

September 17, 2024

VIA ELECTRONIC FILING

Will Seuffert, Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
St. Paul, MN 55101-2147

**Re: In the Matter of the Impacts of the “Capacity” Definition in Minn. Stat. §216B.164 and Associated Rules on NetMetering Eligibility for Rate-Regulated Utilities**

Dear Mr. Seuffert,

Clean Energy Economy Minnesota (CEEM) respectfully submits these comments for PUC Docket Number E002, E111, E017, E015/CI-24-200 In the Matter of the Impacts of the “Capacity” Definition in Minn. Stat. §216B.164 and Associated Rules on Net Metering Eligibility for Rate-Regulated Utilities. Our mission at CEEM is to provide educational leadership, collaboration, and policy analysis that accelerates clean energy market growth and smart energy policies. We work to support and expand clean energy jobs and the economic opportunities provided by clean, reliable, and affordable energy on behalf of all Minnesotans.

Please feel free to contact us with any questions that you may have. We hope that the comments below provide you with useful insights.

Regards,



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State of Minnesota  
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Minnesota Public Utilities Commission

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Chair  
Vice-Chair  
Commissioner  
Commissioner  
Commissioner

In the Matter of the Impacts of the  
“Capacity” Definition in Minn. Stat.  
§216B.164 and Associated Rules on Net  
Metering Eligibility for Rate-Regulated  
Utilities

CLEAN ENERGY ECONOMY  
MINNESOTA’S  
REPLY COMMENTS

PUC Docket Number: E002, E111, E017,  
E015/CI-24-200

## INTRODUCTION

### Clean Energy Economy Minnesota

Clean Energy Economy Minnesota (“CEEM”) is an industry led, nonpartisan, non-profit organization representing the business voice of energy efficiency and clean renewable energy in Minnesota.

Our work is focused on educating Minnesotans about the economic benefits of transitioning to a clean energy economy. Our business membership consists of over 60 clean energy companies ranging from start-up businesses to Fortune 100 and 500 corporations that employ tens of thousands of Minnesotans across the state. Together with our members, we stand committed to delivering a 100% clean energy future where all Minnesota businesses and citizens will thrive.

CEEM respectfully submits these Reply Comments in response to the Minnesota Public Utilities Commission’s (the “Commission”) July 30, 2024, Notice of Extended Comment Period in this matter.

## TOPICS OPEN FOR COMMENT

1. How should the Commission consider the “capacity” definition in Minn. Stat. §216B.164 and associated rules on net metering eligibility for rate-regulated utilities?
2. What should the Commission consider regarding the definition of “capacity” as it relates to reliability and net metering rate eligibility?
3. Are there other issues or concerns related to this matter?

## COMMENTS

### Brief Answers

CEEM respectfully requests the Commission:

1. Consider and apply the unambiguous definition of “capacity” as set forth in Minnesota law governing cogeneration and power production, and reject the call to use nameplate capacity as that term contravenes the law.
2. Consider, with respect to the legal definition of “capacity” as it relates to reliability and net metering, the distinctions between capacity and reliability and, given the inherent systemic reliability benefits Distributed Energy Resources (DERs) can provide for the electrical system, options by which to maximize the use of DERs throughout the grid system and provide enhanced incentives for the use of DERs to relieve grid congestion.
3. Consider the totality of positive social, economic, and environmental benefits scalable DERs provide for Minnesotans and the value DERs add to reducing stress and congestion on the grid.

### Explanations to Support the Brief Answers

1. The legal definition of “capacity” with respect to DERs is unequivocal in Minnesota law. Rather than reciting the extensive background and procedural history of this docket, it seems, for the purpose of net metering eligibility, the fundamental issue is whether the eligibility is derived from and determined by the aggregation of nameplate ratings for individual DER system components or the application of the definition for “capacity” coupled with “the point of

interconnection” as clearly expressed in Minnesota law.

We find the Initial Comments of Dakota Electric Association (“DE”) to be especially instructive on and representative of the broader perspective utilities have on the matter of connecting DERs to the larger grid system. DE, for instance, suggests it is open to other “methods available to consider other measurements” but favors nameplate rating as a starting point.<sup>1</sup> DE maintains that nameplate rating is “the starting point to investigate any alternate measuring point” because the “nameplate rating is the industry standard and has been used by utilities for decades.”<sup>2</sup> While we respect the position of DE and the electric power industry, we believe such a position is out of touch with the plain meaning and requirements of the current, relevant Minnesota law. The position of the utilities also erroneously relies on the industry’s longstanding practice and use of historical terms that are better suited to the evaluation of power plant generators and coal-fired boilers.

In the specific context of cogeneration and small power production, the term “nameplate” does not appear in the law. On the other hand this same section of Minnesota law does explicitly include the term “Capacity” and its definition:

"Capacity" means the number of megawatts alternating current (AC) at the point of interconnection between a distributed generation facility and a utility's electric system.<sup>3</sup>

The relevant Minnesota Administrative Rule to give further effect to the statute states:

"Capacity" means the capability to produce, transmit, or deliver electric energy, and is measured by the number of megawatts alternating current at the point of common coupling between a qualifying facility and a utility's electric system.<sup>4</sup>

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<sup>1</sup> Dakota Electric Association Comments, *In the Matter of Impacts of the “Capacity” Definition in Minnesota Statute 216B.164 and Associated Rules on Net Metering Eligibility for Rate-Regulated Utilities*, Docket No. E-002, -111, -017, -015/CI-24-200, eDockets 20249-209935-01, at 18 (September 3, 2024).

<sup>2</sup> *Id.*

<sup>3</sup> Minn. Stat. §216B.164, subd. 2a.(c) (2023).

<sup>4</sup> Minn. R. 7835.0100, subp. 4 (2023).

Based on our reading of the law, the operative legal and technical element is “the point of interconnection” or “point of common coupling” between the DER and a utility’s electrical system. The Minnesota Department of Commerce refers to this as the “export capacity at the point of common coupling.”<sup>5</sup> In other words, so long as the number of kilowatts at the point of interconnection, or common coupling, comports with the purchases, small facilities provision of the cogeneration and small power production law,<sup>6</sup> the totality of, for instance, the size of a photovoltaic system and/or a battery storage system can be greater than any limit at the point of interconnection or common coupling.

Some confusion arises when the electric power industry attempts to shoehorn its nameplate capacity into DERs. From an historical perspective, “nameplate capacity” is a malleable term the electric power industry continues to use in communicating a variety of situations with respect to its fleet of generators. The American Public Power Association, for instance, defines it this way: “nameplate capacity includes capacity labeled as operating and restarted as well as capacity that is on standby and mothballed”.<sup>7</sup>

For comparison, this is the definition of the Energy Information Administration for “nameplate capacity”:

Generator nameplate capacity (installed): The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts (MW) and is usually indicated on a nameplate physically

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<sup>5</sup> Minnesota Department of Commerce, *In the Matter of Dakota Electric Association’s Distribution Interconnection Process and Agreement In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established Under Minn. Stat. § 216B.1611*, Docket No. E-111/M-18-711 & E999/CI-16-521, eDockets 20241-202160-02, at 5-6 (January 12, 2024); see, also, *Comments of the Minnesota Department of Commerce, Division of Energy Resources Impacts of the “Capacity” Definition in Minn. Stat. §216B.164 and Associated Rules on Net Metering Eligibility for Rate-Regulated Utilities*, Docket No. E002, E111, E017, E015/CI-24-200, eDockets 20249-209936-01, at 6 (September 3, 2024).

<sup>6</sup> Minn. Stat. § 216B.164, subd. 3(a)(b) (2023).

<sup>7</sup> Buttler, Lindsey, American Public Power Association, *America’s Electricity Generation Capacity 2023 Update*, 2 (May 2023).

attached to the generator.<sup>8</sup>

In this final example, the Nebraska Municipal Power Pool (NMPP), just as DE does, relies on the decades long use of electric power industry terms to distinguish the use of generation “capacity” from “capacity factor”. NMPP states, with respect to traditional baseload power plants versus clean renewables: “Capacity is the maximum electric output a generator can produce under specific conditions. Each **power plant or generating facility** [emphasis added] has a “nameplate capacity” which indicates the maximum output that the generator can produce.”<sup>9</sup>

NMPP goes further to distinguish measurements for traditional power production from that used for renewable sources. NMPP states “The capacity factor for renewable resources such as a utility-scale wind or solar facility is significantly less than a baseload nuclear, coal or natural gas plant due to the variability of the wind and sun. Baseload power plants, typically using fuel sources such as nuclear, coal, natural gas or hydro, can operate continuously, unlike variable resources like wind and solar facilities.”<sup>10</sup>

DE’s position, and that of the electric power industry, to use the traditional nameplate capacity for DERs in this matter before the Commission is flawed. The electric power industry’s decades long use of the term “nameplate capacity” is misplaced with respect to understanding cogeneration and small power production and any export, and their position is contrary to the plain meaning of “capacity” as explicitly defined in Minnesota law. Furthermore, by the industry’s own reckoning, its use of nameplate capacity with respect to DERs would produce an absurd result because its use would overstate DER performance given a system’s “capacity factor”.

The electric power industry position would also burden the freedom and rights of homeowners to power their household with clean renewable energy. While a homeowner might be constrained at the point of common coupling, it should not

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<sup>8</sup> Energy Information Administration, *Electricity explained Electricity generation, capacity, and sales in the United States*, [https://www.eia.gov/tools/glossary/index.php?id=Generator%20nameplate%20capacity%20\(installed\)](https://www.eia.gov/tools/glossary/index.php?id=Generator%20nameplate%20capacity%20(installed)) (September 2024).

<sup>9</sup> Nebraska Municipal Power Pool, *Understanding Energy Capacity and Capacity Factor*, available at: <https://www.nmppenergy.org/energy-education/understanding-energy-capacity-and-capacity-factor> (January 29, 2021).

<sup>10</sup> *Id.*

be constrained on the size, or capacity, of its solar and battery storage systems. In practical terms, if, for instance, a homeowner actually needed a 60 kW solar and battery storage system to meet its 35 kW electricity needs, under the industry position, the homeowner would be short at least 25 kW.<sup>11</sup> To avoid this absurd outcome for the homeowner, the clear legal definition in Minnesota law should be applied so the homeowner can install the proper size system upstream from the point of common coupling.

Given the factors discussed here, we urge the Commission to consider and apply the unambiguous definition of "capacity" as it is clearly set forth in Minnesota law governing cogeneration and power production. The Minnesota law is abundantly clear with respect to DERs, the meaning of "capacity", a "qualifying facility" and the point of common coupling or point of interconnection. Further, in keeping with Minnesota law, the Commission is urged to remain true to the scope and purpose of the law: **to construe the law "in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public."**

<sup>12</sup>

The Commission, by applying the clear definition of capacity as found in Minnesota law will (a) be consistent with Minnesota law and public policy, (b) serve ratepayers and the public by further decarbonizing the electric power system with cost-effective clean renewable energy,<sup>13</sup> (c) improve electric system reliability with a greater mix of DERs that can lessen stress on the grid<sup>14</sup> and (d) empower more Minnesotans to use greater amounts of solar and battery storage.

2. While reliability performance is an important requirement in the totality of the electricity generation and transmission system in Minnesota, so too is the urgent

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<sup>11</sup> Minn. Stat. §216B.164, subd. 3, 3a (2023) (referring to purchases, small facilities and net metered facility).

<sup>12</sup> Minn. Stat. §216B.164, subd. 1 (2023).

<sup>13</sup> US Department of Energy, Office of Energy Efficiency & Renewable Energy, *The transition to a clean energy economy will enhance the lives of all Americans*, available at <https://www.energy.gov/eere/why-clean-energy-matters>, (September 15, 2024).

<sup>14</sup> Clean Energy States Alliance, *Solar PV and other distributed energy resources (DERs) are playing an increasingly important role in electricity systems across the United States*, available at <https://www.cesa.org/projects/locational-value-of-distributed-energy-resources/>, (September 2024) (stating, e.g., "When DERs are deployed optimally, they can offer benefits to the customer, to the grid, and to utility ratepayers. For example, optimally sited DERs can reduce grid congestion and help defer, reduce, or avoid distribution system upgrade costs. Likewise, targeted solar+storage deployments can provide resiliency benefits in an event of an electrical outage.).

need for rapid decarbonization of the electricity sector.<sup>15</sup> In response to the climate crisis, the Minnesota legislature passed, and the governor signed into law, specific decarbonization requirements applicable to electric utilities.<sup>16</sup>

System reliability and decarbonization of the grid with clean renewable energy is important to CEEM and its membership as well as all Minnesotans. One of the engines that can pull additional renewables on to the grid to accelerate decarbonization is Minnesota’s cogeneration and small power production law. In keeping with the law, rather than constraining the use of DERs, Minnesotans should be encouraged to maximize the amount and use of DERs and, where DERs can provide targeted relief to grid congestion, be provided an added net-metering incentive.

Topic 2 asks: What should the Commission consider regarding the definition of “capacity” as it relates to reliability and net metering rate eligibility? We urge the Commission to use and apply the legal definition of “capacity” for the reasons we outline in our answer to topic one. Strict adherence to the legal definition will maximize the use of DERs with no impact on export capacity at the point of common coupling.

With respect to the reliability factor, we respectfully request the Commission consider the demonstrable benefits DERs are providing to improve electrical grid reliability while further decarbonizing the electric power industry. As for net metering rate eligibility, we request the Commission consider enhancing the rate for DERs that are situated to relieve targeted grid congestion. A diverse mix of DERs can improve overall electric power system reliability for Minnesotans. First, we address a threshold issue; i.e., whether DERs have, thus far, created any reliability problems.

The initial comments of Nokomis Energy (NE) is especially instructive on this point. NE states it was actively involved in several stakeholder meetings wherein issues of reliability involving DERs could have been raised, but no

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<sup>15</sup> Fifth National Climate Assessment, Chapter 2, *Climate Trends*, <https://nca2023.globalchange.gov/chapter/2/#key-message-3> (November 2023), (offering a key message: “The more the planet warms, the greater the impacts—and the greater the risk of unforeseen consequences (very high confidence). The impacts of climate change increase with warming, and warming is virtually certain to continue if emissions of carbon dioxide do not reach net zero (very high confidence). **Rapidly reducing emissions would very likely limit future warming (very high confidence) and the associated increases in many risks (high confidence)** [emphasis added]. While there are still uncertainties about how the planet will react to rapid warming and catastrophic future scenarios that cannot be ruled out, the future is largely in human hands.”).

<sup>16</sup> Minn. Stat. § 216.1691, sub. 2g (2023) (setting forth particular decarbonization requirements by 2040).



reliability concerns were raised. “Nokomis is not aware of any “reliability problems” advanced by any stakeholder.”<sup>17</sup>

More broadly, in Xcel Energy’s 2022 Annual Report and Petition on Service Quality and Performance, there is no indication that DERs have caused any reliability problems.<sup>18</sup> The only adverse categories with respect to DERs go to billing; interconnection delay in meter set for billing, delay in solar account; and other customer concerns. None of the DER concerns involve electric grid reliability issues.

That said, the challenge now is for Minnesota is to build upon the reliability benefits of DERs. According to a leading nonprofit energy research organization, DERs “can lead to a more reliable and resilient grid. Generation, demand response, and energy efficiency can all provide capacity during system peaks, reducing the risk of brownouts and blackouts. In addition, DERs can be used to create microgrids, “islands” with their own generation and storage that can isolate from the larger grid in the event of a system-wide outage.”<sup>19</sup>

The fact that DERs can further strengthen the reliability and resilience of Minnesota’s electrical grid is further evidenced by the offer of grants for that purpose. Under the Federal Resilience and Reliability Grants 40101(d) program, which just recently closed the application process, the intent is to fund DER projects for the specific purpose of improving reliability of the grid. In particular, an eligible project use of funds includes “Use or construction of Distributed Energy Resources for enhancing system adaptive capacity during disruptive events” in keeping with a program objective to “Maintain or Improve Energy Reliability and/or Resilience”.<sup>20</sup>

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<sup>17</sup> Nokomis Energy, *Comments, In the Matter of the Impacts of the “Capacity” Definition in Minn. Stat. §216b.164 and Associated Rules on Net Metering Eligibility for Rate-Regulated Utilities*, Docket No.E015/CI-24-200, eDocket 20249-209950-01, at 2 (September 3, 2024).

<sup>18</sup> Xcel Energy, *2022 Annual Report and Petition Service Quality Performance and Proposed Reliability Measures*, Docket No. E002/M-23-73, eDockets 20233-194412-01 at Safety and Reliability Metrics 14 - 15 (March 31, 2023).

<sup>19</sup> American Council for an Energy-Efficient Economy, *The Benefits of DERs, Reliability*, available at <https://www.aceee.org/topic/distributed-energy-resources> (September 2024)

<sup>20</sup> Minnesota Department of Commerce, Division of Energy Resources, *BIL-40101(d) Grant Program: Strengthening the Reliability and Resiliency of Minnesota’s Electrical Grid*, available at [https://mn.gov/commerce-stat/pdfs/energy/40101dGridResilienceGrantProgramWebinar041224\\_FINAL.pdf](https://mn.gov/commerce-stat/pdfs/energy/40101dGridResilienceGrantProgramWebinar041224_FINAL.pdf), slides 6 - 7, (April 2024).

As for the addition of greater amounts of DERs, technology, such as Inverter Based Resources (IBR) can handle the onboarding of far more DERs. Last October, the Federal Energy Regulatory Commission Chairman, Willie Phillips, had this to say about the role of IBR in enhancing reliability: “When appropriately programmed, IBRs can provide operational flexibility and the ability of IBRs to perform with precision, speed and control could mitigate disturbances on the bulk power system.”<sup>21</sup>

Given the clear legal definition for capacity and the role DERs can play in efforts to further decarbonize the electric power sector and society more broadly, we urge the Commission to follow the legal definition of “capacity” as it relates to reliability and net metering, and consider enhanced net metering incentives (e.g., increase the compensation rate<sup>22</sup>) to encourage greater use of DERs and especially where DERs can relieve grid congestion.

3. Clean renewable energy is providing Minnesotans with reliable electricity and decarbonization benefits but Minnesota has the capacity to use nearly six times the current amount of solar distributed energy.<sup>23</sup> To fully satisfy decarbonization requirements in Minnesota, and to allow Minnesotans greater energy independence, even more DERs must be encouraged and supported in Minnesota, including the ability for DERs to supply electricity to the grid. DERs, rather than being viewed as a cost to the grid, should be recognized and valued for their contributions to the decarbonization efforts as well as their ability to relieve stress on the grid. DERs hold the potential to further boost grid system reliability and rapidly decarbonize electricity for Minnesotans.

## CONCLUSION

CEEM respectfully requests the Commission apply the definition of “capacity” as defined in Minnesota law, encourage and support greater use of DERs to supply

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<sup>21</sup> Zullo, Robert, Minnesota Reformer, *In some parts of the U.S., the grid of the future might be closer than you think*, available at <https://minnesotareformer.com/2024/05/10/in-some-parts-of-the-u-s-the-grid-of-the-future-might-be-closer-than-you-think/> (May 10, 2024).

<sup>22</sup> Minnesota Public Utilities Commission, *Net metering and compensation*, available at <https://mn.gov/puc/activities/economic-analysis/distributed-energy/net-metering/> (September 2024).

<sup>23</sup> Institute for Local Self-Reliance, *The State(s) of Distributed Solar – 2023 Update*, available at <https://ilsr.org/articles/the-states-of-distributed-solar-2023/> (May 15, 2024) (providing state specific data for distributed solar capacity, distributed solar saturation and other data points).

electricity on site and to the grid, and to enhance incentives for DERs strategically placed to reduce stress and congestion on the grid. CEEM urges the Commission to take these actions to enable Minnesotan's access to greater amounts of electricity from clean, renewable energy.