

# VARNUM

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October 21, 2025

Ms. Lisa Felice  
Executive Secretary  
Michigan Public Service Commission  
7109 W. Saginaw Highway  
P.O. Box 30221  
Lansing, MI 48909

Re: MPSC Case No. U-21870

Dear Ms. Felice:

Attached for electronic filing in the above-captioned matter, please find the Rebuttal Testimony of Sophia Schuster and the Rebuttal Testimony & Exhibits of John Albers on behalf of the Michigan Energy Innovation Business Council, the Institute for Energy Innovation, and Advanced Energy United, as well as a Proof of Service regarding same.

Thank you for your assistance in this matter.

Sincerely yours,

VARNUM



Justin K. Ooms

JKO/lml  
Enclosures

c: All parties of record.

STATE OF MICHIGAN

MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter of the application of **Consumers** )  
**Energy Company** for authority to increase its )  
rates for the generation and distribution of ) **Case No. U-21870**  
electricity and for other relief. )  
\_\_\_\_\_ )

REBUTTAL TESTIMONY OF SOPHIA SCHUSTER

ON BEHALF OF

THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,

INSTITUTE FOR ENERGY INNOVATION,

AND

ADVANCED ENERGY UNITED

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1 **I. INTRODUCTION**

2

3 **Q. State your name, business name and address.**

4 A. My name is Sophia Schuster, and I am a Policy Principal with the Michigan Energy  
5 Innovation Business Council (“Michigan EIBC”) and the Institute for Energy Innovation  
6 (“IEI”), located at 115 West Allegan Street, Suite 710, Lansing, Michigan 48933.

7

8 **Q. On whose behalf are you appearing in this case?**

9 A. I am appearing here as an expert witness on behalf of Michigan EIBC, IEI, and Advanced  
10 Energy United (“United”), collectively referred to as “MEIU.”

11

12 **Q. Are you the same Sophia Schuster who provided direct testimony in this proceeding?**

13 A. Yes, I am.

14

15 **Q. Are you sponsoring any exhibits with your rebuttal testimony?**

16 A. No, I am not sponsoring any exhibits.

17

18 **Q. What is the purpose of your rebuttal testimony?**

19 A. The purpose of my rebuttal testimony is to respond to certain statements in the direct  
20 testimony of Michigan Public Service Commission (“Commission”) Staff witness Kevin  
21 S. Krause regarding the existing “demand charge holiday” for direct current fast chargers

1 (“DCFC”) and his proposal that the Company be required to introduce a new DCFC-  
2 specific tariff in its next general electric rate case.

3  
4 **II. REBUTTAL OF WITNESS KRAUSE**

5  
6 **Q. Please describe the history of the so-called “demand charge holiday” currently in**  
7 **effect.**

8 A. Consumers Energy Company’s (“Consumers” or “the Company”) General Service Primary  
9 Rate GP is a distribution rate with no demand charge for large businesses taking service at  
10 2,400 volts or greater.<sup>1,2</sup> As of January 1, 2021, this rate is closed to new business service  
11 other than for service to DCFC charging stations.<sup>3</sup> The rate includes energy charges for  
12 power supply and distribution, differing by voltage level of connection, and a fixed  
13 customer charge.<sup>4</sup> In the Company’s 2023 general electric rate case (Case No. U-21389),  
14 witness Krause asserted that “the provision that allows [DCFC] stations to be on rate GP

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<sup>1</sup> Consumers Energy, “Primary Distribution Rates for Large Businesses,” accessed October 2025, available at <https://www.consumersenergy.com/business/account-and-billing/rates/electric-rates-and-programs/rate-plans/large-business>.

<sup>2</sup> Michigan Public Service Commission, Case No. U-21389, Order, March 2024, p. 112.

<sup>3</sup> Michigan Public Service Commission, Case No. U-21585, Order, March 2025, p. 480.

<sup>4</sup> Direct Testimony of Kevin Krause (“Krause Direct”), Case No. U-21389, p. 5.

1 is the Company’s version of a demand charge holiday,”<sup>5</sup> but, due to current market  
2 conditions, recommended that

3 the demand charge holiday be extended for currently operating [DCFC]  
4 stations to June 1, 2026 [and that] for chargers energized after June 1, 2024,  
5 the chargers should be allowed to remain on rate GP for two years.<sup>6</sup>  
6

7 According to witness Krause, this would allow adequate time to build out a “skeleton  
8 network of chargers,” at which point, DCFC stations on rate GP should be moved to either  
9 rate GPD or GPTU, which are general service primary rates with demand charges.<sup>7</sup> The  
10 Company contended, however, that due to the immaturity of the market, it would be more  
11 appropriate to revisit, rather than discontinue, the demand charge holiday in 2026.<sup>8</sup> In Case  
12 No. U-21389, the Commission ordered that:<sup>9</sup>

- 13 • The demand charge holiday be extended until June 1, 2026;
- 14 • DCFC stations energized after June 1, 2024 be allowed to remain on Rate GP for two  
15 years; and
- 16 • The Company conduct and present a study to evaluate the merits of a DCFC-specific  
17 tariff in its next rate case.

18 In Case No. U-21585 (Consumers’ 2024 general electric rate case), Company witness  
19 Jeffrey A. Myrom indicated that the limited number of DCFC and low utilization rates in

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<sup>5</sup> *Id.*, p. 6

<sup>6</sup> *Id.*, p. 10.

<sup>7</sup> *Ibid.*

<sup>8</sup> Michigan Public Service Commission, Case No. U-21389, Order, March 2024, p. 114.

<sup>9</sup> *Id.*, pp. 114-115.

1 the Company’s service territory was making it difficult to establish a reliable DCFC load  
2 shape on which to base a DCFC-specific tariff.<sup>10</sup> This issue was not discussed further in  
3 the Commission’s order in Case No. U-21585.

4  
5 **Q. In the current case, what does Commission Staff witness Kevin Krause suggest**  
6 **regarding the so-called “demand charge holiday”?**

7 A. In a discussion regarding the future of the so called “demand charge holiday,” witness  
8 Krause indicates that

9 Under rate GP, charging stations are treated as if increasing charging speed  
10 has no incremental impact on cost causation, such as increased  
11 infrastructure. As charging stations increase in speed and demand, the GP  
12 rate becomes less and less appropriate. Stations on rate GP are clearly  
13 receiving a subsidy. Staff recommends that rate GP should be closed to  
14 both new and existing fast charging stations on June 1, 2028.<sup>11</sup>  
15

16 **Q. Do you agree that EV charging station operators on Rate GP – and thus also their**  
17 **paying customers – are receiving a subsidy?**

18 A. Not necessarily, and almost certainly not when considered in the context of EV-derived  
19 revenues in the aggregate. As detailed in my direct testimony and references therein, DCFC  
20 are essential to enabling long-distance travel and are critical for reducing range anxiety for  
21 new customers, making them a key enabling technology for broad EV adoption.<sup>12</sup>

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<sup>10</sup> Direct Testimony of Jeffrey A. Myrom on behalf of Consumers Energy Company (“Myrom Direct”), Case No. U-21585, p. 8.

<sup>11</sup> Krause Direct, Case No. U-21870, p. 4.

<sup>12</sup> Direct Testimony of Sophia Schuster on behalf of the Michigan Energy Innovation Business Council Institute for Energy Innovation, and Advanced Energy United (“Schuster Direct”), Case No. U-21870, pp. 22, 24–25, 30.

1           Moreover, as utilities continue to invest in EV programs, the resultant increased EV  
2           adoption actually leads to downward rate pressure for all ratepayers.<sup>13</sup>

3  
4           However, DCFC are more expensive to install and, at least until utilization rates are high,  
5           the return on investment for this equipment will remain low, making it difficult to establish  
6           a workable business case for these investments. Demand charges based on peak usage can  
7           add to these costs and further erode the business case for DCFC, especially where  
8           utilization is currently low.<sup>14</sup> In fact, as MEIU witness Dr. Laura Sherman noted in rebuttal  
9           testimony in Case No. U-21297 (DTE Electric Company’s 2023 general electric rate case),

10                   demand charges have been recognized across the country as a barrier to the  
11                   deployment of high-powered EV charging stations (e.g., DCFC or clustered  
12                   Level 2 charging stations).<sup>15</sup>  
13

14           In direct testimony in the current case, Walmart, Inc. witness Matthew Lyon echoes these  
15           points, noting that

16                   Walmart understands how EV charging rates can either promote or impede  
17                   EV charging investment and user experience. While the EV industry  
18                   continues to grow, there will still be a ramp-up to sufficient EV adoption to  
19                   support an extensive public EV charging network. This will create  
20                   geographical locations where public EV chargers are either not being used  
21                   or are used infrequently. For these under-utilized chargers that are being  
22                   billed by the utility under a more traditional rate tariff with a demand  
23                   charge, the charger operator may be assessed the maximum demand charge  
24                   even after only a single use of that charging unit regardless of whether there  
25                   is any additional charging during that month. This outcome negatively

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<sup>13</sup> Frost, J. et al., Synapse Energy Economic, Inc. “Electric Vehicles Are Driving Electric Rates Down,” June 2020, available at [https://www.synapse-energy.com/sites/default/files/EV\\_Impacts\\_June\\_2020\\_18-122.pdf](https://www.synapse-energy.com/sites/default/files/EV_Impacts_June_2020_18-122.pdf).

<sup>14</sup> Great Plains Institute and Midcontinent Transportation Electrification Collaborative, “Analytical White Paper: Overcoming Barriers to Expanding Fast Charging Infrastructure in the Midcontinent Region,” July 2019, available at [https://scripts.betterenergy.org/reports/GPI\\_DCFC\\_Analysis\\_July\\_2019.pdf](https://scripts.betterenergy.org/reports/GPI_DCFC_Analysis_July_2019.pdf).

<sup>15</sup> Rebuttal Testimony of Dr. Laura Sherman on behalf of the Michigan Energy Innovation Business Council Institute for Energy Innovation, and Advanced Energy United, Case No. U-21297, p. 3.

1                   impacts the economics for that unit and may lead to little or no third-party  
2                   investment in public EV chargers sited in areas of initial low usage.<sup>16</sup>  
3

4                   Given this reality, billing DCFC with low utilization rates under a tariff with a demand  
5                   charge is, in fact, likely to be *overcharging* on a cost-of-service basis. Furthermore, as  
6                   detailed in my direct testimony,<sup>17</sup> there is mounting evidence that load from EV charging  
7                   customers as a whole contributes much less to system peaks when compared to other  
8                   commercial and industrial customers, and that the revenue attributable to EV charging  
9                   exceeds the cost of service over time. In other words, EV charging customers may actually  
10                  be subsidizing rates of utility customers who do not own EVs or use EV charging.  
11

12                  If demand charges are nonetheless instituted for DCFC, the resultant hesitance from third  
13                  party operators to invest in public DCFC in areas where utilization may initially be low  
14                  could, subsequently, exacerbate existing infrastructure gaps and risk never establishing the  
15                  desired “skeleton network.”<sup>18</sup> Additionally, to the extent that DCFC are not deployed  
16                  because of demand charges, this will likely depress overall EV adoption, which will in turn  
17                  depress incremental revenue from EV charging.

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<sup>16</sup> Direct Testimony of Matthew Lyon on behalf of Walmart, Inc. (“Lyon Direct”), Case No. U-21870, p. 26.

<sup>17</sup> Schuster Direct, pp. 31-33.

<sup>18</sup> Rebuttal Testimony of Nicholas M. Revere on behalf of Michigan Public Service Commission Staff, Case No. U-21585, p. 3.

1 **Q. What does witness Krause suggest the Company do to prepare in the event that the**  
2 **Commission accepts witness Krause’s proposed “demand charge holiday” sunset on**  
3 **June 1, 2028?**

4 A. In preparation for his recommended closure of Rate GP to all new and existing customers  
5 on June 1, 2028, witness Krause suggests next steps for the Company and the Commission,  
6 recommending that

7 the Company introduce a new tariff for fast charging in its next rate case  
8 based on available fast charging data...based on cost-of-service. Since  
9 there would likely be a preference for an energy only rate, with no demand  
10 charges, Staff would like to see this incorporated into the proposal. Staff  
11 also recommends that the utility provide rate design options considering  
12 charging station uptime and charging reliability.<sup>19</sup>  
13

14 **Q. Do you agree with the recommendation to sunset the “demand charge holiday” on**  
15 **June 1, 2028?**

16 A. Not entirely. Put simply, demand charges are unreasonable until utilization rates are high  
17 enough such that DCFC operators are not overcharged on a cost-of-service basis. Billing  
18 DCFC operators under a tariff that utilizes a demand charge risks suppressing third party  
19 investment in areas where utilization may initially be low and, consequently, delays the  
20 realization of the desired “skeleton network.”<sup>20</sup> Only once more DCFC are energized and  
21 their utilization rates increase and stabilize will it be appropriate to sunset the “demand  
22 charge holiday” and determine the suitability of a DCFC-specific tariff.  
23

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<sup>19</sup> Krause Direct, pp. 4-5.

<sup>20</sup> Rebuttal Testimony of Nicholas M. Revere on behalf of Michigan Public Service Commission Staff, Case No. U-21585, p. 3.

1 Fortunately, the network of DCFC stations across the state is expected to expand  
2 significantly between 2026 and 2028. The Michigan Department of Transportation  
3 announced its Round 1 selections for sites supported by the National Electric Vehicle  
4 Infrastructure (“NEVI”) program in June 2024,<sup>21</sup> and Round 2 selections were announced  
5 in June 2025.<sup>22</sup> With 84 sites selected across the state,<sup>23</sup> only two are currently operational  
6 from Round 1 – the first having come online in December 2024 in Lansing<sup>24</sup> and the second  
7 in 2025 in Grand Rapids.<sup>25</sup> However, of the 84 total sites, two are complete, four are  
8 currently under construction (three of which are in the Company’s service territory), 23 are  
9 in the design phase (13 of which are in the Company’s service territory), and 53 have sites  
10 selected and are awaiting contracts (33 of which are in the Company’s service territory).<sup>26</sup>  
11 Given the time between NEVI award selections and energization, it is reasonable to assume  
12 that many of these NEVI-supported DCFC stations will come online in the next two years.  
13 In addition to DCFC sites supported by the NEVI program, privately supported DCFC

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<sup>21</sup> Michigan Department of Transportation, “NEVI Round 1 selection results,” June 2024, available at <https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Contractors/Innovative-Contracting/NEVI/Round-1-Notification-of-Selection.pdf?rev=179bc81b311441d490d04950775e6fe9&hash=302C7A01C202CF290C3FF8FD15AD82C8>.

<sup>22</sup> Michigan Department of Transportation, “NEVI Round 2 selection results,” June 2025, available at <https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Contractors/Innovative-Contracting/NEVI---2/Notification-of-Selection.pdf?rev=6451b2352ab14cd2a84a075496f62c6f&hash=12DC631641D6A886192976DBDA00C8D8>.

<sup>23</sup> Michigan Department of Transportation, “Michigan NEVI Project Status,” accessed September 2025, available at <https://experience.arcgis.com/experience/0f0eafe4cefe43a0adb8104d600d3cd3/page/Home/?views=Layers>.

<sup>24</sup> Michigan Department of Transportation, “MDOT announces first fast charging station under NEVI program live in Lansing,” December 2024, available at <https://www.michigan.gov/mdot/news-outreach/pressreleases/2024/12/11/mdot-announces-first-fast-charging-station-under-nevi-program-live-in-lansing>.

<sup>25</sup> Michigan Department of Transportation, “Michigan NEVI Project Status,” accessed September 2025, available at <https://experience.arcgis.com/experience/0f0eafe4cefe43a0adb8104d600d3cd3/page/Home/?views=Layers>.

<sup>26</sup> *Ibid.*

1 installations are also expected to continue to grow between 2026 and 2028. For example,  
2 in November 2024, EVgo, a national charging provider, announced that it planned to  
3 expand its partnership with Meijer by deploying 480 new public fast chargers at Meijer  
4 properties across several states, including Michigan.<sup>27</sup> EVgo expects to open 30 new  
5 stations at Meijer stores by the end of 2026, and another 30 by the end of 2027.<sup>28</sup> While  
6 utilization may take time to stabilize at each of these new DCFC stations, they will serve  
7 as useful new data points for the Company to better inform an appropriate “demand charge  
8 holiday” sunset timeline and determine the suitability of a DCFC-specific tariff in the  
9 future.

10  
11 Second, as noted above, prematurely implementing a sunset to the “demand charge  
12 holiday” by requiring DCFC customers to move off Rate GP could result in higher  
13 operating costs, thus deterring future DCFC development and private investment in  
14 Michigan communities. As noted by witness Lyon, Walmart and other third party DCFC  
15 operators

16 [seek] to balance the risks and costs of installing and maintaining a  
17 particular EV [DCFC] station, which is informed, in part, by the tariff under  
18 which the electricity is provided from the utility to the owner of the EV fast  
19 charging station.<sup>29</sup>  
20

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<sup>27</sup> EVgo Fast Charging, “EVgo and Meijer Expand Partnership to Install up to 480 New Fast Charging Stalls at Meijer Locations Across Midwest,” November 2024, available at <https://www.evgo.com/press-release/evgo-and-meijer-expand-partnership-to-install-up-to-480-new-fast-charging-stalls-at-meijer-locations-across-midwest/>.

<sup>28</sup> *Ibid.*

<sup>29</sup> Lyon Direct, Case No. U-21870, p. 25.

1 Witness Lyon suggests that the electric rates available to customers can help to inform third  
2 party operators, like Walmart, as to whether they should site a DCFC station at a particular  
3 facility.<sup>30</sup> Given the relationship between the deployment of public charging and EV  
4 adoption detailed in my direct testimony, slowing DCFC deployment could have a  
5 significant negative impact on EV adoption in the Company’s service territory.<sup>31</sup>  
6 Subsequently, as detailed in my direct testimony, it could also impede the realization of net  
7 benefits to all ratepayers resulting from increased EV charging.<sup>32</sup>

8  
9 Finally, hampering DCFC deployment would also reduce the amount of valuable usage  
10 data for the Company to analyze in a future cost-of-service study (“COSS”), again leaving  
11 any future COSS inaccurate and vulnerable to small demand swings. In other words, the  
12 opportunity for DCFC stations to remain on Rate GP more readily actualizes net benefits  
13 to all ratepayers and increases the amount of data available to the Company to use in future  
14 COSS assessments, thus ensuring a more reliable COSS.

15  
16 **Q. What do you suggest regarding the recommendation to sunset the “demand charge**  
17 **holiday” on June 1, 2028?**

18 A. While I do agree with witness Krause that these are important issues for the Company to  
19 evaluate and study and that at some point it may be necessary to sunset the “demand charge  
20 holiday,” the market is still developing. As stated above, more DCFC are expected to be

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<sup>30</sup> *Ibid.*

<sup>31</sup> Schuster Direct, pp. 25-26.

<sup>32</sup> Schuster Direct, pp. 30-32

1 energized in the Company’s service territory before 2030, which will serve as critical data  
2 points for the Company to evaluate in developing a well-informed sunset timeline and  
3 determining the suitability of implementing a cost-of-service based DCFC-specific tariff.  
4 At minimum, the Commission should not establish a “demand charge holiday” sunset date  
5 until the Company has filed the findings of an accurate DCFC COSS and interested  
6 stakeholders have had the opportunity to review and comment on the study’s findings.  
7 Until then, I recommend that the Commission reject witness Krause’s recommendations to  
8 remove new and existing DCFC customers from Rate GP on June 1, 2028.

9  
10 **Q. Do you agree with the recommendation that the Company propose a DCFC-specific**  
11 **tariff in its next general electric rate case?**

12 No. While the number of DCFC stations deployed has increased, the small sample size still  
13 makes any usage analysis sensitive to swings caused by individual customers.<sup>33, 34</sup>  
14 Moreover, EV adoption and public charging utilization have not yet reached a steady state.  
15 In Case No. U-21534 (DTE Electric Company’s 2024 general electric rate case), MEIU  
16 witness Dr. Laura Sherman indicated that

17 Given the immaturity of the market, the current usage of these sites likely  
18 does not represent the expected utilization rate in coming years as EV  
19 deployment increases until it reaches an eventual point of consistent uptake  
20 (e.g., a certain market equilibrium). These DCFC sites likely have  
21 individual customer and class peak demands that may approximate what  
22 those demands will be with increased EV deployment, but the total energy  
23 usage at these sites is currently significantly less than what it will be in the  
24 future. As such, [while DCFC usage has likely increased,] present revenue

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<sup>33</sup> Myrom Direct, Case No. U-21585, p. 8.

<sup>34</sup> Lyon Direct, p. 26.

1 requirements per kWh of DCFC are likely still well above those that will be  
2 required in the future.<sup>35</sup>  
3

4 It remains true that DCFC deployment and usage are not yet to the point to yield sufficient  
5 data that would allow the Company to develop, or the Commission to rule on, an informed  
6 DCFC-specific tariff.  
7

8 Furthermore, given the limited number of DCFC and low utilization rates, it has not been  
9 possible for the Company to develop an accurate DCFC COSS. These facts have not yet  
10 materially changed and, as discussed above, it will likely not be possible for the Company  
11 to complete an accurate DCFC COSS until more stations are deployed and utilization rates  
12 increase. As such, it would be premature and unreasonable to require the Company to  
13 propose a DCFC-specific tariff in its next general electric rate case.  
14

15 **Q. What do you suggest regarding the recommendations to propose a new tariff for fast**  
16 **charging in its next rate case?**

17 A. Given that EV adoption and therefore EV charging utilization rates have not yet reached a  
18 steady state to inform the Company of an appropriate DCFC tariff, I recommend that the  
19 Commission reject witness Krause’s recommendations to require the Company to file a  
20 DCFC tariff in its next general electric rate case.  
21

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<sup>35</sup> Direct Testimony of Dr. Laura Sherman on behalf of the Michigan Energy Innovation Business Council Institute for Energy Innovation, and Advanced Energy United (“Sherman U-21534 Direct”), Case No. U-21534, p. 52.

1           However, I do agree with witness Krause that these are important issues for the Company  
2           to evaluate and study. As such, I recommend that the Commission require the Company to  
3           conduct a comprehensive evaluation of best practices as it relates to DCFC tariffs being  
4           implemented in other states and countries. To adequately inform its evaluation, the  
5           Company should conduct a stakeholder convening to gather key stakeholder and industry  
6           feedback on issues related to DCFC tariffs and demand charges, as suggested by Walmart  
7           witness Matthew Lyon.<sup>36</sup> The Commission should then require Consumers by a reasonable  
8           later date (*e.g.*, December 1, 2026) to present its findings and propose a long-term plan for  
9           the eventual implementation of an appropriate DCFC tariff. These discussions, coupled  
10          with the new data available from DCFC stations energized in the coming years, should  
11          enable the Company to conduct a more comprehensive COSS to inform whether a future  
12          DCFC-specific rate proposal is suitable and, if so, determine an appropriate tariff structure.

13  
14   **Q.    Do you have any other concerns with regards to “demand charge holiday” sunset**  
15   **timelines that witness Krause proposes?**

16   A.    Yes. As previously stated, witness Krause recommends that “rate GP should be closed to  
17   both new and existing [DCFC] stations on June 1, 2028.”<sup>37</sup> If the Commission adopted this  
18   recommendation, a DCFC station in the Company’s service territory energized on June 1,  
19   2027 would only be able to enroll in Rate GP for one year. However, this recommendation  
20   is inconsistent with the Commission’s previous Order in the Company’s 2023 general

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<sup>36</sup> Lyon Direct, Case No. U-21870, p. 26.

<sup>37</sup> Krause Direct, Case No. U-21870, p. 4.

1 electric rate case (U-21389)<sup>38</sup>, which allowed for a two-year rolling provision wherein  
2 DCFC stations energized at least through inside two years from June 1, 2028 (*i.e.*, between  
3 June 1, 2026 and May 31, 2028) would be eligible to remain on the “demand charge  
4 holiday” rate for two years.

5  
6 **Q. What do you recommend with respect to DCFC stations energized inside two years  
7 of witness Krause’s proposed “demand charge holiday” sunset timeline?**

8 A. If the Commission determines that a concrete sunset date is absolutely necessary despite  
9 the arguments of prematurity presented above, the Commission should, at minimum,  
10 maintain consistency and allow DCFC stations energized between June 1, 2026 and May  
11 31, 2028 to remain on Rate GP for two years, even if that end-date is after the proposed  
12 June 1, 2028 demand charge waiver sunset. In other words, the sunset should only be with  
13 respect to the two-year start date for a customer to enroll in the tariff.

14  
15 **III. CONCLUSIONS AND RECOMMENDATIONS**

16  
17 **Q. What do you recommend to the Commission?**

18 A. In addition to the recommendations contained in my direct testimony,<sup>39</sup> I recommend that  
19 the Commission:

- 20 • Reject witness Krause’s recommendation to remove new and existing DCFC station  
21 customers from Rate GP on June 1, 2028;

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<sup>38</sup> Michigan Public Service Commission, Case No. U-21389 Order, March 2024, p. 113.

<sup>39</sup> Schuster Direct, pp. 50-51.

- 1           • If the Commission does establish June 1, 2028 as the “demand charge holiday” sunset,  
2           allow DCFC site hosts energized between June 1, 2026 and May 31, 2028 to remain on  
3           Rate GP on a two-year rolling basis; and
- 4           • Require the Company to conduct a comprehensive evaluation with stakeholder input  
5           of best practices as it relates to DCFC tariffs being implemented in other states and  
6           countries. The Company should present its findings, a discussion of the suitability of a  
7           DCFC-specific tariff, and, if appropriate, a long-term plan for the implementation of  
8           an appropriate DCFC tariff by December 1, 2026.

9

10 **Q. Does that complete your rebuttal 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 generation and distribution of )  
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**Case No. U-21870**

**REBUTTAL TESTIMONY OF JOHN D. ALBERS**

**ON BEHALF OF**

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**AND**

**ADVANCED ENERGY UNITED**

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1 **I. INTRODUCTION**

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

3 A. My name is John D. Albers. My business address is 1801 Pennsylvania Avenue NW, Suite  
4 410 Washington, DC 20006.

5

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

7 A. I am employed by Advanced Energy United, Inc. (“United”) as the regulatory policy  
8 director for the central region states where United engages in regulatory policy advocacy  
9 efforts.

10

11 **Q. On whose behalf are you testifying?**

12 A. I am testifying on behalf of the Michigan Energy Innovation Business Council, the Institute  
13 for Energy Innovation, and United, collectively referred to as “MEIU.”

14

15 **Q. Are you the same John D. Albers who previously provided direct testimony in this  
16 proceeding on behalf of MEIU?**

17 A. Yes.

18

19 **Q. Did you prepare or direct the preparation of this rebuttal testimony?**

20 A. Yes.

21

22 **Q. Are you sponsoring any exhibits with your rebuttal testimony?**

23 A. Yes, I am offering the following exhibits:

- 1           • Exhibit MEIU-3.3: JNGO Ex. 3.01, Illinois Commerce Commission (“ICC”) Docket No. 22-0486, 23-0055, and 24-0181 (Consolidated);
- 2
- 3           • Exhibit MEIU-3.4: U21870-GLREA-CE-0275;
- 4           • Exhibit MEIU-3.5: U21870-GLREA-CE-0276;
- 5           • Exhibit MEIU-3.6: U21870-GLREA-CE-0277;
- 6           • Exhibit MEIU-3.7: U21870-GLREA-CE-0279;
- 7           • Exhibit MEIU-3.8: U21870-GLREA-CE-0280;
- 8           • Exhibit MEIU-3.9: U21870-GLREA-CE-0297; and
- 9           • Exhibit MEIU-3.10: U21870-GLREA-CE-0298;

10

11 **Q. What is the purpose of your rebuttal testimony?**

12 A. The purpose of my rebuttal testimony is to respond to the direct testimony of Clean Energy  
13 Organizations (“CEO”) witness William Kenworthy and Great Lakes Renewable Energy  
14 Association (“GLREA”) witness Richard Boehnke concerning virtual power plants  
15 (“VPP”). I generally support witness Kenworthy and witness Boehnke’s recommendations  
16 related to VPPs but have an additional recommendation that I believe will improve the  
17 likelihood that Consumers Energy Company (“Consumers”) will be able to offer a  
18 successful VPP program. I also identify a resource available to Consumers to assist with  
19 efforts to develop a successful VPP program.

20

1 **II. VPP RECOMMENDATIONS**

2 **Q. What does witness Kenworthy recommend regarding VPPs?**

3 A. Briefly, witness Kenworthy describes in his direct testimony the opportunities and benefits  
4 available through VPPs and encourages Consumers to develop a strong VPP program in  
5 conjunction with a distributed energy resources management system (“DERMS”).<sup>1</sup> He  
6 also recommends specific requirements that the Michigan Public Service Commission  
7 (“Commission”) should impose upon Consumers to take advantage of VPPs within its  
8 service territory.<sup>2</sup>

9

10 **Q. What does witness Boehnke recommend regarding VPPs?**

11 A. Briefly, witness Boehnke offers through his direct testimony several examples of  
12 successful VPP programs in other jurisdictions and provides compelling arguments for the  
13 deployment of a VPP program by Consumers.<sup>3</sup> Mr. Boehnke further recommends near-  
14 term and long-term actions the Commission can take to ensure successful implementation  
15 of a VPP program.<sup>4</sup>

16

17 **Q. Do you agree with witness Kenworthy and witness Boehnke?**

18 A. Generally, yes, but I recommend additional considerations be taken into account in the  
19 development of any VPP tariff by Consumers.

20

---

<sup>1</sup> Direct Testimony of William D. Kenworthy on behalf of CEO, Case No. U-21870 (“Kenworthy Direct”), pp. 9–17.

<sup>2</sup> *Id.*, p. 17.

<sup>3</sup> Direct Testimony of Richard Boehnke on behalf of GLREA, Case No. U-21870 (“Boehnke Direct”), pp. 12–16, 22–33, 47.

<sup>4</sup> *Id.*, pp. 60–63.

1 First, Consumers already has demand response (“DR”) programs in place covering  
2 residential, commercial, and industrial customers. For instance, Consumers runs a Smart  
3 Thermostat Program. I encourage the Commission to direct that any new VPP program be  
4 developed with existing programs in mind and that Consumers find ways to leverage and  
5 incorporate existing investments and practices that have allowed it to scale its DR programs  
6 to date. This is especially important given that some Consumers customers in any future  
7 VPP program are likely to already be participating in an existing DR program with other  
8 distributed energy resources (“DER”). To be clear, I am not suggesting that Consumers’  
9 existing DR programs should end; rather, I am suggesting that Consumers appropriately  
10 modify and fold its existing DR programs into a VPP program so that all such resources  
11 can be operated in a coordinated manner to bring maximum benefit to ratepayers and the  
12 electric grid.

13  
14 Second, data sharing among the utility, customers, and DER aggregators plays a key role  
15 in any VPP program. For a VPP program to be successful, shared data must be timely,  
16 reliable, and sufficiently detailed. If the Commission directs Consumers to develop a VPP  
17 tariff as the CEO and GLREA witnesses propose, I recommend that the Commission  
18 specifically direct Consumers to work with interested stakeholders to develop a robust data  
19 sharing platform. Illinois electric utility Commonwealth Edison Company (“ComEd”) is  
20 currently involved in such an effort pursuant to a memorandum of understanding (“MOU”)  
21 it entered into with certain parties in its recent proceeding concerning its multi-year  
22 integrated grid plan, ICC Docket Nos. 22-0486, 23-0055, and 24-0181 (Consolidated). To  
23 provide the Commission with an idea of the data sharing platform ComEd agreed to

1 develop, I have attached the MOU to my rebuttal as Exhibit MEIU-3.3.<sup>5</sup> The work of  
2 developing a strong data sharing platform can also be a part of the DERMS development  
3 process the Commission directed Consumers to conduct in its last general electric rate case,  
4 Case No. U-21585.<sup>6</sup>

5  
6 Third, given the interest in VPPs from multiple participants in this proceeding, the general  
7 interest in VPPs in the electric industry that I am aware of through my work, and my  
8 impression from Consumers’ response to several discovery questions<sup>7</sup> that it has given little  
9 thought to developing a comprehensive and coordinated VPP program, I recommend, in  
10 addition to the steps witness Kenworthy and witness Boehnke propose that Consumers  
11 follow, that the Commission also require Consumers to engage interested stakeholders  
12 early and often in its VPP program tariff development process. More specifically, I  
13 recommend that the Commission explicitly require Consumers to publicize and hold  
14 multiple virtual meetings open to interested stakeholders to solicit input on program design  
15 and share preliminary tariff language with stakeholders for further input. The Commission  
16 should direct Consumers to provide opportunities for written feedback as well. I note that  
17 the ability to attend stakeholder meetings virtually is important since many of those  
18 interested are likely not based in the immediate area of Consumers’ service territory.  
19 Providing for robust stakeholder input will enable Consumers and entities experienced with  
20 VPPs to exchange their knowledge and expertise, as well as create an opportunity for this

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<sup>5</sup> Please note that while the MOU is labeled “PRIVILEGED AND CONFIDENTIAL – SETTLEMENT COMMUNICATION,” it was entered into the record of the ICC proceeding as a public document and is available from the ICC’s public website at: <https://www.icc.illinois.gov/docket/P2022-0486/documents/350981/files/613798.pdf>.

<sup>6</sup> March 21, 2025 Order in Case No. U-21585, Filing No. U-21585-0396, pp. 117-118.

<sup>7</sup> See Exhibits MEIU-3.4 through 3.10.

1 information to be shared with the Commission. I further recommend that the Commission  
2 direct Consumers to assess best practices of successful VPP programs, such as  
3 ConnectedSolutions, since there is no need to reinvent a VPP program when other utilities  
4 have already deployed such programs.

5  
6 My recommendation to solicit stakeholder input and assess best practices is consistent with  
7 the aforementioned findings in the Commission’s Order in Case No. U-21585. As alluded  
8 to above, one of the issues in that proceeding related to Consumers’ plan for a DERMS. In  
9 finding that Consumers failed to fully explain and justify its DERMS proposal, the  
10 Commission directed Consumers to develop a strong business case before seeking cost  
11 recovery in a future rate case. The Commission provided guidance on how to do so, which  
12 included the following:

13 Therefore, should Consumers seek recovery for a DERMS in a future  
14 electric rate case, it is incumbent on the company to provide a business case  
15 for the program, including a comprehensive [benefit-cost analysis], that  
16 sufficiently identifies and justifies the program’s costs and benefits to  
17 customers. When developing such a business case, Consumers should look  
18 at other states’ best practices for examples of plans that can be readily  
19 implemented with regard to valuing the benefits of DERs and that are more  
20 actionable than the company’s current proposal to hire a consultant to  
21 contract for the development of a strategy and business case. See, e.g.,  
22 Exhibit CEO-5, pp. 13-18. The Commission notes that development of such  
23 a business case should provide opportunities for interested persons to  
24 provide robust feedback and input into the business case and must include  
25 an analysis of the use of VPPs. The Commission encourages the company  
26 to initiate a workgroup with interested persons and to develop more pilots  
27 or other actionable proposals to develop and further evolve the company’s  
28 initial proposal.<sup>8</sup>

29 It is clear from this Order that the Commission is interested in incorporating stakeholder  
30 feedback and identifying best practices during program development related to DERMS

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<sup>8</sup> March 21, 2025 Order in Case No. U-21585, Filing No. U-21585-0396, pp. 117-118.

1 and there is no reason to eschew the advantages of such outreach in the case of a future  
2 VPP program.

3  
4 **Q. You indicated earlier that there is an additional resource available to Consumers that**  
5 **could be helpful in the development of a VPP program. Can you share more about**  
6 **that?**

7 A. Yes. I am referring to the CHARGED Initiative (“CHARGED”).<sup>9</sup> CHARGED stems from  
8 a collaboration among United, RMI, and GridLab.<sup>10</sup> These three entities formed  
9 CHARGED to ensure that the nation’s electricity distribution system is ready to support  
10 the electrification of the transportation and building sectors. One way in which  
11 CHARGED works toward this goal is to directly assist utilities to develop new programs  
12 and tariffs without additional cost to the utility. CHARGED is knowledgeable about VPP  
13 programs and is currently assisting Illinois electric and gas utility Ameren Illinois  
14 Company (“Ameren”) develop a VPP tariff. I have attended the workshops held thus far  
15 in that effort and have found them informative and helpful. Multiple attendees have  
16 engaged in meaningful discussions to assist Ameren in its tariff design. I encourage  
17 Consumers to consider also taking advantage of this free resource.

18  
19 In addition, I note that ComEd engaged CHARGED to assist with its development of a  
20 DERMS and flexible interconnection process. ComEd filed the preliminary results of that  
21 work in ICC Docket Nos. 22-0486, 23-0055, and 24-0181 (Cons.) in the form of a report

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<sup>9</sup> <https://gridlab.org/chargedinitiative/>

<sup>10</sup> Although I am employed at United, I am not directly involved with CHARGED.

1 earlier this year.<sup>11</sup> I mention ComEd’s experience with CHARGED in the context of  
2 DERMS because witness Kenworthy also discusses Consumers’ DERMS development in  
3 his direct testimony.<sup>12</sup> CHARGED is well situated to assist with these and other aspects  
4 of Consumers’ DERMS development.

5  
6 **III. CONCLUSION AND RECOMMENDATIONS**

7 **Q. Please summarize your conclusions and recommendations to the Commission.**

8 A. In addition to the recommendations in my direct testimony, I recommend that the  
9 Commission:

- 10 1. Require Consumers to incorporate its existing DR programs into any VPP program  
11 it develops;
- 12 2. Require Consumers to meaningfully engage interested stakeholders and develop a  
13 robust data sharing platform;
- 14 3. Require Consumers to publicize and hold multiple virtual meetings open to  
15 interested stakeholders to meaningfully engage stakeholders, solicit input on VPP  
16 program design, and share preliminary tariff language with stakeholders for further  
17 input;
- 18 4. Require Consumers to provide opportunities for written feedback in its VPP  
19 development process;
- 20 5. Require Consumers to identify best practices in its VPP development process; and

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<sup>11</sup> Commonwealth Edison Company and Joint Non-Governmental Organizations' Update on Efforts Around Offering of DERMS and Flexible Interconnection, July 18, 2025, Illinois Commerce Commission Docket Nos. 22-0486, 23-0055, and 24-0181 (Cons.), <https://www.icc.illinois.gov/docket/P2022-0486/documents/368172>

<sup>12</sup> Kenworthy Direct, pp. 3-5.

1           6.       Encourage Consumers to avail itself of available resources in the development of  
2                   its DERMS plans and VPP tariff, including the CHARGED Initiative.

3

4   **Q.     Does this conclude your rebuttal testimony?**

5   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 generation and distribution of )  
electricity and for other relief. )  
\_\_\_\_\_ )

**Case No. U-21870**

**REBUTTAL EXHIBITS OF JOHN D. ALBERS**  
**ON BEHALF OF**  
**THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,**  
**INSTITUTE FOR ENERGY INNOVATION,**  
**AND**  
**ADVANCED ENERGY UNITED**

## **Memorandum of Understanding**

### **A. Preamble**

- Whereas, on December 14, 2024, the Illinois Commerce Commission (“ICC” or “Commission”) issued a Final Order in Dockets No. 22-0486/23-0355 (consolidated) rejecting the initial Multi-Year Grid Plan filed by the Commonwealth Edison Company (“ComEd”) on January 17, 2023;
- Whereas, on March 13, 2024, ComEd filed with the Commission in those same dockets a Refiled Multi-year Grid Plan (“Refiled Grid Plan”) ;
- Whereas, the Joint Non-Governmental Organizations (“JNGO”), consisting of the Environmental Defense Fund, Environmental Law and Policy Center, the Natural Resources Defense Council, the Union of Concerned Scientists, and Vote Solar, are a party to that proceeding; and
- Whereas, both ComEd and the JNGO seek to work cooperatively to advance investments and activities to support implementation of the Climate and Equitable Jobs Act (“CEJA”);
- Whereas, with this agreement in place, JNGO agrees that the specific components of ComEd’s Refiled Grid Plan listed below should be approved by the Commission, consistent with the testimony filed by JNGO on May 23, 2024;
- ComEd and JNGO hereby agree to undertake the following activities.

### **B. Usage and System Data Sharing**

1. JNGO testified in ComEd’s initial Grid Plan proceeding that ComEd failed to meet a statutory objective to provide sufficient information regarding distributed energy resources (“DERs”) and distribution system data. JNGO Init. Br. at 48-49.
2. The Commission’s December 14 Order agreed with JNGO’s recommendation that the parties explore the value of establishing a data access platform for customer, system, market, and DER data. (Final Order at 287)
3. ComEd agrees to provide current data regarding DERs on ComEd’s system as agreed to in ComEd response to JNGO data request 4.01.
4. ComEd agrees to provide current data regarding its distribution system as agreed to in ComEd response to JNGO data request 4.02.
5. ComEd and JNGO agree that they will collaborate on the development of an integrated data platform (“platform”) to access customer, system, tariff/rates, program, CEJA goals and performance incentive mechanism (PIM) data with a goal of ensuring authorized third parties can easily access such data.

- a. The platform shall include, but not be limited to the following data:
  - i. Customer data via a new Green Button Connect, Connect My Data (“GBC CMD”) certified solution.
    1. ComEd and JNGO agree that the Commission’s Data Access Working Group (“DAWG”) should address GBC CMD implementation including the customer and third party registration and authorization processes, data made available, data interval and update frequency, reporting metrics, and other topics as needed to enable the implementation of the GBC CMD certified solution
  - ii. System Data for each substation, feeder and other level of granularity where appropriate:
    1. 8760 hourly profiles
    2. Limiting criteria (thermal, voltage etc.) for locations with limited or no generation or load hosting capacity
    3. DERs and EV charging infrastructure installed, in-queue and forecasted
    4. Upcoming Investments
    5. Information required to be in ComEd’s grid plan per Sec. XX of CEJA
  - iii. Tariff/Rates Data:
    1. Digitized rates and tariffs
    2. Any future operational or pricing information developed as a result of implementing flexible interconnection, DER grid services etc.
  - iv. Program Data for each demand flexibility program:
    1. ComEd’s current program participation and resource mix (smart thermostats, solar + storage, standalone storage, EV charging etc.).
    2. ComEd’s current program participation and resource mix (smart thermostats, solar + storage, standalone storage, EV charging etc.) by substation and feeder.
    3. Other tariff, rate and new program participation to the extent possible and as appropriate.
  - v. CEJA Goals Data:

1. Total DERs (solar, solar + storage etc.) installed
  2. Total EV charging stations installed
  3. Other metrics tracking progress on CEJA goals to the extent possible and as appropriate
- vi. PIM Performance Metrics and Tracking Data reported annually in Docket No. 22-0067.
- b. The goal of the integrated data platform is to ultimately provide a single, cost-effective portal to access this data and will be provided in a standardized, machine readable format including via an Application Programming Interface (API).
  - c. The platform shall include different layers of access where appropriate to address Critical Energy/Electric Infrastructure Information (CEII).
  - d. ComEd and the JNGOs shall work with the Commission's Data Access Working Group ("DAWG") to establish a governance structure to oversee and provide feedback on the implementation of such platform.
  - e. ComEd and JNGO shall create an initial implementation plan with milestones for the new integrated data platform, including the new GBC CMD certified solution and an integrated RFP strategy, by no later than December, 2024.

### **C. Dynamic Hosting Capacity ("DHC"), Flexible Interconnection, and DER Orchestration**

1. JNGO testified in ComEd's initial Grid Plan proceeding that the Commission should direct the Company to develop a Flexible Interconnection Plan to investigate and deploy controlled implementations of volt-watt, active network management (ANM) and dynamic hosting capacity (DHC) with the goal of scaling these programs and incorporating them into the Company's planning and operational practices.<sup>1</sup>
2. In rebuttal testimony, ComEd agreed to work with stakeholders to discuss concepts such as Flexible Interconnection and DER Orchestration that covers different DER control scenarios, including DERMS, within the Interconnection Working Group<sup>2</sup>
3. The Commission's December 14 Order stated ComEd [should] include in its refiled Grid Plan (1) a written plan for implementing and scaling Flexible Interconnection approaches including DERMS, and (2) ComEd's commitment to report on its progress through the Commission's Interconnection Working Group.<sup>3</sup>

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<sup>1</sup> JNGO Exhibit 10.0, at 3.

<sup>2</sup> ComEd Grid Plan Order, at 223.

<sup>3</sup> ComEd Grid Plan Order, at 224.

4. ComEd will work with the JNGO to develop a preliminary written plan to implement and scale Flexible Interconnection approaches, including DERMS, and to estimate DHC on its distribution system. This plan will be introduced in a data request filed in the Refiled Grid Plan docket and will include:
  - a. An evaluation of three different flexible interconnection approaches that are applicable to both exporting and importing facilities including export (i.e., generation) and import (i.e., load) limitation schemes, scheduled interconnections, and actively managed interconnections. An evaluation of each approach includes the following:
    - i. A description;
    - ii. Industry benchmarks and examples;
    - iii. Benefits & Risks;
    - iv. Current implementation status of approach;
    - v. Future state & next steps.
  - b. A technology and investment plan including improved system visibility, the targeted scaling of DERMS and other DER Orchestration approaches as well an evaluation of dynamic hosting capacity to offer flexible interconnection options to a broader set of customers
  - c. A collaborative process, commencing in June 2024, to expand upon this initial plan which will include:
    - i. an in-depth analysis of each approach to expand upon the analysis described above;
    - ii. Interviews with utilities, third-parties and independent experts in the United States, the United Kingdom, the European Union and Australia to support the in-depth analysis of each approach.
    - iii. Flexible interconnection approaches that are prioritized, operationalized and scaled based on several factors including benefits, risks, locational/customer needs and technology availability. This will include timelines for demonstrating and scaling flexible interconnection approaches in an ongoing and iterative manner.
    - iv. A DER Orchestration strategy to develop a common technical approach, where possible, for enabling flexible interconnection as well as DER grid services on the distribution and bulk power system to support the Value of DER Investigation and FERC 2222 compliance.
    - v. A meeting cadence of a minimum of one meeting per month.

- vi. Updates via its Annual MYIGP filing and the Interconnection Working Group (“IWG”) on the progress of this plan.
5. JNGO and ComEd agree to support this mutual effort including but not limited to active participation in the workstreams and as necessary the IWG.

#### **D. REACTS and PERFORM**

1. ComEd proposed in its initial Grid Plan filing a capital investment of \$956 million for REACTS and PERFORM. (ComEd Ex. 9.03)
2. Following discussion with JNGO and Staff, ComEd proposed a reduced investment of \$602 million in REACTS and PERFORM. (ComEd Init. Br. at 148-149)
3. In its Refiled Grid Plan, ComEd proposes to further slow the pace of investment to \$406 million for REACTS and PERFORM. (ComEd RGP Chp. 6 at 84)
4. ComEd refined the planned approach to include other communications technologies that can achieve the same benefits without compromising performance. (ComEd Chp. 6 at 32-37, 71-89) ComEd also removed use cases that aren’t as mature and quantifiable as other use cases. (Id.) The financial net present value (NPV) model was revised to reflect these updates, resulting in \$261 million of net benefits over the Grid Plan period. (Id.)
5. ComEd met with JNGO multiple times to review and receive feedback about Use Case enablement, program prioritization and other concerns. This includes but is not limited to workshops on July 13, 2023; February 6, 2024; February 13, 2024; and April 1, 2024.
6. ComEd commits to continue to evaluate opportunities to reduce its estimated distribution fiber builds beyond the Grid Plan period and to look for more opportunities to incorporate private long-term evolution (“PLTE”) as a more cost-effective approach to connecting devices and enabling use cases. ComEd and JNGO will hold quarterly check-ins, and ComEd agrees to present and discuss the results of this continued evaluation through annual reporting.
7. JNGO supports ComEd’s current investment levels in REACTS and PERFORM, which includes a \$550 million reduction from its initial proposal in the Grid Plan docket and a \$196 million reduction from the Company’s modified surrebuttal proposal in that case.

**E. Activity in Refiled Grid Plan Proceeding**

1. ComEd agrees to update its Refiled Grid Plan to reflect the activities and commitments described herein, and update, as necessary, its proposed revenue requirements to provide for the undertaking of the activities and commitments described herein.
2. JNGO agrees to testify that the activities described herein address their concerns regarding the components of the Refiled Grid Plan's compliance with 220 ILCS 5/16-105.17 addressed here, and that the recovery of any costs associated with these activities is appropriate subject to review by the Commission for prudence and reasonableness.
3. The parties agree that issues not specifically addressed in this MOU are not yet resolved and may be litigated in the Refiled Grid Plan proceeding. The parties intend to continue discussing all remaining issues in hopes that they can be resolved through negotiation.

**F. Miscellaneous Provisions**

1. This entire MOU and the signatories' performance of their obligations hereunder are the result of arms-length negotiations and compromise on the subjects contained herein. Neither this MOU nor any signatory's performance hereunder shall be deemed to be an admission of any fact.
2. The various provisions of this MOU are not severable.

Dated May 23, 2024

Agreed and Accepted:

/s/ Bradley Klein

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On behalf of the Environmental Law &  
Policy Center

/s/ Dawone Robinson

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On behalf of the Natural Resource Defense Council

/s/ James Gignac

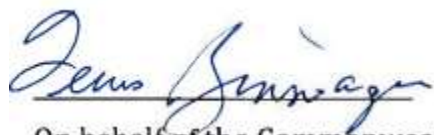
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On behalf of the Union of Concerned Scientists

/s/ Will Kenworthy

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On behalf of Vote Solar



On behalf of the Commonwealth Edison Company

Lewis Binswanger

Senior Vice President, Governmental, Regulatory, and External Affairs

**Question:**

6. Please provide all cost-benefit analyses that have been conducted on Virtual Power Plant (VPP) programs and proposals

a. What assumptions were made regarding customer participation rates, technology costs, delivered peak impacts, and avoided company infrastructure costs?

b. How is it anticipated that VPPs would be funded by the company?

c. What is the percentage of peak demand was calculated that could be addressed through VPPs?

**Response:**

The Company has not conducted any cost-benefit analysis on VPP programs or proposals. Please note that this response does not cover any DR or EE programs and proposals.

- a. As stated above, the Company has not conducted any cost-benefit analysis on VPP programs or proposals.
- b. The Company has not developed a position on how VPPs would be funded.
- c. The Company has not conducted these calculations.

**Witness:** Scott A. Mcphail

**Date:** August 26, 2025

**Question:**

7. What percentage of the company's total R&D budget is allocated to VPPs and other distributed energy resources (DERs)? Please provide a breakdown of this spending for the last three years.

a. What research has been funded? At what levels?

**Response:**

The Company does not have the requested type of R&D budget.

**Witness:** Scott A. Mcphail

**Date:** August 26, 2025

**Question:**

8. Please provide a list of all pilot programs regarding virtual power plants, Demand Response, or EV Charging the company has initiated or participated in over the past 3 years.

a. For each program, include the objective, timeline, budget, and a summary of the key findings and outcomes.

**Response:**

In the last three years, the Company has participated in or led the following pilots related to Virtual Power Plants, Demand Response and EV Charging:

- **DR Generator, Residential**

- Objective: Test energy demand potential on dispatchable home generators to call on during an energy demand event.
- Timeline: 2021-2022
- Budget
  - 2021: O&M - \$390,000; Capital - \$537,000
  - 2022: O&M - \$472,000; Capital - \$575,000
- Summary: The pilot experienced significant enrollment challenges and showed decreased demand potential year over year with increased costs. The pilot was not cost effective, and the Company discontinued it in 2022.

- **DR Generator, Small + Medium Business**

- Objective: Test energy demand potential on dispatchable generators at small- to medium-sized businesses to call on during an energy demand event.
- Timeline: 2022-2023
- Budget:
  - 2022: O&M - \$232,000
- Summary: In the Settlement Agreement for Case No. U-21233, the Company agreed to truncate the pilot phase and commercialize the program while continuing to analyze its performance and costs. During commercialization, the Company uncovered a smaller than expected customer market due to equipment and/or software constraints, resulting

in zero program enrollments. After switching to a different vendor, the Company again found a lack of available market and was not able to test demand savings potential. The program was sunset in 2023.

- **DR Multi-Use Switch, Residential**

- Objective: Test load reduction potential on direct load control switches used in the AC Peak Cycling Program on residential water heaters, pool pumps, and hot tub heaters.
- Timeline: 2020-2022
- Budget:
  - 2022: O&M - \$121,000; Capital - \$187,000
  - 2023: O&M - \$422,000; Capital - \$924,000
- Summary: Originally proposed as the Customized Load Control Switch pilot in the Company's 2018 DR Reconciliation filing in Case No. U-20563, the pilot became the multi-use switch pilot and eventually commercialized as part of the Device Cycling Program that included AC Peak Cycling and the Electric Water Heater DR Programs. The Electric Water Heater Program enrolled approximately 2,000 participants before shutting down operations at the end of 2023 due to cost effectiveness and DR program restructuring.

- **DR Smart Home Pilot, Residential**

- Objective: Test energy demand potential on dispatchable home smart plugs to call on during an energy demand event.
- Timeline: 2021-2023
- Budget:
  - 2021: O&M - \$115,000
  - 2022: O&M - \$899,000
  - 2023: O&M - \$184,000
- Summary: The pilot showed low customer satisfaction after customers experienced communication issues between the smart plugs and app to control the demand as well as no significant increase in capacity. The Company sunset the pilot in 2023.

- **DR Low-Income Pilot Research**

- Objective: Research DR participation rates and barriers with low-income customers to assess how better to provide this customer segment with access to DR opportunities.
- Timeline: 2021-2022
- Budget:

- 2021: O&M - \$76,000
- 2022: O&M - \$98,000
- Summary: The research indicated that low-income customers primarily participate in DR programs to save money on their energy bills, but participants should be provided additional reminders and insights on how to save energy during events to encourage continued participation and benefits. Newer participants were less likely to have started making their homes more energy efficient, including equipment upgrades (such as new appliances or efficient HVAC), and were less familiar with ways to save energy. Given this, the Company decided to transition learnings to the Residential DR team to inform an improved customer experience for low-income customers rather than proceed to pilot a new type of DR offering for these customers.

**Witness:** Alex M. Gast

**Date:** August 26, 2025

**Question:**

8. Please provide a list of all pilot programs regarding virtual power plants, Demand Response, or EV Charging the company has initiated or participated in over the past 3 years.

a. For each program, include the objective, timeline, budget, and a summary of the key findings and outcomes.

**Response:**

The Company has not conducted any pilot programs regarding virtual power plants.

**Witness:** Scott A. Mcphail

**Date:** August 26, 2025

**Question:**

10. How is the company incorporating VPPs into its load forecasting and long-term resource planning models?

a. How are VPPs considered as an alternative to traditional generation or transmission and distribution (T&D) infrastructure? Why?

b. What level of cost and cost deferment has been assessed for VPP delivery?

**Response:**

See also the response of Company witness Mike Kelly.

For purposes of responding to this question, the Company is providing context to its Demand Response ("DR") program. The Company does not forecast DR in its real-time load forecasts. The Company registers DR in the annual MISO Planning Resource Auction and it includes DR in its Integrated Resource Plan ("IRP").

a. DR is considered as an alternative to traditional generation in IRP modeling for purposes of obtaining Commission approval of DR program costs.

b. The levelized cost of DR is compared to the Cost of New Entry since the primary benefit is provision of capacity.

**Witness:** RICHARD T. BLUMENSTOCK

**Date:** August 28, 2025

**Question:**

10. How is the company incorporating VPPs into its load forecasting and long-term resource planning models?

- a. How are VPPs considered as an alternative to traditional generation or transmission and distribution (T&D) infrastructure? Why?
- b. What level of cost and cost deferment has been assessed for VPP delivery?

**Response:**

Please also refer to the response of Company witness Blumenstock.

- a. The Company is not currently considering VPPs as alternatives to traditional distribution infrastructure.
- b. No such assessments have been made regarding electric distribution.

**Witness:** Michael P. Kelly

**Date:** August 27, 2025

**Question:**

11. What partnerships has the company formed with other utilities, technology providers, VPP aggregators, and academic institutions to explore or advance its VPP capabilities?

**Response:**

The Company has not formed partnerships to explore or advance its VPP capabilities.

**Witness:** Alex M. Gast

**Date:** August 26, 2025

**Question:**

11. What partnerships has the company formed with other utilities, technology providers, VPP aggregators, and academic institutions to explore or advance its VPP capabilities?

**Response:**

The Company is not engaged in any partnerships regarding VPPs.

**Witness:** Scott A. Mcphail

**Date:** 8/25/2025

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**Question:**

28. How does the company's internal analysis compare the cost and benefits of a VPP to a traditional company asset (e.g., a natural gas peaker plant or a substation upgrade)?

- a. Please provide examples of these comparative analyses.
- b. What assumptions underpin this analysis?

**Response:**

The Company has not completed cost/benefit analysis of VPPs compared to traditional company assets.

- a. N/A
- b. N/A

**Witness:** Alex M. Gast

**Date:** August 26, 2025

**Question:**

29. For all VPP-related research, pilots, and investments, please provide a detailed breakdown of the costs and the quantifiable avoided costs of implementation (e.g., deferred T&D investments, avoided peaker plant costs, wholesale market savings).

**Response:**

The Company has not completed research, pilot studies, or investments into VPPs.

**Witness:** Alex M. Gast

**Date:** August 26, 2025



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