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December 4, 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 a Commission Investigation on Grid and Customer Security Issues Related to Public Display or Access to Electric Distribution Grid Data

Dear Mr. Seuffert,

Clean Energy Economy Minnesota (CEEM) respectfully submits these comments for PUC Docket Number E-999/CI-20-800. In the Matter of a Commission Investigation on Grid and Customer Security Issues Related to Public Display or Access to Electric Distribution Grid Data.

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,

George Damian
Director of Government Affairs
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State of Minnesota
Before the
Minnesota Public Utilities Commission

Katie J. Sieben	Chair
Joseph K. Sullivan	Vice-Chair
Hwikwon Ham	Commissioner
Valerie Means	Commissioner
John Tuma	Commissioner

In the Matter of a Commission Investigation on Grid and Customer Security Issues Related to Public Display or Access to Electric Distribution Grid Data	CLEAN ENERGY ECONOMY MINNESOTA'S REPLY COMMENTS PUC Docket Number E-999/CI-20-800

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") October 9, 2024, Notice of Supplemental

Comment Period in this matter.[1]

REPLY COMMENTS

Brief Answers

Given the facts in this matter, CEEM respectfully requests the Commission's order guide and inform the process of the workgroup with the following determinations:

1. Preserve grid data sharing protocols while improving access to all categories of grid data currently available to the public.

2. Recognize the existence of other categories of relevant grid data and that such data should be made available upon a good-faith request absent particularity with respect to an actual security risk.

3. Any required mitigation tactics for data sharing must be based on an actual, specific, particularized risk associated with making the data available.

Explanations to Support the Brief Answers

1. CEEM concurs with this position statement of the Minnesota Department of Commerce: "The public interest is served by enabling greater access to data in a manner which allows the state to meet its policy objectives and generates benefits to ratepayers."[2] This position is also supported by the National Renewable Energy Laboratory (NREL). NREL finds, for instance, access to data can enable DER developers and utilities to, "Understand the drivers of distribution grid integration costs and potential opportunities for research and development to drive down costs."[3] Similarly, the Interstate Renewable Energy Council notes that with full transparency, a hosting capacity analysis, for example, "can help regulators, utilities, developers, and customers make more

[1] Minnesota Public Utilities Commission, *Notice of Supplemental Comment Period, In the Matter of a Commission Investigation on Grid and Customer Security Issues Related to Public Display or Access to Electric Distribution Grid Data*, Docket No. E-999/CI-20-800, October 9, 2024.

[2] Minnesota Department of Commerce, *Comments of the Minnesota Department of Commerce*, Docket No. E-999/CI-20-800, at 4, November 12, 2024 [hereinafter, "Commerce"].

[3] National Renewable Energy Laboratory, *Hosting Capacity Analysis for Policy Makers*, at https://www.nrel.gov/docs/fy19osti/74383.pdf (August 2019).

proactive, cost-effective, and efficient decisions about DER investments."[4]

The Minnesota Department of Commerce makes clear: "Greater access to data to improve the DER interconnection process can save developer, utility, and ratepayer resources by more effectively siting DER and promoting efficient interconnection."[5]

That said, CEEM, as does the Department of Commerce[6], recognizes the need for open data access that balances security concerns with the interest of ratepayers. The ratepayer interest is served when DER developers have access to data to design cost-effective projects to enhance grid resiliency and reliability with clean, renewable energy.

While the workgroup continues to explore issues, some data sharing matters are settled and should be preserved. The data set includes, but is not limited to, for example, Federal Energy Regulatory Commission rules, which outline particular information utilities have a duty to share in, for instance, a pre-application report. The items to be shared include:

> 1.2.3.1 Total capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed Point of Interconnection.
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> 1.2.3.2 Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed Point of Interconnection.
>
> 1.2.3.3 Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Interconnection.
>
> 1.2.3.4 Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed Point of Interconnection (i.e., total capacity less the sum of existing aggregate generation capacity and

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[4] Interstate Renewable Energy Council, *Hosting Capacity Analysis: Hosting capacity analyses are grid transparency tools that can help integrate renewables on the grid,* at https://irecusa.org/our-work/hosting-capacity-analysis/ , (last visited December 3, 2024).

[5] Commerce, at 13.

[6] Commerce, at 4.

aggregate queued generation capacity).

1.2.3.5 Substation nominal distribution voltage and/or transmission nominal voltage if applicable.

1.2.3.6 Nominal distribution circuit voltage at the proposed Point of Interconnection.

1.2.3.7 Approximate circuit distance between the proposed Point of Interconnection and the substation.

1.2.3.8 Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load as described in section 2.4.4.1.1 below and absolute minimum load, when available.

1.2.3.9 Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the proposed Point of Interconnection and the substation/area. Identify whether the substation has a load tap changer.

1.2.3.10 Number of phases available at the proposed Point of Interconnection. If a single phase, distance from the three-phase circuit.

1.2.3.11 Limiting conductor ratings from the proposed Point of Interconnection to the distribution substation.

1.2.3.12 Whether the Point of Interconnection is located on a spot network, grid network, or radial supply.

1.2.3.13 Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks[7]

Another example of data for which access must continue to be provided and preserved is found in the State of Minnesota Distributed Energy Resources Interconnection Process (MN DIP). A sample of the data to be provided includes the following data points:

[7] Federal Energy Regulatory Commission, 18 CFR Part 35, *Improvements to Generator Interconnection Procedures and Agreements*, Appendix E, Small Generator Interconnection Procedures, Section 1.2 Pre-Application, at 3 (Issued March 21, 2024).

1.4.2.1 Total capacity (in megawatts (MW)) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed Point of Common Coupling.

1.4.2.2 Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed Point of Common Coupling.

1.4.2.3 Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Common Coupling.

1.4.2.4 Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed Point of Common Coupling (i.e., total capacity less the sum of existing aggregate generation capacity and aggregate queued generation capacity).

1.4.2.5 Substation nominal distribution voltage and/or transmission nominal voltage if applicable.

1.4.2.6 Nominal distribution circuit voltage at the proposed Point of Common Coupling.

1.4.2.7 Approximate circuit distance between the proposed Point of Common Coupling and the substation.

1.4.2.8 Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load as described in section 3.4.4.1 below and absolute minimum load, when available.

1.4.2.9 Whether the Point of Common Coupling is located behind a line voltage regulator.

1.4.2.10 Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the proposed Point of Common Coupling and the substation/area. Identify whether the substation has a load tap changer.

1.4.2.11 Number of phases available on the Area EPS medium voltage system at the proposed Point of Common Coupling. If a single phase, distance from the three-phase circuit.

1.4.2.12 Limiting conductor ratings from the proposed Point of Common Coupling to the distribution substation.

1.4.2.13 Whether the Point of Common Coupling is located on a spot network, grid network, or radial supply.

1.4.2.14 Based on the proposed Point of Common Coupling, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.[8]

At minimum, these are the data points and protocols that must be preserved along with improved access to the data. A utility might have a strong business interest in limiting access to certain data[9], but that interest should not transcend the interests of ratepayers and Minnesota's carbon free requirements.[10] Thus, to serve ratepayers and facilitate efforts to meet Minnesota's carbon free requirements with a variety of DERs, current data and grid sharing protocols should be preserved. In addition to the preservation of the grid sharing protocols, DER developers require improved access to all categories of grid data currently available to the public. The grid sharing protocols and improved access to all categories of grid data will aid in efforts to strategically deploy DERs in a cost-effective manner to serve ratepayers and attain Minnesota's carbon free requirements.

2. With respect to other categories of relevant grid data which have yet to be made publically available, such data should be made available unless a particularized security risk is identified. For the purpose of security risk assessment and evaluation, data and data sharing for the purpose of DER development should continue to be distinguished from highly visible and potentially vulnerable physical assets such as fossil fuel fired power plants, nuclear power plants and substations. Anyone with access to the internet can find descriptions of these physical assets to aid in their identification in the field.

Furthermore, data shared for the purpose of the strategic and efficient

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[8] Minnesota Public Utilities Commission, *State of Minnesota Distributed Energy Resources Interconnection Process* (MN DIP), at 6, (April 15, 2024).

[9] Commerce, at 4

[10] Minn. Stat. § 216B.1691, Subd. 2g (2023) (using the word "requirements" in reference to the 100 percent amount of certain electricity that must be carbon free by 2040) [hereinafter "carbon free"].

development of DERs should be distinguished from potential cybersecurity issues that might involve the electric distribution systems and the DERs that connect to them.[11] Even in the situation where there is a connection between a DER and the electric distribution system, rather than labeling the situation a security risk, the National Association of Regulatory Utility Commissioners (NARUC) protocol simply calls for some basic best management practices. Those practices range from asset inventory to password management to phishing-resistant multifactor authentication to incident planning and preparedness.[12] In short, even where critical operational information is shared, protocols can be used to mitigate any risk associate with the exchange of information between DERs and the electrical system to which it is connected.

3. Any required mitigation tactics for data sharing must be based on an actual, specific, particularized risk associated with making the data available. This baseline is necessary to ensure DER developers have access to basic information for strategic development and to provide some level of competition in the generation of electricity in Minnesota. The NARUC Grid Data sharing Playbook, for example, recognizes that not all data sharing presents a security risk. NARUC states: "In the United Kingdom, data is presumed open unless a specific potential risk is identified."[13] Where, however, some particularized risk is identified, a "tiered grid data classifications"approach can be used to evaluate the situation. Even where there might be some potential risk, a process is used to consider potential restrictions and then move the data into one of four types of open data.[14]

CONCLUSION

Currently available public data and other data sharing and protocol requirements must remain viable to enable strategic deployment of DERs. Improving access to the required and other data can aid in the efficient planning for strategic deployment of DERs and thereby benefit ratepayers as Minnesota moves toward being carbon free. Where there are specific data security concerns that can be stated with great

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[11] National Association of Regulatory Utility Commissioners, *Cybersecurity Baselines For Electric Distribution Systems and DER*, at 3 (February 2024).

[12] *Id.* at 4.

[13] National Association of Regulatory Utility Commissioners, *NARUC Grid Data Sharing Playbook*, at 22 (Fall 2023).

[14] *Id.*

particularity, the merits of those concerns over data security can be evaluated through a tiered approach so as to address any substantiated concerns and properly categorize the data into one of four types of open data in accordance with the NARUC Playbook. This approach can strike a balance between security requirements and the need to deploy DERs to fulfill the requirements in Minnesota's carbon free law.