategy Department to provide support for Company
22 witnesses with the development of testimony and exhibits and assist in responding to data
23 requests that occur during audit and discovery phases of general rate cases. I was promoted

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1 to my current position in 2021 to assist with gas distribution asset strategy planning and
2 implementation.

3 **Q. Please describe your educational background.**

4 A. I received a Bachelor of Science Degree in Business Administration with a major in
5 Accounting from Central Michigan University in 1987. In 1994, I received a Master of
6 Science in Administration Degree from Central Michigan University.

7 **Q. Have you testified in other cases before the Michigan Public Service Commission**
8 **(“MPSC” or the “Commission”)?**

9 A. Yes. I have provided testimony in the following Case Nos.:

- 10 • Case No. U-16191 – January 2010 Electric Rate Case;
- 11 • Case No. U-16412 – September 2010 Energy Optimization Plan Amendment;
- 12 • Case No. U-16418 – August 2010 Gas Rate Case;
- 13 • Case No. U-16432 – September 2010 Power Supply Cost Recovery (“PSCR”)
14 Plan Case;
- 15 • Case No. U-16543 – February 2011 Renewable Energy Plan Amendment;
- 16 • Case No. U-16794 – June 2011 Electric Rate Case;
- 17 • Case No. U-16670 – August 2011 Energy Optimization Plan Amendment;
- 18 • Case No. U-16890 – September 2011 and February 2012 PSCR Plan Case;
- 19 • Case No. U-16924 – December 2011 Gas Cost Recovery Plan Case;
- 20 • Case No. U-17087 – September 2012 Electric Rate Case;
- 21 • Case No. U-17095 – September 2012 PSCR Plan Case;
- 22 • Case No. U-17429 – July 2013 Certificate of Necessity Filing for the Thetford
23 Generating Plant;
- 24 • Case No. U-17643 – July 2014 Gas Rate Case;
- 25 • Case No. U-17735 – December 2014 Electric Rate Case;

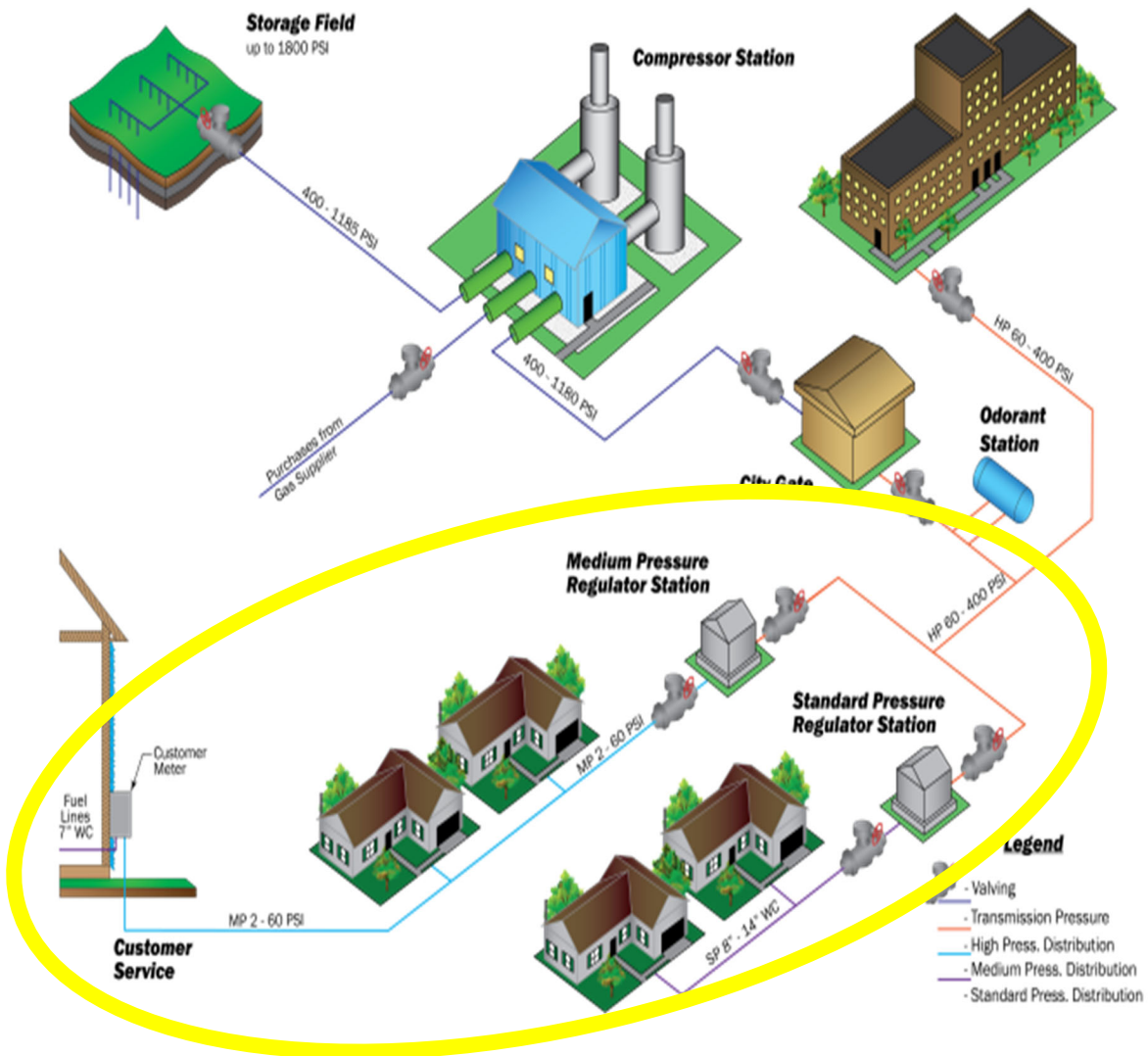
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- Case No. U-17882 – July 2015 Gas Rate Case;
- Case No. U-17990 – March 2016 Electric Rate Case;
- Case No. U-17087 Remand – June 2016 Remand Electric Rate Case;
- Case No. U-18124 – August 2016 Gas Rate Case;
- Case No. U-18322 – March 2017 Electric Rate Case;
- Case No. U-20134 – May 2018 Electric Rate Case;
- Case No. U-20697 – February 2020 Electric Rate Case;
- Case No. U-21308 – December 2022 Gas Rate Case;
- Case No. U-21490 – December 2023 Gas Rate Case; and
- Case No. U-21806 – December 2024 Gas Rate Case.

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to explain the Company's request for rate relief as it relates to certain gas distribution capital investments that are intended to keep the system safe and reliable while providing affordable and clean energy to customers. The distribution assets are the portion of the Company system that receives the gas at the outlet of the Company's city gates and delivers the gas to customers. In the diagram below, these assets are inside the yellow highlighted section.

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1 The capital expenditures described in my testimony are primarily related to the installation
2 and replacement of the Company's gas mains, services, and meters downstream of the city
3 gates. These investments will support the continued safe delivery of gas to customers
4 through this infrastructure. I will also briefly discuss the information technology ("IT")
5 projects that are critically important to support these gas functions within the Company.
6 These IT projects are fully developed, presented, and supported by Company witness
7 Stacy H. Baker.

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Q. How does your direct testimony relate to the NGDP presented by Company witness Trevor M. Blattner?

A. Mr. Blattner's direct testimony discusses the Company's NGDP. My direct testimony contains elements that support the objectives of the NGDP: providing gas supply that is safe, reliable, affordable, and clean. The distribution capital programs represented in my direct testimony work toward achieving the NGDP's objectives of providing safe and reliable service to both new and existing customers within the Company's natural gas service area.

Q. How does the scope of your testimony compare to the testimony you provided in the Company's last gas rate case (Case No. U-21806)?

A. The capital programs described in my testimony are the same as the capital programs I sponsored in Case No. U-21806.

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring the following exhibits:

Exhibit A-12 (LDW-1)	Schedule B-5.8	Projected Capital Expenditures, Distribution Plant, Summary of Actual & Projected Gas and Common Capital Expenditures;

Exhibit A-127 (LDW-2)		Actual & Projected Gas Capital Expenditures - New Business Program;

Exhibit A-128 (LDW-3)		Actual & Projected Gas Capital Expenditures - Asset Relocation Program;

Exhibit A-129 (LDW-4)		Actual & Projected Gas Capital Expenditures - Regulatory Compliance Program;

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Exhibit A-130 (LDW-5) Actual & Projected Gas Capital
Expenditures – Capacity/
Deliverability Program; and

Exhibit A-131 (LDW-6) Projected Capital Expenditures –
Transmission & Distribution Plant,
Summary of Actual & Projected Gas
Capital Expenditures.

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

A. Yes.

Q. Please summarize your direct testimony.

A. My direct testimony explains the Company's projections of certain Gas Distribution capital program investments through October 31, 2027, which are displayed on Exhibit A-12 (LDW-1), Schedule B-5.8. The total Gas Distribution capital expenditures supported by this direct testimony are as follows:

- Calendar year 2024 actual capital expenditures of \$187,325,005 as displayed on line 5, column (b), of Exhibit A-12 (LDW-1), Schedule B-5.8;
- Calendar year 2025 projected capital expenditures of \$251,585,603, as displayed on line 5, column (c), of Exhibit A-12 (LDW-1), Schedule B-5.8;
- Ten months ending October 31, 2026 projected capital expenditures of \$289,172,589, as displayed on line 5, column (d), of Exhibit A-12 (LDW-1) Schedule B-5.8; and
- Projected test year 12 months ending October 31, 2027 capital expenditures of \$301,889,599, as displayed on line 5, column (f), of Exhibit A-12 (LDW-1), Schedule B-5.8.

These expenditures are also shown in Table 1 below.

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Table 1: Gas Distribution Capital Expenditures (in thousands of dollars)

Program Description	Historical 12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
New Business	60,032	54,024	49,236	103,260	52,270
Asset Relocation	72,512	81,311	75,538	156,849	91,260
Regulatory Compliance	47,750	109,785	159,533	269,317	144,012
Capacity/Deliverability	7,031	6,466	4,866	11,332	14,347
Total Capital	187,325	251,586	289,173	540,758	301,890

I. GAS DISTRIBUTION CAPITAL EXPENDITURES

Q. Please highlight the change in test year capital expenditures compared to the historical actual capital expenditures incurred by the Company in calendar year 2024.

A. The projected test year capital expenditures of \$301.890 million are \$114.565 million more than the \$187.325 million actually incurred in calendar year 2024. The increase or decrease for each program is summarized below:

- New Business: a decrease of \$7.762 million, or approximately 12.9%;
- Asset Relocation: an increase of \$18.748 million, or approximately 25.9%;
- Regulatory Compliance: an increase of \$96.262 million, or approximately 201.6%; and
- Capacity/Deliverability: an increase of \$7.316 million, or approximately 104.1%.

As indicated above, the increase in Regulatory Compliance expenditures accounts for most of the increase in test year capital expenditures compared to the 2024 historical actual.

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1 **Q. How much of a difference was there between the 2024 actual capital expenditures for**
2 **these programs and the five-year average amount?**

3 A. The 2020-2024 five-year average amount is \$201.8 million, and the 2024 actual amount is
4 \$187.3 million, so the 2024 actual capital expenditures were approximately 7% less than
5 the five-year average. Table 2 provides the actual capital expenditures for 2020 through
6 2024 for each program, as well as the corresponding five-year average amount.

Table 2: Gas Distribution Capital Expenditures – 5 Year History (in thousands of dollars)

Program Description	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Historical 2024	Five Year Historical Average
New Business	87,021	55,373	74,088	76,320	60,032	70,567
Asset Relocation	83,973	63,376	116,504	97,685	72,512	86,810
Regulatory Compliance	38,354	46,994	22,832	34,488	47,750	38,083
Capacity/Deliverability	3,599	6,503	10,196	4,446	7,031	6,355
Total Capital	212,947	172,246	223,620	212,938	187,325	201,815

7 **Q. Please summarize the change in test year capital expenditures compared to the**
8 **historical five-year average actual capital expenditures incurred by the Company in**
9 **2020-2024.**

10 A. The projected test year capital expenditures of \$301.890 million are \$100.075 million more
11 than the historical five-year average amount of \$201.815 million, which represents an
12 increase of approximately 50%.

13 **Q. Please describe the primary changes in test year capital expenditures compared to the**
14 **historical actual capital expenditures incurred by the Company in 2020-2024.**

15 A. The projected test year capital amount of \$301.890 million exceeds both the 2024 historical
16 actual and the historical five-year average. The increase can be attributed to Maximum
17 Allowable Operating Pressure (“MAOP”) Distribution projects within the Regulatory

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Compliance Program that account for \$102.728 million of the Company's projected test year capital expenditures. This includes the following projects:

- \$50.613 million of test year capital expenditures for the Line 1002c Macomb & Oakland County MAOP project;
- \$25.021 million of test year capital expenditures for the Line 1041 Lapeer Road MAOP project;
- \$13.419 million of test year capital expenditures for the Line 1006 Phase 2 - 11 Mile and Mound to Railroad Street MAOP project; and
- \$13.674 million of test year capital expenditures for six smaller MAOP projects.

These specific projects are described in more detail within my testimony on the MAOP-Distribution sub-program.

Q. Please describe the approach used to project the Company's Gas Distribution capital expenditures for the years 2025 through the 12 months ending October 31, 2027.

A. The projected capital expenditures for this period are based on projected costs for individual projects and sub-programs necessary to ensure customer safety, meet regulatory requirements, and provide reliable service to customers. The projection methodologies vary among the different sub-programs and are described in more detail within each respective section throughout my direct testimony. The 2025 projections include actual expenditures for January through July of 2025 and estimates of expenditures for August through December of 2025. Projections of monthly 2026 and 2027 capital expenditures were used to estimate the dollars for the ten months ending October 31, 2026, and the test year period of November 1, 2026, through October 31, 2027. Monthly estimates were made with input from subject matter experts to project the timing of 2026 and 2027 expenditures.

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1 **Q. Please describe the Gas Distribution programs and sub-programs included within the**
2 **scope of your testimony and exhibits.**

3 A. The programs, as shown on Exhibit A-12 (LDW-1), Schedule B-5.8, are:

- 4 • New Business;
- 5 • Asset Relocation;
- 6 • Regulatory Compliance; and
- 7 • Capacity/Deliverability.

8 Each program includes sub-programs that provide additional detail for each program, as
9 shown on Exhibit A-127 (LDW-2) through Exhibit A-131 (LDW-6):

- 10 • New Business
 - 11 • Mains, Services & Meter Stands – Distribution
 - 12 • Large New Business Projects – Distribution
- 13 • Asset Relocation
 - 14 • Asset Relocation – Civic Improvement
 - 15 • Asset Relocation – Reimbursable
- 16 • Regulatory Compliance
 - 17 • Regulatory Base – Distribution
 - 18 • Meters
 - 19 • MAOP – Distribution
 - 20 • Cathodic - Distribution
- 21 • Capacity/Deliverability
 - 22 • Augment – Distribution

23 Many of these programs have a gas distribution and a gas transmission component to them.

24 My direct testimony represents the gas distribution portion of these programs. The direct
25 testimony of Company witnesses Michael P. Griffin, and Timothy K. Joyce represent
26 additional components of the gas transmission system as well as distribution regulating
27 stations, compression, and storage systems. The direct testimony of Company witness
28 Kristine A. Pascarello represents gas distribution system capital expenditures associated
29 with the Company's Material Condition Program and the Gas Operations Other Program.

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The direct testimony of Company witness Luther A. Bonner describes the Company's administration of the Customer Attachment Program tariff Rule C8, which regulates the Company's calculation of customer contributions associated with natural gas connection requests.

Q. Have you included contingency costs in the capital expenditures you are sponsoring?

A. No, there are not any contingency costs included in the capital expenditures.

A. New Business

Q. Please describe the capital expenditures related to the New Business Program as shown on Exhibit A-12 (LDW-1), Schedule B-5.8, line 1.

A. The New Business Program consists of the capital costs of adding new commercial, industrial, and residential customers to the Company's distribution system. The program costs include the cost of installing mains and services, and the cost of meter stands to service new customers. These projects are required in response to customer requests for new gas use at their site. Customers requesting a new connection are asked to pay for a portion of the cost to construct these projects. The amount paid by a customer is referred to as a "contribution in aid of construction" or "CIAC." The total New Business capital expenditures (net of customer contributions) that the Company experienced in 2024, and the Company's projections for the years 2025, the ten months ending October 31, 2026, and the 12-month test year ending October 31, 2027, are displayed in total on Exhibit A-12 (LDW-1), Schedule B-5.8 on line 1, columns (b) through (f), respectively. These expenditures are also shown in Table 3 below, with amounts for each sub-program identified.

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Table 3: New Business Program Capital Expenditures (expressed in thousands of dollars)

Program Description	Historical 12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/ 2026	22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
Mains, Services, Meter Stands	52,271	51,683	41,689	93,372	52,270
Large New Business Projects	7,761	2,342	7,546	9,888	0
Total New Business	60,032	54,024	49,236	103,260	52,270

Exhibit A-127 (LDW-2) provides further details of the expenditures included in this program.

Q. Please identify any regulatory standards related to the Company’s gas new business connection process.

A. Michigan Administrative Code R 460.2371 contains safety and service quality standards for gas utilities. Specific provisions include:

- A utility shall establish gas service to a customer’s premises in compliance with the Michigan gas safety standards; and
- If there is an existing main at a requesting address, a utility shall complete 90% or more of its new service installations within 15 business days of customer payment per tariff requirements and site readiness, or by a later date that is mutually agreed upon between the utility and customer.

The Company implemented plans during 2023 to address performance impacts associated with construction material delivery delays as well as other root causes of service installation delays. The Company’s plans for improving performance results are detailed in the August 4, 2023 document filed in Case No. U-21458 titled “Consumers Energy Company’s Report on Meter Malfunctions, Estimated Billing Practices, and Delays in New

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Service.”¹ The Company has been meeting the new gas service installation factor standard each month since June 2023.

Q. What is the Company’s current projection for gas new business service connections?

A. The Company projects 5,950 gas new business service connections annually during calendar years 2025, 2026, and 2027. The twelve-month ending October 31, 2027 test year forecast is also 5,950 services. These projections are significantly reduced compared to the average for the 2020 through 2024 period of 7,127 gas service installations. The variance between the test year projection and the five-year average is 1,177 services, or about 16.5% less than the five-year average.

Q. Please explain the Company’s gas new business connection projections.

A. The Company’s Customer Energy Management Department uses data from multiple sources to project and plan for future new business connections.

Internal data regarding the installation of new gas services is one important source of data used to understand trends impacting the Company’s investments in the new business program. During the five-year period of 2015 through 2019, the Company had experienced an average new gas service installation rate of approximately 9,100 new gas services installed per year.² 2019 was the last full year prior to the COVID-19 pandemic, and the Company installed 8,223 new gas service units in that year. During 2020, new gas service installations declined from 2019 by 987 units (or 12.0%) to 7,236 units.³ During

¹ The referenced report is available on the Michigan Public Service Commission’s website at the following location: <https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y0000094k46AAA>

² Historical new gas service installations per year were: 2015 – 9,943; 2016 – 9,422; 2017 – 8,482; 2018 – 9,423; 2019 – 8,223. The average for these five years is calculated as $(9,943+9,422+8,482+9,423+8,223)/5 = 9,098.6$.

³ As noted in the footnote above, new gas service installations in 2019 totaled 8,223 units.

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2021, new gas service installations increased from 2020 by 625 units (or 8.6%) to 7,861 units. During 2022, new gas service installations declined by 142 units (or 1.8%) to 7,719 units. 2023 new gas service installations also declined 849 units (or 11.0%) compared to 2022. 2024 new gas service installations again declined from 2023 by 920 units (or 13.4%). As a result, the Company has revised its long-range outlook for new gas service installation activity downward from prior forecasts.

The Company's projected service installations for 2026 and 2027 of 5,950 units reflect anticipated service installation workload that is approximately the same as what was experienced in 2024, and consistent with the first half of 2025. Therefore, the service installation projections provided by the Company's Customer Energy Management Department are based primarily on recent actual experience.

The Customer Energy Management Department also monitors the projections of the Michigan Home Builders Association ("HBA of Michigan" or "HBA"). In January of 2025, the HBA of Michigan issued their projection of calendar year single family home permits of 15,728 units in 2025 compared to 15,137 units in 2024 and 14,413 units in 2023.⁴

The Company also subscribes to economic projections published by S&P Global ("S&P"). The May 30, 2025 "State Analysis – Michigan" outlook provides the following projections of construction activity in Michigan:

⁴ Source: hbaofmichigan.com/assets/pdf/Forecast.Release.1.30.25.Final/ press release dated January 30, 2025, "2024 New Home Construction Permits at Highest Level Since 2021, 3.9% Growth Forecast for 2025"

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Table 4: S&P Global Michigan Construction Activity projections

Description	Housing Starts, total private	% Change	Single-family units	Multi- family units
2021 Actual	21,840	+12.5%	17,873	3,967
2022 Actual	20,506	-6.1%	15,889	4,618
2023 Actual	19,471	-5.0%	14,737	4,734
2024 Actual	20,395	+4.7%	16,069	4,326
2025 Projection	20,113	-1.4%	15,355	4,758
2026 Projection	20,309	+1.0%	15,592	4,717
2027 Projection	19,291	-5.0%	14,940	4,351
2028 Projection	18,588	-3.6%	14,413	4,175

1 **Q. Do you have any further comment on the level of new business program activity that**
2 **should be considered when evaluating the Company’s projections of new business**
3 **capital expenditures?**

4 **A.** Yes. The Company’s historical service installation results include customer conversions
5 to natural gas under the Customer Attachment Program (“CAP”), which are expected to be
6 relatively small in volume going forward. Projected new connection requests are expected
7 to coincide with new building construction activity. Some of these new connections are
8 expected to be located along existing gas main facilities, while others will require some
9 extension of the network of distribution mains.

10 Distribution main extensions required investments of \$17.1 million during 2024,
11 which is approximately 25.1% lower than the 2020 – 2024 historical average amount.
12 Historical main extension investments are summarized in the following table:

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Table 5: New Business Historical Main Extension Investments (\$000)

Description	Main Extension Investments (\$000)	% Change from Average
2020 Actual	38,637	+69.3%
2021 Actual	11,728	-48.6%
2022 Actual	18,121	-20.6%
2023 Actual	28,566	+25.1%
2024 Actual	17,089	-25.1%
2020-2024 Average	22,828	--

In addition to new residential subdivision developments, the Company has made investments to extend mains to a variety of customers, including the following examples:

- Battery Cell manufacturing and other manufacturing operations;
- Electricity generation operations;
- Renewable Natural Gas (“RNG”) operations;
- Other agricultural facilities;
- Manufactured home community developments; and
- Health care facility additions and expansions.

Q. Have the Company’s current projections of New Business service attachments decreased from the projections provided by the Company in Case No. U-21806?

A. Yes, the new service attachment projections in this case are lower than the new service attachment projections in my original testimony from Case No. U-21806. A comparison of New Business service attachments in each proceeding are provided below:

Table 6: New Business Program service attachment projections

Description	Historical 2024	Projected 2025	Projected 2026	Projected 2027
Case No. U-21806 ⁵	6,800	6,800	7,000	7,200
Current Projection (Case No. U-21981)	5,950	5,950	5,950	5,950
Difference (in units)	-850	-850	-1,050	-1,250
Difference (in percent)	-12.5%	-12.5%	-15.0%	-17.4%

⁵ Source: Case No. U-21490 Direct Testimony of Company witness Lincoln D. Warriner, page 17, Table 4.

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1 **Q. How many feet of gas distribution main have historically been installed as part of the**
2 **Company's New Business Program?**

3 A. During calendar years 2020 through 2024, the Company installed approximately 319.2
4 miles of gas main,⁶ or an average of approximately 63.8 miles per year. The gas main
5 installed during the 2024 historical year in this case is 48.2 miles, which is approximately
6 80% of the five-year average. During the January to September 2025 timeframe, the
7 Company installed 29.7 miles of distribution main and will likely install approximately
8 43.5 miles of distribution main for the full year of 2025, or approximately 68% of the five-
9 year average.⁷

10 **Q. What was the actual average New Business Program cost per service installed during**
11 **the 2024 historical year?**

12 A. I have calculated the average New Business Program cost per service installed during 2024
13 to be \$8,785.11. This number was calculated using the total 2024 actual New Business
14 Program capital expenditures of \$60,032,373, less the expenditures for New Business
15 Major Projects of \$7,760,989; or \$52,271,384 divided by the number of New Business
16 services installed during 2024 of 5,950 units.

17 **Q. What are the projected average New Business Program cost per service installed for**
18 **2025, 2026, and 2027?**

19 A. The projected New Business Program units and unit costs are provided in Table 5 below.
20 In addition to showing the projected units and unit costs for each calendar year, Table 5

⁶ Historical gas main installation miles: 2020: 79.0 miles; 2021: 52.2 miles; 2022: 71.2 miles; 2023: 68.6 miles; 2024: 48.2 miles. The five-year average is calculated as follows: $(79.0 + 52.2 + 71.2 + 68.6 + 48.2)/5 = 319.2/5 = 63.8$

⁷ The 2025 estimate of approximately 43.5 miles is based on October 2024 through September 2025 actual experience of 43.5 miles (or 229,799 feet).

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also documents the calculation of the test year dollars for the New Business Program. The projected capital expenditures for November through December of 2026 are 20.8% of the 2026 annual projection, and the projected capital expenditures for January through October of 2027 are 79.0% of the 2027 annual projection.

**Table 7: New Business Units and Unit Costs
(in Thousands of Dollars)**

Description	Actual 2024	Projected Calendar Year 2025	Projected Calendar Year 2026	Projected Calendar Year 2027	Projected Test Year
Total New Business Dollars (in Thousands; excluding Large New Business projects)	\$52,271	\$51,683	\$52,623	\$52,331	
Service Installation Units	5,950	5,950	5,950	5,950	
Average Unit Cost (in \$)	\$8,785.11	\$8,686.22	\$8,844.20	\$8,795.13	
Test Year Dollar Detail:					
Calendar Year amounts included in the Projected Test Year (in Thousands)			\$ 10,934 (November through December)	\$ 41,337 (January through October)	\$52,270

Q. Please explain the difference between the projected unit costs shown above, and the 2024 actual unit cost of \$8,785.04.

A. The 2027 projected unit cost of \$8,795.13 is only 0.11% more than the 2024 actual unit cost. The 2027 projected unit cost is less than what would be expected if S&P forecasts of Consumer Price escalation were used to project the 2024 unit cost forward out to 2027. The 2027 projected unit cost in a Consumer Price escalation scenario would be \$9,460.54, which is an increase of \$665.41 per unit, or 7.56% from the Company's 2027 projection.⁸

⁸ The projected Consumer Price inflation projections for 2025, 2026, and 2027 respectively are 2.8%, 2.4%, and 2.3%. The 2024 actual unit cost of \$8,785.11 x 1.028 (2025 Consumer Price Index "CPI" growth) x 1.024 (2026 CPI growth) x 1.023 (2027 CPI growth) = 9,460.54. Alternatively, the average of the 2024, 2025, and 2026 Consumer Price inflation projections is 2.5%; therefore, the calculated 2027 unit cost estimate based on the average inflation projection would be \$8,785.11 x 1.025 x 1.025 x 1.025 = \$9,460.60. The CPI growth rates used in this calculation are documented in WP-HLR-35.

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1 The 2026 projected unit cost of \$8,844.20 is only 0.67% more than the 2024 actual
2 unit cost. The 2026 projected unit cost is less than what would be expected if S&P forecasts
3 of Consumer Price escalation were used to project the 2024 unit cost forward out to 2026.
4 The 2026 unit cost in a Consumer Price escalation scenario would be \$9,247.84,⁹ which is
5 an increase of \$403.64 per unit, or 4.56% from the Company's 2026 projection.

6 The 2025 projected unit cost of \$8,686.22 is 1.13% less than the 2024 actual
7 average unit cost. The 2025 projected unit cost includes seven months of actual
8 expenditures and five months of projected expenditures, and the expected cost per unit is
9 projected to be lower than the 2024 actual amount due to lower main and meter stand
10 capital expenditures within the New Business Program during the first seven months of
11 2025.

12 **Q. Please describe the process of connecting customers under the New Business**
13 **Program.**

14 A. When the Company receives a request for a new connection, the Company documents the
15 customer's location, requested load, and required delivery pressure. The Company's
16 engineering staff then analyzes the existing system to determine the necessary steps to
17 provide gas service to that customer. In each of these cases, the customer will be
18 responsible for the cost of work required to make the connection, including main
19 installation, service installation, permit costs, etc. The determination of the amount of
20 contribution required from each customer, however, will consider projected revenue from

⁹ 2024 actual unit cost of \$8,785.11 x 1.028 (2025 CPI growth) x 1.024 (2026 CPI growth) = \$9,247.84. The CPI growth rates used in this calculation are documented in WP-HLR-35.

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the customer, according to the Customer Attachment tariffs, as stated in Rule C8 of the Company's Rate Book for Natural Gas Service (the Company's "Tariff").

Q. What is the status of the Company's CAP sub-program?

A. In 2019, the Company completed the last proactively marketed CAP main installations. The program continues to exist to track the service installations connected to the CAP mains until the associated CAP charges expire, which is 10 years from the date of installation. All new requests that require gas main extensions will continue to be processed according to the Company's Tariff relating to Customer Attachment, as stated in Rule C8 of the Company's Tariff, but the Company is not proactively soliciting to scope and construct additional CAP main extensions. New service connections to existing CAP mains are available with the prorated monthly payment option until expiration of the CAP charges on that system. Actual CAP Program service installation costs incurred during 2024 are included as part of "Mains Services & Meter Stands – Dist" on line 1, column (c) of Exhibit A-127 (LDW-2).

Q. Please describe the projects in the Large New Business sub-program, represented on Exhibit A-127 (LDW-2), line 2.

A. The Large New Business sub-program includes new customer connection projects where the estimated infrastructure cost exceeds \$500,000, the Company plans to enter a facilities agreement for unpredictable operations, or the Company deems it necessary for special tracking and project management and, therefore, included it in a separate sub-program. Projects are generally created under this sub-program when the requesting customer has signed a contract with the Company that specifies the customer load requirements and revenue expectations. As with the New Business Mains and Services sub-program,

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1 Company Tariff Rule C8, relating to the Customer Attachment Program, is utilized to
2 determine the Customer's contribution to the total project cost. During 2024 and 2025, the
3 Company is constructing a 1-mile extension of 8" high pressure steel main to serve a
4 battery manufacturing facility in Marshall and an approximately 4,500-foot extension of
5 6" high pressure steel main in Hemlock to serve a new plant that manufactures components
6 for the solar power industry. The Company is also planning to construct an approximately
7 200-foot extension of 8" high pressure steel service to serve a natural gas fired electric
8 generation facility expansion in the Lansing area and is rebuilding the Marshall-Lansing
9 city gate to serve increasing natural gas demand. Additionally, the Company is
10 constructing a city gate and a 63,000-foot extension of 6" plastic medium pressure main to
11 deliver natural gas to and RNG project and nearby dairy farms in St. Louis. During 2026,
12 the Company will install a meter stand to serve an electric generation expansion at a
13 university in our natural gas service area and will install an 18,000-foot extension of 12"
14 high pressure steel to deliver natural gas to new equipment at an agricultural production
15 facility in Sebawaing. Currently, there are no specific new projects included in the
16 projections for this sub-program for 2027. New requests for load, however, can be received
17 at any time, meaning the Company may add projects to this program as customer requests
18 materialize. There are no projections of capital investments for Large New Business
19 projects in the test year period ending October 31, 2027. Historically, the Company has
20 invested \$53.826 million since 2020 to construct gas service facilities for large
21 customers.¹⁰

¹⁰ The historical period referred to in this statement includes January 2020 through December 2024.

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Gas service facilities that have been installed as required to meet customer service requirements include high-pressure gas mains, city gate and regulating station equipment, services, and meter stands. Site restoration costs for these projects are also included in this sub-program. The projects identified in Table 8 below are examples of the Company's efforts to support economic development efforts within Michigan.

**Table 8: Large New Business Capital Expenditures
(in thousands of dollars)**

Description	Historical 2019-2021	Historical 2022	Historical 2023	Historical 2024	Projected 2025	Projected 2026
Lansing BW&L Delta Energy Park Project	33,178	675	-46	0	-10	
Other Electric Generation Expansions						1,979
Agriculture Processing Complex Projects	17,208	28	166	0	-11	12,000
Industrial Expansion Projects	5,830	9	0	2,667	32	
RNG Facilities	0	4	4,377	-1	6,300	
Battery Manufacturing Facilities	0	67	4,875	4,651	106	
Other Large New Business Projects	-2,455	65	0	444	941	
Sub-Program Level Adjustments					-5,016	-6,432
Total Capital	53,760	848	9,371	7,761	2,342	7,546

Q. Please explain why the Company includes sub-program level adjustments in Large New Business project capital expenditures in 2025 and 2026.

A. At the time the Large New Business sub-program estimates were developed for 2025 and 2026 capital expenditures, the Company did not have estimates for the RNG facility city gate and associated main extension construction in 2025 or the Agriculture Processing main extension construction in 2026 as shown in Table 8. These projects are included in

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Table 8 to provide transparency regarding recent updates to Large New Business project plans. Additionally, the Company is also involved in economic development project discussions that will likely result in expenditures for additional projects in 2026 and 2027. Over the 2020-2024 five-year time period, the Company's average capital investment in Large New Business projects averaged \$10.765 million. The Company's calendar year projections of \$2.342 million (in 2025), \$7.546 million (in 2026), and \$0.000 (in 2027) total less than one historical average calendar year.

Q. Please conclude your testimony regarding the Company's New Business Program.

A. Based on the evidence provided above, analysis indicates that the Company is prudently planning for New Business Program capital expenditures throughout the bridge period and test year in this proceeding. The Company has reduced the projected volumes of new service installations from those originally projected in Case No. U-21806, and the unit cost projections for the New Business Program are consistent with the historical 2024 actual unit cost. The potential exists for the Company to experience cost increases and customer requested main extensions in excess of the Company's forecasts for New Business Program investments. Thus, the Company respectfully requests the Commission's agreement with the Company's New Business Program projections as provided in my Exhibit A-127 (LDW-2).

B. Asset Relocation

Q. Please describe the capital expenditures related to the Asset Relocation Program as shown on Exhibit A-12 (LDW-1), Schedule B-5.8, line 2.

A. The Asset Relocation Program includes gas distribution infrastructure replacement projects that are required due to civic improvement activities initiated by federal, state, or local

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governmental units, or by individual customers with existing gas service. There are two sub-programs within the Asset Relocation Program: Asset Relocation – Civic Improvement and Asset Relocation – Reimbursable. The expenditures for each of these programs are shown in Table 9 below and Exhibit A-128 (LDW-3) provides further details of these expenditures.

**Table 9: Asset Relocation Program Capital Expenditures
(in thousands of dollars)**

Program Description	Historical 12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
Asset Relocation – Civic Improvement	49,276	63,652	63,526	127,178	76,213
Asset Relocation - Reimbursable	23,236	17,659	12,012	29,671	15,047
Total Asset Relocation	72,512	81,311	75,538	156,849	91,260

Asset Relocation – Civic Improvement consists of gas relocation work driven by municipal projects to replace or improve aging public infrastructure such as roadways, bridges, sewer lines, water lines, and drainage ditches. If the Company’s existing facilities are in the public road right-of-way by permit, and need to be moved to eliminate interference, this is done at the Company’s expense.

Asset Relocation – Reimbursable accounts for customer requested capital replacements. This includes scenarios where the customer has added load requiring facility upgrades, asked for relocation of a gas main or replacement of a gas service to accommodate a customer need, or created an unsafe situation requiring capital replacement. In the case of added load, the project is reimbursable by the customer, with the appropriate future revenue costs applied as outlined in the Company’s Tariff Rule C8.

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Other replacements, without added load, within this category can be fully reimbursed by the customer.

Q. Please further describe the expenditures associated with the Asset Relocation – Civic Improvement sub-program.

A. Asset Relocation – Civic Improvement work was recognized by the MPSC as critical work for gas utilities on page 96, section 4.2.1.6 of the September 11, 2019 Statewide Energy Assessment Final Report in Case No. U-20464 (“SEA”). Repairing and expanding infrastructure continues to be a significant topic of public interest as well as a priority for state policy. According to the 2023 Report Card for Michigan’s Infrastructure, which has been published by the Michigan Section of the American Society of Civil Engineers (or “ASCE”), Michigan is making progress in reversing underinvestment in the state’s infrastructure. State and Federal funding sources have included \$3.5 billion in bond funding from the “Rebuilding Michigan Program” and \$4.7 billion from the “Building Michigan Together” plan. The 2021 Bipartisan Infrastructure Law will also provide \$11 billion to address needed infrastructure projects. The ASCE’s 2023 Michigan Infrastructure Report Card assessment shows modest improvement in the overall grade from a “D+” in the 2018 report card to a “C-” in the 2023 report card. Roads and stormwater infrastructure grades have improved from a “D-” in 2018 to a “D” in 2023. Civic Improvement Relocation projects frequently involve replacement of vintage mains and services, avoiding third-party damage to non-vintage facilities, and reducing 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

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1 “Non-EIRP Distribution Main Replacement Project Metrics”, which is included in the
2 Company’s enhanced infrastructure replacement annual reports.

3 **Q. Please summarize the Company’s investments in the Asset Relocation – Civic**
4 **Improvement sub-program over the past five historical calendar years.**

5 A. Asset Relocation – Civic Improvement sub-program investments by the Company over the
6 2020 to 2024 historical years have totaled \$366.924 million. Over 178 miles of distribution
7 main has been installed, and more than 9,200 services have been replaced during the 2020
8 to 2024 time period.¹¹ The average annual capital investment has been approximately
9 \$73.385 million.

10 In most cases, the civic improvement projects involve replacement of metallic
11 facilities with plastic pipe. For example, during the 2020 to 2024 period, approximately
12 89% of the retired gas main associated with civic improvement projects were manufactured
13 from metallic pipeline materials. Historically, the Company has been required to replace
14 portions of high-pressure facilities within this program, which requires the installation of
15 steel pipe. Steel pipe installations represent 11.4% of the civic improvement project main
16 installed during the 2020 to 2024 period. This high-pressure work is more expensive and
17 more time consuming than work on the medium pressure system due to the nature of the
18 material and construction methods required.

19 Table 10 below summarizes the annual Asset Relocation – Civic Improvement
20 sub-program historical activity for the number of projects completed, the footage of gas
21 main installed, and the number of gas services replaced. This table shows a substantial

¹¹ Distribution miles installed and services replaced are reported annually as part of the Company’s Gas Enhanced Infrastructure Replacement (“EIRP”) Annual Report. Asset Relocation – Civic Improvement projects are included in Attachment 9 of those annual reports.

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1 reduction of civic improvement work completed during 2020 and 2021 relative to prior
2 historical experience.

Table 10: Asset Relocation – Civic Improvement Project History¹²

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>5-Year Average</u>
Projects completed	124	152	170	122	147	143
Feet of Distribution Main Installed	169,202	195,305	297,246	181,953	98,507	188,443
Services Replaced	1,729	2,377	2,494	1,228	1,448	1,855

3 Table 11 identifies specific examples of large Asset Relocation – Civic
4 Improvement projects that have required investments of more than \$3 million by the
5 Company over the 2020 through 2025¹³ time period. The actual values during 2022 and
6 2023 reflect large capital expenditure requirements associated with the Mound Road
7 reconstruction project. Another large civic improvement project is the Iron Belle Trail,
8 which provides bicycling and hiking opportunities on trails that extend more than 2,000
9 miles from the western tip of Michigan’s Upper Peninsula to Belle Isle in Detroit. It has
10 been recently reported that the Iron Belle Trail is more than 70% complete.¹⁴ In addition,
11 the City of Eastpointe’s 9 Mile Road reconstruction and water infrastructure project is
12 planned to occur between 2023 and 2025 and will include the addition of green space,

¹² Source: Attachment 9 to Gas EIRP Annual Report.

¹³ The 2025 amount includes actual capital expenditures for January 2025 through September 2025.

¹⁴ <https://www.michigan.gov/recsearch/trails/iron-belle-trail>, accessed 10/13/2025.

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benches, bike paths, and other enhancements that will make 9 Mile Road more pedestrian and bicycle friendly.¹⁵

**Table 11: Asset Relocation – Civic Improvement Large Project History
(in Thousands of Dollars)**

	<u>Project Reference</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025 January - September</u>
I-75 & M-46 Reconstruction	16161	\$8,994	\$76	\$39			
I-75 Segment 3	17080	\$3,836					
Marion Ave	18972		\$3,755	\$146	\$55	-\$8	
Oakland Drive	17037	\$3,879	(\$1)	\$39	\$49		
Mound Rd 13 to 14 Mile	19952			\$5,129	\$282		
Mound Rd 11 to 13 Mile	20136			\$1,491	\$9,037		\$21
I-75 Projects	GL-02841 GL-02842	\$1,069	\$3,884	\$61			
Shiawassee & MLK	19927			\$5,530	\$707	\$125	
Lapeer Rd Burton	20993			\$3,848	\$153	\$2	
Passolt St	19624			\$4,996	\$79		
Atlas Iron Belle Trail	19919			\$56	\$7,910	-\$11	4
US 127 & 223	20824				\$3,178		
Wayne Rd Bridge Replacement	20855			\$303	\$2,669		
9 Mile Road Eastpointe	19765 21012 22727			\$92	\$10,623	\$6,399	\$11
10 Mile Road Centerline	23024 22239					\$2,818	\$878
Other Projects	Various	\$52,456	\$48,756	\$81,384	\$48,776	\$39,899	\$38,425
Total A/R – Civic Improvement		\$74,653	\$56,401	\$103,075	\$83,518	\$49,276	\$39,339

¹⁵ <https://www.macombdaily.com/2023/03/05/modern-9-plan-encompasses-more-than-road-repaving/>, accessed 11/22/2024.

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Q. Please summarize the Company's projected investments in the Asset Relocation – Civic Improvement sub-program.

A. Asset Relocation – Civic Improvement sub-program expenditure projections are developed by engineering staff within the Gas Engineering Asset Planning Department and are summarized in Table 12 below. The scope and location of individual projects will be determined as requests are received. The projected test year amount of \$76,213 reflects the Company's expectation that 12.62% of the 2026 calendar year capital investments and 87.55% of the 2027 calendar year capital investments will occur during November 2026 to October 2027 time period.

**Table 12: Asset Relocation – Civic Improvement Projections
(in Thousands of Dollars)**

Description	Actual 2024	Projected Calendar Year 2025	Projected Calendar Year 2026	Projected Calendar Year 2027	Projected Test Year
Total Asset Relocation – Civic Improvement (Thousands of Dollars)	\$49,276	\$63,652	\$72,703	\$76,572	
Test Year Dollar Detail:					
Calendar Year amounts included in the Projected Test Year (in Thousands)			\$9,176 (November through December)	\$67,037 (January through October)	\$76,213

The calendar year 2027 projection of \$76.572 million is an increase of \$27.296 million, or approximately 55.39% more, compared to the actual capital expenditures in 2024. Table 13 indicates the Company expects to install 166,085 feet of distribution main during 2027, which is an approximately 68.60% increase in workload compared to 2024. Therefore, the difference between the calendar year 2027 capital investment and the 2024 historical actual capital investment is due to increases in projected work. While an increase in projected workload from 2024 is expected, the projected level

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1 of main installation footage is 11.86% below the 2020 to 2024 average main installation
2 footage of 188,443.

3 The calendar year 2026 projection of \$72.703 million is an increase of
4 \$23.427 million, or approximately 47.54% more, compared to 2024. Table 13 indicates
5 that the Company expects to install 166,085 feet of distribution main during 2026, which
6 is an approximately 68.60% increase in workload compared to 2024. The difference
7 between the calendar year 2026 capital investment and the 2024 capital investment,
8 therefore, is due to increases in projected work. The expected increase in work during
9 2026 includes two large I-475 construction projects, a large M-37 construction project, and
10 the Romeo Plank construction project which are expected to require capital investments of
11 more than \$23.3 million 2026. While an increase in projected workload from 2024 is
12 expected, the projected level of main installation footage is 11.86% below the 2020 to 2024
13 average main installation footage of 188,443.

14 The calendar year 2025 projection of \$63.652 million is an increase of
15 \$19.370 million, or approximately 29.2% from 2024. Table 13 indicates that the Company
16 expects to install 166,085 feet of distribution main during 2026, which is an approximately
17 68.6% increase in workload compared to 2024. Therefore, the difference between the
18 calendar year 2025 capital investment and the 2024 capital investment is due to increases
19 in projected work. In Table 11, I have identified actual capital expenditures through
20 September 2025 of \$39.339 million.

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1 **Q. Please summarize the work that the Company expects to complete during the 2025**
2 **through 2027 calendar years within the Asset Relocation – Civic Improvement**
3 **sub-program.**

4 A. Projected work for the Asset Relocation – Civic Improvement sub-program is detailed in
5 Table 13 below. Specific projects that the Company has included in its future year
6 projections include two projects related to I-475 improvements in Genesee County, an
7 M-37 improvement project in Kent Count, and the Romeo Plank project in Macomb
8 County.

Table 13: Asset Relocation – Civic Improvement Projection Details

	Actual 2024	<u>2025</u> (Projected)	<u>2026</u> (Projected)	<u>2027</u> (Projected)
Projects	147	152	152	152
Feet of Distribution Main to be Installed	98,507	166,085	166,085	166,085
Asset Relocation Services to be Replaced	1,448	1,579	1,579	1,579

9 **Q. What benefits are realized from the Company’s investments in the Asset Relocation –**
10 **Civic Improvement sub-program?**

11 A. There are significant benefits realized because of capital investments in this program from
12 an asset integrity and public safety perspective. Replacing vintage gas mains and services
13 in the vicinity of heavy construction equipment reduces the likelihood of a leak either
14 during or after construction that could result from the ground impact of that construction.
15 This enhances the safety of those working on public infrastructure projects near these
16 facilities, as well as any members of the general public who utilize the associated
17 infrastructure. The coordination between the Company and the municipalities allows for

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1 the Company to have an increased awareness and better communication with the
2 excavators on the project to prevent damages to the Company's gas system. Additionally,
3 the relocation of mains and services can enable the future maintenance of main and service
4 lines while minimizing disturbances to completed roadway improvements.

5 **Q. How does the Company coordinate with road right-of-way owner agencies when it**
6 **comes to public infrastructure improvement projects?**

7 A. The Company is a strong proponent of coordinating infrastructure projects among utilities
8 and road right-of-way owner agencies. Many of these public infrastructure projects affect
9 the Company's gas distribution facilities. In support of the Company's continual effort to
10 promote coordination and efficient civic improvement projects, the Company also
11 continues to be involved in the Michigan Infrastructure Council. The Company has
12 engineering staff representatives that serve on subcommittees and contribute to periodic
13 council meetings. Additionally, the Company encourages engineering staff to attend the
14 Asset Management training sponsored by the Michigan Infrastructure Council.

15 The Company's Gas Engineering Asset Planning Department works with state and
16 local government agencies to replace vintage gas facilities when appropriate for safety and
17 reliability, and to attempt to save newer gas main and service materials from having to be
18 replaced to minimize expense to the Company. Cities may have large programs to replace
19 sewer systems or water main replacements, requiring major road construction and deep
20 sewer or water installation. The Company will coordinate timing with the city to replace
21 vintage mains and services that may leak from such type of construction. Coordinating
22 project timelines with municipalities to align construction schedules also allows the

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1 Company to reduce its costs for hard and soft surface restoration once the gas system work
2 is complete.

3 Additionally, there are many projects where the Company has plastic or coated and
4 wrapped steel facilities, primarily gas mains, near the construction activities and will
5 negotiate with the municipality or their engineering firm to get designs changed to protect
6 the Company's gas facilities and prevent relocation. The Engineering Asset Planning team
7 reviews municipal project plans and tries to negotiate municipal design changes to
8 eliminate potential direct conflicts with Company facilities. These negotiations reduce
9 overall project scope and, therefore, reduce the costs to both taxpayers and the Company's
10 customers.

11 **Q. Please summarize the Company's projections for the Asset Relocation – Civic**
12 **Improvement sub-program.**

13 A. As shown on Exhibit A-128 (LDW-3), line 1, the capital expenditures for the Asset
14 Relocation – Civic Improvement Program were \$ 49,276,021 in 2024, and are projected to
15 be:

- 16 • \$63,651,755 for the calendar year 2025;
- 17 • \$63,526,302 for the ten months ending October 31, 2026; and
- 18 • \$76,213,314 for the test year ending October 31, 2027.

19 These projections are based upon recent history, projections of increased federal
20 and state funding for infrastructure improvements, and knowledge of specific projects
21 planned for the next several years. The Company's projected capital expenditure amounts
22 are required to meet the projected level of asset relocations associated with local and state
23 government projects.

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1 **Q. Please further describe the expenditures associated with the Asset Relocation –**
2 **Reimbursable Program.**

3 A. The Asset Relocation – Reimbursable Program accounts for customer requested capital
4 replacements of mains, services, and meter stands. These replacements are requested for
5 multiple reasons, including when the customer desires to add sufficient gas equipment such
6 that it requires a Company facility upgrade, has asked for relocation of a gas main or
7 replacement of a gas service to accommodate a customer need, or has created an unsafe
8 situation requiring Company facility replacement. Customers requesting or requiring these
9 upgrades are responsible for the cost of the upgrade. When a customer is adding gas load
10 that will provide the Company with more revenue, the Company applies the appropriate
11 revenue credits as outlined in Tariff Rule C8 to help offset the customer's costs.

12 **Q. What has been the Company's historical experience with the Asset Relocation –**
13 **Reimbursable Program?**

14 A. The Asset Relocation - Reimbursable Program investments have totaled \$67.1 million for
15 approximately 30,000 work orders from 2020 through 2024, for a historical five-year
16 average capital investment of approximately \$13.4 million annually. During 2024, the
17 Company invested more than \$23.2 million to complete a historical peak workload of more
18 than 8,200 work orders, including \$8.4 million to support the development of vehicle
19 assembly capacity in southeast Michigan. During 2025, the Company invested
20 approximately \$12.1 million for 4,670 work orders during the first nine months of the year,
21 including \$0.6 million for a requested gas main upgrade at a municipal electric generator
22 in Calhoun County, and is projecting a total 2025 investment of \$17.7 million. The
23 \$17.7 million projected for 2025 exceeds the \$13.4 million of annual average investment

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experienced by the Company during 2020 through 2024. The capital expenditure increase in 2025 is primarily related to customer requests for replacements of mains and services.

Table 14: Asset Relocation – Reimbursable sub-program Details
(in Thousands of Dollars)

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u> <u>(Jan - Sep)</u>
Customer Requested Relocations	\$7,260	\$5,888	\$11,526	\$12,956	\$13,341	\$11,139
Damage Replacements	\$1,685	\$1,473	\$1,898	\$1,100	\$1,446	\$892
Large Customer Requested Relocation Projects	\$11			\$107	\$8,449	-\$4
Other	\$364	-\$386	\$4	\$5		\$45
Total Asset Relocation – Reimbursable	\$9,320	\$6,975	\$13,429	\$14,167	\$23,236	\$12,072

The 2024 actual costs and future period projections for this sub-program are reflected on Exhibit A-128 (LDW-3), line 2, and summarized as part of the Asset Relocation Program in Table 9 above.

Q. Please describe how the forecasts for the Asset Relocation – Reimbursable sub-program were developed.

A. The Company's Customer Energy Management Department manages the Asset Relocation – Reimbursable sub-program and provides the forecasts for future year capital investments. The test year forecast of \$15,047,075 includes \$2,295,378 for November and December 2026 and \$12,751,697 for January through October 2027. 83.25% of the 2027 annual forecast of \$15,317,403 and 16.0% of the 2026 annual forecast of \$14,307,270 are expected to occur in the test year based on expected timing of expenditures within this sub-program.

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1 The 2027 calendar year forecast of \$15,317,403 includes projected customer
2 requested relocation investments of \$13,660,606 and investments to correct damages of
3 \$1,656,796.

4 The 2026 calendar year forecast of \$14,307,270 includes projected customer
5 requested relocation investments of \$12,730,156 and investments to correct damages of
6 \$1,577,115.

7 The 2025 calendar year forecast of \$17,658,921 includes actual investments for the
8 first seven months of 2025 in the amount of \$11,444,310 and projected investments for the
9 last five months of 2025 in the amount of \$6,214,609. The 2025 calendar year forecast is
10 \$5,577,019 less than the 2024 historical year amount. As noted previously, the 2024 peak
11 capital expenditure amount was primarily related to customer requested relocation work at
12 a large vehicle assembly facility.

13 **Q. Please summarize the Company's projections for the Asset Relocation –**
14 **Reimbursable sub-program.**

15 A. As shown on Exhibit A-128 (LDW-3), line 2, the capital expenditures for the Asset
16 Relocation – Reimbursable sub-program were \$23,235,940 in 2024, and are projected to
17 be:

- 18 • \$17,658,921 for the calendar year 2025;
- 19 • \$12,011,893 for the ten months ending October 31, 2026; and
- 20 • \$15,047,075 for the test year ending October 31, 2027.

21 The Asset Relocation – Reimbursable sub-program projections are based upon the
22 Company's recent experience with this sub-program. The Company's projected capital
23 expenditure amounts are required to complete work associated with customer requested
24 asset relocations and to resolve gas facility damages.

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C. Regulatory Compliance

Q. Please describe the capital expenditures relating to the Regulatory Compliance Program shown on Exhibit A-12 (LDW-1), Schedule B-5.8, line 3.

A. The Regulatory Compliance Program includes projects that are required to comply with federal and state pipeline safety regulations and mandates. For gas distribution, components of this program are the Regulatory Base Distribution projects, the Meters sub-program, MAOP Distribution projects, and Cathodic Protection Distribution projects. The capital expenditures for this program were \$47,749,694 in 2024, and are projected to be \$109,784,826; \$159,532,567; and \$144,011,743 for the years 2025; the ten months ending October 31, 2026; and the test year 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, of Exhibit A-12 (LDW-1), Schedule B-5.8. A further breakdown of the Regulatory Compliance Program expenditures is shown on Exhibit A-129 (LDW-4). The Regulatory Compliance expenditures are also shown in Table 15 below.

**Table 15: Regulatory Compliance Program Capital Expenditures
(in thousands of dollars)**

Program Description	Historical 12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
Regulatory Base - Distribution	41	0	0	0	0
Meters	24,590	26,641	26,820	53,461	31,410
MAOP Distribution	10,418	66,423	124,686	191,110	102,728
Cathodic - Distribution	12,701	16,720	8,027	24,747	9,875
Total Regulatory Compliance	47,750	109,785	159,533	269,318	144,012

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1 **Q. Please describe the Regulatory Base Distribution sub-program.**

2 A. This sub-program includes the capital construction projects that were required to meet
3 regulatory commitments. This five-year program began in 2017 with an initial plan for
4 17 projects. When the Company committed to this program, it also committed to continue
5 to monitor the Supervisory Control and Data Acquisition (“SCADA”) system for station
6 pressures that exceed 18” water column of pressure on each station outlet and address those
7 as well. Through that continued observation, one of the original projects, High Street in
8 Charlotte, was cancelled after further system planning analysis allowed the Company to
9 lower the station pressure without any replacement. Another project, First Street in
10 Jackson, was eliminated as the Company was able to coordinate the necessary system
11 configuration changes with an Asset Relocation – Civic Improvement project for the City
12 of Jackson in 2018. One project, Ada Street in Owosso, was added due to observed station
13 pressures, bringing the total back to 17 projects in the program. The Chipman Street project
14 in Owosso was split into two phases to allow it to be constructed over two years; a railroad
15 crossing was completed in 2018 and the remainder of the project was completed in 2019.

16 These projects replaced sections of the standard pressure system with medium
17 pressure plastic, which removed load from the standard pressure system. Standard
18 pressure, sometimes called utilization pressure, is a low-pressure distribution system
19 typically operating at 14” water column (~0.5 psig) or less where there may or may not be
20 regulating equipment at the customer’s meter, meaning the pressure on the system is the
21 pressure that is provided to the customer. Medium pressure systems operate between 1 psig
22 and 60 psig, meaning that each customer has a regulator installed at their meter to reduce
23 the pressure prior to customer’s end-use equipment. The scope of work for a typical project

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involved replacing all vintage mains and services along with any other facilities not rated for the medium pressure system. Any existing main and service facilities rated to operate at medium pressure, but still operating at standard pressure, would be converted to medium pressure without replacement. Customers on both the replaced or upgraded sections of the system were provided with an appropriate meter and regulator to reduce the pressure before it enters the customer's building. Together, these changes to the system allow the Company to convert sections of the standard pressure system to medium pressure while reducing the operating pressures of the remaining standard pressure systems from 18" water column to 14" water column or less. These changes were agreed to by the Company and the MPSC Safety Staff in 2017. The Company completed this five-year program in 2022, as shown in Table 16 below:

**Table 16: Regulatory Base Distribution sub-program
Compliance Project List with Status**

Project Number	Headquarters	Project Name	Construction Year
11804	Jackson	Michigan	2018 – Complete
11693	Flint	South Flint SP	2018 – Complete
11979	Flint	Downtown SP	2018 – Complete
11747	Jackson	Ganson	2018 – Complete
12065	Bay City	Bay City East SP, Lincoln St.	2018 – Complete
11908	Owosso	Chipman	2018 – Complete
16175	Owosso	Chipman - Ph II (a.k.a. Cedar St.)	2019 - Complete
11716	Jackson	Seymour	2020 – Complete
11690	Flint	West Flint SP	2019 – Complete
11689	Flint	East Flint SP	2019 – Complete
14024	Jackson	Foote	2020 – Complete
11807	Jackson	Morrell	2019 – Complete
14016	Jackson	First St SP	2019 – Cancelled
11719	Bay City	Bay City West SP Walnut Street	2020 – Complete
12057	Bay City	Bay City East SP, Water Street	2021 - Complete

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11720	Bay City	Bay City West SP Vermont Street	2021 - Complete
11717	Saginaw	Saginaw East SP	2022 – Complete
16132	Owosso	Ada St	2021 – Complete
12085	Lansing	High St – Charlotte	Cancelled

1 While this program reduces the operating pressure on the standard pressure system, there
2 are additional benefits from this work. The projects constructed within this sub-program
3 replaced approximately 10 miles of cast iron and other vintage mains and eliminated more
4 than 200 vintage services. Existing plastic main in the standard pressure system was
5 converted or uprated to medium pressure wherever practical, reducing the cost of
6 replacement for these segments, while still transitioning them from the standard pressure
7 system.

8 The Regulatory Base Distribution compliance sub-program is complete. The above
9 details are included in my testimony to describe capital investments made during the
10 historical year of 2024. The 2024 expenditures detailed on Exhibit A-129 (LDW-4), line 1,
11 include actual capital investments made to complete the Company's standard pressure
12 system upgrade commitment.

13 **Q. Please describe the Meters sub-program within the Regulatory Compliance Program**
14 **and the projections in this filing.**

15 A. The meters purchased in the Regulatory Compliance Program are used in connecting New
16 Business Program services, the Routine Meter Exchange Program, the Vintage Service
17 Replacement Program, and for normal replacement of obsolete or broken meters. The
18 Routine Meter Exchange Program involves replacing a portion of existing meters that
19 measure customer consumption with a new or refurbished meter, then testing the old meter
20 for compliance with MPSC billing accuracy standards. The Meters Program also includes

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1 equipment purchased for customer requested work such as new service or meter requests,
2 meter exchanges, and sets at existing premises where the meter had been previously
3 removed. The meters being purchased are rotary meters and top connect diaphragm meters.

4 The Company purchases new gas meters on a periodic basis to ensure it has an
5 adequate supply to meet customer and regulatory commitments. The Company establishes
6 an annual meter purchase plan for each year in June of the preceding year. That purchase
7 plan provides for meter quantities and types, broken into periodic releases from meter
8 manufacturers throughout the year to meet all business requirements. Those requirements
9 include new business sets, service upgrades, for-cause exchanges (damage, leak,
10 obsolescence, etc.), project work such as EIRP and Vintage Service Replacements, and
11 regulatory testing requirements. Factors considered when establishing the annual plan
12 include examination of current levels of inventory by meter type, assumptions of new
13 business services expected in the coming year, historical for-cause exchange data, project
14 work projections, historical trends for meter retirements, and regulatory program (i.e., the
15 Routine Meter Exchange Program) projections. The meters are purchased according to
16 that annual plan. The plan calls for receiving shipments of meters at different points
17 throughout the year, so the Company can adjust the orders as material usage variations are
18 observed. The projected test year dollar value includes 16.80% of the 2026 calendar year
19 projection and 80.93% of the 2027 calendar year projection based on the projected timing
20 of meter purchase investments. The actual and projected total number of meters purchased
21 for the Meters Program for each period in this filing are shown in Table 17 below:

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Table 17: Actual and Projected Meters Program Purchases by Year

	2024 Actual	2025 Projection	2026 Projection	2027 Projection	Projected Test Year
Meter Units	43,251	47,546	56,445	56,445	49,725
Unit Cost	569	560	541	571	592
Subtotal: Meter Cost	\$24,589,830	\$26,641,190	\$30,555,226	\$32,215,970	\$29,432,078
Gas Smart Meter Pilot: Meter Units				1,000	1,000
Gas Smart Meter Pilot: Meter/Meter Stand Unit Cost				1,000	1,000
Gas Smart Meter Pilot: Software Implementation Costs				\$977,482	\$977,482
Subtotal: Gas Smart Meter Pilot				\$1,977,482	\$1,977,482
Total Meter Cost	\$24,589,830	\$26,641,190	\$ 30,555,226	\$34,193,452	\$31,409,560

Q. What have the historical purchases and unit costs been for the Meters sub-program?

A. Historical purchases and unit costs are presented in the table below:

Table 18: Historical Actual Meters Purchased by Year

	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual
Meter Units	58,997	49,759	21,152	35,200	43,251
Unit Cost	419	503	546	581	569
Total Meter Cost	\$24,742,799	\$25,022,976	\$11,558,636	\$20,450,366	\$24,589,830
Correctors	1,460	3,832			
Unit Cost	1,383	1,331			
Total Corrector Cost	\$2,018,812	\$5,100,820			
Comm Modules	200	100			
Unit Cost	131	207			
Total Comm Module Cost	\$26,166	\$20,667			
Total sub-program	\$26,787,777	\$30,144,463	\$11,558,636	\$20,450,366	\$24,589,830

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1 **Q. What changes have impacted the costs of the Meters sub-program?**

2 A. The costs in the Meters sub-program have been impacted by four significant changes in the
3 recent past, all of which have affected unit cost for the meters purchased. First, with the
4 conclusion of the Advanced Meter Infrastructure (“AMI”) and Automated Meter Reading
5 (“AMR”) programs in 2019, all meters are purchased with a gas communication module
6 (“GCM”) installed on the meter by the meter manufacturers. While the AMI and AMR
7 programs were being implemented, the initial purchases of GCM devices were within the
8 scope of those programs. With the initial installation of AMI and AMR now complete, the
9 cost of module purchases are included as part of the Meters Program. GCMs are meter
10 manufacturer and meter-type specific. When meters are returned from the field, if the
11 meter is scrapped or retired, the GCM is either scrapped or retired or, in the case of meters
12 that will be returned to service, some GCM units are recycled to be used as replacements
13 for defective or damaged GCMs or to mitigate any supply chain disruptions on the part of
14 the GCM manufacturer that would cause delays in new meter shipments from the meter
15 manufacturers. The Company has utilized recycled GCMs on new meters when the GCM
16 supplier was unable to deliver GCMs to the meter manufacturer for installation before
17 shipping new meters to the Company. The recycling of GCM units limits the purchase of
18 new stand-alone GCMs primarily to the meter units that come with the GCM already
19 installed.

20 Second, in late 2020, the sole-source provider of regulated meters (meters with a
21 built-in regulator) announced the decision to discontinue production of diaphragm gas
22 meters in mid-2021. From 2021 forward, the primary meter purchased is the top connect
23 diaphragm meter from a different provider. The top connect diaphragm meter requires a

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1 separate regulator to be installed as part of the meter stand equipment. Purchasing meters
2 without a built-in regulator will lower the unit cost of meters purchased within this
3 program. The cost of the in-stand regulator is not included in this program but is included
4 in work orders as part of other O&M expense and capital expenditure programs.

5 Third, historically, gas meter volume and temperature correctors and GCMs
6 purchased as stand-alone units were purchased in this sub-program. Those stand-alone
7 units are now included in the Meter Technology and Management Systems Support
8 Program, which is sponsored by Company witness James P. Pnacek. The removal of these
9 future purchases is reflected in Table 18, above. All new meter purchases include the
10 meter, the GCM, and where required, the temperature and volume correctors as a single
11 unit.

12 The fourth and final item affecting expenditures in the Meters Program is testing
13 equipment. In addition to meter purchases, this program contains costs for the testing
14 equipment at the Company's Meter Technology Center. In 2020, the Company had
15 planned to procure new leak test equipment for the regulated meters. With the end-of-life
16 decision for the regulated meters, and the shift to the top connect diaphragm meters, the
17 decision was made to shift the purchase of leak test equipment to top connect diaphragm
18 meter leak testers and the procurement of that equipment was completed in 2022. In 2022,
19 the Company procured new commercial and industrial test equipment and plans to acquire
20 regulator test equipment over the next few years. Additionally, the 2022 expenditures in
21 this sub-program include three new leak testers to support testing of unregulated meters.
22 Meter test stations are also periodically replaced as needed within the expenditures for this

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1 sub-program. In 2025, the Company will be replacing regulator test equipment and
2 temperature and pressure instrument test equipment.

3 **Q. Please describe the gas smart meter pilot that is identified as part of the Meters sub-**
4 **program in Table 17.**

5 A. The Company is requesting approval to include in test year capital expenditures and O&M
6 expenses the cost associated with conducting a gas smart meter technology pilot. This pilot
7 is a foundational step in modernizing the Company's natural gas metering infrastructure.
8 Total capital expenditures of \$1,977,482 are planned during the test year to acquire meters
9 and parts for meter stand rebuilds as well as software licenses and software implementation
10 expenditures. Total O&M expense of \$240,000 for software maintenance, cellular usage
11 charges, integration/reporting, and other fees are included in the Meter Tech & Mgmt Sys
12 Support sub-program program sponsored by Company witness Pnacek.

13 **Q. What does the Company intend to accomplish by conducting a gas smart meter pilot.**

14 A. The pilot is a critical component of the Company's long-range gas meter supply plan. This
15 initiative is designed to proactively address three converging challenges: the aging and
16 obsolescence of diaphragm meter technology; the nearing end-of-life of GCMs, which are
17 constrained by a 20-year battery lifespan; and the increasing complexity of maintaining
18 reliable communications for Gas AMI meters as electric smart meters transition away from
19 the current 4G LTE cellular network. Currently, Gas AMI meters depend on the cellular
20 capabilities of electric smart meters to transmit usage data. As the Company begins
21 replacing electric meters, there is a risk that existing GCMs may not be compatible with
22 new models, potentially disrupting gas data transmission. This creates a coordination
23 challenge between electric meter upgrades and the continued reliability of gas meter reads.

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1 Through this pilot, the Company will explore alternative communication pathways
2 and test integration with next-generation electric meters to ensure service continuity. The
3 pilot will also provide valuable operational insights by enabling hands-on evaluation of
4 advanced metering technologies in a real-world setting. The resulting data will support
5 developing robust use cases and cost-benefit analyses, informing future decisions on
6 system-wide deployment, and ensuring alignment with customer expectations, regulatory
7 requirements, and technological advancements.

8 **Q. What features of a gas smart meter is the Company interested in testing in the**
9 **planned pilot?**

10 A. The pilot will evaluate several advanced features that have the potential to significantly
11 enhance customer safety, service, and satisfaction. Specific gas smart meter features that
12 may provide benefits to customers include automatic/remote shutoff valve operations,
13 which can improve emergency response and reduce the need for field visits; pressure
14 monitoring sensors that can detect and automatically respond to unsafe conditions,
15 enhancing system safety; and faster initial response to suspected gas leaks or other
16 emergencies, which can reduce risk and improve public safety. In the case of customers
17 served by existing AMR technology meters, a transition to gas smart meters that
18 communicates frequently via a cellular network may allow customers to access gas
19 consumption indicators in near real-time, enabling better energy awareness and
20 management, and may also enable the Company to offer a “Choose your own due date”
21 service option to natural gas only service customers. By testing these features, the
22 Company will be better positioned to design a future-ready metering platform that aligns

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1 with evolving customer expectations, regulatory requirements, and technological
2 advancements.

3 **Q. Please describe the MAOP Distribution sub-program within the Regulatory**
4 **Compliance Program and the projections included in this filing.**

5 A. The MAOP Distribution sub-program includes expenditures for projects on the gas
6 distribution system where reconfirmation of the established MAOP is required due to new
7 gas code language included in Pipeline and Hazardous Materials Safety Administration's
8 ("PHMSA") regulation 49 CFR 192.624.¹⁶ The PHMSA code states that pipeline segments
9 that operate above 20% of the specified material yield strength are classified by PHMSA
10 as transmission pipelines for the purpose of compliance with safety standards including
11 MAOP. This regulation requires the Company to have a plan to reconfirm MAOP and
12 remediate line segments for which the Company's pressure test records do not meet
13 PHMSA's expectations for traceable, verifiable, and complete documentation. The
14 compliance milestones set forth by the regulation are to complete all actions required by
15 49 CFR 192.624 on 50% of the pipeline mileage subject to MAOP reconfirmation
16 requirements by July 3, 2028, and complete all actions required by 49 CFR 192.624 on
17 100% of the pipeline mileage subject to MAOP reconfirmation requirements by July 2,
18 2035. The Company believes it is necessary to plan for achieving the first reconfirmation
19 compliance milestone by the end of 2027, ahead of the July 3, 2028 requirement, to
20 minimize compliance risk associated with potential unknown project construction delays.
21 In all cases, replacement of gas distribution assets has been determined to be the most

¹⁶ 49 CFR 192.624 is titled "Maximum allowable operating pressure reconfirmation: Onshore steel transmission pipelines"; Michigan Administrative Code R 460.20606 adopts 49 CFR Part 192 by reference.

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1 effective way of reconfirming the MAOP. The Company has identified 30 projects to date,
2 representing approximately 36.02 miles of distribution main installation, and these projects
3 are listed in Appendix F of the NGDP exhibit sponsored by Company witness Blattner.
4 Projections for each project included in this sub-program are developed by the Company's
5 Engineering Asset Planning Department. Twenty-two projects will have capital
6 expenditures during 2024 through 2027 as shown in Table 19 below:

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**Table 19: MAOP Distribution sub-program
Compliance Project List**

Project Number(s)	Project Name	2024 Actual (\$000)	2025 Projected (\$000)	2026 Projected (\$000)	2027 Projected (\$000)	Construction Completion Year
21788	Line 1009, Huron Park to I-94	3,159				2024
22532	Line 1090n, Davis St	253	9			2024
23139	Line 1087b Phase 1	179				2024
22409	Line 1020, Greenfield Rd	427	29			2024
22150	Line 1002f, Macomb ITC Corridor	300	4,473			2025
22157	Line 1009/1009c I-94 to Little Mack, 10 Mile to 11 Mile		4,730			2025
22511	Line 1022f, Vermontville		562			2025
21674 21675	Line 1087b Phase 2		758	3,460		2025
22702	Line 1006, Groebel Dr to Mound Rd	98		4,002		2026
22996	Line 1026f, Mt Hope		16	3,979		2026
21250 21948	Line 1080, Kalamazoo	2,779	26,262	193		2025
22861	Line 1022, Airport Rd.	63	1,358	38,939		2026
22781	Line 1041, Lapeer Rd	70	27		25,021	2027
22393 30380 to 30390 30483 30491 to 30494 30863	Line 1002c, 4 Cities Metro Pipeline Project (Royal Oak, Madison Heights, Clawson, and Warren)	3,091	28,199	60,261	46,442	2029
22494	Line 1009c Ph 3 Little Mack – 10 mile to 9 mile, Macomb			6,144		2026
21676	Line 1093, Shattuck Rd Saginaw			13,988		2026
TBD	Line 1002, 14 mile – Lorraine Ave to Red Run Drain				3,852	2027
22496	Line 1009c Ph 4, 11 mile – Little Mack to RS22, Macomb				3,658	2027
22998	Line 1026i, MSU PP				2,670	2027
30920	Line 1082 Lovers Lane				2,701	2027
30817	Line 1087f, S Saginaw Rd				497	2027
22738	Line 1006 Ph 2, 11 Mile Mound to RR St.				13,419	2027

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1 **Q. Please explain why the replacement of gas distribution assets was determined to be**
2 **the most effective way of reconfirming the MAOP of a line segment.**

3 A. For the projects requiring reconfirmation, engineering staff within the Company have
4 performed an evaluation to determine the best course of action to comply with 49 CFR
5 192.624. The Company must utilize one of six methods identified in 49 CFR 192.624 to
6 reconfirm its MAOP. The Company selected reconfirmation Method 4 - Pipeline
7 Replacement as the preferred approach for remediation after evaluating all the methods
8 offered in 49 CFR 192.624 for each gap segment. In general, the Company arrived at this
9 conclusion because the other reconfirmation methods are not practical or feasible due to
10 existing operational constraints and risks on the Company's distribution system. One
11 benefit of pipeline replacement is that the replacement pipeline would be designed,
12 constructed, and pressure tested according to current standards to establish MAOP.
13 Pressure testing would take place on the new pipe prior to being placed into service. As a
14 result, operational risks and constraints associated with re-testing pipe that is already
15 in-service would be avoided.

16 The other identified methods were not selected for several reasons. For example,
17 reconfirmation Method 1 – Pressure Testing, is an infeasible option in cases where
18 operational constraints and risks surrounding gas quality and gas deliverability
19 requirements exist. This is infeasible because the natural gas distribution system is not
20 generally designed for the removal of water from the pipeline after completion of pressure
21 testing and material verification procedures required to comply with the traceable,
22 verifiable, and complete documentation standard; this means many distribution line
23 segments may only be resolved through pipeline replacement. Additionally,

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1 reconfirmation Methods 2 and 5, which relate to pressure reductions, are generally not
2 practical solutions in most instances because the Company cannot meet gas deliverability¹⁷
3 requirements at the reduced MAOP to comply with the regulations.

4 All three of these methods are examples of situations that create an unacceptable
5 risk. For instance, if pressure testing failed, the line would have to be replaced anyway
6 and the potential for unplanned outages during such an event, particularly if it created the
7 need for replacement before the winter heating season, would create a risk that the
8 Company would not be able to provide gas to customers when needed. Similarly, the line
9 segments identified as requiring MAOP confirmation exist on critical high-pressure
10 systems, some being highly interconnected; this is especially true for distribution lines in
11 the southeast Michigan portion of the Company's service area. In each instance, a pressure
12 reduction would have to be taken along the full length of the line – or multiple adjacent
13 lines in the case of interconnected systems – which would reduce deliverability in
14 downstream line segments.

15 **Q. Please explain the Line 1080 project.**

16 A. In addition to the work being done by the Company to evaluate compliance with MAOP
17 standards described above, the Company has received notice from Staff that Line 1080,
18 which serves customers to the west of Kalamazoo, needs to be operated at a lower pressure
19 to comply with 49 CFR 192.619.¹⁸ The Company, however, cannot meet current
20 deliverability requirements at this new specified operating pressure. Options to augment

¹⁷ Definition of gas “deliverability”: the ability of a natural gas service provider to meet its customers’ needs based on seasonal requirements and operating conditions.

¹⁸ 49 CFR 192.619 is titled “Maximum allowable operating pressure: Steel or plastic pipelines”

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1 this line segment have been reviewed by the Company, and pipeline modifications are
2 under construction during 2025. The Line 1080 project is unique among the MAOP
3 projects planned for during the timeframe of this case. The MAOP compliance remedy for
4 this pipeline involves reducing the operating pressure on the line from its current operating
5 pressure to the pressure documented in the records used to establish MAOP via 49 CFR
6 192.619(c). The Line 1080 segment being addressed does not require reconfirmation of
7 MAOP per 49 CFR 192.624, as it does not meet the definition of a covered segment.¹⁹ The
8 Company has adequate documentation to operate the line at the lower pressure per 49 CFR
9 192.619(c) and needs to augment the system to enable the operation of this line at the lower
10 pressure, so customers are not at risk of losing service. The Company plans to keep the
11 existing pipeline in service and augment the distribution system by constructing a 6.7 mile
12 parallel main.

13 Line 1080 is a single feed system that serves approximately 19,000 customers. It
14 is comprised primarily of 8" diameter high-pressure steel which operates at >20%
15 Specified Minimum Yield Strength. This line was primarily installed in the 1950s. It runs
16 west out of the M Avenue City Gate, feeding the local communities west of the City of
17 Kalamazoo. The Line 1080 project completed survey and field investigations during 2022.
18 Project planning and city gate facility upgrades were completed in 2023. Project
19 milestones during 2024 included the acquisition of real estate, completion of construction
20 plans, delivery of long lead time materials, and issuing requests for construction bids.
21 Construction contracts were executed in 2025, and actual construction is underway during

¹⁹ Provisions that grandfather the documentation requirements for Line 1080, and the fact that pressure test records are not missing for this segment explain why Line 1080 is not a "covered segment."

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2025. The Company plans to improve the resilience of the system in the area served by Line 1080, which has limited sources of supply, by constructing a 6.7 mile 12" diameter parallel main to the existing main. Other alternatives considered by the Company (developing loops of main in that area to create connections with additional city gates to provide additional supply locations) to improve resilience were excessive in terms of the cost to construct versus the overall resilience risk reduction.

Q. Please explain the Line 1009 Huron Park to I-94 project.

A. The Line 1009 Huron Park to I-94 project was completed during 2024. This replacement ensures compliance with 49 CFR 192.624 for this half mile segment of 12 inch high pressure steel main. This project is the first phase of four MAOP replacement projects associated with the Line 1009/1009c line segments. The Line 1009 Huron Park to I-94 line segment was originally installed in 1969 and was approximately 55 years old at the time of replacement. It is in Macomb County. The Company determined that pressure testing was not practical and pressure reduction was not feasible for this line segment. To verify the material properties of this segment, the Company would have needed to remove sections of the line for the purpose of destructive testing. To minimize the impact of pressure testing, pressure reduction, and material testing, the Company believes that it was reasonable and in the best interest of safety, deliverability, and compliance to utilize the replacement option for Line 1009 Huron Park to I-94.

Q. Please explain the Line 1090n Davis St project.

A. The Line 1090n Davis St project scope includes 0.012 mile of 8" diameter main installation to replace a similarly sized existing main segment. The existing Line 1090n Davis St segment was installed in 2002. It is located in Tuscola County. The Company has

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1 determined that pressure testing was not practical and pressure reduction was not feasible
2 for this segment. To verify the material properties of this segment, the Company would
3 have needed to remove a cutout section of the line for the purpose of destructive testing.
4 To minimize the impact of pressure testing, pressure reduction, and material testing it was
5 determined to be in the best interest of safety, deliverability, and compliance to utilize the
6 replacement option for the Line 1090n Davis St project. The Line 1090n Davis St project
7 construction was completed during 2024.

8 **Q. Please explain the Line 1087b Phase 1 project.**

9 A. The Line 1087b Phase 1 project scope included the installation of 0.358 mile of 2" diameter
10 main installation to replace existing main that had been installed primarily during the
11 1950s. It is in Midland County. The Company has determined that pressure testing is not
12 practical, and pressure reduction is not feasible for this line segment. To verify the material
13 properties of this segment, the Company would need to remove cutout sections of the line
14 for the purpose of destructive testing. To minimize the impact of pressure testing, pressure
15 reduction, and material testing, it is in the best interest of safety, deliverability, and
16 compliance to utilize the replacement option for the Line 1087b Phase 1 project. The Line
17 1087b Phase 1 project construction was completed during 2024.

18 **Q. Please explain the Line 1020 Greenfield Road project.**

19 A. The Line 1020 Greenfield Road project scope includes 0.038 mile of 12" diameter main
20 installation to replace a similarly sized existing main segment. The existing Line 1020
21 Greenfield Road line segment was installed in 2006. It is in Oakland County. The
22 Company has determined that pressure testing is not practical, and pressure reduction is
23 not feasible for this line segment. To verify the material properties of this segment, the

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1 Company would need to remove cutout sections of the line for the purpose of destructive
2 testing. To minimize the impact of pressure testing, pressure reduction, and material
3 testing it is in the best interest of safety, deliverability, and compliance to utilize the
4 replacement option for the Line 1020 project. Project construction was completed during
5 2024.

6 **Q. Please explain the Line 1002f Macomb ITC Corridor project.**

7 A. The Line 1002f Macomb ITC Corridor project scope includes 0.07 mile of 26" diameter
8 main installation to replace a similarly sized existing main segment. The existing Line
9 1002f Macomb ITC Corridor line segment was installed in 1971. It is in Macomb County.
10 The Company has determined that pressure testing is not practical and pressure reduction
11 is not feasible for this line segment. To verify the material properties of this segment, the
12 Company would need to remove cutout sections of the line. To minimize the impact of
13 pressure testing, pressure reduction, and material testing, it is in the best interest of safety,
14 deliverability, and compliance to utilize the replacement option for the Line 1002f Macomb
15 ITC Corridor project. The Line 1002f Macomb ITC Corridor project is currently in the
16 construction phase of development and is projected to be complete during 2025.

17 **Q. Please explain the Line 1009/1009c I-94 to Little Mack/10 Mile to 11 Mile project.**

18 A. The Line 1009/1009c I-94 to Little Mack/10 Mile to 11 Mile project scope includes
19 1.53 miles of 12" diameter main installation to replace the existing 10" diameter main. It
20 is the second phase of four phases of MAOP replacement for the Line 1009/1009c line
21 segment. The Line 1009/1009c I-94 to Little Mack, 10 Mile to 11 Mile project line segment
22 was installed in 1969. It is in Macomb County. The Company has determined that pressure
23 testing is not practical, and pressure reduction is not feasible for this line segment. To

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1 verify the material properties of this segment, the Company would need to remove cutout
2 sections of the line for the purposes of destructive testing. To minimize the impact of
3 pressure testing, pressure reduction, and material testing, it is in the best interest of safety,
4 deliverability, and compliance to utilize the replacement option for Line 1009/1009c I-94
5 to Little Mack, 10 Mile to 11 Mile. This second phase of the Line 1009/1009c replacement
6 is currently in the construction phase of project development and is projected to be
7 completed during 2025.

8 **Q. Please explain the Line 1022f Vermontville project.**

9 A. The Line 1022f Vermontville project scope includes 0.038 mile of 8" diameter main
10 installation to replace a similarly sized existing main segment. The existing Line 1022f
11 Vermontville line segment was installed in 1982. It is in Eaton County. The Company has
12 determined that pressure testing is not practical, and pressure reduction is not feasible for
13 this line segment. To verify the material properties of this segment, the Company would
14 need to remove cutout sections of the line. To minimize the impact of pressure testing,
15 pressure reduction, and material testing, it is in the best interest of safety, deliverability,
16 and compliance to utilize the replacement option for the Line 1022f Vermontville project.
17 The Line 1022f Vermontville project construction was completed during 2025.

18 **Q. Please explain the Line 1087b East and West Segment projects.**

19 A. The Line 1087b East and West Segments project scope includes 0.81 mile of 12" diameter
20 main installation to replace an existing 8" diameter existing main segment. The majority
21 of this line segment was installed during the 1970s and a small section was installed during
22 the 1990s. It is in Midland County. The Company has determined that pressure testing is
23 not practical, and pressure reduction is not feasible for this line segment. To verify the

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material properties of this segment, the Company would need to remove cutout sections of the line for the purpose of destructive testing. To minimize the impact of pressure testing, pressure reduction, and material testing, it is in the best interest of safety, deliverability, and compliance to utilize the replacement option for the Line 1087b East and West Segments project. This replacement project will be constructed in two phases. Construction is partially complete and projected to conclude during 2025.

Q. Please explain the Line 1006 Groebel Dr to Mound Rd project.

A. The Line 1006 Groebel Dr to Mound Rd project scope includes 0.31 mile of 24" diameter main installation to replace a similarly sized existing main segment. The existing Line 1006 Groebel Dr to Mound Rd was installed in 1959. It is in Macomb County. The Company has determined that pressure testing is not practical, and pressure reduction is not feasible for this segment. To verify the material properties of this segment, the Company would need to remove cutout sections of the line for the purpose of destructive testing. To minimize the impact of pressure testing, pressure reduction, and material testing, it is in the best interest of safety, deliverability, and compliance to utilize the replacement option for the Line 1006 Groebel Dr to Mound Rd. The Line 1006 Groebel Dr to Mound Rd project is currently in the design phase of development, with construction projected for 2026.

Q. Please explain the Line 1026f Mt Hope project.

A. The Line 1026f Mt Hope project scope includes 0.758 mile of 8" diameter main installation to replace a similarly sized existing main segment. The existing Line 1026f Mt Hope was installed in 1998. It is in Ingham County. The Company has determined that pressure testing is not practical, and pressure reduction is not feasible for this segment. To verify

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1 the material properties of this segment, the Company would need to remove cutout sections
2 of the line for the purpose of destructive testing. To minimize the impact of pressure
3 testing, pressure reduction, and material testing, it is in the best interest of safety,
4 deliverability, and compliance to utilize the replacement option for the Line 1026f Mt Hope
5 project. The Line 1026f Mt Hope project is currently in the design phase of project
6 development, with construction projected for 2026.

7 **Q. Please explain the Line 1022 Airport City Gate to State Rd and State Rd to W Grand**
8 **River project.**

9 A. The Line 1022 Airport City Gate to State Rd and State Rd to W Grand River project scope
10 includes 3.5 miles of 16" diameter main installation to replace a similarly sized existing
11 main segment. The existing Line 1022 Airport City Gate to State Rd and State Rd to W
12 Grand River was primarily installed in 1963. One additional segment was installed in
13 1980. It is in Clinton County. The Company has determined that pressure testing is not
14 practical, and pressure reduction is not feasible for this segment. To verify the material
15 properties of this segment, the Company would need to remove cutout sections of the line
16 for the purpose of destructive testing. To minimize the impact of pressure testing, pressure
17 reduction, and material testing, it is in the best interest of safety, deliverability, and
18 compliance to utilize the replacement option for the Line 1022 Airport City Gate to State
19 Rd and State Rd to W Grand River project. The Line 1022 project is currently in the design
20 phase of project development, with construction projected for 2026.

21 **Q. Please explain the Line 1041 Lapeer Rd project.**

22 A. The Line 1041 Lapeer Rd project scope includes 3.4 miles of 12" diameter main installation
23 to replace a similarly sized existing main segment. The existing Line 1041 Lapeer Rd was

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1 installed in 1967. It is in Genesee County. The Company has determined that pressure
2 testing is not practical, and pressure reduction is not feasible for this segment. To verify
3 the material properties of this segment, the Company would need to remove cutout sections
4 of the line for the purpose of destructive testing. To minimize the impact of pressure
5 testing, pressure reduction, and material testing, it is in the best interest of safety,
6 deliverability, and compliance to utilize the replacement option for the Line 1041 Lapeer
7 Rd project. The Line 1041 Lapeer Rd project is currently in the design phase of project
8 development, with construction projected for 2027.

9 **Q. Please explain the Line 1002c 4 Cities Metro Pipeline project.**

10 A. The Line 1002c 4 Cities Metro Pipeline project scope includes 8.15 miles of 24" diameter
11 main installation to replace a similarly sized existing main segment. The existing Line
12 1002c line segment was primarily installed in 1959 and 1960. It is in Oakland County.
13 The Company has determined that pressure testing is not practical due to the length of the
14 line segment that needs to be reconfirmed and pressure reduction is not feasible given gas
15 deliverability requirements on the high-pressure system. To verify the material properties
16 of this segment, the Company would need to remove cutout sections of the line for the
17 purpose of destructive testing. To minimize the impact of pressure testing, pressure
18 reduction, and material testing, it is in the best interest of safety, deliverability, and
19 compliance to utilize the replacement option for the Line 1002c project. The Line 1002c
20 project is currently in the planning and design phases of project development. Construction
21 work is planned to occur in phases starting in 2026 and ending in 2029.

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1 **Q. Please explain the Line 1009/1009c Phase 3, Little Mack 9 Mile to 10 Mile project.**

2 A. The Line 1009/1009c Phase 3, Little Mack 9 Mile to 10 Mile project scope includes
3 1.3 miles of 12" diameter main installation to replace a similarly sized existing main
4 segment. The existing Line 1009/1009c Phase 3, Little Mack 9 Mile to 10 Mile line
5 segment was installed in 1969. It is in Macomb County. The Company has determined
6 that pressure testing is not practical, and pressure reduction is not feasible for this line
7 segment. To verify the material properties of this segment, the Company would need to
8 remove cutout sections of the line for the purpose of destructive testing. To minimize the
9 impact of pressure testing, pressure reduction, and material testing, it is in the best interest
10 of safety, deliverability, and compliance to utilize the replacement option for the Line
11 1009/1009c Phase 3, Little Mack 9 Mile to 10 Mile project. This project is currently in the
12 design phase of project development. Construction is projected for 2026.

13 **Q. Please explain the Line 1093 Shattuck Rd project.**

14 A. The Line 1093 Shattuck Rd project scope includes 1.76 miles of 12" diameter main
15 installation to replace a similarly sized existing main segment. The existing Line 1093
16 Shattuck Rd was installed in 1967. It is in Saginaw County. The Company has determined
17 that pressure testing is not practical, and pressure reduction is not feasible for this segment.
18 To verify the material properties of this segment, the Company would need to remove
19 cutout sections of the line for the purpose of destructive testing. To minimize the impact
20 of pressure testing, pressure reduction, and material testing, it is in the best interest of
21 safety, deliverability, and compliance to utilize the replacement option for the Line 1093
22 Shattuck Rd project. The Line 1093 Shattuck Rd project is currently in the design phase
23 of project development, and construction is projected for 2026.

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1 **Q. Please explain the Line 1002 14 Mile – Lorraine Ave to Red Run Drain project.**

2 A. The Line 1002 14 Mile – Lorraine Ave to Red Run Drain project scope includes 0.33 miles
3 of 16” diameter main installation to replace a similarly sized existing main segment. The
4 existing Line 1002 high pressure pipe on 14 Mile from Lorraine Ave to Red Run Drain
5 was installed in 1974. It is in Macomb County. The Company has determined that pressure
6 testing is not practical, and pressure reduction is not feasible for this segment. To verify
7 the material properties of this segment, the Company would need to remove cutout sections
8 of the line for the purpose of destructive testing. To minimize the impact of pressure
9 testing, pressure reduction, and material testing, it is in the best interest of safety,
10 deliverability, and compliance to utilize the replacement option for the Line 1002 14 Mile
11 – Lorraine Ave to Red Run Drain project. The Line 1002 project is currently in the
12 planning phase of project development, and construction is projected for 2027.

13 **Q. Please explain the Line 1009c Phase 4, 11 Mile - Little Mack to RS22 project.**

14 A. The Line 1009c Phase 4, 11 Mile - Little Mack to RS22 project scope includes 0.5 miles
15 of 12” diameter main installation to replace a similarly sized existing main segment. The
16 existing Line 1009c Phase 4 line segment was installed in 1969. It is in Macomb County.
17 The Company has determined that pressure testing is not practical, and pressure reduction
18 is not feasible for this line segment. To verify the material properties of this segment, the
19 Company would need to remove cutout sections of the line for the purpose of destructive
20 testing. To minimize the impact of pressure testing, pressure reduction, and material
21 testing, it is in the best interest of safety, deliverability, and compliance to utilize the
22 replacement option for the Line 1009c Phase 4, 11 Mile - Little Mack to RS22 project.

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1 This project is currently in the initial design phase of project development. Construction
2 is projected for 2027.

3 **Q. Please explain the Line 1026i MSU PP project.**

4 A. The Line 1026i MSU PP project scope includes 0.133 mile of 8” diameter main installation
5 to replace a similarly sized existing main segment. The existing Line 1026i MSU PP
6 segment was installed in 1970. It is in Ingham County. The Company has determined that
7 pressure testing is not practical, and pressure reduction is not feasible for this segment. To
8 verify the material properties of this segment, the Company would need to remove cutout
9 sections of the line for the purpose of destructive testing. To minimize the impact of
10 pressure testing, pressure reduction, and material testing, it is in the best interest of safety,
11 deliverability, and compliance to utilize the replacement option for the Line 1026i MSU
12 PP project. The Line 1026i MSU PP project is in the planning phase of development in
13 2025, with design work planned for 2026 and construction projected for 2027.

14 **Q. Please explain the Line 1082 Lovers Lane project.**

15 A. The Line 1082 Lovers Lane project scope includes 0.4 mile of 12” diameter main
16 installation to replace a similarly sized existing main segment. The existing Line 1082
17 Lovers Lane segment was installed in 1972. It is in Kalamazoo County. The Company
18 has determined that pressure testing is not practical, and pressure reduction is not feasible
19 for this segment. To verify the material properties of this segment, the Company would
20 need to remove cutout sections of the line for the purpose of destructive testing. To
21 minimize the impact of pressure testing, pressure reduction, and material testing, it is in
22 the best interest of safety, deliverability, and compliance to utilize the replacement option
23 for the Line 1082 Lovers Lane project. The Line 1082 Lovers Lane project is in the

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1 planning phase of development in 2025, with design work planned for 2026 and
2 construction projected for 2027.

3 **Q. Please explain the Line 1087f S Saginaw Rd project.**

4 A. The Line 1087f S Saginaw Rd project scope includes 0.028 mile of 12" diameter main
5 installation to replace a similarly sized existing main segment. The existing Line 1087f S
6 Saginaw Rd segment was installed in 1978. It is in Midland County. The Company has
7 determined that pressure testing is not practical, and pressure reduction is not feasible for
8 this segment. To verify the material properties of this segment, the Company would need
9 to remove cutout sections of the line for the purpose of destructive testing. To minimize
10 the impact of pressure testing, pressure reduction, and material testing, it is in the best
11 interest of safety, deliverability, and compliance to utilize the replacement option for the
12 Line 1087f S Saginaw Rd project. The Line 1087f S Saginaw Rd project is in the planning
13 phase of development in 2025, with design work planned for 2026 and construction
14 projected for 2027.

15 **Q. Please explain the Line 1006 Ph 2 11 Mile Mound to RR St. project.**

16 A. The Line 1006 Ph 2 11 Mile Mound to RR St. project scope includes 0.75 mile of 24"
17 diameter main installation to replace a similarly sized existing main segment. The existing
18 Line 1006 Ph 2 11 Mile Mound to RR St. segment was installed in 1959. It is in Macomb
19 County. The Company has determined that pressure testing is not practical, and pressure
20 reduction is not feasible for this segment. To verify the material properties of this segment,
21 the Company would need to remove cutout sections of the line for the purpose of
22 destructive testing. To minimize the impact of pressure testing, pressure reduction, and
23 material testing, it is in the best interest of safety, deliverability, and compliance to utilize

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the replacement option for the Line 1006 Ph 2 11 Mile Mound to RR St. project. This project is in the planning phase of development in 2025, with design work planned for 2026 and construction projected for 2027.

Q. Please describe the Cathodic Protection Distribution sub-program within the Regulatory Compliance Program and the associated projections included in this filing.

A. As shown on Exhibit A-129 (LDW-4), line 4, the capital expenditures for this sub-program were \$12,700,844 in 2024 and are projected to be \$16,720,490 in 2025; \$8,026,522 for the ten months ending October 31, 2026; and \$9,874,593 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. Table 15 above also shows the capital expenditures for the Cathodic Distribution sub-program.

The capital expenditures include a combination of impressed current installations (new and replacements), galvanic (sacrificial) anode installations, and the replacement of services or mains to clear shorted sectors. Exhibit A-129 (LDW-4), line 4, provides further details of the expenditures included in this program.

Q. Please describe the need for the Company to make capital investments in impressed current installations.

A. The impressed current installations include a combination of rectifier installations (new and replacements) and impressed current groundbed installations (new and replacements). The impressed current systems (rectified) consist of an external DC power source that supplies power to anode beds installed below grade. These impressed current systems include a combination of conventional groundbeds (surface beds), semi deep groundbeds

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(20 feet to 150 feet deep), and deep anode systems (greater than 225 feet in depth). The Company continues to install impressed current systems (rectified systems) and remote monitoring units ("RMUs"). The rectified systems allow the Company more control of system performance by having the ability to adjust the amount of current being applied to the system. The installation of RMUs allows the Company to monitor the output of rectifiers remotely.

Q. What is the status of the Company's installation of remote monitoring units?

A. The Company plans to complete the installation of 116 RMUs during the 2025 calendar year, plans to install 10 RMUs in 2026, and an additional 10 RMUs in 2027.

Q. What are the benefits that will be realized as a result of the Company's installation of RMUs?

A. Statewide, distribution corrosion has a total of 910 rectifiers that must be read every two months, six times per calendar year. Historically these bi-monthly reads had to be read manually. The installation of RMUs reduces the number of required physical visits of each rectifier to one visit per year. This will help reduce the environmental impact of driving to each of these rectifiers and will keep operating and maintenance costs down. Additionally, the RMU installations allow the Company to receive notifications when the rectifiers are not outputting correctly, diagnostic work can then be initiated quicker, which improves the integrity and reliability of the distribution system. RMU devices also allow for the Company to remotely interrupt rectifiers to perform cathodic surveys and testing.

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1 **Q. Please describe the need for the Company to make capital investments in galvanic**
2 **anode installations.**

3 A. Galvanic anode systems protect natural gas mains from corrosion using 17-pound and
4 20-pound magnesium anodes that are installed near a gas main. These anodes attract
5 naturally occurring corrosion that would otherwise cause cracks, leaks, and other
6 dangerous safety hazards in gas distribution mains. Replacement of existing magnesium
7 anodes is necessary when annual surveys and associated diagnostics indicate the existing
8 anodes have depleted. The installation of new galvanic anodes is necessary when the
9 current output no longer provides an adequate level of cathodic protection to the pipeline.

10 **Q. Please describe the need for the Company to make capital investments in services or**
11 **mains within the Cathodic Protection Distribution program.**

12 A. Annual surveys of services and mains are conducted to identify any segments that have
13 experienced corrosion to the extent that replacement is required to maintain safety and
14 reliability.

15 **Q. Please describe the need for the Company to make capital investments in casing test**
16 **points.**

17 A. The cathodic protection system requires an adequate number of test points for cathodic
18 protection application and monitoring. Casing test point reads are required to be read on
19 an annual basis to ensure casing and carrier pipe are not electrically continuous. Casings
20 that have been identified in the Company's mapping systems and corrosion databases,
21 which do not have an active test point, are being excavated, a test point is installed, and
22 test points are read to ensure electrical discontinuity between casing and carrier pipe.

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1 **Q. What Federal and State regulatory standards make it necessary for the Company to**
2 **invest in the Cathodic Protection Distribution sub-program?**

3 A. The applicable Federal and State regulatory standards include Michigan Gas Safety
4 Standards Section Three, Subpart I which is titled "Requirements for Corrosion Control."
5 Within Subpart I, Section 192.463 is titled "External corrosion control: Cathodic
6 protection." Similarly, Federal standards include Title 49 of the Code of Federal
7 Regulations, subtitle B, chapter 1, subchapter D, part 192, subpart I, which is also titled
8 "Requirements for Corrosion Control."

9 **Q. What amount has the Company historically invested in the Cathodic Protection**
10 **Distribution sub-program?**

11 A. The Company invested \$47.315 million in the Cathodic Protection Distribution
12 sub-program during 2020-2024. The annual investment averaged \$9.463 million per year
13 over that time period. Annual amounts for each year are:

- 14 • 2020 historical actual: \$6,663,545;
- 15 • 2021 historical actual: \$6,976,687;
- 16 • 2022 historical actual: \$8,582,806;
- 17 • 2023 historical actual: \$12,391,559;
- 18 • 2024 historical actual: \$12,700,844;
- 19 • 2025 projected: \$16,720,490;
- 20 • 2026 projected: \$9,545,898; and
- 21 • 2027 projected: \$9,935,991.

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1 **Q. What portion of the historical and projected investments in the Cathodic Protection**
2 **Distribution sub-program represent investments in RMU Installations?**

3 A. The Company invested \$3.558 million in the Cathodic Protection Distribution sub-program
4 during 2020-2024 for RMU Installations. The annual investment averaged \$0.712 million
5 per year over that period. Annual amounts for each year are:

- 6 • 2020 historical actual: \$532,356;
- 7 • 2021 historical actual: \$720,208;
- 8 • 2022 historical actual: \$632,899;
- 9 • 2023 historical actual: \$0;
- 10 • 2024 historical actual: \$1,672,945;
- 11 • 2025 projected: \$1,153,330;
- 12 • 2026 projected: \$102,500; and
- 13 • 2027 projected: \$105,573.

14 **Q. What portion of the historical and projected investments in the Cathodic Protection**
15 **Distribution sub-program represent investments in Rectifier and Groundbed**
16 **installations and replacements?**

17 A. The Company invested \$9.730 million in the Cathodic Protection Distribution sub-program
18 during 2020 to 2024 for Rectifier and Groundbed installations and replacements. The
19 annual investment averaged \$1.946 million per year over that time period. Annual amounts
20 for each year are:

- 21 • 2020 historical actual: \$1,001,186;
- 22 • 2021 historical actual: \$1,185,666;
- 23 • 2022 historical actual: \$2,220,388;

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- 2023 historical actual: \$2,429,288;
- 2024 historical actual: \$2,893,034;
- 2025 projected: \$1,949,334;
- 2026 projected: \$980,710; and
- 2027 projected: \$1,002,378.

Q. What portion of the historical and projected investments in the Cathodic Protection Distribution sub-program represent investments in other capital repairs?

A. The Company invested \$29.132 million in the Cathodic Protection Distribution sub-program during 2019 to 2023 for other capital repairs. The annual investment averaged \$5.826 million per year over that time period. Annual amounts for each year are:

- 2020 historical actual: \$5,130,002;
- 2021 historical actual: \$5,070,813;
- 2022 historical actual: \$5,729,519;
- 2023 historical actual: \$9,962,271;
- 2024 historical actual: \$8,134,865;
- 2025 projected: \$13,617,826;
- 2026 projected: \$8,462,688; and
- 2027 projected: \$8,828,040.

Q. How were the projections for the Cathodic Protection Distribution sub-program developed?

A. Projections for the Cathodic Protection Distribution expenditures are provided by engineering staff within the Gas System Integrity Engineering Department. The test year value was determined using \$1,519,376, or 15.9%, of the calendar year 2026 forecast and

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1 \$8,355,217, or 84.1%, of the calendar year 2027 forecast. The test year total of \$9,874,593
2 is 22.2% lower than the 2024 actual capital investment and is approximately 4.4% higher
3 than the five-year average amount of \$9,463,088. The projected increases from the five-
4 year average amount reflect increasing materials and contractor costs that have been
5 experienced during 2022 through 2024.

6 The calendar year 2027 forecast for the Cathodic Protection Distribution
7 sub-program is \$9,935,991. This forecast includes \$105,573 for RMU installations,
8 \$1,002,378 for Rectifier and Groundbed installations and replacements, and \$8,828,040
9 for other capital repairs. The 2027 calendar year forecast is 21.8% lower than the 2024
10 historical actual investment, and approximately 5% more than the 2020 to 2024 historical
11 average. Increasing material and contractor costs are the primary reasons for projections
12 being higher than the historical five-year average.

13 The calendar year 2026 forecast for the Cathodic Protection Distribution
14 sub-program is \$9,545,898. This forecast includes \$102,500 for RMU installations,
15 \$980,710 for Rectifier and Groundbed installations and replacements, and \$8,828,040 for
16 other capital repairs. The 2026 calendar year forecast is 24.8% lower than the 2024
17 historical actual investment, and approximately 0.9% higher than the 2020 to 2024
18 historical average. Increasing material and contractor costs are the primary reasons for
19 projections being higher than the historical five-year average.

20 The calendar year 2025 forecast of \$16,720,490 includes actual expenditures for
21 the January through July period of \$6,971,802 and projected expenditures for the August
22 through December period of \$9,748,687. The 2025 calendar year forecast is 31.6% higher
23 than the 2024 historical actual expenditure due to anticipated casing test point workload.

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D. Capacity/Deliverability

Q. Please describe the capital expenditures relating to the Distribution Capacity and Deliverability Program as shown on Exhibit A-12 (LDW-1), Schedule B-5.8, line 4.

A. As shown on Exhibit A-12 (LDW-1), Schedule B-5.8, the capital expenditures the Company experienced in 2024, and is projecting for the years 2025, the ten months ending October 31, 2026, and the test year ending October 31, 2027, are \$7,030,978; \$6,465,846; \$4,866,266; and \$14,347,197; as set forth on this exhibit on line 4, columns (b) through (f), respectively. The expenditures in the Capacity/Deliverability Program are also shown in Table 20 below:

**Table 20: Capacity/Deliverability Capital Expenditures
(in Thousands of Dollars)**

Program Description	Historical 12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	Projected Test Year 12 Mos Ending 10/31/2027
Augment	7,031	6,466	4,866	11,332	14,347
Total Capacity/Deliverability	7,031	6,466	4,866	11,332	14,347

Exhibit A-130 (LDW-5) provides a detailed breakdown of these expenditures. These capital expenditures reflect needed increases in distribution pipeline capacity, which help ensure adequate pressures for deliverability throughout the system.

Q. Why are Capacity/Deliverability projects necessary?

A. Capacity requirements can change due to shifts in population into new locations, as has been recently experienced in the communities near Macomb, which the Company addressed by the installation of pipe near Huron Point and Selfridge Air Force Base. The Company also continued the augmentation of the medium pressure system in Caledonia in

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2020. Further, capacity requirements can increase due to changes in system requirements, as the ways customers use gas change. With the price of the gas commodity remaining relatively low, requests for gas process load, including natural gas-fueled power generation, continue to increase. Substantial requests for additional load, shifts in population and usage, and general system growth cause new low points and bottlenecks to be identified on the gas distribution system. Investment in this program ensures that customers receive reliable gas service even on the coldest days.

Q. Can you describe the process of identifying Augment investments?

A. As described on page 96 of the SEA, the distribution system periodically requires augmentation to adjust for capacity requirements based on current and future gas needs. These projects are identified and prioritized based on gas load analysis software that evaluates system requirements by combining weather conditions (temperature) with known consumption data and system pressures. If the analysis reveals low pressures are expected, the Company will typically install a pressure recording chart to validate the modeled pressures over the next winter. Once validated, an augment project is initiated to reinforce the system, bringing additional capacity or pressure from other parts of the system, to prevent outages or load restrictions to customers. In general, a smaller scope system augmentation project is not planned more than one heating season in advance as they are based upon the system load analysis and actual pressure observations mentioned above.

Q. Please summarize the Augment sub-program investments made by the Company over the past five historical years?

A. Over the time period of 2020 through 2024, the Company has invested over \$31.8 million in distribution system Augment projects, as summarized in the following table:

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Table 21: Historical Actual Augment Investments by Year

	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Jan - Sep
Caledonia HP Phase 1	\$488					
Caledonia HP Phase 2			-\$512			
Caledonia HP Phase 3	\$35,961	-\$153				
Gratiot Ave HP		\$2,803,277	\$1,514,207			
Caledonia MP / Cherry Valley Ave	\$1,778,302	\$287,842	-\$100			
Hickory Corners		\$910,795	\$455,855			
Shaffer Rd East of Alamando			\$4,052,568	\$18,338	0	
Imlay City Rd & Lk Pleasant			\$1,626,475	-\$13,529		
W Sanilac Rd			\$1,032,909			
Climax CG				\$1,925,844	\$45	
Walled Lake – Welch & Oak				\$1,723,201	-\$22,405	
Galesburg – Celery & River St.					\$5,190,751	\$109,028
Other Projects	\$1,784,195	\$2,501,265	\$1,514,431	\$792,074	\$1,862,587	\$105,565
Total Augment	\$3,598,945	\$6,503,025	\$10,195,833	\$4,445,928	\$7,030,978	\$214,593

The average historical annual investment for 2020 through 2024 is approximately \$6.4 million. The largest project for 2020 was the Caledonia MP Augment Project. This project was chosen to shift supply to the southern area. This was the lowest cost option to serve the area and reduce customer impact. The Gratiot Rd HP replacement was the largest project for 2021. It involved replacement of undersized HP pipe with properly sized main, allowing the station to supply adequate amounts of gas to the Macomb area. The Shaffer Rd East Alamando project was the largest project for 2022. This project also involved the replacement of undersized HP pipe with properly sized main, which will increase the supply of gas to an area north of Midland. The Climax City Gate project is the largest augment project constructed during 2023. The construction of this project was necessary to increase the capacity of the system serving areas to the north of Climax extending to the Gun Lake area. The Galesburg – Celery & River St. project accounted for a large share of

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the 2024 actual Augment capital expenditures. Approximately 1.3 miles of 8-inch diameter HP steel distribution main was necessary to reduce the risk of high-pressure distribution main failure in Kalamazoo County.

Q. Can you describe the Augment investments included in this filing?

A. There are several projects planned for 2025 through 2027 to reduce bottlenecks on the system. These are intended to provide capacity and resiliency in the areas of Midland County (the Beaverton 12-inch-high pressure main installation), Oakland County (the Orchard Lk Rd 12-inch-high pressure main installation), and Kalamazoo County (the I-94 Crossing at 44th St 8-inch-high pressure main installation). These projects as well as several other smaller projects will require a projected total investment of \$28.4 million over that time period.

Examples of augmentation projects currently planned for 2025 through 2027 include:

- The Beaverton Shaffer Road east of Apple Drive project involves the construction of 6,764 feet of 12-inch steel high pressure main that will be constructed parallel to existing 6-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 St project completes the high pressure connections installed during the Climax City Gate station project construction in 2023. The scope of this project includes the installation of 2,581 feet of 8-inch steel high pressure main. This project is planned for completion by November 2024.
- A project is planned to install approximately 8,945 feet of 12-inch and 2-inch steel high pressure main on Orchard Lake Road near the West Wayne City Gate Station. The 12-inch high pressure steel main will replace existing 6-inch and 8-inch main that created bottlenecks in the distribution system resulting in lower than expected delivery pressure in January of 2025. This project is planned for construction during 2027.

Additional augment supply projects are identified each winter as the Company records actual pressure readings and actual temperatures and uses them to further refine the piping

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1 system models. These projects tend to be smaller in nature (one mile or less) and therefore
2 less expensive with shorter design and construction timeframes. The Company will
3 continue to review system models and pressures to ensure reliability.

4 **Q. Please describe Exhibit A-131 (LDW-6).**

5 A. Exhibit A-131 (LDW-6), in accordance with Attachment 11 to the filing requirements
6 prescribed in Case No. U-18238, provides the variances in the capital program amounts for
7 the distribution programs which I am sponsoring to the Company's most recent general gas
8 rate case, Case No. U-21806.

9 **Q. Can you explain why columns (d), (e), and (f) of Exhibit A-131 (LDW-6) do not**
10 **contain any data?**

11 A. Yes, the information for column (d), the "Last Rate Case Actual Spending Case No.
12 U-21806," cannot be provided because the twelve month period ending October 31, 2026
13 has not transpired as of the date of this filing in Case No. U-21981. Since there is no data
14 to display in column (d) for these programs, the information for columns (e) and (f), which
15 seek information concerning the variances from (c), cannot be completed.

16 **II. IT PROJECTS**

17 **Q. Is the Company planning technology projects that support the engineering, asset**
18 **planning, design, construction, and maintenance of a safe, reliable, and affordable**
19 **distribution system for its customers?**

20 A. Yes. Company witness Baker includes in her direct testimony and exhibits a number of
21 technology projects that are critically important in supporting these gas functions within
22 the Company. The expenditures for these projects are contained within the exhibits

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sponsored by Ms. Baker. The projects for the areas which I am sponsoring are described below:

- The **Gas Distribution Probabilistic Risk Model** project requires \$1,494,796 in capital and \$12,734 in O&M in the test year. 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 to 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. 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 modeling supports the changes planned for in the Company’s NGDP, including the Company’s Gas Safety Management 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; (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. Risk modeling will precede the development of work plans that would inform project designs and cost estimates. As a result, the risk model development scope will not include mitigation cost estimates or cost-effectiveness calculations. 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. There were three alternatives considered for the project. (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

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was not selected because the custom-built solutions analyzed are not mature and have not been widely tested with transmission operators. (3) Implement a Software as a Service (“SaaS”) based solution. Option (3) 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.

- The **Gas Transmission and Distribution (“T&D”) Historian** project requires \$8,546 in capital and \$3,180 in O&M in the test year. The Gas T&D Historian project will replace the current historian for Gas T&D, eDNA (a traditional 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 T&D 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 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. The 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,

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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 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 operational data reporting capabilities could occur and could result in a non-compliance and could potentially interrupt certain volumetric accounting and billing functions.

- The **Gas SCADA Software Solution** project requires \$218,157 in capital and \$111,815 in O&M in the test year. The Gas 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

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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 remain compliant 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.

- The **Tracking and Traceability** project requires \$6,619,263 in capital and \$508,607 in O&M in the test year. 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 “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 defined by the American Society for Testing and Materials standard F2897-11a and includes a unique identifier for the location of manufacture, production lot information, size, material, pressure rating, temperature rating and, as appropriate, the 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

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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 (or “GPS”) equipment to improve the quality of data and assist the Company in determining future scopes of work in the event of any component manufacturer 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 include (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, and (2) internally develop digital technology that will support the tracking and traceability standards included in the PHMSA-2014-0098 plastic pipe rule. The second alternative is being pursued by the Company.

- The **Gas Nominations Replacement Solution** project requires \$406,968 in capital and \$48,465 in O&M in the test year. 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

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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 the Company's 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.

- The **Replacement for Gas Automated Meter Reading (AMR) Technology** project requires \$180,839 in capital and \$18,737 in O&M in the test year. This project will replace the Itron Field Collection Systems ("FCS") and Itron Mobile with the newest Itron 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 Itron mobile to gather gas meter reads. The software vendor is transitioning these systems to new cloud software called Temetra and Temetra Mobile and will be discontinuing support for the existing FCS and Itron Mobile software in December 2026. This software migration is necessary to maintain vendor support (including the latest security patches, bug fixes, and 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 operating with unsupported software 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. The

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implementation project includes (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-premises database 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 decouple 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 1.2 million gas communication modules on gas 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). Option (3) 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.

- The **Customer Consecutive Estimate Reduction Enablement** project requires \$4,006 in capital and \$2,969 in O&M in the test year. 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 the MPSC for consecutive estimates and fines of \$500,000 in 2016 and \$1 million in 2023. There is also \$3 million 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 \$4 million as the Company is responsible for the difference between the dollars recovered from the vendor and the \$3 million total established by the MPSC. The objective is to reduce disconnected consecutive estimate accounts from 8% to less than 1%, reducing the 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. The do-nothing alternative does not improve customer experience. Our current solution of SAP CRM used by the Company’s Call Center, SAP Work Management, ADMS for storm restoration, and Service Suite for field work are all core platforms able to accommodate the change. Adding additional software or alternatives will

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1 complicate the technical solution and/or require additional training for Call
2 Center and field personnel.

3 **Q. Please summarize your direct testimony.**

4 A. My direct testimony describes the Company's Gas Distribution capital investment
5 requirements for specific programs that are required to operate a gas distribution system
6 that is safe and reliable. The projections included in this testimony are needed to meet
7 customer capacity demand and regulatory requirements, reduce leaks on the system, and
8 protect public safety. I have described the importance of project coordination with other
9 public infrastructure work as recognized by the MPSC through the SEA and the Michigan
10 Infrastructure Council and demonstrated the Company's commitment to this coordination.
11 The Company's NGDP will work to enhance the Company's gas distribution system and
12 offer additional opportunities for similar collaboration with municipal partners. Through
13 the implementation of the NGDP and the execution of the projects outlined in my direct
14 testimony above (including the IT projects that support these distribution system projects),
15 investments that are both reasonable and necessary, the Company can provide a safe,
16 reliable, affordable, and clean gas delivery system for its customers.

17 **Q. Does this conclude your direct testimony?**

18 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

LINCOLN D. WARRINER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Schedule: B-5.8

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual and Projected Capital Expenditures
Distribution Plant
(\$000)

Case No.: U-21981

Exhibit No.: A-12 (LDW-1)

Schedule: B-5.8

Page: 1 of 3

Witness: LDWarriner

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year	Projected Bridge Period		Projected Test Year	
		12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
1	New Business	60,032	54,024	49,236	103,260	52,270
2	Asset Relocation	72,512	81,311	75,538	156,849	91,260
3	Regulatory Compliance	47,750	109,785	159,533	269,317	144,012
4	Capacity/Deliverability	7,031	6,466	4,866	11,332	14,347
5	Total Distribution Capital	187,325	251,586	289,173	540,758	301,890
			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	New Business	44,555	58,705	52,270	155,530	
7	Asset Relocation	68,207	88,642	91,260	248,109	
8	Regulatory Compliance	97,431	171,887	144,012	413,329	
9	Capacity/Deliverability	4,284	7,048	14,347	25,679	
10	Total Distribution Capital	214,476	326,282	301,890	842,648	

Schedule: B-5.8

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Actual and Projected Capital Expenditures
 Distribution Plant
 (\$000)

Case No.: U-21981
 Exhibit No.: A-12 (LDW-1)
 Schedule: B-5.8
 Page: 2 of 3
 Witness: LDWarriner
 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
1	New Business	60,032	54,024	49,236	103,260	52,270
	Labor	17,015	16,805	14,029	30,834	16,798
	Capitalized E&S	15,052	13,277	12,122	25,398	12,836
	Materials	7,431	6,209	5,938	12,146	5,890
	Contractor	12,229	10,363	10,299	20,662	9,669
	Non-Labor Overhead	2,845	2,960	2,410	5,371	2,985
	Non-Labor Other	5,460	4,411	4,439	8,849	4,092
	Contingency	0	0	0	0	0
2	Asset Relocation	72,512	81,311	75,538	156,849	91,260
	Labor	12,790	13,416	11,690	25,106	14,217
	Capitalized E&S	18,124	19,206	17,647	36,853	21,344
	Materials	7,794	7,656	6,475	14,131	7,900
	Contractor	22,784	26,751	25,634	52,385	30,874
	Non-Labor Overhead	1,839	1,901	1,634	3,534	1,990
	Non-Labor Other	9,182	12,382	12,458	24,840	14,935
	Contingency	0	0	0	0	0
3	Regulatory Compliance	47,750	109,785	159,533	269,317	144,012
	Labor	6,733	11,882	14,736	26,618	14,432
	Capitalized E&S	10,289	22,916	32,880	55,796	29,866
	Materials	18,901	31,364	43,323	74,687	40,614
	Contractor	5,335	26,231	42,946	69,177	36,261
	Non-Labor Overhead	198	353	342	695	327
	Non-Labor Other	6,295	17,039	25,306	42,345	22,511
	Contingency	0	0	0	0	0
4	Capacity/Deliverability	7,031	6,466	4,866	11,332	14,347
	Labor	456	450	339	789	998
	Capitalized E&S	1,651	1,513	1,139	2,652	3,358
	Materials	738	673	507	1,180	1,494
	Contractor	2,963	2,691	2,025	4,716	5,970
	Non-Labor Overhead	15	21	16	37	47
	Non-Labor Other	1,208	1,117	841	1,958	2,480
	Contingency	0	0	0	0	0
5	Total Distribution Capital	187,325	251,586	289,173	540,758	301,890
	Labor	36,994	42,552	40,794	83,346	46,446
	Capitalized E&S	45,116	56,912	63,788	120,700	67,404
	Materials	34,863	45,902	56,242	102,144	55,898
	Contractor	43,310	66,035	80,904	146,939	82,775
	Non-Labor Overhead	4,897	5,235	4,402	9,637	5,348
	Non-Labor Other	22,144	34,949	43,044	77,992	44,018
	Contingency	0	0	0	0	0

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

Schedule: B-5.8

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Actual and Projected Capital Expenditures
 Distribution Plant
 (\$000)

Case No.: U-21981
 Exhibit No.: A-12 (LDW-1)
 Schedule: B-5.8
 Page: 3 of 3
 Witness: LDWarriner
 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 New Business	44,555	58,705	52,270	155,530	
Labor	13,827	17,007	16,798	47,631	
Capitalized E&S	10,950	14,448	12,836	38,235	
Materials	5,127	7,019	5,890	18,037	
Contractor	8,568	12,093	9,669	30,331	
Non-Labor Overhead	2,434	2,936	2,985	8,355	
Non-Labor Other	3,648	5,201	4,092	12,942	
Contingency	0	0	0	0	
7 Asset Relocation	68,207	88,642	91,260	248,109	
Labor	11,364	13,742	14,217	39,323	
Capitalized E&S	16,138	20,715	21,344	58,197	
Materials	6,513	7,618	7,900	22,031	
Contractor	22,328	30,056	30,874	83,259	
Non-Labor Overhead	1,613	1,921	1,990	5,524	
Non-Labor Other	10,251	14,589	14,935	39,774	
Contingency	0	0	0	0	
8 Regulatory Compliance	97,431	171,887	144,012	413,329	
Labor	10,379	16,238	14,432	41,050	
Capitalized E&S	20,309	35,487	29,866	85,662	
Materials	27,819	46,868	40,614	115,301	
Contractor	23,503	45,675	36,261	105,439	
Non-Labor Overhead	287	408	327	1,022	
Non-Labor Other	15,134	27,211	22,511	64,856	
Contingency	0	0	0	0	
9 Capacity/Deliverability	4,284	7,048	14,347	25,679	
Labor	298	490	998	1,787	
Capitalized E&S	1,003	1,650	3,358	6,010	
Materials	446	734	1,494	2,674	
Contractor	1,783	2,933	5,970	10,686	
Non-Labor Overhead	14	23	47	84	
Non-Labor Other	740	1,218	2,480	4,438	
Contingency	0	0	0	0	
10 Total Distribution Capital	214,476	326,282	301,890	842,648	
Labor	35,868	47,478	46,446	129,792	
Capitalized E&S	48,400	72,300	67,404	188,104	
Materials	39,906	62,239	55,898	158,043	
Contractor	56,182	90,757	82,775	229,714	
Non-Labor Overhead	4,348	5,289	5,348	14,985	
Non-Labor Other	29,773	48,219	44,018	122,010	
Contingency	0	0	0	0	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - New Business Program
(\$000)

Case No.: U-21981
Exhibit No.: A-127 (LDW-2)
Page: 1 of 3
Witness: LDWarriner
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year 12 Mos Ended 12/31/2024	Projected Bridge Year		Projected Test Year	
		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	Mains Services & Meter Stands - Dist	52,271	51,683	41,689	93,372	52,270
32%	Labor	16,334	16,609	13,397	30,006	16,798
25%	Capitalized E&S	13,116	12,692	10,238	22,930	12,836
11%	Materials	6,059	5,824	4,698	10,522	5,890
18%	Contractor	9,744	9,560	7,712	17,272	9,669
6%	Non-Labor Overhead	2,817	2,951	2,381	5,332	2,985
8%	Non-Labor Other	4,201	4,046	3,264	7,310	4,092
	Contingency		0	0	0	0
2	Large New Business Projects - Dist	7,761	2,342	7,546	9,888	0
8%	Labor	681	196	632	828	0
25%	Capitalized E&S	1,936	585	1,884	2,468	0
16%	Materials	1,372	385	1,240	1,624	0
34%	Contractor	2,485	803	2,587	3,389	0
0%	Non-Labor Overhead	27	9	30	39	0
16%	Non-Labor Other	1,259	365	1,175	1,539	0
	Contingency		0	0	0	0
3	Total New Business Capital	60,032	54,024	49,236	103,260	52,270
	Labor	17,015	16,805	14,029	30,834	16,798
	Capitalized E&S	15,052	13,277	12,122	25,398	12,836
	Materials	7,431	6,209	5,938	12,146	5,890
	Contractor	12,229	10,363	10,299	20,662	9,669
	Non-Labor Overhead	2,845	2,960	2,410	5,371	2,985
	Non-Labor Other	5,460	4,411	4,439	8,849	4,092
	Contingency	0	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - New Business Program
(\$000)

Case No.: U-21981
Exhibit No.: A-127 (LDW-2)
Page: 2 of 3
Witness: LDWarriner
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
4	Mains Services & Meter Stands - Dist	42,486	50,885	52,270	145,642
32%	Labor	13,653	16,353	16,798	46,804
25%	Capitalized E&S	10,434	12,496	12,836	35,766
11%	Materials	4,788	5,734	5,890	16,412
18%	Contractor	7,859	9,413	9,669	26,941
6%	Non-Labor Overhead	2,426	2,906	2,985	8,317
8%	Non-Labor Other	3,326	3,984	4,092	11,402
0%	Contingency	0	0	0	0
5	Large New Business Projects - Dist	2,068	7,820	0	9,888
8%	Labor	173	655	0	828
25%	Capitalized E&S	516	1,952	0	2,468
16%	Materials	340	1,285	0	1,624
34%	Contractor	709	2,680	0	3,389
0%	Non-Labor Overhead	8	31	0	39
16%	Non-Labor Other	322	1,217	0	1,539
0%	Contingency	0	0	0	0
6	Total New Business Capital	44,555	58,705	52,270	155,530
	Labor	13,827	17,007	16,798	47,631
	Capitalized E&S	10,950	14,448	12,836	38,235
	Materials	5,127	7,019	5,890	18,037
	Contractor	8,568	12,093	9,669	30,331
	Non-Labor Overhead	2,434	2,936	2,985	8,355
	Non-Labor Other	3,648	5,201	4,092	12,942
	Contingency	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy Company

Actual and Projected Capital Expenditures

Distribution Plant - New Business Program

(\$000)

Case No.: U-21981

Exhibit No.: A-127 (LDW-2)

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Witness: LDWarriner

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	Mains Services & Meter Stands - Dist					
2	None identified	-	-	-	-	-
3	Large New Business Projects - Dist					
4	None identified	-	-	-	-	-
5	Customer Attachment Program - Dist					
6	None identified	-	-	-	-	-
	Projects Under \$5 Million					
7	Mains Services & Meter Stands - Dist	52,271	51,683	41,689	93,372	52,270
8	Large New Business Projects - Dist	7,761	2,342	7,546	9,888	-
9	Total Capital	60,032	54,024	49,236	103,260	52,270

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Asset Relocation Program
(\$000)

Case No.: U-21981
Exhibit No.: A-128 (LDW-3)
Page: 1 of 3
Witness: LDWarriner
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year 12 Mos Ended 12/31/2024	Projected Bridge Year		Projected Test Year	
		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 - Civic Improvement	49,276	63,652	63,526	127,178	76,213
13%	Labor	5,927	8,069	8,053	16,122	9,661
23%	Capitalized E&S	11,623	14,422	14,394	28,816	17,268
6%	Materials	2,852	3,986	3,978	7,965	4,773
37%	Contractor	18,383	23,404	23,358	46,763	28,023
2%	Non-Labor Overhead	792	1,072	1,070	2,142	1,283
20%	Non-Labor Other	9,700	12,698	12,673	25,372	15,204
	Contingency		0	0	0	0
2	Asset Relocation - Reimbursable	23,236	17,659	12,012	29,671	15,047
30%	Labor	6,863	5,347	3,637	8,984	4,556
27%	Capitalized E&S	6,501	4,784	3,254	8,037	4,076
21%	Materials	4,942	3,670	2,496	6,167	3,127
19%	Contractor	4,400	3,346	2,276	5,622	2,851
5%	Non-Labor Overhead	1,047	829	564	1,393	706
-2%	Non-Labor Other	(518)	(317)	(215)	(532)	(270)
	Contingency		0	0	0	0
3	Total Asset Relocation Capital	72,512	81,311	75,538	156,849	91,260
	Labor	12,790	13,416	11,690	25,106	14,217
	Capitalized E&S	18,124	19,206	17,647	36,853	21,344
	Materials	7,794	7,656	6,475	14,131	7,900
	Contractor	22,784	26,751	25,634	52,385	30,874
	Non-Labor Overhead	1,839	1,901	1,634	3,534	1,990
	Non-Labor Other	9,182	12,382	12,458	24,840	14,935
	Contingency	0	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Asset Relocation Program
(\$000)

Case No.: U-21981
Exhibit No.: A-128 (LDW-3)
Page: 2 of 3
Witness: LDWarriner
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
4	Asset Relocation - Civic Improvement	52,770	74,408	76,213	203,391
13%	Labor	6,689	9,432	9,661	25,783
23%	Capitalized E&S	11,957	16,859	17,268	46,084
6%	Materials	3,305	4,660	4,773	12,738
37%	Contractor	19,403	27,359	28,023	74,786
2%	Non-Labor Overhead	889	1,253	1,283	3,425
20%	Non-Labor Other	10,528	14,844	15,204	40,576
0	Contingency	0	0	0	0
5	Asset Relocation - Reimbursable	15,437	14,234	15,047	44,718
30%	Labor	4,674	4,310	4,556	13,541
27%	Capitalized E&S	4,182	3,856	4,076	12,113
21%	Materials	3,208	2,958	3,127	9,294
19%	Contractor	2,925	2,697	2,851	8,473
5%	Non-Labor Overhead	725	668	706	2,099
-2%	Non-Labor Other	(277)	(255)	(270)	(802)
0	Contingency	0	0	0	0
6	Total Asset Relocation Capital	68,207	88,642	91,260	248,109
	Labor	11,364	13,742	14,217	39,323
	Capitalized E&S	16,138	20,715	21,344	58,197
	Materials	6,513	7,618	7,900	22,031
	Contractor	22,328	30,056	30,874	83,259
	Non-Labor Overhead	1,613	1,921	1,990	5,524
	Non-Labor Other	10,251	14,589	14,935	39,774
	Contingency	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
 Actual and Projected Capital Expenditures
 Distribution Plant - Asset Relocation Program
 (\$000)

Case No.: U-21981
 Exhibit No.: A-128 (LDW-3)
 Page: 3 of 3
 Witness: LDWarriner
 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	Asset Relocation - Civic Improvement					
2	None identified	-	-	-	-	-
3	Asset Relocation - Reimbursable					
4	None identified	-	-	-	-	-
Projects Under \$5 Million						
5	Asset Relocation - Civic Improvement	49,276	63,652	63,526	127,178	76,213
6	Asset Relocation - Reimbursable	23,236	17,659	12,012	29,671	15,047
7	Total Capital	72,512	81,311	75,538	156,849	91,260

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Regulatory Compliance Program
(\$000)

Case No.: U-21981
Exhibit No.: A-129 (LDW-4)
Page: 1 of 3
Witness: LDWarriner
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year	Projected Bridge Year			Projected Test Year
		12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
1	Regulatory Base Distribution	41	0	0	0	0
31%	Labor	13	0	0	0	0
23%	Capitalized E&S	9	0	0	0	0
1%	Materials	0	0	0	0	0
0%	Contractor	(0)	0	0	0	0
28%	Non-Labor Overhead	11	0	0	0	0
17%	Non-Labor Other	7	0	0	0	0
	Contingency		0	0	0	0
2	Meters	24,590	26,641	26,820	53,461	31,410
20%	Labor	4,770	5,415	5,451	10,866	6,384
22%	Capitalized E&S	5,772	5,969	6,009	11,977	7,037
45%	Materials	11,114	12,056	12,137	24,193	14,214
0%	Contractor	0	0	0	0	0
0%	Non-Labor Overhead	2	2	2	3	2
12%	Non-Labor Other	2,932	3,200	3,221	6,421	3,772
	Contingency		0	0	0	0
3	MAOP Distribution	10,418	66,423	124,686	191,110	102,728
7%	Labor	542	4,424	8,304	12,728	6,842
20%	Capitalized E&S	1,801	13,410	25,173	38,583	20,740
24%	Materials	4,784	15,688	29,448	45,135	24,262
33%	Contractor	1,921	21,726	40,783	62,510	33,601
0%	Non-Labor Overhead	47	123	231	354	190
17%	Non-Labor Other	1,322	11,052	20,747	31,799	17,093
	Contingency		0	0	0	0
4	Cathodic - Distribution	12,701	16,720	8,027	24,747	9,875
12%	Labor	1,409	2,043	981	3,023	1,206
21%	Capitalized E&S	2,705	3,538	1,698	5,236	2,089
22%	Materials	3,003	3,620	1,738	5,358	2,138
27%	Contractor	3,414	4,505	2,163	6,668	2,660
1%	Non-Labor Overhead	137	228	110	338	135
17%	Non-Labor Other	2,034	2,787	1,338	4,124	1,646
	Contingency		0	0	0	0
5	Total Regulatory Compliance Capital	47,750	109,785	159,533	269,317	144,012
	Labor	6,733	11,882	14,736	26,618	14,432
	Capitalized E&S	10,289	22,916	32,880	55,796	29,866
	Materials	18,901	31,364	43,323	74,687	40,614
	Contractor	5,335	26,231	42,946	69,177	36,261
	Non-Labor Overhead	198	353	342	695	327
	Non-Labor Other	6,295	17,039	25,306	42,345	22,511
	Contingency	0	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

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MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Regulatory Compliance Program
(\$000)

Case No.: U-21981
Exhibit No.: A-129 (LDW-4)
Page: 2 of 3
Witness: LDWarriner
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	Regulatory Base Distribution	0	0	0	0
31%	Labor	0	0	0	0
23%	Capitalized E&S	0	0	0	0
1%	Materials	0	0	0	0
0%	Contractor	0	0	0	0
28%	Non-Labor Overhead	0	0	0	0
17%	Non-Labor Other	0	0	0	0
0%	Contingency	0	0	0	0
7	Meters	23,364	30,097	31,410	84,870
20%	Labor	4,749	6,117	6,384	17,250
22%	Capitalized E&S	5,234	6,743	7,037	19,014
45%	Materials	10,573	13,620	14,214	38,407
0%	Contractor	0	0	0	0
0%	Non-Labor Overhead	2	2	2	6
12%	Non-Labor Other	2,806	3,615	3,772	10,193
0%	Contingency	0	0	0	0
8	MAOP Distribution	61,512	129,598	102,728	293,837
7%	Labor	4,097	8,632	6,842	19,570
20%	Capitalized E&S	12,419	26,165	20,740	59,323
24%	Materials	14,528	30,608	24,262	69,397
33%	Contractor	20,120	42,390	33,601	96,111
0%	Non-Labor Overhead	114	240	190	544
17%	Non-Labor Other	10,235	21,564	17,093	48,892
0%	Contingency	0	0	0	0
9	Cathodic - Distribution	12,555	12,192	9,875	34,622
12%	Labor	1,534	1,489	1,206	4,230
21%	Capitalized E&S	2,656	2,579	2,089	7,325
22%	Materials	2,718	2,640	2,138	7,496
27%	Contractor	3,383	3,285	2,660	9,328
1%	Non-Labor Overhead	171	166	135	473
17%	Non-Labor Other	2,093	2,032	1,646	5,770
0%	Contingency	0	0	0	0
10	Total Regulatory Compliance Capital	97,431	171,887	144,012	413,329
	Labor	10,379	16,238	14,432	41,050
	Capitalized E&S	20,309	35,487	29,866	85,662
	Materials	27,819	46,868	40,614	115,301
	Contractor	23,503	45,675	36,261	105,439
	Non-Labor Overhead	287	408	327	1,022
	Non-Labor Other	15,134	27,211	22,511	64,856
	Contingency	0	0	0	0

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

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MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Regulatory Compliance Program
(\$000)

Case No.: U-21981
Exhibit No.: A-129 (LDW-4)
Page: 3 of 3
Witness: LDWarriner
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	Regulatory Base Distribution					
2	None identified	-	-	-	-	-
3	Meters					
4	None identified	-	-	-	-	-
5	MAOP Distribution					
6	Line 1041 Lapeer Rd	-	-	-	-	25,021
7	Line 1006 Ph2 11 Mile Mound to RR St.	-	-	-	-	13,419
8	Line 1022	63	1,358	38,561	39,919	378
9	Line 1002c	3,091	28,198	54,359	82,557	50,613
10	Cathodic - Distribution					
11	None identified	-	-	-	-	-
Projects Under \$5 Million						
12	Regulatory Base Distribution	41	-	-	-	-
13	Meters	24,590	26,641	26,820	53,461	31,410
14	MAOP Distribution	7,264	36,867	31,766	68,633	13,296
15	Cathodic - Distribution	12,701	16,720	8,027	24,747	9,875
16	Total Capital	47,750	109,785	159,533	269,317	144,012

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Distribution Plant - Capacity/Deliverability Program
(\$000)

Case No.: U-21981
Exhibit No.: A-130 (LDW-5)
Page: 1 of 2
Witness: LDWarriner
Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	Description	Historical Year	Projected Bridge Year		Projected Test Year	
		12 Mos Ended 12/31/2024	12 Mos Ending 12/31/2025	10 Mos Ending 10/31/2026	22 Mos Ending 10/31/2026	12 Mos Ending 10/31/2027
1	Augment	7,031	6,466	4,866	11,332	14,347
7%	Labor	456	450	339	789	998
23%	Capitalized E&S	1,651	1,513	1,139	2,652	3,358
10%	Materials	738	673	507	1,180	1,494
42%	Contractor	2,963	2,691	2,025	4,716	5,970
0%	Non-Labor Overhead	15	21	16	37	47
17%	Non-Labor Other	1,208	1,117	841	1,958	2,480
	Contingency		0	0	0	0
2	Total Capacity/Deliverability Capital	7,031	6,466	4,866	11,332	14,347
	Labor	456	450	339	789	998
	Capitalized E&S	1,651	1,513	1,139	2,652	3,358
	Materials	738	673	507	1,180	1,494
	Contractor	2,963	2,691	2,025	4,716	5,970
	Non-Labor Overhead	15	21	16	37	47
	Non-Labor Other	1,208	1,117	841	1,958	2,480
	Contingency	0	0	0	0	0
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	Augment	4,284	7,048	14,347	25,679	
7%	Labor	298	490	998	1,787	
23%	Capitalized E&S	1,003	1,650	3,358	6,010	
10%	Materials	446	734	1,494	2,674	
42%	Contractor	1,783	2,933	5,970	10,686	
0%	Non-Labor Overhead	14	23	47	84	
17%	Non-Labor Other	740	1,218	2,480	4,438	
0%	Contingency	0	0	0	0	
4	Total Capacity/Deliverability Capital	4,284	7,048	14,347	25,679	
	Labor	298	490	998	1,787	
	Capitalized E&S	1,003	1,650	3,358	6,010	
	Materials	446	734	1,494	2,674	
	Contractor	1,783	2,933	5,970	10,686	
	Non-Labor Overhead	14	23	47	84	
	Non-Labor Other	740	1,218	2,480	4,438	
	Contingency	0	0	0	0	

This exhibit demonstrates the projected break down for each sub-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 average (Jan 2024 - Jun 2025) actual percentage of the breakdown of these components in these sub-programs. The Company projects the program expenditures at a total dollar level based upon historical spending and known projects or other changes.

Note: capital "non-labor other" costs include expenses such as pension, administrative/general expenses, indirect non-labor expenses, rent/utility costs, employee benefits, non-labor material loadings, contributions/reimbursements and business expenses. WP-LDW-2 page 7 of 7 provides additional details on "non-labor other" costs. Confidence intervals are not used to prepare projections for the above programs.

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy Company

Actual and Projected Capital Expenditures

Distribution Plant - Capacity/Deliverability Program

(\$000)

Case No.: U-21981

Exhibit No.: A-130 (LDW-5)

Page: 2 of 2

Witness: LDWarriner

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	Projected Bridge Year			Projected Test Year
Line		12 Mos Ended	12 Mos Ending	10 Mos Ending	22 Mos Ending	12 Mos Ending
No	Description	12/31/2024	12/31/2025	10/31/2026	10/31/2026	10/31/2027
					[Col. (c) + (d)]	
	Projects Over \$5 Million (with spend in test year)					
1	Augment					
2	Orchard Lk Rd HP Augment	-	-	-	-	10,669
	Projects Under \$5 Million					
3	Augment	7,031	6,466	4,866	11,332	3,678
4	Total Capital	7,031	6,466	4,866	11,332	14,347

(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	New Business	60,032	53,808	n/a	n/a	n/a	52,270
2	Asset Relocation	72,512	86,977	n/a	n/a	n/a	91,260
3	Regulatory Compliance	47,750	150,311	n/a	n/a	n/a	144,012
3	Capacity/Deliverability	7,031	5,354	n/a	n/a	n/a	14,347
4	Total Capital	<u>187,325</u>	<u>296,450</u>	<u>-</u>			<u>301,890</u>

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 generation and distribution of)
natural gas and for other relief.)
_____)

Case No. U-21981

DIRECT TESTIMONY
OF
MELISSA N. WIERSEMA
ON BEHALF OF
CONSUMERS ENERGY COMPANY

December 2025

MELISSA N. WIERSEMA
U-21981 DIRECT TESTIMONY

1 **Q. Please state your name and business address.**

2 A. My name is Melissa N. Wiersema, and my business address is One Energy Plaza, Jackson,
3 Michigan 49201.

4 **Q. By whom are you employed and what is your present position?**

5 A. I am employed by Consumers Energy Company (“Consumers Energy” or the “Company”)
6 as a Principal Regulatory Consultant.

7 **Q. Please review your educational background.**

8 A. I graduated from Aquinas College with a Bachelor of Arts in English and from Valparaiso
9 University with a Juris Doctor.

10 **Q. Please review your business experience.**

11 A. In 1997, I was employed as a private security officer and fire/safety inspector at Saint
12 Mary’s College in South Bend, Indiana. In 2000, I was employed as a QS 9000 technical
13 writer for Lason, Inc. in Granger, Indiana. Beginning in 2001, I held a series of positions
14 at the University of Michigan, including Documentation Writer and Research Assistant
15 (Institute for Social Research-2001-2003), Special Projects Coordinator and Speech Writer
16 for the Dean (School of Social Work-2003-2008), and HR Manager/Assistant Director of
17 Administration (2008-2014). I joined Consumers Energy in 2014 as a technical writer
18 involved in the transfer of transmission assets and later became part of the FERC/NERC
19 compliance team in the Transmission and Regulatory Strategies (“TRS”) group. In 2017,
20 I joined a subset of the TRS team as a regulatory support consultant in Energy Supply,
21 transferring to Customer Regulatory Strategy in 2021. In 2023, I took a Federal Regulatory
22 position at DTE. In 2024, I returned to Consumers Energy in a senior regulatory capacity
23 Principal Regulatory Consultant, again in the Customer Strategy space.

MELISSA N. WIERSEMA
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1 **Q. What are your responsibilities as the Principal Regulatory Consultant?**

2 A. In this position, I manage the Customer Experience & Growth (“CX&G”) portion of gas
3 and electric rate cases, as well as the Company’s Voluntary Green Pricing (“VGP”) and
4 Transportation Electrification Plan (“TEP”) filings.

5 **Q. Have you previously testified before the MPSC?**

6 A. No.

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

8 A. The purpose of my direct testimony is to describe the CX&G organization and how the
9 work performed within this organization benefits the Company’s residential and business
10 gas customers. As part of my direct testimony, I will address the operating and
11 maintenance (“O&M”) expenses and capital investments associated with executing this
12 work in the test year ending October 2027.

13 **EXHIBITS**

14 **Q. Are you sponsoring any exhibits?**

15 A. Yes, I am sponsoring the following exhibits:

16	Exhibit A-12 (MNW-1)	Schedule B-5.9	Actual and Projected Capital
17			Expenditures - Customer Experience
18			& Operations;

19	Exhibit A-132 (MNW-2)		Summary of Actual & Projected
20			O&M Expenses – Customer
21			Experience, Customer Operations:
22			Customer Interactions; and

23	Exhibit A-133 (MNW-3)		Summary of Actual & Projected
24			O&M Expenses – Third-party ASP.

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

26 A. Yes.

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1 **Q. Please describe Exhibit A-12 (MNW-1), Schedule B-5.9.**

2 A. Exhibit A-12 (MNW-1), Schedule B-5.9, details the capital expenditures related to direct
3 work within the CX&G organization, which totaled \$111,000 in the historical year,
4 \$1 million projected in the bridge period, and \$1.9 million projected in the test year. This
5 reflects a financial forecast based on the work plan and designated development activities
6 within the Customer Billing and Credit and Assistance areas.

7 Please note that this testimony also discusses the Customer IT project benefits
8 related to the capital spend sponsored by the IT Company witness Stacy H. Baker.

9 **Q. Please describe Exhibit A-132 (MNW-2).**

10 A. Exhibit A-132 (MNW-2) details the O&M expenses related to work within the CX&G
11 organization, which total \$33,847,000 for the test year ending October 31, 2027.

12 **Q. Please describe Exhibit A-133 (MNW-3).**

13 A. Exhibit A-133 (MNW-3) details the O&M expenses related to work within the third-party
14 Appliance Service Plan ("ASP") space, with a total reported margin of \$1.6 million for the
15 test year ending October 31, 2027.

16 **Q. Please describe Exhibit A-132 (MNW-2), page 4.**

17 A. Exhibit A-132 (MNW-2) page 4 is a hypothetical illustration of the CX&G projected O&M
18 expenses based on Inflation. This page is for illustrative purposes only and not intended
19 to represent how the Company has developed its projected CX&G O&M. Column (b)
20 shows the actual historical O&M expense for the year ending December 31, 2024.
21 Column (c) shows the historical amount, to which an inflation rate was applied.
22 Column (d), scope/cost increases net of productivity gains, has also been applied to the
23 historical amount. Column (d) shows the total projected O&M for the test year through
24 October 31, 2027.

SUMMARY OF EXPENSES AND INVESTMENTS

Q. Please provide a summary of the CX&G O&M expenses and capital investments projected in the test year.

A. CX&G is projecting capital expenses of \$1.2 million in the historical year, \$847,000 projected in the bridge period, and \$882,000 projected in the test year, as mentioned above, and \$33.8 million in O&M expenses for the test year ending October 31, 2027. This amount comprises \$22.4 million of O&M expenses for Customer Interactions, and \$11.4 million for Billing and Payment. The CX&G O&M expenses are presented in detail in Exhibit A-132 (MNW-2). The historical and projected capital costs for these programs are included in Exhibit A-12 (MNW-1), Schedule B-5.9.

DEPARTMENT	TEST YEAR CAPITAL	TEST YEAR O&M
Customer Interactions	\$882,000	\$22.4 million
Billing & Payment	\$0	\$11.4 million
Total	\$882,000	\$33.8 million

The Company is also projecting \$147,847 in capital and \$47,291 in O&M for customer capital investments in the test year to support the CX&G IT infrastructure. All IT-related capital costs discussed herein are in the IT budget and discussed by Company witness Baker.

Q. Has the Company undertaken any initiatives to lower costs related to CX&G O&M expenses?

A. Yes. Incorporated into the CX&G O&M projection is \$9 million of net recurring customer benefit to the gas business due to changes to the payment process. This is the result of implementation of a fee-based model for payments submitted through vendor payment channels to ensure the cost distribution for payments is fairly represented between

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1 residential customers and non-residential customers who choose to pay with a high-cost
2 payment method or fee-based channels versus those who use fee-free payment methods.

3 Additionally, the Customer organization has undertaken several initiatives in 2025
4 that have yielded avoided O&M savings, such as bringing marketing campaigns in-house
5 (\$1.5 million annually), renegotiating service agreements (\$11,000 in savings), and
6 consolidating licensing costs (\$12,000 annually). Additionally, soliciting savings via a
7 Request for Proposal for mailing supplies yielded a hard savings of \$122,000.

8 The Company has also implemented Company-wide Waste Elimination goals (e.g.,
9 eliminating unnecessary processes, procedures, avenues of low-use contacts), optimized
10 LEAN principles, and actively encourages customers to utilize paperless or more efficient
11 methods of contact and/or billpaying (e.g., eBill, mobile app).

12 **Q. How is the remainder of your testimony organized?**

13 A. My testimony is organized as follows:

14 I. CX&G

15 A. Customer Interactions

- 16 1. Digital Customer Operations
- 17 2. Customer Contact Center
- 18 3. Business Center Care
- 19 4. Credit and Assistance
- 20 5. Analytics and Outreach

21 B. Billing and Payment

- 22 1. Customer Billing
- 23 2. Customer Payment Programs

I. CX&G

Q. Please describe CX&G.

A. As a whole, the CX&G organization strives to optimize gas customers' positive interactions with the Company. It has two core components: 1) Customer Interactions, and 2) Billing & Payment.

Customer Interactions				
Digital Customer Operations	Customer Contact Center	Credit and Assistance	Business Customer Care	Analytics and Outreach
Billing and Payment				
Customer Billing		Customer Payment Programs		

1) **Customer Interactions** ensures that customers are equipped to connect with the Company in their preferred channel (e.g., phone, Interactive Voice Response (“IVR”), website, mobile app, or digital correspondence—such as text messages), as well as utilizing preferred channels to seek help, ask questions, and get updates. The theft and fraud departments are included in the Billing and Payment umbrella, as is the Company’s administration of Consumers Affordable Resource for Energy (“CARE”), Michigan Energy Assistance Program (“MEAP”), and other payment assistance programs. Business units under this umbrella include Digital Customer Operations (“DCO”), the Customer Contact Center, Business Customer Care (“BCC”), Credit and Assistance, and Analytics and Outreach. All are discussed below.

2) **Billing & Payment** provides customers with accurate, punctual energy bills and consistent payment processes, and arranges personalized payment plans or settings (e.g., inability to pay arrangements, pay by phone/website, payment alerts, choose your own bill due date) for individual customers. Business units under this umbrella include Customer

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1 Billing and Customer Payment Programs, and serve as the operational home of the
2 Company's direct Low- and Moderate- Income plans ("LMI"). both of which are discussed
3 further below.

4 These two core components manage and complete fundamental day-to-day
5 operating tasks that accomplish the Company's customer experience goals and facilitate
6 and enhance actual customer experiences. The Company relies on its array of customer-
7 experience offerings to ensure that customers are satisfied when interacting with
8 Consumers Energy, which in turn provides opportunities to improve services and programs
9 in response to changing customer needs.

10 **Q. The inclusion of a Growth team within Customer Experience team is new since the**
11 **Company filed its last gas rate case. Please explain why this team was added, their**
12 **responsibilities, and any associated cost.**

13 A. The CX&G Growth team was assembled to focus on intentional, planned load growth
14 within the Company's service areas. The team consists of employees who had previously
15 been a part of an external outreach team or economic development team, providing benefits
16 for both new and existing customers. Associated costs are the result of internal shifting of
17 costs centers. Related costs are included in the Customer O&M calculations within the
18 BCC organization.

19 **Q. Is the Company's IT witness sponsoring any CX&G-related projects?**

20 A. Yes. Company witness Baker is sponsoring test year funding for LMI-related updates
21 (Kubra 4.0 update) as well as costs associated with the continuation of the Customer Order
22 Service Tracker ("COST"). The customer benefit of each project will be discussed later in
23 my testimony. Please see Company witness Baker's testimony for implementation and
24 cost information.

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The IT department is a critical CX&G partner and CX&G relies on IT expertise to help develop and implement necessary digital solutions. IT maintains the Company's technology systems, ensuring they operate efficiently, reliably, and free from cybersecurity risks. IT also supports analytic platforms and solutions that provide deeper insight into customer needs, enabling CX&G to establish appropriate targets for metrics, products, and customer programs, necessary to allow CX&G to select the most cost-effective and beneficial solutions for customers. Together, CX&G and IT ensure customers receive secure, reliable, up-to-date, and positive experiences across all channels of interaction with the Company. Continued investment in technology requires additional ongoing funding to initiate, support, and maintain vital platforms. Cross-references to CX&G testimony are noted below.

PROJECT	CAPITAL	O&M	MNW Testimony Reference
Customer Order Service Tracker	\$158,393	\$40,415	page 14
Kubra 4.0 Upgrade	\$414	--	page 16
Energy Assistance Enhancements and Maintenance Annual Updates	--	\$124,022	page 18
Total	\$158,807	\$164,437	

A. Customer Interactions

Q. Please provide an overview of Customer Interactions.

A. Customer Interactions owns and executes all channels of customer interactions as identified above. This work includes the following areas of focus: DCO, Customer Contact Center, BCC, Analytics and Outreach, and Credit and Assistance. All are aligned to the larger department goals of: (i) providing customers the opportunity to interact with Consumers Energy via their channel of choice; (ii) facilitating program enrollment and product

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1 selection to meet customer needs; and (iii) providing customers the information and
2 opportunity to learn more about programs that support low- to moderate-income customers.
3 To effectively perform in these areas, the Company is projecting ~\$22.4 million of O&M
4 expenses and \$882,000 in capital for the test year ending October 31, 2027, as shown on
5 Exhibit A-132 (MNW-2).

6 **1. Digital Customer Operations**

7 **Q. Please provide an overview of DCO.**

8 A. DCO is responsible for the operation and continuous improvement of the Company's
9 customer-facing digital applications, including its website and mobile application. The
10 website, mobile app, and other customer-related technologies are not static—they require
11 assessment, updates, and fixes to remain accessible and relevant to the customer base.

12 To that end, the DCO team collects over 2,900¹ points of customer survey feedback
13 every month, which drives the team's priorities in four simultaneous work cycles: (1) small,
14 agile digital changes using available tools; (2) managing the design, development, and
15 launch of monthly releases to add new features or modify user flows; (3) leading major
16 technology projects that add new or modify existing functionality to better serve customers;
17 and (4) executing the implementation of programs online to help accrue energy savings
18 and clean energy opportunities for customers.

19 To continue this work, the Company is projecting \$818,000 of O&M expenses for
20 the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents

¹ A visitor to consumersenergy.com will be presented with a survey invite after they have spent at least 90 seconds on the site. The quantity of surveys provided varies and the offer rate differs based on platform used to visit the site:
Desktop: 100% invitation rate for visitors who qualify
Mobile: 55% invitation rate for visitors who qualify
Tablet: 55% invitation rate for visitors who qualify

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1 a decrease in O&M expenses of \$54,000 from the \$872,000 expended in 2024. The
2 primary driver of this is a decrease in contractor-related costs.

3 **Q. What types of transactions do customers complete online?**

4 A. The most common transactions customers completed in 2024 using the Company's website
5 and mobile app are (1) checking the billing status of their account (website-14 million
6 views, app-4.9 million views), (2) making payments (website-14.6 million views,
7 app-3.8 million views), (3) reporting outages or viewing the status of an outage (website-
8 3.2 million views, app-1.1 million views), (4) checking energy usage information (website-
9 804,000 views, app-1 million views), and (5) investigating additional service
10 information—such as auto-pay, eBill enrollment, budget billing, and information on
11 products and services (website-1.5 million views, app-not applicable). The Consumers
12 Energy website also serves as the principal vehicle to enable customers to sign up for low-
13 to moderate- income programs, clean energy program rebates, enroll in energy saving
14 programs, and save money with energy-efficient products.

15 **Q. Please explain why the Company is continuing to invest in multiple digital methods**
16 **to allow customers to complete transactions or find information in their channel of**
17 **choice.**

18 A. The Company continues to invest in multiple digital methods for customer interaction for
19 several reasons. Continued investments are needed to keep pace with changes in customer
20 needs, habits, and expectations, and at the same time customer use continues trending
21 toward more integrated and sophisticated digital services. These investments also ensure
22 channel parity so that customers can complete all transactions in all channels. Additionally,
23 expanding the Company's digital channel lets customers complete a variety of activities on
24 a smartphone or computer at a time that may be more convenient than the limited call center

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1 service hours, shifting costs to the more cost-effective channel. In 2024 customers paid an
2 average of \$4.7 million bills through the web and mobile app daily. Both channels together
3 saw \$1.7 billion in payments over the year. Online transactions cost approximately \$0.11
4 versus \$9.22 per live agent call (utilizing internal contact center resources), making
5 electronic resources more cost-effective alternatives to expanding the call center service
6 hours.

7 The Company's digital channels are critical systems requiring proper levels of
8 support to ensure they function when and how customers need them. It is important to note
9 that--like most peer institutions for which this has become the customer expectation--the
10 Company continues to support several channels in response to customer needs and choices
11 for communicating and completing transactions. The Company's IVR System currently
12 co-exists in the digital platform space with the website/mobile website and the mobile app.
13 Similarly, the Company maintains call centers and direct payment offices for customers
14 who prefer to communicate or pay face-to-face. Many of these channels are maintained in
15 service of the wide variety of customer needs given generational, locational, and
16 socio-economic factors.

17 **The Company's Website and Mobile Application**

18 **Q. Historically, the Company's inclusion of both website and mobile application funding**
19 **has met with disallowance, with preference for a robust website update. Are both**
20 **channels necessary?**

21 **A.** The Company maintains that having duplicate channels in which a customer can choose to
22 interact depending on their preferences, abilities, and access is reasonable. The Company
23 has stated and reiterates here that the Mobile App and chat functions are not intended to
24 have all the functionality of the website, nor are they intended to replace the website or

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1 other customer channels.

2 In approving the Company's Mobile App in Case No. U-21389, the Commission
3 agreed with the Company's arguments that, "while there may be some redundancy in the
4 functions of the app and the website, there is value in offering varying communication
5 channels to meet customer needs." While there may be some redundancy between the
6 functions of call centers and the Company's website as both are avenues to receive
7 customer payment, different customers have different preferences or needs. As the
8 Commission has found before, it is reasonable for the Company to meet customer
9 preferences and needs by developing platforms as the technology ecosystem evolves.

10 **Q. What improvements have been made to the website since 2023 and what**
11 **improvements are projected to be made?**

12 **A.** While the Company agrees that a current and robust website is beneficial to an organization
13 that provides a large volume and wide variety of information and resources to its customer
14 base, it has been delayed in fully realizing its stated plans.

15 However, since 2023, the Company has made progressive improvements on the
16 website through a regular monthly cadence of releases to bring new functionality and
17 experience to customers. Notable improvements include navigation and homepage refresh,
18 redesigning the account dashboard, adding additional accessibility functionality for the
19 visually impaired, launching the Simplified Enrollment flow for LMI customers,
20 improvements to the outage experience, and more. Additionally, the Company is in the
21 process of migrating the Company's website from an on-premises solution to a cloud
22 solution to enable more enhancements that are responsive to customer needs, improve the
23 site's architecture, and ensure continued support of a critical channel for customers.

1 **Q. Why are investments in website functionality still prudent considering a delayed**
2 **website redesign?**

3 A. Investments in Web Chat AI and the LMI Customer Support Enhancement remain
4 important front-end enhancements to provide better service to customers, increase access
5 to assistance and programs, and overall help customer self-service more effectively within
6 this digital channel.

7 The Website Redesign Project was intended to upgrade the back-end architecture
8 of the website to improve features for personalization for customers, alleviate potential
9 cyber security concerns, and improve site reliability, as well as making front-end
10 improvements for enhanced usability. Front-end improvements are still necessary and
11 important to ensure that customers can satisfactorily be served on the website and projects
12 like the LMI Customer Support enhancement, Web Chat AI, and website dashboard
13 redesign would not have been in scope of the original Website Redesign Project.

14 **Q. Why will the Company not be pursuing a total website redesign through 2028?**

15 A. With the Company's transition to the S4HANA platform, a total website redesign would
16 not be prudent at this time as rework would be required to connect to the new infrastructure.
17 The Company remains committed to updating its website to provide accurate and up-to-
18 date information for all its customers. The Company is currently assessing the website
19 redesign and high-level task list and timeline for its completion. As the Company works
20 through the IT solutions in progress to achieve this goal, it also remains committed to
21 growing channels utilized by customers.

22 **Q. Is the CX&G department proposing test year IT costs related to DCO projects?**

23 A. Yes. Company witness Baker is sponsoring test year capital IT costs for three DCO
24 projects: (i) \$158,393 in capital and \$40,415 in O&M costs in the test year for the

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Company's Customer Order Service Tracker; (ii) \$414 in capital for a Kubra 4.0 Update; and (iii) \$124,022 in O&M for Energy Assistance Enhancements and Maintenance Annual Updates. The customer benefit of each project is discussed below.

CUSTOMER ORDER SERVICE TRACKER

Q. Please detail the Customer Order Service Tracker.

A. The Customer Order Service Tracker provides both transparency to customers and oversight to internal teams supporting utility service orders across Company service areas via timely and accurate service order updates, creating a more robust customer experience for tracking service order status and crew location updates, as well as an interactive digital channel for use by dispatch, scheduling, and field crews.

Many incoming customer inquiries include "short cycle" orders, such as questions about or reports of emergencies, forestry needs, or meter services issues. Customers may have very limited visibility into when Company-assigned crews will be onsite for this work due to a current lack of relevant features within the Company's digital channels that can track and report accurate updates from dispatch, scheduling, and field crews. The lack of awareness drives thousands of short cycle request-related calls into the call center.

Additionally, current lack of visibility by dispatchers increases truck rolls because they have limited awareness of crew locations and routes, which can cause crews to be assigned improperly. Enabling a digital channel for utility service order communication for both customers and dispatchers will improve customer experience and reduce the waste of repetitive crew dispatching.

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1 **Q. Why is this project important to customers?**

2 A. The Customer Order Service Tracker is expected to significantly enhance the customer
3 experience by providing timely and accurate updates while improving operational
4 efficiency and resource management for the Company. This project will add value by:

- 5 • **Increasing Visibility and Self-Service Access:** Customers can access real-
6 time updates on their service orders, reducing the need for inquiries.
- 7 • **Increasing Transparency on Timing and Location:** COST will provide clear
8 information about crew schedules and locations, ensuring customers are
9 informed about service expectations.
- 10 • **Enhancing Communication:** COST will enable direct communication with
11 Company systems.
- 12 • **Becoming a Channel of Choice for Interactions:** Allowing customers to
13 choose their preferred communication channel, enhancing their experience.
- 14 • **Reducing Truck Rolls:** By providing visibility into crew locations, dispatchers
15 can make informed decisions, reducing unnecessary truck rolls and associated
16 costs.
- 17 • **Decreasing Contact Center Calls:** Real-time updates reduce the number of
18 status inquiries, freeing up resources and improving efficiency.

19 **Q. What is the status of the COST project?**

20 A. The COST project is currently in the IT planning stage.

21 **Q. In the September 30, 2025 Order in Case No. U-21860, the Commission ordered that**
22 **the Company “track and quantify O&M savings realized from this project in the**
23 **company’s next gas rate case so that such savings can be used to offset other O&M**
24 **expenses moving forward.” Has the Company provided this accounting?**

25 A. No. The project is currently planned as an iteration of an existing tool that currently 1)
26 provides notification to customers that a service worker is being dispatched in response to
27 their Gas Odor call and 2) provides the ability to verify a Gas Service worker when they
28 show up to a customer’s or neighboring residence. The full COST implementation remains

1 in the planning stage, with an expected delivery date of the end of Q2/Q3 2026 due to all
2 dependencies. Full implantation of COST has been assessed and balanced with the work
3 expected in the Company's planned S4HANA project. Consequently, there is no
4 implementation or uptake data with which to calculate costs savings at this time. The
5 Company is committed to providing the requested data when available.

6 **KUBRA 4.0 UPDATE**

7 **Q. Please describe the Kubra 4.0 update.**

8 The Company has the goal of serving one in three LMI customers, and is currently serving
9 ~one in six, while supporting the achievement of clean energy goals and reduction in
10 Uncollectible Expense ("UCX"). As part of this effort, Behavior Based Direct Messaging
11 has become a communication channel of choice for the Company, meeting customers
12 where they are and proactively responding to behavioral indicators to help increase the
13 likelihood of enrollment into meaningful assistance programs ahead of a crisis. The
14 Company has identified that updating the Kubra 4.0 tool will provide a more flexible and
15 configurable messaging platform to help in experimental design & marketing messages
16 directly react to and communicate with the affected customer base.

17 **Q. What are some behavioral indicators that prompt specialized messaging?**

18 A. Examples include (1) missed payment after record of making payments for several months,
19 (2) the auto-pay system receives an insufficient funds alert from the customers' account,
20 (3) energy use is high, and a bill is projected to be 25-50% larger than usual, and
21 (4) localized/seasonal triggers such as heat waves, blizzards, and ice storms.

22 **Q. What are the customer benefits of this upgrade?**

23 A. This project creates value for customers and the Company by:

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- providing access to templates and wording changes that previously required expensive Statement of Work engagement to deliver;
- reducing lengthy wait times to implement these aforementioned Statements of Work;
- introducing 12 net-new alert messages, including four for the Shut-off Protection Plan, one each for missed payment(s), summer event alerting, winter event alerting, and five additional alerts to be detailed during the plan & design phase and based on current LMI customer communication needs;
- allowing for new means of communication and messaging via the mobile app push notification feature; and
- providing better outage notification reliability and control via Application Programming Interface data transfer instead of Secure File Transfer Protocol data transfer.

Q. Were alternatives to the update considered?

A. Yes. The alternatives considered were: (1) continuing the expensive Statements of Work approach for updating each message template and for bringing on any new messages. This would total approximately ~\$50,000 per new alert, for a total of \$600,000 for all 12 net-new alerts for this effort if pursued individually. This total did not include costs to any existing message adjustments. (2) Purchasing a new customer communications system. This option was not selected as it would be extremely expensive to purchase, would not have all of the requirements needed, and would require additional labor to reintegrate with existing communication channels. (3) Utilizing Microsoft Dynamics or Riverstar. This option was not selected as it would be additional labor to reintegrate with existing communication channels. Additionally, neither of the platforms fully support the bandwidth or channels needed to properly communicate out what is sent via Kubra today.

ENERGY ASSISTANCE ENHANCEMENTS AND MAINTENANCE
ANNUAL UPDATES

Q. Please describe the Energy Assistance Enhancements and Maintenance Annual Updates project.

A. The Energy Assistance Enhancements and Maintenance Annual Updates project, formerly known as the CARE project, will implement changes to the software that supports programs offering 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 include criteria from the Department of Health and Human Services (“DHHS”) and the MPSC to prioritize the list of changes.

Q. Why is this project beneficial for Customers?

A. Each grant year, DHHS and MPSC stipulate the criteria required for customers enrollment in the CARE Program, how the Company and support 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 change significantly each year and consequently, the Energy Assistance Enhancement and Maintenance Annual Updates application requires related modifications to meet the new requirements.

The project will provide the following value: (1) complete modifications to internal SAP application and Agency Portal to receive Low Income Energy Assistance Fund (“LIEAF”) funding, used to provide customers the bill credits and arrears forgiveness; (2) improve the data within the assistance agencies portal, making it easier to assist

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1 customers in need of LIEAF funding; and (3) complete modifications to customer facing
2 platforms.

3 **Q. Please provide a scope for the project.**

4 A. The project scope includes:

- 5 • updating the enrollment and status process;
- 6 • facilitating flat monthly bills;
- 7 • improving reporting;
- 8 • updating the arrears forgiveness plan;
- 9 • satisfying additional regulatory requirements for the required annual grant rule
- 10 changes;
- 11 • updating CARE dunning process; and
- 12 • updating the assistance portal functionality to enhance Agency Self-Service.

13 **Q. What is the risk if the project is not funded for implementation?**

14 A. If the regulatory requirements are not fulfilled, the Company is at risk of losing state LIEAF
15 funds to assist low-income customers with paying their energy bills, thereby increasing
16 customers' risk of shutoff for non-payment.

17 **Q. Were additional options considered?**

18 A. Yes. Transferring the administration of Energy Assistance Programs to a third-party
19 organization was considered but ultimately rejected as it would remove the Company's
20 ownership and visibility into the health of the program while increasing administrative
21 costs.

22 **Q. Is this project related to the LMI Customer Enhancement Project?**

23 A. No. These are two separate projects.

CUSTOMER PRODUCT FAMILY ENHANCEMENTS²

Q. Please describe how Customer Product Family enhancements are identified and implemented.

A. CX&G Customer Product Family Enhancements are technology improvements which benefit customers and are implemented in response to the launch of a channel, customer tool, project completion, and/or direct customer feedback. Enhancements shore up the foundation of existing features or capabilities in customer channels or tools. Depending on the need identified, enhancement dollars could be utilized to support the enhancement of any customer supporting feature and/or capability, often as emerging requests. These items are small-scope items with a reduced budget and fewer resource requirements in comparison to larger capital investments. Having the flexibility to implement Customer Product Family Enhancements enables the Company to meet emerging needs without the longer lead time of rate case submissions.

Examples of enhancements include improving overall functionality of the channel or tool, analytics on platform usage, addressing issues identified internally or via customer feedback, adding relevant or customer-driven capability, and performance monitoring.

Q. How do Customer Product Family Enhancements benefit the Company's customers?

A. Enhancements assist the Company in providing a better, more optimized customer experience for customers through improved understanding of how they use the channels or tools, which features are important to their experience, and how the channels or tools are performing. Specific enhancements are discussed throughout my testimony in the corresponding business area and IT Company witness Baker's testimony.

² For 2021 and 2022, the actual project name was Enhancements-CX&O-Capital and starting in 2023, the project is named Product Family Enhancements-Customer-Capital.

2. Customer Contact Center

Q. Please provide an overview of the Customer Contact Center.

A. The Customer Contact Center is responsible for staffing and operating the Company's call centers, which serve all residential and small business customer calls. In 2024, call center representatives answered over 2.68 million customer calls. Likewise, the IVR system addressed 4.7 million calls in 2023.

To continue this work, the Company is projecting \$13.7 million of O&M expenses for the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents an increase in O&M expenses of \$900,000 from the \$12.8 million expended in 2024, due to new union contract wage increases & merits for Customer Service Representatives.

3. Business Customer Care ("BCC")

Q. Please provide an overview of BCC.

A. BCC directly impacts the Company's commercial and industrial customers, and includes the Business Center, which assists the Company's larger business customers with support such as phone agents and account management. BCC's main goal is to deliver exceptional customer experience, while identifying opportunities that provide the Customer with added energy value and opportunities. Overall, BCC serves approximately 100,000 customers, equating to 200,000 contract accounts. As noted above, a new Growth team was assembled under this umbrella to focus on intentional, planned load growth within the Company's service areas.

To continue the work in this area, the Company is projecting \$2.5 million in O&M expenses for the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents an increase in O&M expenses of \$1 million from the \$1.5 million expended

1 in 2024. This increase is directly attributable to both Growth team labor and outside
2 services added to the existing Economic Development team.

3 **4. Credit and Assistance**

4 **Q. Please provide an overview of Credit and Assistance.**

5 A. Credit and Assistance consists of: (1) Theft Investigations; (2) Revenue Operations; and
6 (3) Energy Assistance, which collectively manage the Company's collections cycle and
7 support its most vulnerable customers by connecting them with Company-sponsored
8 payment plans and public assistance funding to help customers pay their bills.

9 The Theft Investigation Team provides the critical service of identifying and ending
10 energy theft in the Company's service territory - important both for maintaining the safety
11 and integrity of the Company's system and minimizing all customers' costs. In 2024, the
12 team identified 2,182 confirmed cases of theft and billed for \$1,584,851 in unauthorized
13 use and investigation costs—a decrease of 615 cases but an increase of about \$439,000 billed
14 over the previous year.

15 Revenue Operations addresses past due customer accounts or accounts involved in
16 bankruptcy. Employees within this area manage the collections cycle, beginning with
17 issuing a notice to customers and ending with visiting their premises to disconnect service.
18 This group also manages contracts with outside collection agencies to recover payments
19 from customers with outstanding balances. In 2024, the Company contracted with outside
20 collection agencies to recover \$1.6 million (covering recovery for both gas and electric
21 accounts). Consequently, the agencies recovered \$9.4 million of previously written-off
22 customer balances, of which \$3 million accounted for gas-only recoveries (32% of total).

23 Recovery of these payments directly offsets the uncollectible expense discussed in
24 the testimony of Company witness Matthew J. Foster.

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1 The Energy Assistance team is responsible for administering the Company's CARE
2 Program, which supports low-income customers who may be struggling to pay their
3 monthly energy bills and helps to provide customers with either a one-time bill assistance
4 payment or on-going support via enrollment in an Affordable Payment Plan ("APP"). By
5 coordinating with other organizations in fiscal year 2025, this team obtained \$9 million of
6 APP-specific assistance and an additional \$5.5 million in as-needed assistance for its
7 customers requested through the MEAP.³ In addition to MEAP assistance, customers
8 received \$26 million in State Emergency Relief payments and \$11 million in Home
9 Heating Credit assistance. Note these figures include assistance for both electric and gas
10 customers.

11 To continue the work in this area, the Company is projecting \$2.4 million in O&M
12 expenses and \$882,000 in capital for the test year ending October 2027. As shown on
13 Exhibit A-132 (MNW-2), the O&M request represents an increase of about \$3 million in
14 O&M expenses from the \$2.1 million expended in 2024, due to the following increases:

- 15 • \$91,000 increase due to reduced theft investigation bill credits;
- 16 • \$68,000 increase for Collection Agency Services; and
- 17 • \$140,000 labor increase for full headcount in the Low-Income team and
18 Revenue Recovery Office team that had vacancies in 2024.

19 **Q. Please provide additional details about the \$882,000 in capital spending in this area.**

20 **A. The capital request is to support the LMI Customer Support Enhancement.**

³ The MEAP offers customers options for reduced monthly bills while gradually paying down any arrears brought into the program or a one-time payment toward their bill.

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1 **Q. Please describe the LMI Customer Support Enhancement project.**

2 A. Since its implementation, the LMI Customer Support Enhancement has provided solutions
3 that make interactions with the Company and its LMI-related resources more accessible,
4 supportive, and efficient, while facilitating enrollment into assistance programs to reduce
5 energy burden for LMI customers. This project has facilitated collecting targeted,
6 personalized data to provide customers with earlier communication and opportunities to
7 enroll in payment assistance and income-qualified programs including budget plan,
8 payment arrangements, shut-off protection, home energy audits, helping neighbors,
9 demand response (“DR”), renewable energy, and more.

10 The Company’s stated core functions for the project have been four-fold:

- 11 • streamlining enrollment—providing clear, step-by-step guidance through
12 enrollment processes, and ensuring the enrollment information is mobile
13 friendly;
- 14 • creating proactive communications—using data to proactively reach out to LMI
15 customers with education and options;
- 16 • integrating new programs—and redesigning if necessary to meet the needs of
17 the LMI customers; and
- 18 • continuous improvement and feedback—incorporating feedback about what
19 works and what doesn’t.

20 **Q. Why is it important for the Company to receive continued approval for this project?**

21 A. The LMI project has shown positive metrics since implementation.

- 22 • Since launch, 78,000 customers have engaged with the tool, and 52,000 have
23 self-identified as LMI, confirming strong visibility and interest from the
24 intended user base.
- 25 • Of those engaged, 35% completed the full eligibility assessment, successfully
26 identifying one or more programs for which they qualify.
- 27 • 25,000 customers have completed the enrollment flow, and nearly 20% enrolled
28 in more than one offering, highlighting the tool’s effectiveness in simplifying
29 access to multiple programs.

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- This streamlined experience reduces enrollment barriers and helps customers navigate offerings like Energy Waste Reduction (“EWR”), DR, Payment Plans, and Energy Assistance offerings.
- 69% of surveyed customers rated the tool “extremely easy to use.”
- Direct customer comments reinforce this ease and appreciation:
 - *“Very easy to do and understand thanks. I am a senior citizen.”*
 - *“This was a wonderful surprise after dealing with shutoff notices. It was easy to use and seemed designed to be user friendly.”*
 - *“Thank you for the recommendations and opportunities listed! I need all the help I can get.”*
- The tool has generated 52,000 new LMI self-identifications, data the Company did not previously have.
- On April 20, 2025, Green Giving was added to the simplified digital enrollment experience. In just the first hour, six customers enrolled—matching the total enrollments agencies achieved in the previous six weeks.
 - Since then, the Company has enrolled 515 low-income customers digitally in Green Giving, while agencies have enrolled 10 customers.
- By implementing the tool, the Company has reduced the need to send over 300,000 emails to promote individual products to reach enrollment goals, streamlining the Company’s outreach efforts and maximizing efficiency.
- Continued success enables:
 - More effective outreach for affordability and energy efficiency programs.
 - Future offerings designed for real customer needs.
 - Advance equity goals by prioritizing Environmental Justice (“EJ”) and LMI communities.

These results affirm that the tool has immediate impact, delivering on its intended purpose: reducing enrollment barriers, increasing program visibility, and helping LMI customers more easily access the support they need. Continued monitoring and feedback collection will allow the Company to further refine the tool and expand its impact.

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Overall, this work provides proactive, immediate relief, helping LMI customers manage costs, avoid disconnection, and maintain essential services, all of which will enhance customer well-being making it a socially responsible initiative with tangible, positive outcomes.

Q. How will investment in this project benefit all Consumers Energy customers?

A. While this project's primary focus is to support LMI households, it will benefit all customers by delivering five noted benefits: (1) Enhancing energy equity: by broadening access to bill assistance and utility programming this solution gets the Company one step closer to ensuring everyone has equal access to basic utilities; (2) addressing the risk of unpaid bills and service disconnections isn't just compassionate and the right thing to do, it's also cost-effective; preventing service cuts reduces administrative costs and lost revenue which will positively impact all customers; (3) building trust with LMI customers fosters a sense of loyalty and increases their willingness to engage proactively, not just in times of crisis; (4) reducing the bill and energy burden on low-income families enhances their overall quality of life and financial stability; and finally, engaging LMI households not only in bill assistance programs but also in clean energy solutions is crucial for environmental sustainability aligning with the Company's Clean Energy Plan and the state's MI Healthy Climate Plan. Together, these benefits not only support vulnerable customers but also create a more cost-effective and sustainable future for everyone.

Q. Has the LMI Customer Support Enhancement been previously allowed?

A. Yes. The Commission notably supported the project in its September 30, 2025 Order in Case No. U-21806, stating "The need to simplify and streamline the process for LMI customers to access support is a priority of the Commission and will continue to be assessed and refined in future proceedings. Accordingly, finding the LMI Customer Support

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Enhancement project to be reasonable and prudent overall (with the caveat that the Commission expects to see real progress by the company on its website redesign project)..." (page 144). As noted earlier in my testimony, the Company is currently assessing the website redesign and high-level task list and timeline for its completion.

5. Analytics and Outreach

Q. Please detail the scope and duties of the Analytics and Outreach team.

A. The larger Analytics and Outreach team includes several multi-faceted teams that supports the overall customer analytics, strategy, experience design for utility products, and research activities used to improve the overall customer experience. This team

- supports the overall enterprise and partners with teams across the Company to include the voice of customers in business decisions, strategies, and processes;
- helps to identify new technological needs for the company to better serve customers and for customers to more easily self-serve;
- supports building business cases for new work or customer service tools;
- builds data visualizations and automated processes; and
- works with other parts of the Company to improve customer outcomes within the billing & payment, outage, move in/move out, and field experiences.

To continue this work, the Company is projecting \$2.9 million of O&M expenses for the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents an increase of \$1.6 million from the \$1.3 million expended in 2024 - \$647,000 due to fully staffing/filling vacancies the Customer Strategy team, \$335,000 for a Voice of the Customer Enterprise Feedback Management Solution, and \$647,000 for increasing IT cost and contracted labor cost.

B. Billing and Payment

Q. Please provide an overview of Billing and Payment.

A. Billing and Payment is responsible for leveraging customer feedback to ensure payment processes are simple and consistent, monthly energy bills are accurate and easy to understand, and customers receive their bills in a timely fashion. The work in this department is divided between Customer Billing and Customer Payment programs. The Company is projecting \$11.4 million of O&M expenses for the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents an increase of \$1.7 million in O&M expenses over the \$9.7 million expended in 2024. This increase is mainly due to increasing costs in postage and service fees.

1. Customer Billing

Q. Please provide an overview of Customer Billing.

A. Customer Billing manages the exceptions process--a quality control process designed to (1) review unusual bills (both digital and paper) and/or (2) bill for unique programs before they are sent to customers. The review may involve contacting customers to gather additional information or to inform them of a potential billing issue. Bills may be corrected through the billing adjustment process, or meters may be reread as part of the validation process. Rigorous efforts to ensure every customer bill is accurate results in the Customer Billing team continually optimizing its processes and technology to aid in the billing exception review. Ensuring that customers receive the right bill every time is critical. To continue this work, the Company is projecting \$9.9 million of O&M expenses for the test year ending October 2027. As shown on Exhibit A-132 (MNW-2), this represents an increase of \$1.4 million from the \$8.5 million expended in 2024, due to postage mail and

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1 material costs for customer paper bills and notices, as well as annual USPS postage
2 increases forecast at approximately 7.8% per year.

3 **Q. Please explain the costs within Customer Billing.**

4 A. The cost for stationery, forms, and postage related to the Company's billing and dunning
5 communication processes is included in Customer Billing. The Company expects to mail
6 20 million paper bills, and approximately 2 million dunning notices in 2026.

7 To mitigate these cost increases, the Company has taken action to increase customer
8 enrollment in electronic billing, or eBill. Consumers Energy has successfully increased
9 eBill participation from <27% in 2017 to 50% as of the second quarter of 2025. This
10 growth has offset postage costs by over \$2.5 million annually by reducing the number of
11 pieces mailed.⁴

12 However, cost per piece of postage has steadily increased over the past three years,
13 a cost expected to continue to increase due to nearly annual US Postal Service postage
14 increases. As noted previously, postage costs are forecast at a 7.8% increase year over year
15 through 2030. These increases offset the savings the Company has realized from growing
16 its eBill enrollment, without which increases in the cost for postage would have contributed
17 to the cost of customer billing over time.

18 In addition, as shown in Exhibit A-12 (MNW-1), Schedule B-5.9, the Company
19 invested \$1.2 million in the historical period on printers used for two large-scale customer
20 bill printer replacements. Two of the Company's printers reached the end of life in 2023,
21 and it was necessary to replace them to continue to be able to provide customers with

⁴ This figure can vary since it is dependent upon when the United States Postal Service raises rates, as well as customer base growth. At the beginning of 2025 a 1% increase in participation would have led to a \$207,543.93 savings, but with the rise in postage rates in July 2025, a 1% increase in eBill users could lead to a \$288,164.52 savings for the year.

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appropriate and timely bills. Exhibit A-12 (MNW-1), Schedule B-5.9 also highlights bridge year capital spend of \$112,000 for Postage & Print Shop equipment (postage meter, bill printers, tabletop inserters, lift jack).

2. Customer Payment Programs

Q. Please describe the CX&G Customer Payment Programs group.

A. Customer payments are among the most sensitive and frequent touchpoints the Company has with its customers, with approximately over 34 million payments made annually. The Company's Customer Payment Strategy focuses on removing payment difficulties, providing payment options that customers expect, and ensuring all customers have the same easy payment experience regardless of how they choose to pay their bill. This has resulted in a significant reduction of payment-related calls and complaints and improvement in customer experience. The Company continues to make it a priority to accommodate customer preferences with a variety of desirable options to meet current customer expectations and to maintain a single set of customer-friendly payment rules that apply across all payment options.

Q. Please describe the costs associated with the Customer Payment Programs.

A. The Company is projecting \$1.4 million in the test year O&M expenses shown on Exhibit A-132 (MNW-2). This represents a \$260,000 increase from the \$1.1 million expended in 2024. The increase is due to an increase in payment lockbox fees due to vendor increases.

Q. What are the anticipated payment processing fees costs for the test year?

A. Within the \$1.4 million of Customer Payment Programs test year O&M expense, the Company is projecting \$125,146 in payment processing fees O&M expenses for the test year. Additional payment-related fees include bank lock box fees in the amount of

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1 \$529,900, approximately \$467,041 in Direct Payment Office (“DPO”)-related payment
2 fees, and \$323,045 for the Billing & Payment Program Support team.

3 **Q. Are there additional changes to the way the Company collects payment processing**
4 **fees?**

5 A. As discussed above, the Company has implemented a policy change, resulting in a
6 fee-based model for payments submitted through vendor payment channels.

7 **Q. Does the Company anticipate any revenue generated by assessing payment card**
8 **service fees to customers continuing to pay with a credit/debit card?**

9 A. No, the Company does not anticipate or forecast any revenue being generated from
10 payment processing fees.

11 **Q. What are the merchant fees that customers pay for use of credit/debit cards?**

12 A. All customers using credit/debit cards pay a flat fee per transaction. Residential customers
13 pay \$2.99 per transaction and Commercial & Industrial customers pay \$9.99 per
14 transaction, regardless of rate schedule. These fees are paid directly to the third-party
15 payment processor, Paymentus.

16 **Q. Please provide an overview of DPOs.**

17 A. Consumers Energy has eight DPOs around the state of Michigan, all located within existing
18 Company facilities, making them a cost-effective option for customers to pay their bills in
19 person. These offices serve some of the Company’s most vulnerable customers, such as
20 seniors and low-income customers, providing them with a community resource that can
21 connect them with billing options and assistance opportunities.

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1 **Q. Does the Company offer other in-person payment options in addition to the remaining**
2 **DPOs?**

3 A. Yes. The Company has maintained its relationship with an authorized pay agent, which
4 accepts payments at stations such as Wal-Mart, Kroger, and other associated store fronts.
5 These pay stations serve as de facto DPOs. This provides customers with the continuity
6 and convenience of being able to pay their bill without having to locate a DPO. Customers
7 are charged a fee to pay their bill in these locations, which covers the costs of the processing
8 fee the Company is charged to have this option.

9 **Q. Does the Company itself collect the payment fee?**

10 A. It does not. The authorized pay agent implements and collects the fee from the customer
11 utilizing their services.

12 **Q. What is the payment fee?**

13 A. The payment fee is \$1.50 per transaction, per the agreement between the vendor and the
14 Company.

15 **HOME ENERGY PRODUCTS PROGRAM**

16 **Q. Please describe the Company's Home Energy Products Program.**

17 A. Home Energy Products referred to a portfolio of value-added products and services
18 ("VAPS") that consists of the Company's non-regulated ASP, appliance repair, and the
19 AllConnect Mover Program. Customers enrolled in ASP paid a monthly subscription fee
20 to cover repairs to equipment such as furnaces, air conditioners, etc. and if a covered
21 appliance malfunctioned, a qualified service person was sent to explain/rectify the problem
22 at no additional cost to the customer. This program benefited customers by reducing the
23 risk of potentially expensive and unexpected appliance repair or replacement costs.

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1 **Q. Is there ongoing revenue from the third party?**

2 A. Yes. As a part of the sales agreement, the Company receives a monthly per-enrolled
3 customer fee, in addition to a monthly fee for each call transferred. Over the term of the
4 proposed long-term service agreement ("LTSA"), the proposed revenue sharing is
5 \$1.50 monthly per customer, which includes \$.066 per customer per month payment to
6 compensate for the costs related to the business, resulting in \$.084 customer per month of
7 revenue sharing. Additionally, the LTSA includes a \$1.00 fee per call transferred.

8 **Q. Are all ongoing costs covered by the LTSA?**

9 A. Yes. The contractually stipulated costs account for billing and payment support contact
10 center support, and corporate services. The LTSA fully offsets the Company's ongoing
11 costs.

12 **Q. How are revenues from the LTSA shared with customers?**

13 A. 100% of LTSA revenues are shared with customers via the Company's general rate cases.

14 **Q. Has the Company included those in this case's revenue requirements and/or proposed**
15 **rates?**

16 A. Yes. Those are included in both. Please see A-133 (MNW-3) for additional information.

17 **Q. Does this complete your direct testimony?**

18 A. Yes.

In the matter of the application of
CONSUMERS ENERGY COMPANY
 for authority to increase its rates for
 the generation and distribution of
 natural gas and for other relief.

EXHIBITS

OF

MELISSA N. WIERSEMA

ON BEHALF OF

CONSUMERS ENERGY COMPANY

December 2025

Schedule: B-5.9

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual and Projected Capital Expenditures

CX&G Capital

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (MNW-1)

Schedule: B-5.9

Page: 1 of 3

Witness: MNWiersema

Date: December 2025

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Historical Year	Projected Bridge Period			Projected Test Year
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	Customer Billing	1,183	112	0	112	0
2	Analytics & Outreach	14	0	0	0	0
3	Credit & Assistance	0	0	735	735	882
4	Total Customer Experience & Operations Capital	1,196	112	735	847	882

		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	Customer Billing	98	15	0	112
6	Analytics & Outreach	0	0	0	0
7	Credit & Assistance	0	735	882	1,617
8	Total Customer Experience & Operations Capital	98	750	882	1,729

Schedule: B-5.9

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Actual and Projected Capital Expenditures

CX&G Capital

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (MNW-1)

Schedule: B-5.9

Page: 2 of 3

Witness: MNWiersema

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
1	Customer Billing	1,183	112	0	112	0
	Labor	-	-	-	-	-
	Capitalized E&S	-	-	-	-	-
	Materials	-	1	-	1	-
	Contractor	1,183	111	-	111	-
	Non-Labor Overhead	-	-	-	-	-
	Non-Labor Other	-	-	-	-	-
	Contingency	-	-	-	-	-
2	Analytics & Outreach	14	0	0	0	0
	Labor	-	-	-	-	-
	Capitalized E&S	-	-	-	-	-
	Materials	-	-	-	-	-
	Contractor	14	-	-	-	-
	Non-Labor Overhead	-	-	-	-	-
	Non-Labor Other	-	-	-	-	-
	Contingency	-	-	-	-	-
3	Credit & Assistance	0	0	735	735	882
	Labor	-	-	-	-	-
	Capitalized E&S	-	-	-	-	-
	Materials	-	-	-	-	-
	Contractor	-	-	735	735	882
	Non-Labor Overhead	-	-	-	-	-
	Non-Labor Other	-	-	-	-	-
	Contingency	-	-	-	-	-
4	Total Customer Experience & Operations Capital	1,196	112	735	847	882
	Labor	0	0	0	0	0
	Capitalized E&S	0	0	0	0	0
	Materials	0	1	0	1	0
	Contractor	1,196	111	735	846	882
	Non-Labor Overhead	0	0	0	0	0
	Non-Labor Other	0	0	0	0	0
	Contingency	0	0	0	0	0

Schedule: B-5.9

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Actual and Projected Capital Expenditures

CX&G Capital

(\$000)

Case No.: U-21981

Exhibit No.: A-12 (MNW-1)

Schedule: B-5.9

Page: 3 of 3

Witness: MNWiersema

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	
5 Customer Billing	98	15	0	112	
Labor	-	-	-	-	
Capitalized E&S	-	-	-	-	
Materials	1	-	-	1	
Contractor	97	15	-	111	
Non-Labor Overhead	-	-	-	-	
Non-Labor Other	-	-	-	-	
Contingency	-	-	-	-	
6 Analytics & Outreach	0	0	0	0	
Labor	-	-	-	-	
Capitalized E&S	-	-	-	-	
Materials	-	-	-	-	
Contractor	-	-	-	-	
Non-Labor Overhead	-	-	-	-	
Non-Labor Other	-	-	-	-	
Contingency	-	-	-	-	
7 Credit & Assistance	0	735	882	1,617	
Labor	-	-	-	-	
Capitalized E&S	-	-	-	-	
Materials	-	-	-	-	
Contractor	-	735	882	1,617	
Non-Labor Overhead	-	-	-	-	
Non-Labor Other	-	-	-	-	
Contingency	-	-	-	-	
8 Total Customer Experience & Operations Capital	98	750	882	1,729	
Labor	0	0	0	0	
Capitalized E&S	0	0	0	0	
Materials	1	0	0	1	
Contractor	97	750	882	1,728	
Non-Labor Overhead	0	0	0	0	
Non-Labor Other	0	0	0	0	
Contingency	0	0	0	0	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
CX&G O&M
(\$000)

Case No.: U-21981
Exhibit No.: A-132 (MNW-2)
Page: 1 of 4
Witness: MNWiersema
Date: December 2025

(a)		(b)	(c)
Line		Actual	Projected
No.	Description	12-Mos Ended	12-Mos Ending
		12/31/2024	10/31/2027
1	Billing & Payment	9,733	11,405
	Labor	2,395	2,451
	Material	647	781
	Contractor	1,287	1,651
	Non-Labor Overhead	-	-
	Non-Labor Other	5,402	6,522
2	Customer Interactions	18,714	22,441
	Labor	13,858	16,418
	Material	65	72
	Contractor	4,154	4,771
	Non-Labor Overhead	-	-
	Non-Labor Other	636	1,181
3	Total CX&G O&M Expenses	28,447	33,847
	Labor	16,254	18,869
	Material	713	853
	Contractor	5,442	6,422
	Non-Labor Overhead	-	-
	Non-Labor Other	6,039	7,702

MICHIGAN PUBLIC SERVICE COMMISSIONConsumers Energy Company

Summary of Actual & Projected O&M Expenses

CX&G O&M

(\$000)

Case No.: U-21981

Exhibit No.: A-132 (MNW-2)

Page: 2 of 4

Witness: MNWiersema

Date: December 2025

(a)		(b)	(c)
Line		Actual	Projected
No.	Description	12-Mos Ended	12-Mos Ending
		12/31/2024	10/31/2027
1	Customer Billing	8,549	9,961
	Labor	1,916	1,960
	Material	648	781
	Contractor	578	697
	Non-Labor Overhead	-	-
	Non-Labor Other	5,407	6,522
2	Customer Payment Programs	1,184	1,444
	Labor	479	491
	Material	(0)	-
	Contractor	709	954
	Non-Labor Overhead	-	-
	Non-Labor Other	(4)	-
3	Total CX&G O&M Expenses	9,733	11,405
	Labor	2,395	2,451
	Material	647	781
	Contractor	1,287	1,651
	Non-Labor Overhead	-	-
	Non-Labor Other	5,402	6,522

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
CX&G O&M
(\$000)

Case No.: U-21981
Exhibit No.: A-132 (MNW-2)
Page: 3 of 4
Witness: MNWiersema
Date: December 2025

(a)		(b)	(c)
Line No.	Description	Actual 12-Mos Ended 12/31/2024	Projected 12-Mos Ending 10/31/2027
1	Analytics & Outreach	1,328	2,905
	Labor	1,148	1,778
	Material	2	-
	Contractor	320	820
	Non-Labor Overhead	-	-
	Non-Labor Other	(142)	307
2	Business Customer Care	1,517	2,549
	Labor	1,364	1,943
	Material	1	4
	Contractor	108	427
	Non-Labor Overhead	-	-
	Non-Labor Other	44	174
3	Credit & Assistance	2,132	2,403
	Labor	1,535	1,724
	Material	48	55
	Contractor	476	541
	Non-Labor Overhead	-	-
	Non-Labor Other	73	83
4	Customer Contact Center	12,871	13,767
	Labor	9,251	10,544
	Material	14	13
	Contractor	2,998	2,670
	Non-Labor Overhead	-	-
	Non-Labor Other	600	541
5	Digital Customer Operations	872	818
	Labor	560	429
	Material	0	0
	Contractor	251	313
	Non-Labor Overhead	-	-
	Non-Labor Other	61	76
6	Total CX&G O&M Expenses	18,714	22,441
	Labor	13,858	16,418
	Material	65	72
	Contractor	4,154	4,771
	Non-Labor Overhead	-	-
	Non-Labor Other	636	1,181

Line No.	(a) Description	(b)	(c)	(d)	(e)
		Actual 12 Mos Ended 12/31/2024	Inflation Impacts on Historical Costs Test Year	Scope/ Cost Increases Net of Productivity Gains	Projected O&M 12 Mos Ending 10/31/2027
			(b) * Compounded Inflation Rate		(b) + (c) + (d)
1	Billing & Payment	\$ 9,733	\$ 709	\$ 964	\$ 11,405
2	Customer Interactions	18,714	1,363	2,364	22,441
3	Total	\$ 28,447	\$ 2,072	\$ 3,328	\$ 33,847

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 Actual & Projected O&M Expenses
 Oncourse Appliance Service Plan ("ASP") Margin
 (\$000)

Case No.: U-21981
 Exhibit No.: A-133 (MNW-3)
 Page: 1 of 1
 Witness: MNWiersema
 Date: December 2025

(a)		(b)	(c)
Line No.	Description	Actual 12-Mos Ending 12/31/2024	Projected 12-Mos Ending 10/31/2027
1	Oncourse ASP	\$ 3,144	\$ 1,681
	Labor	655	350
	Material	0	0
	Contractor	1,459	780
	Non-Labor Overheads	56	30
	Non-Labor Other	973	520
2	Oncourse ASP Revenue	\$ (3,520)	\$ (3,252)
3	Oncourse ASP Margin	\$ <u>(377)</u>	\$ <u>(1,571)</u>

Variance:

Expenses for the Oncourse ASP service agreement in 2024 are \$1.3M more than the test year due to IT migration costs that are not projected to continue in the test year.