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May 21, 2021

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

RE: Xcel Energy's 2020 Hosting Capacity Analysis Report
Docket No. E002/M-20-812

Dear Mr. Seuffert:

Fresh Energy respectfully submits the attached letters from Minnesota clean energy developers filed to Docket No. E000/CI-20-800 regarding the Commission Investigation into grid security and data disclosure practices in response to the Minnesota Public Utility Commission's May 11, 2021 Second Notice of Extended Reply Comment Period in this docket. While these letters were filed in response to a different docket, they are highly relevant to the record considering Xcel Energy's 2020 Hosting Capacity Analysis report.

Clean energy developers Impact Power Solutions ("IPS"), Nokomis Energy, Novel Energy Solutions, and United States Solar Corporation ("US Solar"), as well as the Minnesota Solar Energy Industries Association (MnSEIA) filed letters on April 30, 2021 and May 10, 2021 which describe the value of accurate and granular hosting capacity data for their customers and businesses. These letters request continued and/or expanded access to several specific data points and recommend that hosting capacity data be updated monthly. Fresh Energy believes these letters are important additions to the record in Docket No. E002/M-20-812 because they provide concrete examples of how hosting capacity information is used by clean energy developers today, the value it provides for these growing markets, and specific examples of the value additional information and frequency could provide.

Thank you for the opportunity to provide comments on this important issue. If you have any questions about this submission, please contact me at the information below.

/s/ Isabel Ricker

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April 30, 2021

VIA ELECTRONIC FILING

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

Re: Joint Letter

In the Matter of the Petition of Northern States Power Company, dba Xcel Energy, Requesting Approval of Its Proposed Community Solar Garden Program
Docket No. E-002/M-20-800

In the Matter of the Xcel Energy 2019 Hosting Capacity Report Under Minn. Stat. § 216B.2425, Subd. 8
Docket No. E002/M-19-685

Dear Mr. Seuffert,

We respectfully submit the attached *Joint Letter* in response to the Commission's October 30, 2020 notice and subsequent comments and notices in the above-mentioned docket.

Please do not hesitate to contact me if you have any questions.

Sincerely,

s/ *Ross Abbey*

Ross Abbey
United States Solar Corporation

On behalf of MN DER Developers

STATE OF MINNESOTA
BEFORE THE
PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	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	DOCKET NO. E999/CI-20-800
In the Matter of the Xcel Energy 2019 Hosting Capacity Report Under Minn. Stat. § 216B.2425, Subd. 8	DOCKET NO. E002/M-19-685

JOINT LETTER

Impact Power Solutions ("IPS"), Nokomis Energy, Novel Energy Solutions, and United States Solar Corporation ("US Solar"), collectively "MN DER Developers", submit this letter in response to the Commission's October 30, 2020 Notice and Xcel Energy's January 29, 2021 Comments in this docket.

Each of our companies are active developers of community solar gardens, solar plus storage, behind the meter solar, and/or other distributed energy resource (DER) projects in Minnesota, and have a direct interest in the outcome of this grid-security docket. Grid data is a key ingredient in allowing us to identify optimal locations for DERs, plan for grid-optimal DER sizing and operational flexibility, achieve efficient grid interconnection, deliver increased value to the grid, and secure just and reasonable compensation that fairly reflects the value delivered.[1]

In other words, open access to grid data is a key prerequisite for the orderly planning and development of distribution-connected DERs (including solar up to 10 MW plus storage) along a low-cost, high-value pathway. There is, of course, a strong public benefit and public interest in allowing for orderly and cost-effective development of DERs, both to meet Minnesota state goals for GHG reductions, but also to reduce air local pollution, improve grid resilience, support local economic development, and save a significant amount of ratepayer dollars.[2]

[1] While this statement is true today, it will become even more true in the next few years with declining battery costs, increasing solar penetration, and the implementation of FERC Order 2222.

[2] *See, e.g.*, Minnesota Solar Pathways' Solar Potential Analysis Report (Nov. 15, 2018), available at http://mnsolarpathways.org/wp-content/uploads/2018/11/solar-potential-analysis-final-report-nov15-

More specifically, the categories of DER-relevant grid data include but are not limited to the following:

1. Estimated and Actual Daytime Minimum Load at substation and feeder levels;
2. Hosting Capacity Results (min. and max) at substation, feeder, and subsection levels;
3. Distributed Generation and Storage (kW), in operation (by substation and feeder);
4. Distributed Generation and Storage (kW), in queue (by substation and feeder);
5. Load shapes (seasonal) at substation and feeder levels;
6. Load shapes (hourly) at substation and feeder levels;
7. Forecasted Peak Load at substation, feeder, and subsection levels;
8. Actual Peak Load at substation, feeder, and subsection levels; and
9. Hosting Capacity Criteria Violations (substation and feeder and subsection level).

Some of these DER-relevant grid data are currently available via Xcel's hosting capacity map and reporting tables – but the information is only refreshed once a year and can become stale soon after it is published, making it relatively more risky to commit development spend until the next data refresh. But other categories, such as peak-load and load-shape data, is not currently available at all – making it difficult for DER developers to analyze and identify grid locations where solar-plus-storage projects could be economically feasible.

Of concern, it appears that Xcel Energy is now attempting to classify many of these DER-relevant data categories as non-public, confidential, confidential restricted, in-person viewing only, or not provided.[3] But cumersome restrictions on access to this grid data would have a direct negative impact on the cost and effectiveness of deploying DER in Minnesota, and raise barriers to entry and further privilege Xcel in the deployment of DERs in the coming years. The Commission should thus closely scrutinize all asserted security concerns to determine:

- the actual level of risk associated with the concern, and
- whether the risk can be mitigated by existing mechanisms.

2.pdf (finding that solar and wind can meet 70% of Minnesota's electric needs with minimal need for seasonal energy storage and generation costs comparable to new natural gas generation, as long as "solar and wind compensation policies . . . account for additional capacity coupled with energy curtailment."). *See also* Vibrant Clean Energy, Why Local Solar For All Costs Less: A New Road Map for the Lowest Cost Grid (December 1, 2020), available at https://www.vibrantcleanenergy.com/wp-content/uploads/2020/12/WhyDERs_ES_Final.pdf

[3] Xcel Energy January 29, 2021 Comments, at 10.

If the Commission does find that certain DER-relevant data categories merits confidential or non-public status, we respectfully request that any approved confidentiality mechanism:

(1) be narrowly tailored to legitimate and specifically identified security concerns, and

(2) be designed to allow *bona fide* DER developers and stakeholders access to DER-relevant grid data (*e.g.*, under a tariff sheet that establishes a process to request grid data, requires developer certification and utility disclosure, and established protected data categories (if any) with tariffed confidentiality conditions).

Importantly, such a confidentiality mechanism should not erect arbitrary and unnecessary barriers to a DER developer's access to such information and should not permit Xcel to have discretion over whether a DER developer may, or may not, have access to such information. Rather, there should be a presumption that DER developers can have access to this information unless it can be demonstrated that such developers are utilizing such information for inappropriate purposes.

Thank you for your careful consideration of this matter.

Sincerely,

s/ *Ross Abbey*

Ross Abbey, US Solar

s/ *Ralph Kaehler*

Ralph Kaehler, Novel Energy Solutions

s/ *Matthew Melewski*

Matthew Melewski, Nokomis Energy

s/ *Eric Pasi*

Eric Pasi, IPS

STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Valerie Means	Commissioner
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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 Nos. E999/CI-20-800 and E002/M-19-685

MINNESOTA SOLAR ENERGY INDUSTRIES ASSOCIATION'S (MnSEIA) COMMENTS

April 30, 2021

Docket Nos. E002/M-19-685 and E002/M-20-800

MnSEIA's COMMENTS

The Minnesota Solar Energy Industries Association (MnSEIA) is a 501(c)(6) nonprofit trade association that represents our state's solar businesses, with 125 member companies, which employ over 4,200 Minnesotans.

BACKGROUND

On November 1, 2019, Xcel Energy ("Xcel") filed their annual Hosting Capacity Analysis (HCA) Report with the Minnesota Public Utilities Commission (PUC or the "Commission").[1] The Commission received comments from the Interstate Renewable Energy Council Inc., Fresh Energy, the Minnesota Department of Commerce, Division of Energy Resources, and the City of Minneapolis, regarding among other things, the effectiveness and accuracy of Xcel's annual HCA.

[1] *See* INITIAL FILING--2019 HOSTING CAPACITY ANALYSIS REPORT, DISTRIBUTION SYSTEM – HOSTING CAPACITY ANALYSIS REPORT, DOCKET NO. E002/M-19-685, Doc. Id. 201911-157103-01 (November 1, 2019).

The COVID-19 pandemic delayed the docket for several months. The PUC issued their Order on July 31, 2020[2], approving Xcel's 2019 HCA, and setting further requirements for future HCAs. Xcel submitted a compliance HCA filing with the PUC on August 20, 2020[3], and soon thereafter the PUC opened the docket for comments[4]. Following this docket, the Commission hosted 2 workshops exploring HCA updates and data security. The first workshop[5] discussed Xcel's risk-benefit framework for HCA updates and its security platform for data, while the second workshop[6] explored the sharing of data in other states and how the implementation of more frequent HCA updates or live HCA updates in those states could translate to Minnesota.

COMMENTS

I. The Commission Should Direct Utilities to Provide Monthly Updates to HCA Reports

While grid security is important to *all* stakeholders, we urge the Commission to be cautious about letting security concerns in this proceeding render the HCA entirely moot. Rather, MnSEIA hopes that this discussion will facilitate a future grid where security concerns and orderly, efficient deployment of distributed energy resources (DER) coexist and meet public policy goals.

Developers need access to current and accurate data about the distribution system to ensure that they are able to interconnect projects to the grid in a timely and efficient manner. The knowledge of feeder capacity, criteria violations, and load patterns facilitates interconnection where DER can provide the lowest cost and highest value to the grid. When data requests are delayed or when the data itself is outdated, developers' efforts can be seriously hampered, and can lead to suboptimal DER siting, additional project risk, and interconnection delays. The current flow of information from HCA reports neither keeps up with the growth of distributed generation on the Minnesota grid, nor provides all the information necessary to allow developers to identify high-value locations for DER.

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[2] *See* ORDER ACCEPTING REPORT AND SETTING FURTHER REQUIREMENTS, In the Matter of Xcel's 2019 Hosting Capacity Analysis Report, DOCKET NO. E002/M-19-685, Doc. Id. 20207-165472-01 (July 31, 2020).

[3] *See* COMPLIANCE FILING HOSTING CAPACITY ANALYSIS REPORT - UPDATED TABULAR RESULTS, DOCKET NO. E002/M-19-685, Doc Id. 20208-166045-01 (August 20,2020).

[4] *See* NOTICE OF 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. E002/M-19-685, Doc. Id. 202010-167790-02 (October 30, 2020).

[5] *See* Hosting Capacity Analysis and Distribution Grid Data Security Workshop, Workshop 1 Summary, DOCKET NO. E002/M-19-685, Doc. Id. 20213-172192-01 (March 25, 2021).

[6] *See* Hosting Capacity Analysis and Distribution Grid Data Security Workshop, Workshop 2 Summary, DOCKET NO. E002/M-19-685, Doc. Id. 20214-172695-01 (April 8, 2021).

MnSEIA agrees with the comments made by IREC[7] and Fresh Energy[8] that the current flow of information from the HCA is inadequate for the rapid changes that are occurring on Minnesota's electric grid. Many of our members have expressed concerns both about the reply time for requesting data and the relevancy of data. Receiving replies from utilities has not been a straightforward process. Developers have noted that requesting data from utilities will often take numerous attempts at communication, and there are long delays in reply times. Unfortunately, these delays can result in receiving outdated data that is less useful. These delays cut at the underlying purpose of having an HCA altogether; namely, receiving HCA and other data that is months old can severely hamper development.

Annual or biannual updates to the HCA are not sufficient to meet developer needs, and do not meet the Commission's stated goal that the HCA be useful in the interconnection process. This much lag returns outdated and irrelevant information. Monthly HCA updates, on par with the monthly updates that Xcel provides to its Public DG Queue report, are needed to provide the more current and relevant data that developers need to properly plan for optimal siting, interconnection budget, project budget, etc.

MnSEIA agrees with IREC's comments[9] that in order to provide customers useful information—and meet the Commission's goal—the HCA should have monthly updates. The current flow of information and the relevance of this information has been insufficient to meet the state's clean-energy goals, or to reasonably allow for the commercial deployment of new DER categories, such as solar plus storage. Additionally, the Commission should establish guidelines around adequate response times and the relevancy of data requests from utilities to ensure developers are receiving the most accurate and relevant information.

We highlight the need for the HCA to be useful and timely in this venue because we strongly believe that the security concerns addressed below should be viewed in that light. A set of security parameters that is too restrictive will fail the larger purpose of the HCA exercise inasmuch as it would further slow updates and harm the usefulness of the report. Without frequent updates, the time to create and implement any and all security parameters would be wasted effort by the utilities, stakeholders, and Commission. Therefore, the security framework created here should be viewed in a light that makes frequent updates both feasible and up-to-date.

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[7] *See* COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON XCEL ENERGY'S 2019 HOSTING CAPACITY ANALYSIS, DOCKET NO. E002/M-19-685, Doc. Id. 201912-158688 (December 30, 2019).
[8] *See* COMMENTS OF FRESH ENERGY, In the Matter of Xcel Energy's Hosting Capacity Analysis Report, DOCKET NO. E002/M-19-685 Doc. Id. 201912-158682 (December 30, 2019).
[9] *See* COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON XCEL ENERGY'S 2020 HOSTING CAPACITY ANALYSIS, DOCKET NO. E002/M-20-812, Doc. Id. 20214-172657-01 (April 7, 2021).

II. The Commission Should Facilitate Access to DER-Relevant Data upon Request by a *Bona Fide* Developer

While MnSEIA is mindful of the security concerns voiced by Xcel[10] and Dakota Electric[11], we do not believe that either has demonstrated a legitimate grid-security issue that cannot be managed or mitigated by other measures.

MnSEIA asserts that the following information categories, **each of which is already available to DER developers from Xcel, should remain publicly available**:

- Actual Daytime Minimum Load at substation and feeder levels;
- Hosting Capacity Results (min. and max) at substation, feeder, and subsection levels;
- Distributed Generation and Storage (kW), in operation (by substation and feeder);
- Distributed Generation and Storage (kW), in queue (by substation and feeder).

In addition, the following categories of information are highly relevant to future DER development (e.g., under FERC Order 2222), but are not currently provided upon developer request:

- Forecasted Annual Peak Load at substation, feeder, and subsection levels;
- Actual Annual Peak Load at substation, feeder, and subsection levels;
- Load shapes (seasonal) at substation and feeder levels;
- Load shapes (hourly) at substation and feeder levels;
- Hosting Capacity Criteria Violations (substation and feeder level).

We thus respectfully request the Commission to direct the utilities to make each of the above data categories either: (1) public as via the HCA report; or (2) available upon request to a certified bona fide developer, i.e., for the purposes of planning a solar-plus-storage project or another type of DER project.

Please, see MnSEIA's Attachment 1 for further explanation of how public availability of the above data categories would serve the public interest, including be enabling utility customers and

[10] *See* COMMENTS – RESPONSE TO NOTICE DISTRIBUTION GRID AND CUSTOMER SECURITY, DOCKET NOS. E002/M-19-685 AND E999/CI-20-800, Doc. Id. 20211-170472-02 (January 29, 2021).
[11] *See* DAKOTA ELECTRIC ASSOCIATION COMMENTS IN RESPONSE TO OCTOBER 30, 2020 NOTICE OF 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 NOS. E999/CI-20-800 and E002/M-19-685, Doc. Id. 20211-170472-02 (January 29, 2021).

DER developers to identify project location, sizing, and operational characteristics that maximize value to the utility distribution system and ratepayers in general.

III. If the Commission Finds That Some Level of Non-Public Access is Necessary, Then the Commission Should Direct the Department of Commerce to Create a Single-Tier Certification System.

MnSEIA and its members believe that a multi-tiered access structure for accessing data would over-complicate the process of obtaining DER-relevant data. A multi-tiered access structure has the possibility of becoming a "pay-to-play" system, or could be used to prevent smaller or new developers access to data. Burdensome fees or other arbitrary certifications—for example, engineering certifications—would act as unnecessary market barriers.

Access to timely and accurate hosting capacity data facilitates continued growth and efficient interconnection of DER on Minnesota's grid. Rather than setting up a multi-tiered access structure, MnSEIA believes the proper structure should be one that provides data access to anyone with a legitimate business reason and a demonstrated need to know. Finally, we believe that the utility should only be able to require a signed Non-Disclosure Agreement (NDA) for data requests that are so specific[12] (e.g., at the secondary level) to risk potential disclosure of load data that could be linked to an individual customer, or other such extenuating circumstances.

A. The Department of Commerce is best situated to certify an entity's need to know for accessing data.

The Department of Commerce—or, possibly, the Department of Labor and Industry—should certify DER developers that have an established and determined need to know hosting capacity data. The Department of Commerce is the best body to ensure fairness and equality in this certification process, because of its neutral position representing the public interest. Certification should be accessible to DER developers that seek it in good faith. A small one-time application fee and verification that the DER developer is in fact a DER developer—and therefore has a *bona fide* need to know—could be one reasonable approach. In addition to these rules, a required annual HCA security update and training session hosted by the Department would ensure that developers and utilities productively discuss these issues.

B. If the Commission does adopt a tiered access structure due to security concerns, it should ensure that the structure does not create barriers to *bona fide* data requests by DER developers.

[12] See Hosting Capacity Analysis and Distribution Grid Data Security Workshop, Workshop 1 Summary, DOCKET NO. E002/M-19-685, Doc. Id. 20213-172192-01 (March 25, 2021).

If the Commission believes that a tiered access system is the best solution to security concerns, MnSEIA believes that this tiered approach should only be implemented for data with higher security concerns. Tiered access should *not* be based on financial resources available, size of the developer, professional certification such as engineering certifications, or any semblance of a pay-to-play system. If a tiered access structure incorporates any of these mechanisms, then the goal will have effectively shifted from addressing security concerns to creating market barriers to entry.

Conclusion

The main concern shared by MnSEIA member-developers is the *present* lack of access to relevant and up-to-date data from utilities. The current system of providing annual hosting capacity analysis reports does not seem to comport with the rapid development and changes on Minnesota's electrical grid—and inadequately anticipates the needs of a future with more dynamic DER. Monthly updates to the HCA report would be a great step in the right direction for Minnesota, especially if paired with increased developer access to the other DER-relevant data categories called out above. MnSEIA hopes that even the present relevance and accuracy of the HCA will not regress under the guise of security.

Data security is a shared concern and responsibility. However, creating a multi-tiered system for accessing this information leaves too much room for system abuse and the creation of market barriers. Access to data should be granted to anyone that can show a legitimate business reason, while higher-risk or sensitive data should come with additional security requirements. If the Commission believes a tiered access system to be the best solution to security concerns, then it should be established in a way that truly focuses on security and not preventing or limiting developers from accessing data for not meeting certain market requirements.

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#	Data Type	Public or Protected for Security? Certification by DOC as "need to know" as suggested in MnSEIA's Comments.	Designation Rationale (Include citations when possible)	How does public availability of this data serve public interest?
A	**Public display (e.g. maps, pop up windows, etc.)**			
1	Distribution grid map with **critical energy infrastructure**	**Certification Required**	Maps of containing crtitical energy infrastructure should be restricted from the general public.	The public availibility of this data does not serve public interest. This data should be made available to certified parties, but could pose a security risk if publicly available.
2	Distribution grid map with **critical infrastructure**	**Certification Required**	Maps of containing crtitical energy infrastructure should be restricted from the general public.	The public availibility of this data does not serve public interest. This data should be made available to certified parties, but could pose a security risk if publicly available.
3	Distribution grid map at **feeder level**	**Public**	This data is useful to developers and poses very little security risk.	This data poses no additional security threats or risk to the public.
4	Distribution grid map at **secondary level**	**Public**	This data is useful to developers and poses very little security risk.	This data poses no additional security threats or risk to the public.
5	Distribution grid map at **customer meter level**	**Certification Required**	This data should be restricted. Customer data is needed for developers to install distributed energy resources (DER), but should only be made available upon certification of *bona fide* status.	The public availibility of this data does not serve public interest. This data should be made available to certified parties, but could pose a security or privacy risk if publicly available.
6	Aggregated Data **by Substation** (see Sec. B)[1]	**Public**	This data is useful to developers and poses very little security risk.	This data poses no additional security threats or risk to the public.
7	Aggregated Data **by Feeder** (see Sec. C)	**Public**	This data is useful to developers and poses very little security risk.	This data poses no additional security threats or risk to the public.
8	Aggregated Data **by Node/Subsection of Feeder** (see Sec. D)	**Public**	This data is useful to developers and poses very little security risk.	This data poses no additional security threats or risk to the public.
9	Aggregated Data **by Secondary** (See Sec. E)	**Certification Required**	This data should be public, except where information of critical infrastructure or confidential/customer data may be at risk. Certification of *bona fide* developer status will clear up any potential security risks.	Access to this data will help further the development and interconnection of DER. However, some areas of this data may contain sensitive data, for example, if the particular feeder serves only one customer or a small group of customers. As such, the majority of data should be accessible to the general public, with certification being required to access the rest.
B	**Access to Aggregated Data <u>by Substation</u>**			
1	Forecasted Annual Peak Load	**Public**	This data is useful to developers and poses very little security risk. **It is not currently available to developers, even by request.**	Access to aggregated data by substation provides necessary and useful data for the further development and interconnection of distributed energy resources (DER). Without access, or a clear pathway to obtain access to this data, interconnection efforts can be substantially delayed, and so undermine the Legislature's and PUC's goals of DER deployment.
2	Actual Annual Peak Load	**Public**	This data is useful to developers and poses very little security risk. **It is not currently available to developers, even by request.**	Access to aggregated data by substation provides necessary and useful data for the further development and interconnection of distributed energy resources (DER). Without access, or a clear pathway to obtain access to this data, interconnection efforts can be substantially delayed, and so undermine the Legislature's and PUC's goals of DER deployment.

#	Data Type	Public or Protected for Security? Certification by DOC as "need to know" as suggested in MnSEIA's Comments.	Designation Rationale (Include citations when possible)	How does public availability of this data serve public interest?
3	Actual Daytime Minimum Load	**Public**	This data is **already public**, is useful to developers when accurate, and poses very little security risk.	Actual Daytime Minimum Load is necessary for developers to interconnection, and is extremely important for developers to have to ensure timely and efficent development and interconnection of DER. Without access to the most accurate and recently available data, developers efforts can be diminished and the State will be further away from reaching its energy goals. **Further, given that this metric is a key benchmark for Xcel's determination of capacity, interconnection efficiency is best facilitated with public knowledge of capacity**.
4	Load shapes (seasonal)	**Public**	This data is useful to developers and poses very little security risk.	Substation Load data is extremely important for developers to have to ensure timely and efficent development and interconnection of DER. Seasonal Load data is important for long term project viability. Without access to the most accurate and recently available data, developers efforts are diminished, and the State will be further away from reaching its energy goals.
5	Load shapes (hourly)	**Public**	This data is useful to developers and poses very little security risk.	Substation Load data is extremely important for developers to have to ensure timely and efficent development and interconnection of DER. Hourly Load data is important for developers to ensure that potential DER projects can interconnect and run without creating issues for the substation. Without access to the most accurate and recently available data, developers efforts can be diminished and the State will be further away from reaching its energy goals.
6	Hosting Capacity Results (min. and max)	**Public**	This data is useful to developers and poses very little security risk.	Access to aggregated data by substation provides necessary and useful data for the further development and interconnection of distributed energy resources (DER). Without access, or a clear pathway to obtain access to this data, interconnection efforts can be substantially delayed which will ultimately result in the Legislature's and PUC's goals for DER not being met.
7	Hosting Capacity Criteria Violations	**Public**	This data is useful to developers and poses very little security risk.	Access to aggregated data by substation provides necessary and useful data for the further development and interconnection of distributed energy resources (DER). Without access, or a clear pathway to obtain access to this data, interconnection efforts can be substantially delayed which will ultimately result in the Legislature's and PUC's goals for DER not being met.
	Distributed Generation and Storage (kW), in operation	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Developers need to be able to see the distributed generation and storage on a particular substation in order to ensure that any DER will be able to interconnect efficiently, without putting to many constraints on a substation.
	Distributed Generation and Storage (kW), in queue	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Developers should be able to see the queue to ensure that their projects are interconnect in a timely fashion, and to plan future projects around any queue constraints or bottlenecks.
	Demand Response or other demand-side DER (kW) (EV chargers, EE, etc.)	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to aggregated data by substation provides necessary and useful data for the further development and interconnection of distributed energy resources (DER). Without access, or a clear pathway to obtain access to this data, interconnection efforts can be substantially delayed which will ultimately result in the Legislature's and PUC's goals for DER not being met.
C	**Access to Aggregated Data <u>by Feeder</u>**			

#	Data Type	Public or Protected for Security? Certification by DOC as "need to know" as suggested in MnSEIA's Comments.	Designation Rationale (Include citations when possible)	How does public availability of this data serve public interest?
1	Forecasted Annual Peak Load	**Public**	This data is useful to developers and poses very little security risk. **It is not currently available to developers, even by request.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
2	Actual Annual Peak Load	**Public**	This data is useful to developers and poses very little security risk. **It is not currently available to developers, even by request.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
3	Actual Daytime Minimum Load	**Public**	This data is **already public**, is useful to developers when accurate, and poses very little security risk.	Actual Daytime Minimum Load is necessary for developers to interconnection, and is extremely important for developers to have to ensure timely and efficent development and interconnection of DER. Without access to the most accurate and recently available data, developers efforts can be diminished and the State will be further away from reaching its energy goals. Further, given that this metric is a key benchmark for Xcel's determination of capacity, interconnection efficiency is best facilitated with public knowledge of capacity.
4	Load shapes (seasonal)	**Certification Required**	Data at this level is useful to developers but may contain confidential/customer information. As such it should be limited on HCA area maps but should be accesible to developers with certification.	Access to this data will help further the development and interconnection of DER. However, some areas of this data may contain sensitive data, such as consumer/commercial private data or critical energy infrastructure. As such, the majority of data should be accessible to the general public, with certification/NDA being required to access the rest.
5	Load shapes (hourly)	**Certification Required**	Data at this level is useful to developers but may contain confidential/customer information. As such it should be limited on HCA area maps but should be accesible to developers with certification.	Access to this data will help further the development and interconnection of DER. However, some areas of this data may contain sensitive data, such as consumer/commercial private data or critical energy infrastructure. As such, the majority of data should be accessible to the general public, with certification/NDA being required to access the rest.
6	Hosting Capacity Results (min. and max)	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
7	Hosting Capacity Criteria Violations	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
	Distributed Generation and Storage (kW), in operation	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
	Distributed Generation and Storage (kW), in queue	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
	Demand Response or other demand-side DER (kW) (EV chargers, EE, etc.)	**Public**	This data is useful to developers and poses very little security risk.	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
D	**Access to Aggregated Data <u>by Node (Subsection of Feeder)</u>**			
1	Forecasted Annual Peak Load	**Certification Required**	This data is useful to developers, but may pose privacy concerns. As such it should be limited on HCA area maps but should be accesible to developers with certification. **It is not currently available to developers, even by request.**	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests.

#	Data Type	Public or Protected for Security? Certification by DOC as "need to know" as suggested in MnSEIA's Comments.	Designation Rationale (Include citations when possible)	How does public availability of this data serve public interest?
2	Actual Annual Peak Load	**Certification Required**	This data is useful to developers, but may pose privacy concerns. As such it should be limited on HCA area maps but should be accesible to developers with certification. **It is not currently available to developers, even by request.**	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests.
3	Actual Daytime Minimum Load	**Certification Required**	This data is useful to developers, but may pose privacy concerns. As such it should be limited on HCA area maps but should be accesible to developers with certification. **It is not currently available to developers, even by request.**	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests.
4	Load shapes (seasonal)	**Certification Required**	This data is useful to developers, but may pose privacy concerns. As such it should be limited on HCA area maps but should be accesible to developers with certification. **It is not currently available to developers, even by request.**	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests. **This level of granularity will help developers site the most efficient DER, e.g. storage and solar-plus-storage.**
5	Load shapes (hourly)	**Certification Required**	This data is useful to developers, but may pose privacy concerns. As such it should be limited on HCA area maps but should be accesible to developers with certification. **It is not currently available to developers, even by request.**	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests. **This level of granularity will help developers site the most efficient DER, e.g. storage and solar-plus-storage.**
6	Hosting Capacity Results (min. and max)	**Public**	This data is useful to developers and poses very little security risk. **It is already publicly available.**	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
7	Hosting Capacity Criteria Violations	**Public**	This data is useful to developers and poses very little security risk. **It is not currently available to developers, even by request**.	Access to this data promotes continued growth and development of DER while posing very little risk to the public.
8	Distributed Generation and Storage (kW), in operation	**Certification Required**	This data is useful to developers and poses very little security risk. **It is publicly available at the feeder level.**	Knowledge of DG in operation at the subsection level may reasonably be seen as posing privacy and/or security concerns. However, expanding this access to the subsection level **with certification** would promote more efficient DER interconnection.
9	Distributed Generation and Storage (kW), in queue	**Certification Required**	This data is useful to developers and poses very little security risk. **It is publicly available at the feeder level.**	Knowledge of DG in operation at the subsection level may reasonably be seen as posing privacy and/or security concerns. However, expanding this access to the subsection level **with certification** would promote more efficient DER interconnection.
10	Demand Response or other demand-side DER (kW) (EV chargers, EE, etc.)	**Certification Required**	Data at this level is useful to developers, but may contain confidential customer information.	Access to this data will help further the development and interconnection of DER, which is a public policy goal of the state. At the subsection level, there may be relevant security or privacy considerations that merit a layer of confidentiality. A certification of *bona fide* developer status appropriately balances these competing interests.
E	**Access to Aggregated Data <u>by Secondary</u>**			
1	Forecasted Annual Peak Load	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.

#	Data Type	Public or Protected for Security? Certification by DOC as "need to know" as suggested in MnSEIA's Comments.	Designation Rationale (Include citations when possible)	How does public availability of this data serve public interest?
2	Actual Annual Peak Load	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
3	Actual Daytime Minimum Load	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
4	Load shapes (seasonal)	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
5	Load shapes (hourly)	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
6	Hosting Capacity Results (min. and max)	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
7	Hosting Capacity Criteria Violations	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
8	Distributed Generation and Storage (kW), in operation	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
9	Distributed Generation and Storage (kW), in queue	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
10	Demand Response or other demand-side DER (kW) (EV chargers, EE, etc.)	**Certification Required**	Private/confidential information on individual consumers/entities may be at risk at this level of data access.	Data on this level has a high probability of containg sensitive information, and as such, it should not be available to the general public. However, this data should be available to certified developers.
F	**OTHER DATA**			
#	*[If desired, identify additional electric distribution or aggregate customer data requested for public display or access subject to security claims]*			

_ftnref1

Note 1: Restricted refers to entities that have demonstrated a need to know and have recieved certification through the Department of Commerce as suggested in MnSEIA's Comments.

May 10, 2021

VIA ELECTRONIC FILING

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

Re: Reply Comment Letter

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. E999/CI-20-800

In the Matter of the Xcel Energy 2019 Hosting Capacity Report Under Minn. Stat. § 216B.2425, Subd. 8 Docket No. E002/M-19-685

Dear Mr. Seuffert,

We respectfully submit the attached letter in response to the Commission's October 30, 2020 notice and subsequent comments in the above-mentioned docket.

Please feel free to contact me with any questions you may have.

Sincerely,

Kristen Peterson
Impact Power Solutions

STATE OF MINNESOTA
BEFORE THE
PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	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	DOCKET NO. E999/CI-20-800
In the Matter of the Xcel Energy 2019 Hosting Capacity Report Under Minn. Stat. § 216B.2425, Subd. 8	DOCKET NO. E002/M-19-685

REPLY COMMENT LETTER

Impact Power Solutions, LLC (IPS) appreciates this opportunity to submit comments in response to the Public Utilities Commission's October 30, 2020 notice regarding a *Commission Investigation on Grid and Customer Security Issues Related to Public Display or Access to Electric Distribution Grid Data* in dockets E999/CI-20-800 and E002/M-19-685.

Impact Power Solutions, LLC is a full-service clean energy development company. For over 30 years, we have worked to deliver customers solutions ranging from rooftop installations to multi-megawatt community solar gardens. Our company's purpose is, and always has been, to build a better future by providing access to renewable energy.

IPS has been at the forefront of the development of Minnesota's community solar program since its inception, and more recently we have also forayed into the solar plus storage market. Our company would benefit greatly from up-to-date access to DER-relevant grid data. Specific examples of data critical to the growth of our business include, but are not limited to, the following categories:

1. Estimated and Actual Daytime Minimum Load at substation and feeder levels;
2. Hosting Capacity Results (min. and max) at substation, feeder, and subsection levels;
3. Distributed Generation and Storage (kW), in operation (by substation and feeder);
4. Distributed Generation and Storage (kW), in queue (by substation and feeder);
5. Load shapes (seasonal) at substation and feeder levels;
6. Load shapes (hourly) at substation and feeder levels;
7. Forecasted Peak Load at substation, feeder, and subsection levels;
8. Actual Peak Load at substation, feeder, and subsection levels; and
9. Hosting Capacity Criteria Violations (substation and feeder and subsection level).

Ensuring that this data is both accessible to developers and regularly updated will allow developers to target the lowest cost, most feasible, and most beneficial places on the grid to interconnect solar,

storage, and other DER technologies. While some grid data (e.g. Xcel Energy's hosting capacity map) is already publicly available, in practice this resource could be far more useful if it were updated on a monthly basis and included additional data, particularly information related to load shapes.

This additional data can help ensure that developers and utilities alike don't spend time investigating DER projects that aren't feasible. Publicly available data allows developers to target areas of the grid to strategically locate projects where load allows, saving utilities time in responding to developers with dead-end capacity screen requests for infeasible projects. Improved data access can also help developers size proposed DER projects appropriately from the onset of the project development process, cutting down on delays, resubmissions, and confusion in the interconnection queue.

Streamlining these processes via data access can ultimately benefit ratepayers by minimizing utilities' administrative time spent addressing potential DER opportunities with developers. Ratepayers can also benefit from more efficient DER development since improved data access can help create a more stable, optimized grid with expanded opportunities for community solar garden subscriptions.

Finally, we do not support using a multi-tiered data access system as proposed by Xcel, and we prefer that entities not be required to sign an NDA to access data. To ensure that developers of all types can access DER-relevant grid data, IPS supports either making this data publicly available or ensuring that data is accessible after a one-time vetting process. Any confidentiality mechanism implemented should not position Xcel as the gatekeeper to data access and should not create unnecessary barriers to the market for DER developers.

Thank you for your thoughtful consideration of this matter.

Sincerely,

Kristen Peterson
Impact Power Solutions

Eric Pasi
Impact Power Solutions