January 19, 2024

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55105

Re: In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established Under Minn. Stat. § 216B.1611 (Docket E999/CI-16-521)

Mr. Seuffert,

Please find the Initial Comments of the Minnesota Solar Energy Industries Association regarding Qualified Facilities with a capacity up to 40 kilowatts. These comments attempt to reflect the balanced perspectives of both our small rooftop installer members and larger developer members related to the issue, "What changes to the Minnesota Distributed Energy Resources Interconnection Process (MN DIP) should the Commission make to achieve the purpose of Minnesota Law 2023, Ch. 60, Art. 12, Sec. 75 (HF 2310)," noticed for comment on September 1, 2023, in this docket.

Sincerely,

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STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

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In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established Under Minn. Stat. § 216B.1611	**INITIAL COMMENTS REGARDING QUALIFIED FACILITIES WITH CAPACITY UP TO 40 KW**
January 19, 2024	**Docket No. E999/CI-16-521**

INTRODUCTION

The Minnesota Solar Energy Industries Association ("MnSEIA") is a 501(c)(6) nonprofit association that represents Minnesota's solar and storage industry, with over 150 members, ranging from rooftop installers, to distributed generation developers, non-profits, manufacturers, and utilities. Together, our members employ over 4,500 Minnesotans.

As previously stated, if Minnesota wants to transition to a 100 percent clean energy economy by 2040 and take advantage of all of the state and federal incentives that are currently available, it is going to have to develop everything from large utility scale projects to small rooftop projects, and everything in between. As everyone is aware from Xcel's recent solar RFP and the huge MISO backlog, Minnesota cannot rely solely on large utility scale projects to meet its clean energy goals. Distributed generation ("DG") must also be an essential part of Minnesota's clean energy future. Unfortunately, to develop the DG projects that Minnesota

needs to meet its clean energy goals, it will need to improve the business environment for developing DG projects. Minnesota was once a leader in developing solar projects on its distribution system but that is no longer the case. While Minnesota had 1,763 MWs of solar installed as of 2022, the majority of that was installed in 2017 and 2018, with over 400 MWs in each of those years.[1] However, only 78 MWs were installed in 2022.[2] This ranks Minnesota 16th in terms of installed capacity, but the future is bleak, with a projected growth over the next 5 years that has that rank falling to 32nd.[3]

If Minnesota wants to regain a leadership position, or at least catch up with other states, then it will, among other things, have to assure renewable energy businesses that Minnesota provides a predictable and reasonable business environment for the development of renewable energy projects. A crucial part of that is improving the interconnection process for small projects up to 40 kW. The Minnesota Legislature recognized the importance of these small projects, which can be installed in a matter of months instead of years if reasonable interconnection procedures are in place, by requiring the Minnesota Public Utilities Commission ("Commission") to change the interconnection procedures for projects up to 40 kW.

MnSEIA filed a proposal noting that any changes the Commission considers should actually make interconnection faster for the smaller projects while treating the larger projects in a fair and reasonable manner. MnSEIA noted that any changes being considered should reflect the real-world impact of the project, the capabilities of current electrical equipment, and the benefit to all parties, including ratepayers and later projects in the queue, of upgrading the system to increase its capacity for more distributed energy resources ("DER"). Any proposal that fails to

[1] *See* Exhibit A – SEIA Minnesota State Solar Spotlight.
[2] *See id.*
[3] *See id.*

do that will simply be substituting one problem for another, which is exactly what Xcel's proposal does.

While Xcel's proposal likely resolves the interconnection problem for small projects sized to load, which is a subset of small projects, it creates much bigger problems for every other type of project by limiting the capacity available to them to just 50% of the equipment rating, a monumental change from the current capacity, which is 80% of the equipment rating plus daytime minimum load. And, notably, by allowing these small sized to load projects to use 100% of the capacity of the system, this proposal highlights the fact that the Technical Planning Limit ("TPL"), which already limits the capacity of Xcel's distribution system by an estimated 2.6 gigawatts, is not based on the safety and reliability of the system, but rather a policy choice. A fact that Xcel admitted at the hearing on the TPL. Thus, while a separate queue for congested feeders has some merit and should be evaluated along with other options, Xcel's proposal to further limit the capacity the distribution system that ratepayers are paying for should be rejected as far beyond the Legislative directive and in conflict with many, if not all, of Minnesota's clean energy programs and goals.

BACKGROUND

In a bill that included many items intended to promote the development of distributed energy resources in Minnesota, the Minnesota Legislature wanted to make sure that small solar projects were part of Minnesota's clean energy future by including a provision that specifically addressed the interconnection problem that many small solar projects were facing. Accordingly, the Minnesota Legislature directed the Commission to do the following:

> **Sec. 75. Public Utilities Commission Docket; Interconnection**
>
> No later than September 1, 2023, the commission shall open a proceeding to establish interconnection procedures that allow customer-sited distributed

> generation projects up to 40 kilowatts alternating current in capacity to be processed according to schedules specified in the Minnesota Distributed Energy Resources Interconnection Process, giving such projects priority over larger projects that may enjoy superior positions in the processing queue.[4]

On September 1, 2023, the Commission issued a Notice of Comment Period. The notice stated that the issue was, "What changes to the Minnesota Distributed Energy Resources Interconnection Process (MN DIP) should the Commission make to achieve the purpose of Minnesota Law 2023, Ch. 60, Art. 12, Sec. 75 (HF 2310)?," and listed the following topics:

> 1. Interconnection procedures that allow customer-sited distributed generation projects up to 40 kilowatts alternating current in capacity to be processed according to schedules specified in the MNDIP, giving such projects priority over larger projects that may enjoy superior positions in the processing queue.
> 2. Whether the prioritization of these projects include areas where the distribution system is capacity constrained as well as in areas that are not similarly constrained.
> 3. Whether there are changes to the MN DIP that would be de minimis in nature regarding policy but would update the document to accurately reflect recent changes and references.
> 4. Are there other issues or concerns related to this matter?

The current MN DIP already has a Simplified Process and a Fast Track Process. The Simplified Process is available to projects that can be interconnected safely and reliably without construction of facilities by the utility.[5] The Fast Track Process is available the "if the DER capacity does not exceed the size limits identified in this Section, including the table below and does not qualify for the Section 2 Simplified Process."[6] Section 3.1.1 further states, "Fast Track eligibility for DERs is determined based upon the generator type, the size of the generator, voltage of the line, and the location of and the type of line at the Point of Common Coupling. All synchronous and induction machines must be no larger than 2 MW to be eligible for Fast Track Process consideration."

[4] House File 2310 (Law 2023, Ch. 60). Art. 12; Section 75
[5] *See* MN DIP 2.2.3.
[6] *See* MN DIP 3.1.1.

On November 1, 2023, MnSEIA filed a proposal that recommended that the Commission consider what is happening in other states and noted that the major trends were:

> (1) advanced interconnection processes assign screening tests based on the appropriate level of review for a system's impact on the grid; and,
> (2) the starting queue position may differ from the ending queue position because a system with a lesser impact on the grid requires fewer screens and studies to cross the finish line and achieve interconnection approval.

Thus, MnSEIA recommended that the MN DIP should be changed:

> (1) To allow the creation of a different level of screening review for non-exporting or net metered facilities;
> (2) In the event that a screen is not passed - obtaining interconnection approval through the use of advanced inverter settings for curtailment to mitigate export in excess of grid capacity;
> (3) For small projects that are not sized to load, the impact of the smaller project or projects on the larger projects in the queue should be determined so that those costs can be offset or otherwise compensated so that the larger projects are not prejudiced.

MnSEIA also noted that any changes to the MN DIP must be consistent with Minnesota law. Changes that violate Minnesota law will simply be replacing one interconnection problem with another one. Changes should reflect the real-world impact of the project, the capabilities of current electrical equipment, and the benefit to all parties, including ratepayers and later projects in the queue, of upgrading the system to increase its capacity for more distributed energy resources. Upgrading the distribution system does not solely benefit the project requesting to interconnect. It benefits the ratepayers who would have otherwise had to pay to maintain or upgrade the system at some point in the future and the subsequent projects that are now allowed to interconnect. Thus, placing the entire cost of distribution upgrades solely on the project currently seeking to interconnect is fundamentally unfair and unreasonable. Changes to the MN DIP to allow smaller projects, especially small sized to load projects, to proceed quickly through

the process likely cannot be made in a fair and reasonable manner without addressing this fundamental issue.

Most of the other parties that filed proposals generally noted that the interconnection of small projects in service territories other than Xcel's were not a problem and, generally, didn't think any changes were necessary. Xcel, however, appears to use the Minnesota Legislature's attempt to resolve one problem to create a much larger one that threatens all of the new programs it passed last year and Minnesota's clean energy goal of 100% by 2040. Xcel proposes creating a second queue for size-limited projects that are under 40 kW AND also limiting the capacity of its distribution system by over 50% for ALL other projects.

INITIAL COMMENTS

MnSEIA continues to believe that proposals should be evaluated based on whether they meet the purpose of the legislation without creating problems larger than the one that is being solved. This requires an approach or approaches that consider the use of information and technology, not archaic approaches based on the lack of both. Proposals should be using a scalpel, not a hatchet to attempt to solve the interconnection problem.

Second Queue for Projects Sized to Load

MnSEIA agrees that creating a second queue for small projects that are sized to load is something that should be considered. However, such an approach only appears to be necessary on congested feeders because, as noted by several utilities, no utility other than Xcel is having any problems processing interconnection applications. Moreover, changing the MN DIP to only require a second queue when a feeder becomes congested will alleviate the burden of making any changes on all the utilities who are not experiencing problems currently, while possibly addressing a problem they could encounter in the future. Such an approach, however, should not

be permanent until it can be demonstrated that it meets the Legislature's goal without creating additional problems.

The upgrades necessary to create this second queue on congested feeders could be funded by the DG upgrade program that the Minnesota Department of Commerce is currently considering in docket 23-458. On May 24, 2023, Minn. Stat. § 216C.378 was created as part of HF2310. The bill includes a one-time appropriation of $4.25 million in the first year and $6 million in the second year for eligible expenditures under the program. $250,000 of the first-year appropriation is to implement a small interconnection cost-sharing program.. And, in fact, this statute states that in developing this plan, "the utility must prioritize making investments at capacity constrained locations on the distribution grid."[7]

However, the small project size to load should be 200% instead of the 120% proposed by Xcel. MnSEIA has often heard from members that based on the conditions in Minnesota, sizing a project to 120% of its load will likely not be sufficient to even meet load, especially as more consumers electrify their heating and transportation needs in the future. Moreover, 200% is consistent with the law that was recently passed in Colorado, where Xcel is also a public utility.[8] Small projects that are sized to their load should have such a minimal impact on the grid that on non-congested feeders they should simply be studied differently rather than creating a separate unnecessary queue for them.

Small projects that are not sized to load could have a greater impact on the larger projects they bypass, and, as such, should not substantially impact the time or cost to build the projects that are being bypassed. Such an impact would be unfair and unreasonable, which is prohibited

[7] *See* Minn. Stat. § 216C.378, subd. 4.
[8] *See* Public Utilities Commission Encourage Renewable Energy Generation (available at https://leg.colorado.gov/bills/sb21-261).

under Minnesota law.[9] To address any such impact, any additional cost for interconnecting the larger project caused by the smaller projects that bypassed the larger project should be paid by an alternate source, such as, for example, a fund created using some of the money allocated under Minn. Stat. § 216C.378. Alternatively, a fund could be created that is paid for by all projects that are not sized to load over 40 kW, based on the size of their project, similar to what is currently done for small projects, that is used to pay for upgrades. To be clear, the larger projects should still pay for some portion of their interconnection upgrades, but what cost is paid should reflect the benefit that is received by ratepayers and subsequent developers for the upgrades. The cost causer approach to paying interconnection costs is based on outdated ideas about energy production and is neither fair nor reasonable.

In addition, as previously noted, with regard to small projects that are not sized to load, the Commission might want to consider the approaches that other states have taken. In Massachusetts, systems under 15 KW that use certified inverters are only screened to confirm that the added aggregate DER does not exceed more than 15% of the annual peak load as measured at the substation circuit breaker. With regard to queue position, these systems are not considered to be "moving ahead in the queue," but rather being approved for interconnection upon completing the appropriate level of screening review - based on that system's size and likely impact on the grid. In New Mexico, for systems under 10kW, Xcel screens for aggregate generating capacity of under 65% of the Substation Rating and compatibility with the transformer rating. Note that a penetration test is completed at Screen 3, however there are only restrictions based on Minimum Daytime Loading for Highly Seasonal Circuits.[10] In Illinois, the

[9] *See* Minn. Stat. § 216B.03 ("Every rate made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable. Rates shall not be unreasonably preferential, unreasonably prejudicial, or discriminatory, but shall be sufficient, equitable, and consistent in application to a class of consumers.").

[10] *See* Exhibit B - Xcel NM Penetration Test Attachment.

administrative code permits up to 100% of DML on the basis of aggregate export capacity. Ameren processes smaller interconnections (Level 1 and Level 2) at the circuit level. Larger projects are first reviewed for aggregate impacts at the sub transmission level and if no issues are observed then allowed to join the distribution circuit level queue with other smaller projects.

Xcel often touts the uniqueness of each interconnection to support its need to use its engineering judgment. Thus, it is interesting that it is proposing a one size fits all solution to the small project interconnection problem that completely ignores the characteristics of each feeder and substation. The average number of residential customers on any given feeder is irrelevant. That necessarily means that some will have more, maybe much more, while others will have less, maybe much less. MnSEIA agrees with Xcel that feeders and substations can have unique or special circumstances and, thus, solutions to the problems they must overcome should be tailored to those circumstances.

Further Limiting the Capacity of its Distribution System

Through its TPL, which Xcel has now, contrary to prior assertions, admitted is a policy decision rather than one based on the safety and reliability of its system, already limits the capacity of its distribution system by 20 percent of its equipment rating, which is approximately 2.6 gigawatts. Xcel's proposal to more than double that to 50%, plus eliminate the DML, will reduce the capacity of its system exponentially more; to such an extent that it would seem unlikely that Minnesota's clean energy programs, such as Solar on Schools, Solar on Public Buildings, or the new DG energy standard, would have any chance of success, thereby impairing the state's ability to meet its clean energy goals.

Moreover, it will also increase the cost of all of those programs, or reduce the amount of projects than can be constructed, because of the additional upgrade costs that will be necessary to

interconnect projects. At a time when Xcel is constantly stating that it is concerned about the cost of energy, it seems unreasonable to propose a plan that unnecessarily increases those costs.

As such, Xcel's capacity reservation should be rejected as not only inconsistent with the legislative objective of the fast track approach, but also inconsistent with the public interest. It would not be reasonable for the Commission to approve this restriction and the additional burden it places on every project other than the small sized to load projects in its priority queue without first building a record as to the negative impact it would have on those types of projects and on Xcel's ability to meet its new DSES legislative requirement. Such a proposal is more than a change to MN DIP, it is a rate[11] change that requires additional justification and procedure.

CONCLUSION

Updating the MN DIP is not about small systems skipping the line but rather applying the correct screenings for smaller systems commensurate with their likely impact on the grid. Small systems that will have a greater impact on the grid because they are not designed primarily to offset the customer's load should be treated differently than those that are because their impact on larger projects could be significant, individually or cumulatively. Thus, while they should be allowed to move ahead of larger projects because they can be built quickly unlike larger projects, the time and cost to the larger projects should be offset or otherwise paid or compensated such that the larger project is not unfairly prejudiced. That money can come from the money allocated by the legislature or other sources. On congested feeders, that legislative congested feeder money should pay for upgrades that allow the creation of a second queue so that small sized to load projects can bypass the congestion. This allows small projects, both sized to load and

[11] *See* Minn. Stat. § 216B.02, subd. 5, which states that a rate is "every compensation, charge, fare, toll, tariff, rental, and classification, or any of them, demanded, observed, charged, or collected by any public utility for any service and any rules, practices, or contracts affecting any such compensation, charge, fare, toll, rental, tariff, or classification." A capacity reservation is surely a rule or practice that affects the charges and tariff related to interconnection.

otherwise, to be built more quickly while not unfairly prejudicing the larger projects in the queue.

Thank you for your time and consideration of this important issue.

Sincerely,

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