



September 30, 2025

Ms. Lisa Felice
Michigan Public Service Commission
7109 W. Saginaw Hwy.
Lansing, MI 48909

Via E-File

RE: MPSC Case No. U-21870

Dear Ms. Felice:

Attached please find the enclosed documents for filing:

- Public Direct Testimony and Exhibits of Caroline Palmer on behalf of Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, and Citizens Utility Board of Michigan (MEC-15 through MEC-23); and
- Proof of Service.
- Please note that there is a confidential version of this testimony which is only being served to those with an executed non-disclosure certificate pursuant to the Protective Order.

Thank you for your assistance in this matter. If you have any questions, please feel free to contact me.

Sincerely,

Christopher M. Bzdok
chris@tropospherelegal.com

CC: Parties to Case No. U-21870

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of
CONSUMERS ENERGY COMPANY for
authority to increase its rates for the generation
and distribution of electricity and for other
relief.

U-21870

DIRECT TESTIMONY OF CAROLINE PALMER
ON BEHALF OF
MICHIGAN ENVIRONMENTAL COUNCIL,
NATURAL RESOURCES DEFENSE COUNCIL, SIERRA CLUB,
AND CITIZENS UTILITY BOARD OF MICHIGAN

PUBLIC

September 30, 2025

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1 **I. INTRODUCTION & QUALIFICATIONS**

2 **Q. Please state for the record your name, position, and business address.**

3 A. My name is Caroline Palmer. I am a Principal Associate at Synapse Energy Economics,
4 Inc. (“Synapse”), located at 485 Massachusetts Avenue, Suite 3, Cambridge, MA 02139.

5 **Q. On whose behalf is this testimony being offered?**

6 A. I am testifying on behalf of the Michigan Environmental Council, Natural Resources
7 Defense Council, Sierra Club, and Citizens Utility Board of Michigan.¹

8 **Q. Please summarize your experience in the field of utility regulation.**

9 A. At Synapse, I provide expert witness and consulting services on behalf of public interest
10 clients in regulatory proceedings. The issues I cover in these cases include marginal and
11 embedded cost-of-service studies, revenue allocation, advanced rate design, low-income
12 rate design, large load/data center tariff design, decoupling, distributed energy resource
13 (“DER”) interconnection and compensation, and electric vehicle (“EV”) infrastructure
14 investments. Prior to joining Synapse, I worked at Strategen Consulting for five years
15 performing similar work. I have submitted expert testimony in 20 dockets across ten
16 jurisdictions.

17 I was awarded a Fulbright Research Fellowship to Greece in 2015 and supported
18 clean energy policy consulting at Meister Consultants Group (now Cadmus) before that. I
19 hold a Master of Public Policy from the Goldman School at UC Berkeley and a Bachelor

¹ Sierra Club joins my testimony with respect to data centers.

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1 of Science from Georgetown University. I have 10 years of professional experience. My
2 work experience is summarized in my resume, provided as Exhibit MEC-1.

3 **Q. Have you testified before this Commission or as an expert in any other proceeding?**

4 A. I have previously testified before the Michigan Public Service Commission (Commission)
5 in the following case:

- 6 • Case U-21859 (Consumers Energy’s application to serve data center load on its
7 Large General Service Primary Demand (“GPD”) Rate)

8 I have also sponsored testimony before the Connecticut Public Utilities Regulatory
9 Authority, the New Hampshire Public Utilities Commission, the Missouri Public Service
10 Commission, the New York Public Service Commission, the Massachusetts Department of
11 Public Utilities, the Maine Public Utilities Commission, the Oklahoma Corporation
12 Commission, the North Carolina Utilities Commission, and the Nova Scotia Energy Board.

13 **Q. Are you sponsoring any exhibits?**

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

| | | |
|----|----------------|--|
| 15 | Exhibit MEC-15 | Resume of Caroline Palmer |
| 16 | Exhibit MEC-16 | Consumers Response to U21870-MNSC-CE-221 |
| 17 | Exhibit MEC-17 | Consumers Response to U21870-MNSC-CE-0222 |
| 18 | Exhibit MEC-18 | Consumers Response to U21870-MNSC-CE-0214 |
| 19 | Exhibit MEC-19 | Consumers Response to U21870-MNSC-CE-253 with |
| 20 | | Attachment 1 |
| 21 | Exhibit MEC-20 | Consumers Response to U21870-MNSC-CE-255 without |
| 22 | | Attachments |

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| | | |
|---|----------------|--|
| 1 | Exhibit MEC-21 | Consumers Response to U21870-MNSC-CE-256 |
| 2 | Exhibit MEC-22 | Consumers Response to U21870-MNSC-CE-257 |
| 3 | Exhibit MEC-23 | Consumers Response to U21870-MNSC-CE-215 |

4 **Q. What topics and Company witnesses' testimony are you addressing in your**
5 **testimony?**

6 **A.** I am addressing the Company's cost of service study and rate design and the testimony of
7 Company witnesses Davis and Connolly.

8 **II. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

9 **Q. Please summarize your conclusions.**

10 **A.** My conclusions are as follows:

- 11 • The Company's classification of advanced metering infrastructure ("AMI") meter costs
12 as 100 percent customer-related does not reflect cost causation.
- 13 • Consumers' cost of service study ("COSS") disproportionately and inappropriately
14 assigns distribution costs to lower voltage or smaller customers.
- 15 • The riskiness and magnitude of infrastructure investment associated with potential new
16 data centers taking service in Consumers' territory necessitates re-evaluating the
17 traditional ways that Consumers would track and allocate the costs of its investments
18 for data centers.
- 19 • Consumers' proposed facilities allowance for the Large Economic Development Rate
20 ("LEDR") could increase costs for other customers.

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1 **Q. What are your recommendations?**

2 A. I recommend that the Commission:

- 3 • Direct the Company to classify AMI meters as customer, demand, and energy related
4 proportionally to the relative benefits that accrue to each of the three cost drivers based
5 on Consumers' quantification of AMI benefits.
- 6 • Reject Consumers' proposed new distribution COSS allocations to downstream-
7 voltage customers. Further, the Company should reconsider existing voltage
8 differentiations already built into its COSS, with related recommendations in its next
9 rate case.
- 10 • Require Consumers to allocate distribution battery costs to all distribution customers
11 and allocate Multi-Account Online Account Management project costs to the customer
12 classes who use the program.
- 13 • Order Consumers to demonstrate in its next rate case that its proposed cost allocation
14 methods satisfy the legislative requirement that residential customers will not subsidize
15 the costs incurred to provide electric service to a data center.
- 16 • Order Consumers to conduct sensitivity modeling runs in its next IRP with and without
17 data center load and disclose the difference in revenue requirements and resource
18 portfolios.
- 19 • Reject Consumers' proposed facilities allowance for rate LEDR. If the Commission
20 approves a facilities allowance, it should reject Consumers' proposal to provide the
21 facilities allowance to existing customers and should require Consumers to true up
22 incremental distribution charges for overestimated facilities allowances.

- 1 • Direct Consumers to increase the LEDR system contribution charge and shorten the
2 LEDR discount period.

3 **III. COST OF SERVICE STUDY**

4 ***Overview of Cost of Service Studies***

5 **Q. What is the purpose of a cost of service study?**

6 A. A COSS seeks to determine what costs are incurred to serve each class of customers in
7 order to assign the utility's revenue requirement to each customer or rate class in proportion
8 to the costs that those customers impose on the system.

9 **Q. How is a COSS performed?**

10 A. A COSS typically follows three steps. First, costs are functionalized by separating utility
11 plant and expenses according to the primary functions they serve, such as generation,
12 transmission, and distribution. Second, the functionalized rate base and operating costs are
13 classified based on their primary cost drivers – typically as energy-related (commodity),
14 demand-related (capacity), or customer-related. Finally, costs are either directly assigned
15 to specific customers or allocated among customer classes using allocation factors based
16 on energy use, peak demand, or customer counts.

17 **Q. How do analysts determine the appropriate approaches to cost classification and**
18 **allocation?**

19 A. When selecting classification factors or allocators, the goal is to fairly allocate costs among
20 different customer classes based on cost causation. Cost causation reflects the notion that
21 the customer or set of customers that caused a cost should pay for the cost. To determine

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1 cost causation, analysts often rely on economic theory and power system engineering
2 considerations.

3 **Q. In your view, has the Company selected appropriate COSS methods?**

4 A. No. I have two primary concerns with the Company's COSS methods:

- 5 1. The Company's meter classification does not reflect AMI cost causation; and
- 6 2. The Company's allocations based on voltage differentiation do not reflect modern
7 cost causation.

8 My testimony recommends alternative approaches that are better supported by economic
9 theory and power system engineering.

10 **Q. How should COSS results be used in a rate case?**

11 A. Parties and the Commission should exercise judgement when using a utility COSS to
12 inform revenue allocation or rate design, as it is an inherently imprecise tool in which cost
13 analysts make numerous subjective determinations that may dramatically impact the study
14 results. As such, utility cost of service studies should be one of several considerations used
15 to guide decision-makers in revenue allocation and rate design, rather than being viewed
16 as the sole determinant or final authority.

1 ***Consumers Should Classify and Allocate Advanced Metering Infrastructure Meter***
2 ***Costs Based on Customer, Energy, and Demand***

3 **Q. Describe the extent of AMI meter deployment in the Company's territory.**

4 A. As of 2024 reporting, 99.48% of residential, 98.46% of commercial, and 9.91% of
5 industrial customers had AMI meters.² In terms of infrastructure investment, AMI meters
6 made up 68% of the Company's meter plant in service in 2023.³

7 **Q. How does the Company classify and allocate AMI meter costs?**

8 A. Consumers classifies AMI meter costs as customer-related and allocates them using
9 allocator 170, which is based on the number of customers in each customer class. For
10 traditional meters, this approach follows the principle of cost causation by recognizing that
11 the weighted number of customers in a class drives traditional meter costs.

12 **Q. What are your concerns with Consumers' AMI meter classification and allocation?**

13 A. Consumers' approach does not reflect the realities of an evolving power system.
14 Technology and cost responsibility are changing rapidly to meet evolving market demands
15 and to support state policy goals. Technological advances are impacting the services
16 provided on the power grid and how those services are provided, which requires utilities to
17 re-evaluate cost allocation issues that may previously have been considered settled.
18 Traditional cost of service techniques do not necessarily reflect the modern power system
19 or a modernized understanding of cost causation on the system.

² Exhibit MEC-15, Consumers Response to U21870-MNSC-CE-0221(a).

³ Exhibit MEC-15, Consumers Response to U21870-MNSC-CE-0221(c).

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1 The Regulatory Assistance Project explains that the main purpose of meters was
2 once customer billing, but that “advanced meters serve a broader range of functions,
3 including demand management, which in turn provides system capacity benefits, and line
4 loss reduction, which provides a system energy benefit. This means the benefits of these
5 meters flow beyond individual customers, and logically so should responsibility for the
6 costs.”⁴

7 **Q. Do Consumers’ new AMI meters enable services beyond customer-related functions?**

8 A. Yes. Consumers’ AMI meters – an essential component of its overall AMI system – will
9 enable significant new functionality beyond that associated with traditional meters.
10 Consumers identified that AMI benefits include reduced energy theft, peak demand
11 reduction, and energy consumption savings.⁵ For example, AMI-enabled programs
12 “provide customers options to manage their energy usage and their energy costs,” and “all
13 customers benefit through lower power supply costs enabled by reduced capacity
14 requirements during ‘critical peak’ conditions.”⁶

15 **Q. Do these new functionalities and their associated benefits change cost causation for**
16 **AMI meters compared to traditional meters?**

17 A. Yes. The benefits that Consumers described clearly extend the role of AMI meters beyond
18 traditional metering, which does not enable energy savings and demand reductions in this
19 way. The Company proposed, and the Commission approved, its AMI investment based

⁴ Lazar, J. et al., *Electric Cost Allocation for a New Era: A Manual*. Montpelier, VT: Regulatory Assistance Project (2020) p.18.

⁵ Direct Testimony of David E. Schonhard. Case No. U-15645 (Remand), January 2014, p.12.

⁶ *Id.* at 11-12.

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1 on the services AMI would provide.⁷ Thus, cost causation for AMI investments is dictated
2 by those services and benefits.

3 **Q. How do you recommend that Consumers classify AMI meter costs?**

4 A. The Company should identify the AMI meter costs included in its approved revenue
5 requirement and classify those costs as a combination of customer, demand, and energy,
6 because AMI meters provide services and benefits that can be categorized into each of the
7 three cost drivers. Specifically, Consumers should classify AMI meter costs across those
8 categories proportionally according to the relative benefits that accrue to each of the three
9 cost drivers, based on the Company's formal quantification of AMI benefits.

10 **Q. What are Consumers' proportional energy, demand, and customer AMI benefits?**

11 A. The Company last filed an AMI business case in Case No. U-21389.⁸ Of total expected
12 electric smart grid program benefits, demand-related benefits⁹ total 17%, while energy-
13 related benefits¹⁰ total 36%.¹¹ Therefore, I propose an initial classification approach that
14 treats AMI meter costs as 36% energy-related, 17% demand-related, and 47% customer-
15 related. I also recommend that Consumers continue to produce its AMI business case
16 benefit analysis in subsequent rate cases and update this classification accordingly.

⁷ For example, in the October 7, 2014, Case No. U-15645 Order and in subsequent rate cases, in which Consumers has also presented a business case for AMI benefits and costs.

⁸ Exhibit MEC-16, Consumers Response to U21870-MNSC-CE-0221(e).

⁹ AC Load Control Avoided Generation, Transmission and Demand Response Avoided Generation, Transmission.

¹⁰ Theft Reduction, AMI Induced Conservation & Efficiency Energy, and Demand Response Conserved Energy.

¹¹ Exhibit A-72 (JRC-1) in U-21389.

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1 **Q. What is the impact of your recommended AMI meter treatment on COSS allocators?**

2 A. This alternative classification reduces the costs treated as customer-related, instead treating
3 portions as energy- and demand-related. Table 1 compares customer, demand, and energy
4 allocators from Consumers' COSS with my proposed AMI meter allocator, showing that
5 demand and energy allocators tend to allocate fewer costs to small customers and greater
6 costs to larger customers than the 100% customer allocator does, due to larger users' higher
7 utilization of the power system and relatively lower customer count. For example, the
8 weighted customer allocator allocates 60% of costs to the residential class, whereas the
9 energy allocator would only allocate 43% of costs to the residential class. My proposed
10 AMI allocator, shown in the bottom row of the table, would ultimately allocate 52% of
11 AMI costs to the residential class, as it uses a blend of the other three allocators.

12 *Table 1: Customer, Demand, and Energy Allocators for AMI Allocation*

| Allocator | Total Electric | Residential | Commercial Secondary | Lighting & Unmetered | Primary | Rate GSG |
|-----------------------------------|----------------|-------------|----------------------|----------------------|---------|----------|
| Weighted Customer (170) | 100 | 60.2 | 28.6 | 0.1 | 11.1 | 0.0 |
| Energy @ Generation (100) | 100 | 42.8 | 23.8 | 0.6 | 32.3 | 0.6 |
| Class Pk @ Voltage 1 (127) | 100 | 47.6 | 22.2 | 0.4 | 29.2 | 0.6 |
| AMI Meter Allocator | 100 | 51.8 | 25.8 | 0.3 | 21.8 | 0.3 |

13

14 **Q. Have you implemented your proposal in the Company's COSS to determine its**
15 **impact on Consumers' COSS results?**

16 A. No, the Company's COSS does not readily permit the testing of changes at this level of
17 granularity.. Thus, the Company is best qualified to adapt its model to include this new
18 classification and allocation approach if the Commission approves it. As discussed above,
19 the new approach would allocate fewer costs to small customers and greater costs to larger

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1 customers than the customer allocator does, due to larger users' higher utilization of the
2 power system and relatively fewer customers.

3 **Q. Have other Commissions approved similar AMI meter classifications?**

4 A. Yes. The Maryland Public Service Commission approved “a benefits approach for
5 allocating AMI costs among rate classes” in 2016, when it approved a proposal to assign
6 25% of AMI costs using a customer-based allocator, 37.5% using a demand-based
7 allocator, and 37.5% using an energy-based allocator in Pepco’s distribution rate case.¹²
8 The approved proposal was based on the fact that an early report on AMI benefits assigned
9 just over 75 percent of the benefits to energy and demand management outcomes, justifying
10 a customer, demand, and energy based allocation.¹³ The Maryland Public Service
11 Commission concluded that the “hybrid approach most fairly spreads the costs and related
12 benefits of AMI throughout the Pepco service territory.”¹⁴

13 **Q. Does Maryland continue to use a composite allocator for AMI meters?**

14 A. Yes. The Maryland Public Service Commission ordered Baltimore Gas and Electric
15 Company (“BGE”) to update its electric AMI benefit analysis in its 2023 rate case to ensure
16 that the AMI allocators reflect updated benefit weights. BGE analyzed six years of data

¹² In the Matter of the Application of Potomac Electric Power Company for Adjustments to Its Retail Rates for the Distribution of Electric Energy (Hereafter, “MD PSC, Case No. 9418”), Order No. 87884. November 15, 2016. (Accessed September 30, 2025) <https://www.psc.state.md.us/wp-content/uploads/Order-No.-87884-Case-No.-9418-Pepco-Rate-Case-1.pdf>. At 105-106.

¹³ MD PSC, Case No. 9418. Direct Testimony of Shelley Norman. July 6, 2016. Available at <https://webpscxb.psc.state.md.us/DMS/case/9418> Item No. 33. At 21-23.

¹⁴ MD PSC, Case No. 9418. Order No. 87884. November 15, 2016. Available at <https://www.psc.state.md.us/wp-content/uploads/Order-No.-87884-Case-No.-9418-Pepco-Rate-Case-1.pdf>. At 106.

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1 and proposed to allocate 56% of AMI meters based on the replacement cost of AMI meters
2 (customer), 26% based demand, and 18% based on energy.¹⁵

3 **Q. Has the Colorado Public Utilities Commission also approved AMI meter classification**
4 **as more than customer-related?**

5 A. Yes. In Proceeding No. 23AL-0243E (and in at least two prior rate cases), Public Service
6 Company of Colorado functionalized 17% of Advanced Meter costs as secondary
7 distribution (classified as demand-related), with the remaining 83% functionalized as
8 metering (classified as customer-related).¹⁶

9 In its February 2024 decision, the Commission found that “there are system-wide
10 benefits of AMI that should be better reflected in the allocation” and therefore directed the
11 Company to “provide a more robust analysis of these costs and identification of the scale
12 and proper allocation of benefits associated with AMI when it files its next Phase II rate
13 case.”¹⁷

¹⁵ Baltimore Gas and Electric Company's Application for an Electric and Gas Multi-Year Plan. Case No. 9692. Direct Testimony of April M. O'Neill. February 17, 2023. Available at <https://webpsexb.psc.state.md.us/DMS/case/9692> Item No. 1. At 15-17.

¹⁶ Colorado Public Utilities Commission Docket No. 23AL-0243E. Rebuttal Testimony Derek S. Klingeman, p.29-31.

¹⁷ Colorado Public Utilities Commission Docket No. 23AL-0243E. February 7, 2024. 2023 CO Phase II Electric Rate Review Decision No. C24-0117, p.23.

1 **Q. Is there other established regulatory precedent tying cost allocation to benefits?**

2 A. Yes. The Federal Energy Regulatory Commission (FERC) has also determined that “the
3 cost causation principle provides that costs should be allocated to those who cause them to
4 be incurred and those that otherwise benefit from them.”¹⁸

5 Given that the benefits of peak demand reduction accrue to customers by reducing
6 their share of demand-related system costs, the costs of Consumers’ AMI meters are partly
7 attributable to enabling peak demand reduction and should in turn be allocated among
8 customer classes based on demand allocators. The same is true for energy-related benefits.

9 ***Consumers’ Voltage Differentiation Does Not Reflect Cost Causation and May***
10 ***Disproportionately Allocate Costs to Lower-Voltage Classes***

11 **Q. What do you discuss in this section?**

12 A. I discuss a few ways in which Consumers’ COSS disproportionately and inappropriately
13 assigns distribution costs to lower voltage or smaller customers. In subsections 1 and 2, I
14 address the Company’s proposals to strictly identify and assign lower-voltage equipment
15 specifically to lower-voltage customers and provide alternative recommendations. In
16 subsection 3, I address Consumers’ assignment of certain IT project costs to residential
17 customers.

¹⁸ FERC’s influential Order No. 1000 reformed the Commission's electric transmission planning and cost allocation requirements. *See* Order No. 1000, Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities. 136 FERC ¶ 61,051 paragraph 535. Available at: <https://www.ferc.gov/sites/default/files/2020-04/OrderNo.1000.pdf>.

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1 *1. Distribution Land, Lines, Substations*

2 **Q. How has Consumers further differentiated allocation by voltage in this case?**

3 A. Since its last rate case, the Company updated its property accounting reporting system to
4 map assets to more granular COSS categories than previously identified. The property
5 accounting system produces the Electric Asset Categorization (“EAC”) report, which
6 breaks out distribution plant and related depreciation accounts into more detailed categories
7 “to facilitate allocating costs to customers.”¹⁹ Consumers then updated its COSS
8 distribution cost categories for land, lines, and substation assets to align with the EAC
9 report results.²⁰ Consumers states that these categories were “chosen to capture asset
10 voltage and the downstream facilities connected to/relying on that asset.”²¹ In other words,
11 the Company developed such granular categories in order to allocate costs to downstream
12 connected facilities that rely on a given asset and “should be assigned some of those
13 costs.”²² The update now allows Consumers to isolate lower-voltage infrastructure costs
14 and assign them specifically to downstream customers.²³

15

¹⁹ Direct Testimony of Emily A. Davis, p.8.

²⁰ For example, Consumers previously separated high voltage distribution substations and equipment into Voltage 1 and below, and Voltage 2 and below; now, Consumers separates high voltage distribution substations and equipment into Voltage 1 only, Voltage 2 and below, and Voltage 3 and below. *See* Davis Direct, p.7 and 10.

²¹ Davis Direct, p.9.

²² Davis Direct, p.10-11.

²³ Consumers also created two new allocators that assign limited costs specifically to Voltage 1 and Voltage 2.

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1 **Q. Why does Consumers assign lower-voltage infrastructure costs to downstream**
2 **customers?**

3 A. Historically, Consumers has excluded customers taking service at higher voltage levels
4 from cost allocation for certain infrastructure to account for the fact that, in the past, such
5 customers did not contribute to system costs at lower voltage levels. The theory supporting
6 such differentiation is that higher voltage customers do not benefit from the lower voltage
7 distribution network because power flows in one direction (from high to low voltage).
8 However, the justification for isolating cost assignment to downstream voltages—
9 especially at the increasing granularity that Consumers now proposes—is becoming less
10 pertinent as the power system evolves.

11 **Q. Why has the historical justification for strict cost assignment to downstream voltages**
12 **changed in today’s evolving power system?**

13 A. One-way power flow is no longer the reality. Today, the power system is changing such
14 that DERs are making bidirectional power flow more common on the distribution system,
15 in turn providing generation and other services to higher voltage customers who previously
16 only benefitted from centralized generation delivered at the transmission or primary level.

17 **Q. Has Consumers acknowledged bidirectional power flow on its distribution system?**

18 A. Yes. Consumers’ Reliability Roadmap, updated for this proceeding, describes “[b]i-
19 directional power flows, especially in circuits that show a propensity to higher-than average
20 adoption of solar DG.”²⁴ Consumers anticipates between 2.4 and 3.5 GW of solar DG

²⁴ Exhibit A-129 (MPK-19), p.34.

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1 penetration by 2030, causing “two-way flows.”²⁵ Consumers also justifies the importance
2 of a DER Management System (“DERMS”) in part based on the described bidirectional
3 power flow, calling a DERMS “critical for managing bi-directional power flows.”²⁶

4 Clearly, Consumers is increasingly planning and designing its power system to be
5 bidirectional. In fact, the Company expects to produce reports in the future demonstrating
6 the extent of bi-directional power flow. To do so, Consumers would assess reverse flow
7 through primary distribution lines and devices as well as substation devices.²⁷ The
8 Company’s plan to assess reverse flow at various levels of the power system indicates the
9 potential pervasiveness of the phenomena.

10 **Q. Do higher voltage customers benefit from the lower voltage system?**

11 A. Yes. Due to bidirectional power flows, lower voltage assets are now being used to serve
12 some of the requirements of higher voltage customers; therefore, higher voltage customers
13 benefit from (and thus help cause) costs related to low voltage assets, and should pay a fair
14 share of these costs. Indeed, Consumers agrees that bidirectional flows may include
15 flowing from lower-voltage distribution equipment to higher-voltage distribution
16 equipment²⁸ and that there could even be times when power flows from distribution-level
17 equipment to transmission-level equipment.²⁹

²⁵ *Id.* at 35.

²⁶ *Id.* at 142.

²⁷ Exhibit MEC-17, Consumers Response to U21870-MNSC-CE-0222(a).

²⁸ Exhibit MEC-17, Consumers Response to U21870-MNSC-CE-0222(b).

²⁹ Exhibit MEC-17, Consumers Response to U21870-MNSC-CE-0222(c).

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1 **Q. Do you agree with Consumers' new EAC report and resulting COSS allocators?**

2 A. No. Stricter assignment of costs to downstream-voltage customers does not reflect
3 customers' use of the power system, since two-way power flows are becoming more
4 common, with generation being injected into the grid even at low voltages. Thus, most of
5 the new EAC categories and corresponding COSS allocations of all low-voltage resources
6 strictly to low-voltage customers introduce a false precision that is no longer fully
7 representative of reality and is thus unreasonable and out of sync with the changing grid.

8 **Q. What do you recommend regarding Consumers' new EAC report and resulting**
9 **COSS allocators?**

10 A. I recommend that the Commission reject Consumers' proposed new distribution COSS
11 allocations to downstream-voltage customers based on the updated EAC report. New EAC
12 categories that specifically isolate high-voltage costs, such as Consumers' new V1 and V2-
13 only allocators, do not necessarily fit this description and may be appropriate. Further, the
14 Company should reconsider existing voltage differentiations already built into its COSS,
15 with related recommendations in its next rate case. As the Company develops analysis of
16 bidirectional flow on its power system, it should incorporate such empirical data into the
17 EAC report or other power system mapping to identify the extent to which higher-voltage
18 customers utilize and should pay for downstream assets.

19 2. *Distribution Batteries*

20 **Q. How does Consumers allocate distribution batteries?**

21 A. Consumers categorized 100% of the distribution batteries as low voltage distribution
22 ("LVD"), meaning they are allocated only to low voltage customers (in this case, voltage

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1 level 3 and 4).³⁰ Consumers justifies this allocation as being consistent with the way the
2 COSS treats other demand-related distribution plant and allocates costs to the customer
3 classes connected to (or downstream of) the voltage level of that equipment.³¹

4 **Q. Is it reasonable to allocate distribution battery costs only to LVD customers?**

5 A. No. the Company has not demonstrated that batteries serve only low voltage customers.
6 Consumers is also “not aware of any engineering literature or manuals that specifically
7 state” that batteries serve only voltage level 3 and 4 customers.³² In fact, rather than serving
8 only low voltage customers, distribution-related battery plant provides services that benefit
9 customers across all distribution voltage levels: Consumers notes that such investment is
10 “deployed to support the electric distribution system (e.g., capacity deferral, voltage
11 support, resiliency, etc.).”³³ Thus, the allocation of battery costs should not be limited to
12 lower-voltage customers.

13 **Q. How do you recommend allocating distribution batteries?**

14 A. I recommend that Consumers allocate distribution battery costs to all distribution
15 customers.

³⁰ Davis Direct, p.11.

³¹ Exhibit MEC-18, Consumers Response to U21870-MNSC-CE-0214(a).

³² Exhibit MEC-18, Consumers Response to U21870-MNSC-CE-0214(a).

³³ Exhibit MEC-18, Consumers Response to U21870-MNSC-CE-0214(a).

1 3. *Digital Customer Operations*

2 **Q. Describe Consumers’ proposal for allocating Commercial and Industrial (“C&I”)**
3 **Online Account Management project costs.**

4 A. In Case No. U-20963, the Commission required that the Company’s COSS separate out
5 and allocate the costs associated with Digital Customer Operations IT projects, including
6 the C&I Online Account Management project.³⁴ Since then, Consumers has changed the
7 project scope and name. It is now known as the Multi-Account Online Account
8 Management (“MAOAM”) project and has expanded to give all customers (including
9 residential customers) the ability to manage multiple accounts through a single login. Thus,
10 the Company “believes it should be allocated in the same manner as other IT projects,” i.e.
11 to all customer classes, negating the need to breakout costs in the COSS.³⁵

12 **Q. Is it reasonable to allocate MAOAM project costs to all customers at this time?**

13 A. No. Consumers justifies its proposed allocation by stating that the project “will support
14 customers across various rate classes;” however, the Company has not demonstrated that
15 all classes will use the software proportionally to the proposed cost allocator. For example,
16 although all customers might have the ability to manage multiple accounts through a single
17 login, it is unclear that the residential class requires such functionality. Currently, there are
18 no customers with MAOAM login for multiple accounts as the tool is still in development,
19 and only C&I customers have access to and use the current tool.³⁶ Yet, the Total Labor
20 (502) allocator that Consumers proposes to use to allocate \$0.64 million in MAOAM plant

³⁴ Davis Direct, p.14.

³⁵ Davis Direct, p.15-16.

³⁶ Exhibit MEC-23, Consumers Response to U21870-MNSC-CE-0215(b).

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1 and expense³⁷ would assign the majority of these costs to residential customers, per Table

2 2.

3 *Table 2: Consumers' Proposed Allocator for MAOAM Project Costs*

| | Total Electric | Residential | Commercial Secondary | Lighting & Unmetered | Primary | Rate GSG |
|--------------------------|-------------------|-------------|-------------------------|-------------------------|---------|-------------|
| Total Labor (502) | 100 | 62.7 | 24.0 | 0.7 | 12.4 | 0.2 |

4
5 **Q. How do you recommend allocating MAOAM project costs?**

6 A. I recommend that Consumers continue to break out this project cost in the COSS and
7 allocate it to the customer classes who use the program, based on the proportion of
8 customers that have multiple logins. Currently, that would only include C&I customers.

9 ***Data Center Cost Allocation***

10 **Q. Has Consumers proposed to serve large new data center load?**

11 A. Yes. In U-21859, Consumers proposed changes to its Large General Service Primary
12 Demand ("GPD") Rate specifically for new data center load. The Commission has not yet
13 issued an order in the case.

14 **Q. Did you testify in U-21859 on data center cost allocation and rate design?**

15 A. Yes. I testified that the riskiness and magnitude of infrastructure investment associated
16 with potential new data centers taking service in Consumers' territory necessitates re-
17 evaluating the ways that Consumers would track and allocate the costs of its investments
18 for data centers.³⁸

³⁷ \$0.45 million plant and \$0.19 million O&M expense. See Davis Direct, p.15.

³⁸ Direct Testimony of Caroline Palmer. Case No. U-21859. June 12, 2025. Section III.

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1 I recommended that, instead of allocating data-center-related generation costs
2 through existing cost of service methods, Consumers directly assign data centers such
3 costs. I recommended that Consumers identify incremental generation costs by conducting
4 integrated resource plan (“IRP”) modeling with and without data center load.³⁹ I further
5 recommended that Consumers directly assign all dedicated distribution facility costs to
6 data centers without CIAC offsets.⁴⁰

7 **Q. How did Consumers respond to your data center cost allocation and rate design**
8 **testimony in U-21859?**

9 A. Consumers stated that the “issue of direct assigning costs to data center customers [wa]s
10 beyond the Company’s proposal” in U-21859. Rather, Consumers argued, any
11 “determinations on cost assignment and cost allocation should be handled in the context of
12 an electric general rate case.” The Company stated that it “intends to file a future rate
13 proposal which will address cost allocation and rate design issues for new data center
14 customers.”⁴¹

15 **Q. When does Consumers intend to address cost allocation and rate design issues for**
16 **new data center customers?**

17 A. During the U-21859 hearing, Witness Connolly testified that the Company had not made a
18 decision regarding when it might make proposals to modify existing methods of cost
19 allocation relative to data centers. Witness Connolly said that typically, the customer class

³⁹ *Id.* at Section Va.

⁴⁰ *Id.* at Section Vb.

⁴¹ Rebuttal Testimony of Laura M. Connolly, Case No. U-21859, 3 Tr 100.

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1 or expected customer class would have load in the test year and expected customers to pay
2 the allocated costs.⁴²

3 **Q. Has Consumers announced new data center load growth in its service territory since**
4 **filing U-21859 and this rate case?**

5 A. Yes. In its August 1, 2025 news release for its 2025 Second Quarter Results & Outlook,
6 Consumers announced that it had reached an agreement with a new data center, which is
7 expected to add up to 1 gigawatt of load growth in its service territory.⁴³

8 **Q. In light of Consumers' substantial new data center load agreement, do you**
9 **recommend that the Commission and Company prepare now for data center cost**
10 **allocation in future rate cases?**

11 A. Yes. Given the significant new data center load that Consumers has agreed to serve, it is
12 quite possible that there could be data center load in Consumers' next rate case test year.
13 Also, Consumers may soon begin to incur costs to serve the new customer – and any other
14 customers that reach agreements with the Company. Proactive assessment of costs and cost
15 causation is essential to equip the Company, Commission, and other parties with the
16 information necessary to properly evaluate the impacts of unprecedented new load growth
17 and to assign the associated costs justly and reasonably.

⁴² Cross Examination of Laura M. Connolly, Case No. U-21859, 3 Tr 206-208.

⁴³ MNSC Hearing Exhibits Ex MEC-46 in U-21859, source: CMS-Energy-2Q25-Earnings-Release-Combined-Final.

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1 **Q. How do you recommend preparing now for future data center cost allocation**
2 **decisions?**

3 A. First, I recommend that the Commission order Consumers to demonstrate in its next rate
4 case that its proposed cost allocation methods satisfy the legislative requirement that
5 residential customers will not subsidize the costs incurred to provide electric service to a
6 data center.

7 Second, I recommend that the Commission order Consumers to conduct sensitivity
8 modeling runs in its next IRP with and without data center load of magnitudes that
9 reasonably reflect Consumers' expected data center load at the time, and disclose the
10 difference in revenue requirements and resource portfolios. I discuss each sequentially.

11 **Q. Why do you recommend that Consumers demonstrate that its cost allocation**
12 **approaches will not cause residential customers to subsidize the costs incurred to**
13 **provide electric service to the facility?**

14 A. Under MCL 205.54ee(10)(e)(x)(c), an enterprise data center “will not take electric service
15 under” “[a] rate that causes residential customers to subsidize the costs incurred to provide
16 electric service to the facility.” In Case No. U-21859, Consumers did not analytically
17 engage with this requirement, such as by attempting to quantify the costs associated with
18 new data center customers and assessing quantitatively whether the new customers would
19 cover those costs. Instead, Consumers focused mainly on the “risk for stranded assets with
20 respect to data center customers,”⁴⁴ not on the risk of cost shifting even if data center load
21 materializes as expected. Consumers concluded without evidence that “Approval of the

⁴⁴ Consumers Energy Application in U-21859, February 7, 2025, p. 2.

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1 proposed amendments will not increase any existing rates or the cost of service to other
2 customers.”⁴⁵

3 Since Consumers has argued that a rate case is the appropriate forum to address
4 data center cost assignment, a rate case must therefore be at least one of the places that the
5 Company demonstrates that residential customers do not subsidize the costs incurred to
6 provide electric service to data centers. Consumers should quantitatively address this
7 requirement in its next rate case.

8 **Q. Have other utilities addressed similar legislative requirements?**

9 A. Yes. Ameren Missouri acknowledged that state law requires that large load customers’
10 rates reflect the costs incurred to serve them and prevent unjust or unreasonable costs to
11 other customer classes; Ameren in turn attempted to quantitatively demonstrate that its
12 proposed data center rates would not cause unjust or unreasonable costs to other customer
13 classes.⁴⁶ While Ameren’s analysis was flawed and unsatisfactory, utilities, parties, and
14 Commissions must nonetheless engage with such legislative requirements.

15 **Q. Why do you recommend that Consumers model its next IRP with and without data**
16 **center load?**

17 A. The results of such analysis will help the Commission assess whether data centers pay their
18 costs without subsidization from residential customers. Parties in U-21859 asked the
19 Company several times to share estimates of the incremental generation costs associated
20 with data center load, but Consumers stated that load growth studies and decisions

⁴⁵ *Id.* at 6.

⁴⁶ Direct Testimony of Steven M. Wills, Missouri Public Service Commission File No. ET-2025-0184, May 14, 2025. Section V.

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1 regarding the addition of new peak load and required generation supply would be included
2 in the Company's 2026 IRP. However, the Company plans to determine the required
3 generation investment for the entirety of its service territory, not specifically for data center
4 load.⁴⁷ This is a missed – and critical – opportunity to estimate the incremental generation
5 costs of data center load. The additional information from with-and-without IRP modeling
6 may be one of the best and only ways to evaluate the impacts of unprecedented data center
7 load on Consumers' generation costs.

8 **Q. Have other jurisdictions conducted IRP runs with and without data center load?**

9 A. Yes. I am aware that at least Dominion Virginia⁴⁸ and Ameren Missouri have done so.
10 Ameren Missouri, for example, evaluated resource plans based on seven different
11 prospective large load cases and compared each to a baseline resource plan which included
12 no incremental large load demand.⁴⁹

⁴⁷ Direct Testimony of Caroline Palmer, Case No. U-21859, June 12, 2025, pp. 26-27.

⁴⁸ Virginia Electric and Power Company's SCC Directed 2024 IRP Supplement. November 15, 2024, Case No. PUR-2024-00184, Virginia Electric and Power Company's 2024 Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.

⁴⁹ Direct Testimony of Matt Michels, Missouri Public Service Commission File No. ET-2025-0184, May 14, 2025. p. 8.

1 **IV. RATE DESIGN**

2 ***Large Economic Development Rate (“LEDR”)***

3 *1. The Commission Should Reject Consumers’ Proposed LEDR Facilities Allowance*

4 **Q. Describe Consumers’ LEDR facilities allowance proposal.**

5 A. Consumers proposes to include a facilities allowance for Rate LED to “better align with
6 other cost-based large customer rate options in Michigan,”⁵⁰ because potential customers
7 have apparently inquired about the availability of a facilities allowance such as that offered
8 under DTE Electric Company’s Rate D13. The Company would calculate the allowance as
9 the NPV of five years of a customer’s expected system contribution revenue and
10 distribution revenue.⁵¹ The Company would then reduce the LEDR customer’s incremental
11 distribution charge by the calculated facilities allowance.

12 **Q. Describe the incremental distribution costs that the facilities allowance would offset.**

13 A. The incremental distribution charge collects costs related to dedicated substation,
14 transformers, wires, and metering needed to serve the specific customer’s site.⁵² In other
15 words, the incremental distribution costs that are incurred strictly to provide service to the
16 LEDR customer.

⁵⁰ Direct Testimony of Laura M. Connolly, p.11.

⁵¹ Exhibit MEC-19, Consumers Response to U21870-MNSC-CE-0253, Att. 1.

⁵² Exhibit MEC-19, Consumers Response to U21870-MNSC-CE-0253(c); MEC-20, Consumers Response to U21870-MNSC-CE-0255(c).

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1 **Q. What are your concerns with the LEDR facilities allowance?**

2 A. I am concerned that reducing an LEDR customer's incremental distribution charge by the
3 facilities allowance would increase costs for other customers. When the Commission
4 originally approved Rate LED, it did so based on the determination that the rate would not
5 result in higher costs or rates for other customers, and it stated that increasing costs for
6 other customers contradicts Michigan law.⁵³ Thus, it is imperative that any facilities
7 allowance not increase other customers' costs. I am also concerned by Consumers'
8 proposal to retroactively apply the facilities allowance and the lack of cost true-up for
9 overestimated facilities allowances. I address each concern sequentially.

10 **Q. How could Consumers' proposed LEDR facilities allowance increase costs for other**
11 **customers?**

12 A. Consumers' LEDR facilities allowance could increase costs for other customers if the
13 revenues paid by the LEDR customer do not fully offset the incremental costs of serving
14 that customer. The incremental distribution costs of serving an LEDR customer consist of:

15 1) The customer's dedicated infrastructure (e.g., metering, service drop,
16 transformer, etc); and

17 2) The marginal cost associated with higher demand on the rest of the shared
18 distribution system⁵⁴ (expressed as the marginal distribution cost in \$/kW).

19 The cost of (1) is typically recovered through the customer's "incremental" distribution
20 charge. However, the facilities allowance would reduce that charge. Thus, to ensure that

⁵³ Michigan Public Service Commission, "MPSC approves DTE Electric, Consumers Energy special rates to help attract, retain advanced manufacturing." December 22, 2021, <https://www.michigan.gov/mpsc/commission/news-releases/2021/12/22/mpsc-approves-dte-electric-consumers-energy-special-rates>. Accessed, September 25, 2025.

⁵⁴ Including shared lines, transformers, substations, etc.

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1 there is no cost shifting to other customers, Consumers must demonstrate that the customer
2 revenues included in the facilities allowance, including standard distribution rates paid by
3 LEDR customers, cover not only their portion of the customer's facilities allowance, but
4 also the marginal cost associated with accommodating the customer's load on the rest of
5 the distribution system (2). While prior cases have rightfully narrowed the revenues that
6 could be included in any LEDR facilities allowance for this reason, the inclusion of Rate
7 LED customers' distribution revenues in the facilities allowance likely still uses Rate LED
8 customers' marginal costs to pay for their facilities costs.

9 Currently, Consumers can not ensure that the LEDR distribution rates cover the full
10 incremental cost associated with serving a LEDR customer (including any facilities
11 allowance) because it has not calculated its marginal distribution cost (2). When asked to
12 identify its marginal cost of distribution capacity in discovery, Consumers said that the
13 "Company has not analyzed this information" and has only reviewed the marginal cost of
14 production capacity.⁵⁵

15 **Q. Do you recommend the Commission reject the facilities allowance?**

16 A. Yes. The Commission can only conclude that the facilities allowance will not shift LEDR
17 costs to other customers when Consumers can demonstrate that the customer will pay all
18 of its marginal distribution costs despite using five years of distribution revenues to pay for
19 its incremental, dedicated facilities costs, rather than paying for other distribution costs
20 during that time. Given that Consumers has not demonstrated this, I recommend that the
21 Commission reject the facilities allowance.

⁵⁵ Exhibit MEC-21, Consumers Response to U21870-MNSC-CE-0256(g).

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1 **Q. Does Consumers propose to apply the facilities allowance retroactively to current**
2 **LEDR customers?**

3 A. Yes. “The Company believes the facilities allowance should apply to existing Rate LED
4 customers if approved,” by calculating their facilities allowance, applying it to the existing
5 customer’s incremental facilities costs, and recalculating their incremental facilities
6 charge.⁵⁶

7 **Q. Is it appropriate to apply the facilities allowance to existing LEDR customers?**

8 A. No. The Commission approved Rate LED to attract new load – and the associated
9 investment and jobs – to the state. The existing LEDR rate has already succeeded in
10 attracting existing LEDR customers to the state without a facilities allowance. The
11 Company has not demonstrated that the facilities allowance is necessary to retain these
12 existing customers. Instead, these customers would likely be free-riders—receiving a
13 discount despite it playing no part in their decision to locate in Consumers’ territory. This
14 would serve to unreasonably increase costs for other customers.

⁵⁶ Exhibit MEC-22, Consumers Response to U21870-MNSC-CE-0257(d).

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1 **Q. How much would it cost to provide the facilities allowance retroactively for existing**
2 **customers?**

3 A. Using Consumers' test year forecast for Rate LED capacity and energy,⁵⁷ the magnitude
4 of Consumers' proposed facilities allowance for existing customers would be [REDACTED]
5 million, which Consumers would no longer collect in Rate LED revenue.⁵⁸

6 **Q. What do you recommend regarding providing the facilities allowance to existing**
7 **customers?**

8 A. If the Commission approves a facilities allowance, it should reject Consumers' proposal to
9 provide the facilities allowance retroactively to existing customers. Not only could this
10 credit reduce LEDR customers' revenues below marginal costs, but surrendering these
11 revenues is completely unnecessary given that existing LEDR customers have already
12 made the decision to site their operations in Consumers' service territory.

13 **Q. Does Consumers propose to true up the facilities allowance?**

14 A. No, it does not appear that Consumers intends to true up the facilities allowance if the
15 Company initially overestimated an LEDR customer's expected annual revenues when
16 calculating the facilities allowance. In such case, the LEDR customer would receive a
17 higher facilities allowance than provided for in Consumers' proposal, at a cost to other
18 customers.

19 **Q. If the Commission approves a facilities allowance, do you recommend that**
20 **Consumers true up the facilities allowance if it overestimated a customer's revenues?**

⁵⁷ Exhibit A-70 (LMC-9) CONF.

⁵⁸ Calculated using the sample calculation provided in U21870-MNSC-CE-0253_Connolly_ATT_1, which calculates the NPV of 5 years' worth of system contribution charges and distribution revenues at current rates.

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1 A. Yes. After Consumers has collected five years of revenue, the Company should reconcile
2 any overestimated revenue upon which it originally based the facilities allowance, by
3 recalculating the customer's incremental distribution charges based on the lower facilities
4 allowance due to the lower revenue received.

5 *2. Consumers Should Increase the LEDR System Contribution Charge*

6 **Q. What costs does the LEDR system contribution charge collect?**

7 A. The system contribution charge, approved in Case No. U-21160 as part of Rate LED, was
8 intended to "ensure the Company's existing customers also benefit during the term of the
9 contract by having the Rate LED customer contribute to the utility's fixed power supply
10 costs."⁵⁹ It is designed to cover a portion of the embedded costs of capacity.⁶⁰ Specifically,
11 the charge was set based on 1% of the Rate GPD embedded capacity costs approved in
12 2020 in U-20697 and seemingly has not been updated since.⁶¹

13 **Q. Why did Consumers set the system contribution charge at 1% of the Rate GPD**
14 **embedded capacity costs?**

15 A. Consumers seemingly did not base the charge on any assessment of Rate LEDR's
16 embedded cost or other analytical justification. Per Witness Miller's cross-examination in
17 U-21224, it seems that Consumers considered this remarkably small charge to be the most
18 it could ask Rate LED to pay and keep the rate competitive.⁶²

⁵⁹ U-21160 Consumers Energy Application. U-21160. November 4, 2021.

⁶⁰ Exhibit MEC-21, Consumers Response to U21870-MNSC-CE-0256(f).

⁶¹ Exhibit MEC-20, Consumers Response to U21870-MNSC-CE-0255(d).

⁶² Cross examination of Hubert Miller in Case No. U-21224, 3 Tr 635-637.

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1 **Q. Do you recommend that Consumers raise the system contribution charge?**

2 A. Yes. Consumers has not presented a cost basis for setting its system contribution charge at
3 1% of the Rate GPD embedded capacity costs. I recommend that the Company raise the
4 charge in order to contribute more meaningfully to embedded system costs.

5 *3. Consumers Should Shorten the LEDR Discount Period*

6 **Q. What is the Rate LED contract term?**

7 A. The minimum term is 15 years and the maximum contract term shall not exceed 20 years
8 from the initial service date.⁶³ LEDR customers receive the discount throughout the
9 contract term.

10 **Q. Is this discount period long compared to other economic development rates?**

11 A. Yes. A number of jurisdictions offer discount rates for just five years, including LGE and
12 KU in Kentucky,⁶⁴ Dominion in Virginia,⁶⁵ Evergy in Missouri and Kansas,⁶⁶ Florida
13 Power and Light,⁶⁷ and Interstate Power and Light in Iowa.⁶⁸ For Dominion in South

⁶³ Consumers' Electric Rate Book. Accessed at <https://www.consumersenergy.com/-/media/CE/Documents/rates/electric-rate-book.pdf>.

⁶⁴ LGE KU, *Economic Development Rider*, <https://lge-ku.com/economic-development/rider> (accessed September 25, 2025).

⁶⁵ Dominion Energy, *Economic Development Incentives & Special Rates*, <https://www.dominionenergy.com/-/media/content/economic-development/virginia/pdfs/economic-development-incentives-special-rates-va.pdf>. (accessed September 25, 2025).

⁶⁶ Evergy, *Economic Development Rider Incentive*, <https://www.evergyed.com/site-selection/edr-rider-incentive/> (accessed September 25, 2025).

⁶⁷ Florida Power & Light Company, *Economic Development Rider-EDR*, accessed at: <https://www.poweringflorida.com/content/dam/poweringflorida/us/en/pdf/FPL%20Combined%20Economic%20Development%20Programs.pdf>

⁶⁸ Interstate Power and Light Company, *Rider ECON- Economic Development Rate*, accessed at: https://www.alliantenergy.com/-/media/alliant/documents/accountandbilling/ratesandtariffs/iowaelectricrates/ridereconomicdevelopmentrate.pdf?sc_lang=en&hash=6404DD5B0C297A984510D49BEA282777

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1 Carolina, the credit applies for five years, but customers must remain on the system for 10
2 years (i.e., a contract term of 10 years). If the customer departs before 10 years, it is liable
3 for a proportion of the credits provided.⁶⁹ Indiana Michigan Power provides an economic
4 discount rate to Indiana customers for seven years.⁷⁰

5 **Q. Do you recommend that Consumers shorten the length of its Rate LED discount?**

6 A. Yes. I recommend that Consumers offer rate LED for a maximum of seven years.
7 Consumers has not justified why it should provide substantial rate discounts for such a long
8 time. Until Consumers provides such justification, Rate LED should only provide
9 discounts for a shorter period of time.

10 **Q. Does that complete your testimony?**

11 A. Yes.

⁶⁹ Dominion Energy South Carolina, INC, *Rider to Retail Rates Economic Development Rider*, accessed at: <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/content/rates-and-tariffs/pdfs/south-carolina/electric/riders/economic-development-rider.pdf?rev=2c3654bb1938410795b9d5925dcfb686&hash=B6577F4D669D09E2822E87913BADA281>

⁷⁰ Indiana Michigan Power, *Indiana Economic Development Rider 2*, accessed at: <https://docs.aep.com/docs/economic-development/IN-EDR-2023-App.pdf>



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PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Cambridge, MA. *Principal Associate*, June 2024 – present.

- Conduct analysis and provide expert witness and consulting services on behalf of public interest clients in regulatory proceedings, on topics including electric utility class cost of service, revenue allocation, advanced rate design, avoided cost methodology, and distributed generation interconnection and planning.

Strategen Consulting, Oakland, CA. *Senior Manager*, 2024; *Manager*, 2023 - 2024; *Senior Consultant*, 2021 - 2022; *Consultant*, 2019 - 2021.

- Conducted analysis and provided expert witness and consulting services to state regulatory commissions, state consumer advocates, and non-profits to advance the public interest in regulatory decision-making around electricity service, pricing, and decarbonization.

Metropolitan Area Planning Council Boston, MA. *Clean Energy Fellow*, 2017.

- Provided technical assistance to Massachusetts local government on renewable energy technology and energy planning.

Fulbright Foundation Athens, Greece. *Fulbright Research Fellow*, 2015 – 2016.

- Designed and conducted original, independent research on renewable energy policymaking and implementation in the context of Greece's severe economic crisis

Meister Consultants Group (now Cadmus), Boston, MA. *Analyst*, 2014 – 2015.

- Performed research and writing for renewable energy policy design, analysis, and implementation.

EDUCATION

University of California, Berkley, CA
Master of Public Policy – Energy Policy, 2019

Georgetown University, Washington, DC
Bachelor of Science in Foreign Service – Science, Technology, and International Affairs, 2013

TESTIMONY

Connecticut Public Utilities Regulatory Authority (24-10-04) Direct Testimony, Surrebuttal Testimony, and Cross-examination of Caroline Palmer (Cost-of-Service Study/Rate Design) regarding Application of The United Illuminating Company to Amend Its Rate Schedules. On behalf of The Office of Consumer Counsel. February 13, 2025, March 24, 2025, and May 6, 2025.

New Hampshire Public Utilities Commission (DE 24-070) Direct Testimony and Cross-examination of Caroline Palmer (Cost-of-Service Study/Rate Design) regarding Public Service Company of New Hampshire d/b/a Eversource Energy Request for Change in Distribution Rates. On behalf of the NH Office of Consumer Advocate. January 23, 2025 and June 4, 2025.

Massachusetts Department of Public Utilities (D.P.U. 24-195 D.P.U. 24-197) Direct and Surrebuttal Testimonies of Caroline Palmer and Thanh Nguyen addressing the EV Infrastructure Program mid-term modification filings from the electric distribution companies. On behalf of The Office of the Attorney General. April 4, 2025 and May 27 2025.

Missouri Public Service Commission (WR-2024-0320). Direct Testimony of Caroline Palmer (Cost-of-Service Study/Rate Design) regarding Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service. On behalf of Consumers Council of Missouri. December 20, 2024.

Missouri Public Service Commission (ER-2024-0319). Direct Testimonies and Surrebuttal Testimony of Caroline Palmer (Revenue Requirement and Cost-of-Service Study/Rate Design) regarding Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Electric Service. On behalf of Consumers Council of Missouri. December 3, 2024, December 17, 2024, and February 14, 2025.

Nova Scotia Utility and Review Board (M11874). Direct Testimony of Caroline Palmer regarding costs incurred to implement the Renewable to Retail market. On behalf of Counsel to Nova Scotia Utility and Review Board. November 1, 2024.

Maine Public Utilities Commission (Docket No. 2024-00137). Direct Testimony and Cross-examination of Caroline Palmer and Eric Borden regarding Stranded Cost Rate Design. On behalf of the Maine Office of the Public Advocate. October 1, 2024 and January 10, 2025.

New York Public Service Commission (Cases 24-E-0322 & 24-G-0323): Direct Testimony of Caroline Palmer, Melissa Whited, and Ben Havumaki regarding the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric and Gas Service. On behalf of the Utility Intervention Unit (UIU) of the New York Department of State's Division of Consumer Protection. September 26, 2024.

Massachusetts Department of Public Utilities (D.P.U. 23-150): Direct Testimony, Surrebuttal Testimony, and Cross-examination of Caroline Palmer and Ron Nelson regarding Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, pursuant to G.L. c. 164, § 94 and 220 CMR 5.00, for Approval of a General Increase in Base Distribution Rates for Electric Service and a

Performance-Based Ratemaking Plan. On behalf of the Massachusetts Office of the Attorney General. March 29, 2024, May 3, 2024, and May 20, 2024.

North Carolina Utilities Commission (Docket No. E-7, Sub 1276): Direct Testimony of Caroline Palmer regarding the Application of Duke Energy Carolinas, LLC, for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina and Performance-Based Regulation. On behalf of the North Carolina Attorney General's Office. July 19, 2023.

Oklahoma Corporation Commission (Case No. PUD 2022-000093.): Adoption of Direct Testimony and Cross-examination regarding the Application of Public Service Company of Oklahoma, for an adjustment in its rates and charges and the electric service rules, regulations, and conditions of service for electric service in the state of Oklahoma and to approve a formula-based rate proposal. On behalf of AARP. May 22, 2023.

Maine Public Utilities Commission (Case No. 2022-00152): Direct Testimony and Surrebuttal Testimony of Caroline Palmer, Nikhil Balakumar, and Ron Nelson regarding the Central Maine Power Company's request for Approval of a Rate Change - 307 (7/30/23). On behalf of the Maine Governor's Energy Office. December 2, 2022 and April 6, 2023.

Massachusetts Department of Public Utilities (D.P.U. 21-91): Direct Testimony and Cross-examination of Caroline Palmer and Ron Nelson regarding the Petition of NSTAR Electric Company d/b/a Eversource Energy for approval of its Phase II Electric Vehicle Infrastructure Program and EV Demand Charge Alternative Proposal. On behalf of the Massachusetts Office of the Attorney General. January 5, 2022, and March 22, 2022.

Massachusetts Department of Public Utilities (D.P.U. 21-90): Direct Testimony and Cross-examination of Caroline Palmer and Ron Nelson regarding the Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, for approval of its Phase III EV Market Development Program and EV Demand Charge Alternative Proposal. On behalf of the Massachusetts Office of the Attorney General. January 5, 2022, and March 22, 2022.

Massachusetts Department of Public Utilities (D.P.U. 21-92): Direct Testimony and Cross-examination of Caroline Palmer and Ron Nelson regarding the Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil for approval of its EV Infrastructure Program, EV Demand Charge Alternative Proposal, and Residential EV Time-of-Use Rate Proposal. On behalf of the Massachusetts Office of the Attorney General. January 5, 2022, and March 22, 2022.

PUBLICATIONS

Yuang, C., M. Whited, T. Nguyen, S. Schadler, R. Anderson, W. Dejeanlouis, C. Palmer, C. Mattioda, A. Glaser Schoff, S. Koester, J. Hittinger, P. Eash-Gates. 2024. *Utility Engagement Playbook for Industrial Customers: Addressing Power Sector Barriers to Electrification*. Synapse Energy Economics and World Wildlife Fund for Renewable Thermal Collaborative.

Palmer, C. 2019. *Using Low Carbon Fuel Standard Proceeds from EV Adoption to Improve the Efficiency of Electricity Rates*. Berkeley Public Policy Journal.

PRESENTATIONS

Palmer, C. 2022. Utility Transportation Electrification from a Consumer Advocate Perspective. NASUCA Mid-Year Meeting. Indianapolis, IN.

Palmer, C. 2017. Integration of renewable energy in Greek energy markets: A case study. 2nd HAEE International Conference. Athens, Greece.

Resume last updated June 2025

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Page 1 of 1

Question:

15. Refer to Davis Direct Testimony p.7, footnote 1 stating: "Meter facilities...are assigned using allocators based on the number of customers."

a. Describe in detail the extent of advanced metering infrastructure (AMI) installations in the Company's territory. What portion of each customer class has AMI installations? If the answer is less than 100%, explain if the Company plans to roll out advanced metering to all customers, and provide the timeline for the rollout.

b. Confirm that the Company classifies advanced metering infrastructure as customer-related and allocates AMI costs using allocator 170, or weighted customer.

c. Of the Company's \$818,321,000 metering equipment plant in service, how much is AMI?

d. Provide the docket number(s) and Commission order(s) approving the Company's AMI investment.

e. In Case No. U-15645 (Remand), Witness Schonhard provided the Company's Smart Grid/AMI business case analysis, which had been updated in the summer of 2013 (Exhibit A-2 (DES-1), Summary of Business Case Costs and Benefits 2007-2032). Please provide the Company's most recent Smart Grid/AMI business case analysis, the docket number in which it was provided, and any testimony accompanying the filing.

Response:

Objection of Counsel: Consumers Energy Company objects to parts d. and e. of this discovery request on the grounds that it seeks information in the possession of, known to, or otherwise equally available to the requesting party. Subject to the Company's objection, and without waiving its objection, the Company responds as follows:

b. Correct

c. To break out test year distribution plant into FERC account detail the COSS relies on historic FERC account balances including FERC 370 (meter plant in service). In 2023 AMI meters made up 68% of the total balance in FERC 370.

d. The Commission approved the Company moving from the AMI pilot to full deployment in Case No. U-16794. The Commission has approved recovery of AMI investment in every Consumers Energy electric rate case thereafter.

e. The Company last filed an AMI business case in Case No. U-21389 which was sponsored by Company witness Jason Coker. Updated AMI metrics in the current case can be found in Exhibit A-133 (MPK-23).

Witness: Emily A. Davis

Date: August 18, 2025

U21870-MNSC-CE-0221 (Partial)
Page 1 of 1

Question:

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c. Of the Company’s \$818,321,000 metering equipment plant in service, how much is AMI?

d. Provide the docket number(s) and Commission order(s) approving the Company’s AMI investment.

e. In Case No. U-15645 (Remand), Witness Schonhard provided the Company’s Smart Grid/AMI business case analysis, which had been updated in the summer of 2013 (Exhibit A-2 (DES-1), Summary of Business Case Costs and Benefits 2007-2032). Please provide the Company’s most recent Smart Grid/AMI business case analysis, the docket number in which it was provided, and any testimony accompanying the filing.

Response:

a. The numbers of residential, commercial, and industrial customers who have AMI meters, and the numbers who have non-AMI meters, are shown below, based on the Company’s 2024 EIA-861 filing which is reported out by the U.S. Energy Information Administration at <https://www.eia.gov/electricity/data/eia861/>

| | Residential | Commercial | Industrial |
|--------------------------|-------------|------------|------------|
| Number of AMI Meters | 1,660,920 | 233,245 | 148 |
| % with AMI Meters | 99.48% | 98.46% | 9.91% |
| Number of non-AMI Meters | 8,661 | 3,654 | 1,345 |
| % with non-AMI Meters | 0.52% | 1.54% | 90.09% |

To the extent that customers do not have AMI meters, it is because they have either a) opted out of receiving AMI; or b) are on a rate that makes them ineligible for AMI. The latter classification is particularly relevant for customers with MV90 accounts and meters. The Company does not plan to roll AMI out to these customers.

Witness: MICHAEL P. KELLY

Date: August 18, 2025

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Question:

16. Refer to Exhibit A-129 (MPK-19), p. 34 describing “Bi-directional power flows, especially in circuits that show a propensity to higher-than average adoption of solar DG” and p.142, stating “A centralized DERMS is critical for managing bi-directional power flows.”

- a. Describe in detail the extent of bi-directional power flows on the Company’s distribution system. Provide all supporting information demonstrating the existence of bi-directional power flows on the Company’s distribution system.
- b. When bi-directional power flow occurs, does it flow from lower-voltage distribution equipment to higher-voltage distribution equipment? If yes, please explain if this is a phenomenon that the Company considers “critical” to manage, and why.
- c. When bi-directional power flow occurs, does it flow from distribution-level equipment onto transmission-level equipment? If yes, please explain if this is a phenomenon that the Company considers “critical” to manage, and why.

Response:

- a. The referenced bullet points on p. 34 of Exhibit A-129 (MPK-19) indicate indirect challenges associated with customer technology adoption that the Company will have to address, including but not limited to bi-directional power flows and power quality issues. The Company must consider these issues to ensure any impact to the grid and the customers it serves are proactively mitigated. The ability to produce reports demonstrating the extent of bi-directional power flow on the distribution system are expected to be developed as part of this effort but are not available at present.

At minimum, analysis demonstrating the extent of bi-directional flow introduced by Level 1 through Level 5 interconnections throughout the Company’s distribution system will require:

- Processing of hourly AMI and/or event data to capture the extent of customer exports to the secondary system
- Processing of hourly line device data to capture the extent of reverse flow through primary distribution lines and devices
- Processing of hourly substation device data to capture the extent of reverse flow through substation devices

While many modern electronic controls used for line and substation equipment may be capable of measuring both the magnitude and direction of active and reactive power flow, there are additional limitations to overcome:

- Not all distribution devices are equipped with these modern controls
- Not all controls are configured to measure and report this information back to enterprise systems
- The overall deployment density of electronically controlled devices is insufficient to fully assess bi-directional power flow across the system

To provide the Company’s planners and operators with full, system-wide visibility into the direct and indirect challenges associated with customer adoption of new technologies, enhanced power

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flow simulation capabilities are required. The Load Flow Tool Upgrade described in Company witness McPhail's testimony is critical to the Company's plans to enable these capabilities and datasets within the CYME distribution planning software. Similar enhancements to real-time operational systems will need to be made to provide the same level of visibility to operators as DER penetration increases.

- b. When bi-directional power flow occurs, it flows in a direction opposite traditional power flows on a radial distribution circuit. Traditional flows emanate at the circuit source (substation), following a radial path through utility-owned conductors and devices (regulators, reclosers, isolators, fuses, switches, transformers, etc.) to reach customer loads. Bi-directional flow typically occurs in the reverse direction and may include flowing from lower-voltage distribution equipment to higher-voltage distribution equipment.

Whether bi-directional flow occurs from lower to higher voltage is not the sole determinant of criticality for anticipated future DER management requirements. As DER penetration increases, the Company does consider it critical, and remains ultimately responsible for:

1. Ensuring that customers receive the energy they need, when they need it, which can only be accomplished by knowing what the load is, and what sources of generation will serve it.
 2. Ensuring the safety of the public and Company employees by having full visibility and the ability to manage the power flow directionality and energization status of all Company-owned assets at all times.
 3. Ensuring that the Company is delivering adequate power quality to customers' homes and businesses. Common power quality issues associated with reverse flow or exports from customer owned generation/storage include voltage rise at the point of common coupling, voltage unbalance, delayed or mis-operations of voltage conditioning devices, and harmonics.
 4. Ensuring that power flows in either direction do not exceed the forward or reverse thermal ratings of Company owned equipment, to maintain the reliability of service for all customers on the circuit.
 5. Ensuring that protective device schemes and settings account for the magnitude and direction of power flows so they operate as expected when faults on the system occur.
 6. Ensuring that the intermittency of solar and other sources of renewable generation do not lead to premature wear or reduced life-expectancy of Company-owned equipment.
 7. Ensuring that automated or manual load transfer schemes have full visibility of the load and generation present on the system at the time of transfer. Relying on third-party/customer owned sources of generation introduces many new contingencies, including but not limited to inverter settings that are not what they were at the time of commissioning, and third-party/customer owned equipment that has gone offline without notification to the Company.
- c. Yes, there could be times when power flows from distribution-level equipment to transmission-level equipment. The Company needs to maintain awareness and the ability to control reverse flow to transmission as this involves an interconnection with another entity.

Witness: Scott McPhail
Date: August 18, 2025

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Question:

8. Refer to Davis Direct Testimony p.11.

- a. Explain why the Company categorizes distribution batteries as low voltage distribution (LVD) Voltage 3. Provide references to the Company's work orders, distribution planning manual, or other distribution engineering literature to indicate that the batteries serve only Voltage 3 and 4 customers.
- b. In live, unlocked Excel file format with all links and formula intact, provide all analysis the Company has conducted to conclude that it is appropriate to categorize distribution batteries as LVD Voltage 3.

Response:

- a. The EAC categorizes distribution batteries by their connected voltage. The batteries currently in service are connected between voltages 8.32-24.9 kV which is considered LVD Voltage level 3.

I am not aware of any engineering literature or manuals that specifically state batteries only serve Voltage 3 and 4 customers. The COSS treats this distribution-related battery plant, which is deployed to support the electric distribution system (e.g., capacity deferral, voltage support, resiliency, etc.), the same way it treats other demand-related distribution plant and allocates costs to the customer classes connected to (or downstream of) the voltage level of that equipment. The Commission approved this battery treatment in Case No. U-21389.

- b. See the response to subpart a.

Witness: Emily A. Davis

Date: August 15, 2025

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Question:

9. Refer to the Direct Testimony of Laura M. Connolly p.11.
- a. Narratively describe in detail how the Company would calculate the facilities allowance, including how the Company would determine the net present value of margin for expected load over five years of the contract term.
 - b. Does the Company propose to include any non-energy-related power supply revenues in its calculation of the facilities allowance? If yes, identify all nonenergy-related power supply revenues to be included in the facilities allowance.
 - c. Identify the specific facilities costs that the facilities allowance would offset.
 - d. Explain how the facilities allowance would interact with the charges specified in the Rate LED tariff or contract.
 - e. In live, unlocked Excel file format with all links and formula intact, provide an example calculation for the facilities allowance based on the net present value of margin, based on expected load over five years of the contract term. Clearly identify all assumptions used to produce the example calculation and all steps involved in the calculation. Demonstrate how the calculated facilities allowance would interact with the charges specified in the Rate LED tariff or contract.

Response:

- a. The Company would calculate the expected annual system contribution revenue and distribution revenue. The Company would then calculate the NPV of each annual revenue amount based on a 7.45% minimum acceptable rate. The total of each annual NPV of marginal revenue would set the allowance offered to the customer. The total allowance would be based on five years of NPV revenue.
- b. No.
- c. The specific costs will vary based on the customer and the site but could include items like dedicated substation, transformers, and wires needed to serve the specific customers site.
- d. The calculation of the incremental distribution charge would be decreased by the amount offered to the customer as facilities allowance.
- e. Please see the attached example calculation based on a hypothetical 35 MW customer with a 90% load factor. The proposed facilities allowance calculation would yield a total allowance of \$2.1 million. This \$2.1 million would be used to offset the incremental distribution costs used to calculate the incremental distribution charge.

Witness: Laura M. Connolly

Date: August 21, 2025

Consumers Energy Company

Example facilities allowance calculation at 35 MW, 90% Load Factor

Large Economic Development Rate LED VL 1

(\$ in millions)

| Description | | Years: | | | | | Sum |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 | 2 | 3 | 4 | 5 | |
| Power Supply | | | | | | | |
| System Contribution | \$mils | <u>0.1</u> | <u>0.1</u> | <u>0.1</u> | <u>0.1</u> | <u>0.1</u> | <u>0.4</u> |
| Quantity | GWh | 277 | 277 | 277 | 277 | 277 | 1,383 |
| Rate | \$ per kWh | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 |
| Delivery | | | | | | | |
| Maximum Demand | \$mils | \$ 0.4 | \$ 0.4 | \$ 0.4 | \$ 0.4 | \$ 0.4 | \$ 2.1 |
| Quantity | MW | 420 | 420 | 420 | 420 | 420 | 2,100 |
| Rate | \$ per kW | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 |
| Total Annual Expense | \$mils | \$ 0.5 | \$ 0.5 | \$ 0.5 | \$ 0.5 | \$ 0.5 | \$ 2.5 |
| NPV of Marginal Revenue | \$mils | \$ 0.5 | \$ 0.4 | \$ 0.4 | \$ 0.4 | \$ 0.4 | \$ 2.1 |
| Minimum Acceptable Rate | | 7.45% | | | | | |

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Question:

11. Refer to Connolly Direct Testimony and Consumers' electric rate book.
 - a. Describe how the Company calculates the incremental transmission charges applicable to the load served under Rate LED.
 - b. In live, unlocked Excel file format with all links and formula intact, provide all workpapers, calculations, and original data that underlie the calculation described in part (a).
 - c. Explain how the Company collects the costs of service drops, metering, and distribution transformers for Rate LED customers. Explain if the charge is a per customer per month charge, or something else. If not a per customer per month charge, explain why not.
 - d. Explain what costs the Company collects through the Rate LED System Contribution Charge and how the Company calculates the charge. In live, unlocked Excel file format with all links and formula intact, provide all workpapers, calculations, and original data that underlie the calculation of the System Contribution Charge.

Response:

- a. The incremental transmission charge was established in Case No. U-21160. The approved LEDR transmission charge was calculated by imputing what METC's total transmission cost is based on Consumers share of the total METC load and assumes Rate LED customers are responsible for the increase in Consumers share from serving the Rate LED load.
- b. See attached file, Estimated Share of Assigned Transmission.xlsx.
- c. The costs related to service drops, metering, and distribution transformers would be included as part of the calculation of the incremental distribution facilities charge. This is charged as a per kW charge and levelized over the life of the contract.
- d. The System Contribution charge was established in Case No. U-21160 and was set based on 1% of the Rate GPD embedded capacity costs. See the attached file, LEDR System Contribution Charge.xlsx.

Witness: Laura M. Connolly
Date: August 21, 2025

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Page 1 of 2

Question:

12. Refer to Connolly Direct Testimony and Consumers' electric rate book, which states that the "Production Charge is the Cost of New Entry for MISO's Local Resource Zone 7 ("CONE"), as of the time of contract execution," and that this charge "is fixed for the contract term at the rate in effect at the time of contract execution,"

- a. Explain why it is reasonable to maintain a fixed Production Charge for the contract term at the rate in effect at the time of contract execution.
- b. If MISO's Cost of New Entry (CONE) for Zone 7 increases in the future, please explain whether the cost to the Company to procure capacity on behalf of Rate LED customers would also increase. If not, please explain why not.
- c. Please explain whether maintaining a fixed Production Charge for the duration of the contract could result in costs being shifted to other customers.
- d. Explain in detail how the Company procures energy and capacity for Rate LED customers. In your response, please address whether capacity will be procured through the wholesale market, through bilateral contracts, through utility self-build, or through some other method, and the duration of any contracts.
- e. Please explain whether the Company's rates for Rate LED provide sufficient revenue to cover the full embedded cost of service associated with serving Rate LED customers. If not, please explain why not.
- f. Please explain whether the Company's rates for Rate LED would provide any contribution to margin, or whether they would only cover marginal costs. If they would only cover marginal costs, please discuss whether this is reasonable and in accordance with standard ratemaking practices.
- g. Please provide the Company's most recent estimate of the marginal cost associated with energy, generation capacity, transmission capacity, and distribution capacity. To the extent available, please provide these marginal costs in the most granular resolution available, such as hourly energy costs or seasonal capacity costs. Please also provide these costs in Excel format.

Response:

- a. The production charge is based on the marginal cost of capacity associated with serving new load. In Case No. U-21160, the MPSC approved locking the production charge in for the term of the contract.
- b. The Company is proposing to update the production charge based on the latest CONE forecast in each electric rate case. Any incremental new load will pay the production charge approved at the time their contract is signed.
- c. The MPSC found in its order in Case No. U-21160 that the proposed Rate LED complies with Michigan law and would not increase the cost of service for any customer.

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- d. The Company anticipates a mix of renewable resources, energy producing resources and firm capacity resources will be needed to serve future Large Economic Development customers. The specific amounts and resource types will be presented in the company's applicable integrated resource plan filings.
- e. Rate LED is based on the marginal cost of serving new qualifying load. The design was approved by the MPSC in Case No. U-21160.
- f. The System Contribution charge approved as part of Rate LED is designed to cover a portion of embedded costs of capacity.
- g. The Company has not analyzed this information. The Company has only reviewed the latest marginal cost of capacity in relation to the latest forecast of CONE in order to update the production capacity charge as part of Rate LED.

Witness: Laura M. Connolly

Date: August 25, 2025

U21870-MNSC-CE-0257

Page 1 of 1

Question:

13. Refer to Exhibit A-16 (BAG-2) Schedule F-5 p.65.

- a. Why does the Company propose to specify the facilities allowance in the Rate LED contract for electric service rather than in the tariff?
- b. Provide the language that will be specified in the Rate LED contract for electric service regarding the proposed facilities allowance. If the contract language will not be the same for all Rate LED customers, explain all ways in which the facilities allowance provision could differ between customers.
- c. Will the Company submit the Rate LED contract, or the proposed facilities allowance, to the Commission for approval?
- d. Will the Company allow any current Rate LED customers to utilize the facilities allowance? If yes, describe the applicability of the facilities allowance to such customers.

Response:

- a. Exhibit A-16 (BAG-2) page 65 of 81 specifies that a facilities allowance will be applicable to Rate LED.
- b. The Company has not drafted this contract language yet but expects the language would be consistent for all Rate LED customers.
- c. No.

The Company believes the facilities allowance should apply to existing Rate LED customers if approved. The applicable facilities allowance would be calculated and applied to the existing customer's incremental facilities charge. The facilities allowance would be an offset to the incremental distribution investment and the incremental facilities charge would be recalculated for the remaining term of the contract to reflect the adjustment for the allowance.

Witness: Laura M. Connolly

Date: August 25, 2025

Question:

9. Refer to Davis Direct Testimony p.15-16.

- a. Do any customer classes besides the residential class have access to the MIMO 3.0 tool?
- b. In live, unlocked Excel file format with all links and formula intact, provide the number of customers in each customer class that has multiple accounts. Separately, also provide the number of customers in each customer class that has a Multi-Account Online Account Management login for multiple accounts.
- c. Identify the allocation schedule (ie, allocator name/number) that the Company proposes using to allocate MAOAM costs if the Commission no longer requires a separate breakout of costs for this project.
- d. Identify the allocation schedule (ie, allocator name/number) that the Company would use to allocate MAOAM costs if the Commission continues to require a separate breakout of costs for this project.

Response:

- c. 502: Total Labor
- d. 502: Total Labor

Witness: Emily A. Davis

Date: August 15, 2025

Question:

9. Refer to Davis Direct Testimony p.15-16.

- a. Do any customer classes besides the residential class have access to the MIMO 3.0 tool?
- b. In live, unlocked Excel file format with all links and formula intact, provide the number of customers in each customer class that has multiple accounts. Separately, also provide the number of customers in each customer class that has a Multi-Account Online Account Management login for multiple accounts.
- c. Identify the allocation schedule (ie, allocator name/number) that the Company proposes using to allocate MAOAM costs if the Commission no longer requires a separate breakout of costs for this project.
- d. Identify the allocation schedule (ie, allocator name/number) that the Company would use to allocate MAOAM costs if the Commission continues to require a separate breakout of costs for this project.

Response:

- a. Currently, only residential accounts have access to MIMO.
- b. Please see U21879-MNSC-CE-0215-Byrom_ATT 1, lines 1-4 for the requested customer numbers.

Currently, there are no Customers with Multi-Account Online Account Management login for multiple accounts as the tool is still in development. However, the Companies C&I customers have access/use the current tool, BillTrust, for their multiple account management. Please see U21879-MNSC-CE-0215-Byrom_ATT 1, lines 7-10 for associated customer numbers.

Witness: Jessica R. Byrom

Date: August 18, 2025

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.

Case No. U-21870

PROOF OF SERVICE

On the date below, an electronic copy of **Public Direct Testimony and Exhibits of Caroline Palmer on behalf of Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, and Citizens Utility Board of Michigan (MEC-15 through MEC-23)** was served on the following:

| Name/Party | E-mail Address |
|--|--|
| ALJ Jonathan F. Thoits | thoitsj@michigan.gov |
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[signature page below]

The statements above are true to the best of my knowledge, information and belief.

Troposphere Legal, PLC
Counsel for MNSC

Date: September 30, 2025

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