September 3, 2024

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

RE: Minnesota Rural Electric Association Comments

In the Matter of Dakota Electric's Updates to Specific Distribution Interconnection Proc ess and Interconnection Agreement, Docket No. E111/M-18-711; In the Matter of Updating Generic Standards for Utility Tariffs for Interconnection and Operation of Distributed Generation Facilities Under Minn. Stat. §216B.1611, Docket No. E-999/CI-16-521

Dear Mr. Seuffert,

The Minnesota Rural Electric Association ("MREA") respectfully submits these comments in support of the Dakota Electric Association's ("DEA's") position in the above-entitled matters related to determining the capacity of a facility for net metered rate eligibility.

The MREA is the statewide association representing the interests of all 50 non-profit member-owned electric cooperatives in Minnesota. MREA's members have a high level of interest in this proceeding and consider it essential for the Commission to fully understand that MnSEIA's position does not comport with applicable statutes and to decide this issue correctly.

INTRODUCTION

The fundamental question presented in this proceeding is simple and straight forward, namely: What is the capacity of a distributed generation (DG) facility when that term is applied to determine eligibility for net metered compensation? The answer to that question is equally simple and straight forward: It is the facility's ***production capability,*** measured by its alternating current (AC) at the point of DG interconnection and reflected in the nameplate rating of the facility's inverters.

The AC production capability for distributed solar generation is, and always has been, determined by the ***nameplate rating of the facility's inverters***, which convert the Direct Current (DC) capacity of the solar panels to Alternating Current (AC) output that can be used by consumers – hence the term "nameplate capacity."[1] MnSEIA is seeking an unprecedented change in the way capacity is determined that would conflict with widespread practice not just in Minnesota but around the Country.

As the Commission observed in its Order, "MnSEIA has not demonstrated that Dakota Electric's application of nameplate rating has impeded installation of net-metered or qualifying facilities." Two additional observations are also key to correctly resolving the issue in this proceeding. First, it is important to note that ALL of Minnesota's utilities use nameplate rating to determine eligibility for net-metered retail rate compensation and always have used that metric for decades.[2] This long-standing practice reflects the collective expertise of those who implement net metering and prevailing industry standards. Second, it is noteworthy that neither the Commission nor the Legislature has ever questioned or sought to change this practice.

MnSEIA appears to take the position that a solar facility's eligibility for retail rate compensation is based on the amount of energy exported to the grid rather than the nameplate rating of the facility's inverters. That position conflicts with (1) the plain language of the applicable statute; (2) the purpose of the statute; and (3) long-standing industry practice, engineering standards and Commission precedent. Further, MnSEIA's position would create confusion and pose risks to the cost-effective, safe, reliable operation of the grid.

[1] Exhibit A (Declaration of Kristi Robinson), paragraph 5; Exhibit B (Declaration of Tom Gottormson), paras 4 and 5.

[2] Exhibit A, para. 4; Exhibit B, para. 5.

DISCUSSION

A. MnSEIA's position conflicts with the applicable Statute's plain language, which ties eligibility for net metered compensation to the size of the facility, not the amount of electricity exported to the grid.

The first principle of statutory interpretation is to effectuate the Legislature's intent, applying the letter of the law and giving effect to all of the statute's provisions.[3]

To that end, it is critical to recognize that the long-standing, universally applied practice of applying inverter nameplate rating as a distributed solar facility's capacity aligns squarely with the relevant statutory language under which eligibility for net metered compensation is determined. Specifically, for cooperative and municipal utilities, Minn. Stat. § 216B.164, subd. 3 applies the term capacity to determine eligibility for net metered compensation as follows:

> Subd. 3. Purchases; small facilities. (a) This paragraph applies to cooperative electric associations and municipal utilities. For a qualifying facility having less than 40-kilowatt capacity, the customer shall be billed for net energy supplied by the utility according to the applicable rate schedule for sales to that class of customer. . .. In the case of net input into the utility system ***by a qualifying facility having less than 40-kilowatt capacity,*** compensation to the customer shall be at the per kilowatt-hour rate determined under paragraph (c) or (d).
>
> (d) Notwithstanding any provision in this chapter to the contrary, a qualifying ***facility having less than 40-kilowatt capacity*** may elect that the ***compensation for net input*** by the qualifying facility into the utility system shall be ***at the average retail utility energy rate***.
>
> (Emphasis added).

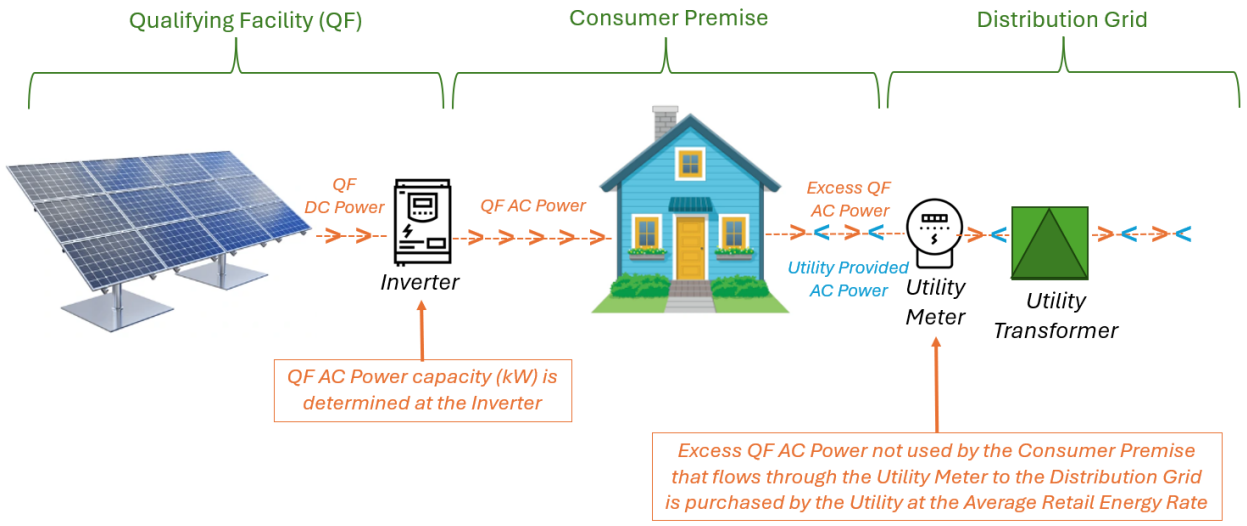
These governing statutes clearly limit net metered (retail rate) compensation to a qualifying facility that ***has*** a capacity below 40 kilowatts. The word "has" means to "possess, own or hold."[4] As such, the capacity of a solar DG facility is its AC ***production capability*** (i.e., the AC electricity capability it possesses or can produce), ***not*** the amount of the facility's alternating current that is ultimately ***exported to the grid***. In fact, the term "export" does not exist anywhere in section 216B.164.

In short, the statute applies net metered compensation to a facility's "***net input*** into the system" but only to the extent the net input comes from a ***facility that has a production***

[3] Minn. Stat. § 645.16.
[4] Oxford Dictionary.

capability below the 40-kilowatt threshold.[5] The production capability for a solar DG facility is determined by its inverters, which convert the solar facility's DC capacity to AC capacity that can then be used by the consumer.[6] There is no sensible alternative reading of the statute's plain language.

The following illustration depicts the production capability or output of a facility, which defines its capacity, compared to what might ultimately be exported to the grid:



Note that the AC production of the qualifying facility (QF) is determined at the inverter where the DC capacity of the solar panels is converted to usable AC capacity. This fact is indisputable. A net metered QF's production will then be consumed in whole or part by the consumer who owns the net metered facility. This fact is also indisputable. It is well understood that there may be (and often will be) some excess AC output that is not used by the customer or member at their premise. This excess production will be exported to the grid.

The excess output ("net input") is eligible for retail rate compensation if produced by a facility that has a capacity below the established threshold (40 kilowatts for cooperatives and municipal utilities). This approach is not theoretical; it is precisely how the term capacity has always been applied and how net metered compensation has been determined by all utilities throughout Minnesota since the relevant statute was enacted around 40 years ago.[7] This aligns not only with the language of the applicable statute and industry practice, but also with prevailing engineering standards and Minnesota's interconnection process.[8]

---

[5] To give effect to all the provisions of this statute, as required by Minn. Stat. § 645.16, the Commission needs to give effect to both the phrase "net input" **and** the phrase "***by a qualifying facility having less than 40-kilowatt capacity.*** MnSEIA's interpretation appears to apply the former but it completely ignores the latter.

[6] Exhibit A, para. 5; Exhibit B, paras 5 and 6.

[7] Exhibit A, para. 4.

[8] *Id.,* paras 4-10.

MNSEIA's interpretation is fundamentally flawed because it ignores the production that is actually consumed by the customer at their premise and assumes that a facility's output or production, which determines its size, is somehow defined by the portion of electricity that gets exported to the grid. Oddly, MnSEIA's position would apply retail rate compensation, which is reserved by statute solely for small facilities under a certain size, to the entire amount of AC power exported to the grid without regard to the size of the facility. As a consequence, MnSEIA's interpretation would result in retail rate compensation for up to 39.9 kilowatts of electricity exported to the grid even if the facility from which that power comes produces substantially more than 40 kilowatts.[9]

MnSEIA's position effectively subtracts the customer's usage from the calculation as if the usage doesn't exist. That position clearly conflicts with the applicable statutory language, which limits retail rate compensation to the net input from a facility that has a capacity below a specific threshold (40 kilowatts for cooperatives and municipal utilities). Hence, MnSEIA's interpretation cannot be reconciled with a plain reading of the statute and is wrong as a matter of law. The statute was intended to apply retail rate compensation solely to facilities below a certain size, not to a certain threshold of energy exported to the grid regardless of the facility's output or production.

B. **MnSEIA's position also conflicts with the purpose of net metering.**

Minnesota net metering laws contemplate the construction of net metered facilities to offset a customer's load. As such, those laws focus on the size/capacity of the generation facility not the amount of energy exported to the grid after a customer's or member's usage. Specifically, Minnesota law defines a net metered facility as:

> [A]n electric generation facility constructed ***for the purpose of offsetting energy use*** through the use of renewable energy or high efficiency distributed generation resources.[10]

Clearly, net-metering is intended for generation facilities designed to meet a customer's load. Retail rate compensation is available for net-metered facilities, but only for those facilities "having less than 40-kilowatt capacity." While a member's DG facility might generate more than the member uses at their home and be compensated for the net excess at the utility's retail rate, the extent of retail rate compensation for excess generation has always been tied subject to the 40-kilowatt cap on the size of the facility. That cap is, in turn, tied to an expectation under Minnesota law that net-metered generation facilities will be constructed to meet some or all of a customer's demand, not to generate grid exports. Again, it is a

[9] See Minn. Stat. § 645.17 (1) (A key presumption in ascertaining legislative intent is that: "the legislature does not intend a result that is absurd, impossible of execution or unreasonable.")

[10] Minn. Stat. 216B.164, Subd. 2a (j). (Emphasis added).

fundamental precept of statutory construction that legislative intent controls based on the language of the statute but also on factors that include the object to be obtained.[11]

Using a facility's inverter nameplate rating to determine a facility's capacity for net metered rate eligibility furthers the purpose of net metering by effectively limiting the size of the facilities eligible for this special compensation consistent with the Legislature's intent to limit this special rate to facilities constructed for the purpose of self-supply. This critical tie to self-supply would be lost under MnSEIA's approach, which ignores the member's usage when determining a facility's capacity. Allowing facilities much larger than 40 kilowatts to qualify for retail rate compensation, based on what is ultimately exported to the grid after a customer's usage, would create an economic incentive to build larger facilities effectively untethered to a customer's load and thereby contravene the purpose of net metering.

The 40-kilowatt capacity cap, and statutory purpose of net metering as an offset to a customer's demand, combine to limit the economic risks and inequities associated with paying a retail rate for generation that exceeds customer usage. MnSEIA's proposed interpretation would encourage developers to overbuild solar generating facilities for the purpose of maximizing net kilowatt hour sales to the utility – in effect maximizing the sale of ***wholesale*** electricity supply at a ***retail rate,*** rather than building to meet a customer's load with retail compensation for some limited net excess generation. Customers who lack the ability to purchase large solar generation facilities would unreasonably bear the financial burden resulting from this expansion of retail rate compensation for wholesale supply. As such, adopting MnSEIA's position would not only contravene legislative intent but also produce a bad policy outcome for consumers.

C. Use of inverter nameplate capacity comports with Commission precedent for determining a DG solar facility's capacity.

The Commission indicated that nameplate capacity was the appropriate metric to use when determining the capacity of distributed energy facilities in its August 13, 2018 Order establishing updated guidelines for the *Minnesota Distributed Energy Resources Interconnection Process* ("MN-DIP"). In that Order, the Commission stated:

> The MN DIP defines capacity consistent with the federal small Generator Interconnection Procedures. Generally, a DER's capacity is ***equivalent to its "nameplate rating***." However, the ***nameplate capacity may, with the utility's agreement, be limited "through use of a control system***, power relay(s), or other similar device settings or adjustments." In such situations, a DER's capacity is the maximum AC capacity that the DER is "capable of injecting

[11] Minn. Stat. § 645.16.

into the Area EPS Operator's [utility's] electric system over a sustained time which may be limited.[12]

Clearly, the Commission has already tied the determination of a DER's capacity to the facility's nameplate rating, not the export to the grid as suggested by MnSEIA. The Commission's Order left room to consider a DER's export based on the use of control systems, but only "with the utility's agreement." Therefore, MnSEIA's interpretation conflicts with Commission precedent and is not an appropriate basis for defining capacity as applied to net metering, or any other purpose for that matter, absent a change in statute.

Further, when explaining its rule definition of capacity, the Commission tied the definition of capacity to a facility's "production," not its "export." Notably, the Commission explained its definition of capacity as follows:

> It is necessary to update the rules to incorporate the recent statutory changes, which define capacity as the "number of megawatts alternating current at the point of interconnection between a distributed generation facility and the utility's electric system." Under this definition, capacity is, in effect, the amount of ***electricity actually produced***. It is therefore reasonable to incorporate this language into the rules by stating that ***capacity is the capability to produce***, transmit, or deliver electricity and is ***measured by the amount produced***.[13] (Emphasis added).

This Commission explanation of its own rules leaves no room for MnSEIA's interpretation that the capacity of a solar DG facility is its export to the grid. To the contrary, the Commission's explanation makes it crystal clear that a facility's capacity is defined by its "capability to produce" or its actual "production," not its net export to the grid beyond the customer premise. A solar facility's production capability or actual production is determined by the facility's inverters before any consumption of the power produced.

As explained earlier, some and often most of the AC power produced by a DG facility will be consumed at the premise of the member or customer who owns the net metered facility. If the AC production capability of that facility, as determined by the facility's inverter, is less than 40 kilowatts, then all of its output with respect to a cooperative or municipal utility will be eligible for retail rate compensation.

[12] Order Establishing Updated Interconnection Process and Standard Interconnection Agreement, Docket Nos. E-999/CI-01-1023 and E-999/CI-16-521 (August 13, 2018), p. 7. (Emphasis added).

[13] Commission Statement of Need and Reasonableness, Docket No. E-999/R-13-729 (December 29, 2014), pp. 3-4.

D. Even if MnSEIA's approach were legally permissible, it would contravene long-standing industry standards, be extremely difficult to implement and pose risks.

Consistent with the Commission's MN-DIP Order described above, all of Minnesota's utilities use nameplate capacity as the metric for determining the capacity of DG facilities.[14] Inverter nameplate rating is the well-established metric for determining a distributed solar facility's capacity in Minnesota and elsewhere.[15] Moreover, this is the only metric that make sense because capacity is effectively production and nameplate rating defines what a facility can produce. Therefore, adopting MnSEIA's position that grid export quantity defines a facility's capacity would conflict with the plain language of the applicable statute, Commission precedent, long-standing practice, prevailing engineering standards and common sense.

Further, determining capacity based on any other measure, especially grid export, would be confusing, technically challenging and possible jeopardize the cost-effective, safe and reliable design and operation of the grid as explained by Kristi Robinson in her attached Declaration.[16] Using grid export as the measure of capacity would be particularly problematic because the amount exported will vary based on how much of the facility's output is used by the net metering customer at their premise.[17]

CONCLUSION

The nameplate rating of a distributed solar facility has always defined its capacity for both interconnection and net metered rate eligibility. This practice aligns with the applicable statutory language, the purpose of net metering, Commission precedent, and prevailing engineering practices. It also provides the clarity and certainty essential to ensure a cost-effective, safe and reliable grid.

MnSEIA has provided no basis for changing this long-standing, universal approach to determining capacity. To the contrary, MnSEIA's position that a facility's capacity is determined by its grid exports conflicts with the plain language of the applicable statute and contravenes statutory intent as reflected in the definition of net metered facilities. Moreover, it would create uncertainty and confusion as well as potential issues related to cost, safety and reliability.

[14] Exhibit A, para. 10.

[15] Exhibit A, paras. 4 and 5; Exhibit B, paras. 4 and 5.

[16] Exhibit A, paras 8-12.

[17] Exhibit A, para. 8.

Sincerely,

/s/ Dan Lipschultz

_____

Dan Lipschultz
Consultant and Attorney
Minnesota Rural Electric Association