



Minnesota Solar Energy Industries Association

We Move Minnesota Solar + Storage Forward

November 14, 2024

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

**Re: In the Matter of Xcel Energy's Petition for Approval of Residential Time-of-Use
Docket No. E002/M-23-524**

Executive Secretary Seuffert,

Please find here the Reply Comments of the Minnesota Solar Energy Industries Association. These comments reflect the views of our organization and interested members related to the issue raised and the topics open for discussion in the Minnesota Public Utilities Commission's Notice of Comment Period issued on January 16, 2024, with Initial Comments filed on October 15, 2024, in the above-referenced docket.

Sincerely,

/s/ Logan O'Grady, Esq.
Executive Director
MnSEIA
(P) 651-425-0240
(E) logrady@mnseia.org

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

Katie Sieben	Chair
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Joseph Sullivan	Commissioner
John Tuma	Commissioner

**In the Matter of Xcel Energy’s Petition
for Approval of Residential Time-of-Use
Rates**

REPLY COMMENTS of MnSEIA

November 14, 2024

Docket No. E002/M-23-524

INTRODUCTION

The Minnesota Solar Energy Industries Association (MnSEIA) is a nonprofit association of over 170 members that represents Minnesota’s solar and storage industry. Our broad membership ranges from rooftop installers to non-profit organizations, manufacturers, and many others, all of whom collectively employ over 5,000 Minnesotans. MnSEIA submits these Reply Comments in response to the updated proposal by Xcel Energy (Xcel) to implement residential time-of-use (TOU) rates submitted on August 16, 2024, and subsequent Initial Comments submitted by parties on October 15th, 2024 in the above-referenced docket.

MnSEIA’s Reply Comments will build upon our initial comments and the comments of others. We will provide greater context and clarity on the importance to a clean energy economy of proper compensation for small qualifying facilities under 40 kW¹ and propose modifications to this

¹Small Qualifying Facilities (QF) under 40 kW that are eligible for the average retail utility energy rate under Minn. Stat. § 216B.164, subd. 3(d), are commonly referred to as net metered or NEM customers, receiving the net metered rate. However, it is important to remember that they are not a “net metered facility” - due to the fact that those are limited under Minn. Stat. § 216B.164, subd. 3a, to qualifying facilities 40 kW or greater, but less than 1 MW, that are interconnected to a public utility. In other words, QFs are not necessarily net metered facilities and that distinction is recognized in various provisions of Minnesota law. See, e.g., Minn. Stat. § 216B.164, subd. 4b. In the remainder of these comments and discussions in this docket, for the purposes of precision and clarity, MnSEIA will refer to the under 40kW net metered customers as “Small QFs” to separate them from QFs over 40kW, both of which who are commonly referred to as “net metered customers” outside of Minnesota law, but are entitled to different rates under law.

effect. Additionally, we will go into detail on the importance of properly executing on these rates, and ensuring that they are phased in with proper understanding and supporting data as well as comprehensive customer communications. This should take the form of an updated pilot, or a phased transition from an opt-in to opt-out rate, with comprehensive customer bill protections and communication, as proposed by other parties in this docket. However, it is important to note that if an updated pilot is not utilized, the transition from opt-in to opt-out should not occur until Xcel clearly documents that its TOU rates are actually achieving the goal of TOU rates – changing customer behavior to reduce demand during peak rates by installing solar and battery storage, along with changing their usage behavior.

BACKGROUND

On December 22, 2023, Xcel filed a petition requesting the Minnesota Public Utilities Commission (Commission) approve changes related to transitioning their default residential rate to a TOU tariff.

On January 16, 2024, the Commission issued a Notice of Comment Period, which was then amended and extended with their subsequent filing on March 6, 2024.

On August 16, 2024, Xcel submitted its updated TOU rates proposal, including an opt-in rather than default opt-out rate structure and a proposal to compensate small QF customers. Additionally and critically, Xcel's second TOU proposal has an updated on-peak period of 7 p.m. to 10 p.m. on non-holiday weekdays, and reduced ratios between on and off-peak rates, and seasonal rates.

On October 15th, Initial Comments on Xcel's updated proposal were filed by multiple parties, including MnSEIA, Citizens' Utility Board (CUB), Center for Energy and the Environment,

Uplight, GridX, The Minnesota Department of Commerce (Commerce), Fresh Energy, and the Office of the Attorney General, Residential Utilities Division (OAG).

COMMENTS

MnSEIA appreciates the continued conversation in this docket, as well as Xcel's updated proposal. This updated proposal represents a great step forward, and a residential TOU rate for Xcel customers could be a boon to Minnesota energy consumers. It can offer significant benefits to our energy transition, and the accomplishment of our state's goal of 100% carbon-free electricity by 2040. We look forward to the implementation of a residential TOU rate, and while we will offer alterations and updates to the current proposal, MnSEIA views this rate as a positive development.

It is important to consider what occurs in the real world, when we discuss a residential small QF customer. In this context and in this docket, as noted above, we are generally discussing an individual with solar panels and potentially storage, on their roof, yard, or property, with a total capacity of under 40 kW - referred to under statute as a "qualifying facility", or "QF".² When these PV panels generate electricity the customer can first consume any amount of energy their panels generate, and then decide what to do with the excess after consumption. If the customer owns a battery that is linked with their system they can store excess electricity for later use, or they can export it back to the grid. At this point, the bidirectional meter between their system and the distribution system tracks how much electricity is exported to the grid, and when during the day it occurs.

This is the basic principle upon which residential small power production functions, and has functioned, in Minnesota since 1981, for any kind of small power production or cogeneration behind-the-meter-facility.³ A bidirectional meter tracks how much energy comes into the home from

²Minn. Stat. § 216B.164, subd. 3(d)

³Minn. Stat. § 216B.164, subd. 3, (1981)

the grid, and how much excess goes out, and charges or credits that customer based upon the net balance. When excess electricity is exported, the small QF customer should be compensated fairly for it, as it benefits the grid, the customer themselves, and primarily, their neighbors.⁴ Energy generated by a home photovoltaic (“PV”) system does not travel tens or hundreds of miles - it generally goes to the closest points along the transmission lines that require it. In this way, a single home PV system can not only benefit the system and homeowner, but can help meet demand for their neighbors as well, by a distribution-sited resource that the homeowner pays for and maintains.

MnSEIA’s primary concern with the net metering compensation scheme under Xcel’s updated TOU proposal is that, seemingly unrecognized by most parties, it would be a radical change in how small QF customers are compensated for the energy they produce, from what Minnesota has done for over 40 years. At the current moment, given that the proposed TOU rate would be opt-in, this is a valid experiment, but it is one that is not fully understood and under-analyzed. MnSEIA therefore does not support Xcel’s TOU rates becoming a default or opt-out at any point in the future, until a separate docket is opened to comprehensively study the effects of this billing change for small QF customers.

At this time, there is a clear and reasonable relationship between the flat rate Xcel small QF customers pay for energy imported, and the A50 tariff most customers elect to be compensated at - one flat average, for one flat time period. In short, this compensation is and should be effectively a wash - what the small QF customer receives for generation exported is roughly equal to what Xcel Energy charges their neighbors for that same energy. This is the principle upon which net metering

⁴Eric Gimon, Mike O’Boyle, and Michelle Solomon. 2024. “MEETING GROWING ELECTRICITY DEMAND WITHOUT GAS.” Energy Innovation.
<https://energyinnovation.org/wp-content/uploads/2024/03/MEETING-GROWING-ELECTRICITY-DEMAND-WITHOUT-GAS.pdf>. p. 6-7

has worked since 1981, and is a precedent that we have no wish to deviate from. Disconnecting what a small QF customer's neighbors are charged, from the compensation a small QF customer receives, would be the result under Xcel's proposal.

Xcel Energy's proposal, as discussed in MnSEIA's prior comments, offsets consumption against generation by time period in a complex and confusing scheme, before compensating any remaining generation at the existing flat A50 rate, which would be extended to TOU customers without alteration.⁵ Xcel themselves admit that for the foreseeable future, net metered customers may be slightly overcompensated under the existing proposal, because they expect the A50 tariff rate to remain higher than the mid-peak rate overall – notably without running the calculations to estimate the rate change.⁶ MnSEIA does not want this to happen, for the sake of fairness to non-small QF ratepayers, just as we do not wish small QF customers to be undercompensated for the service the energy they export provides to their neighbors and to the grid. This docket has yet to have a compelling argument as to why the current and long-standing principles of net metering need to change in such a drastic fashion. Therefore, we cannot support this proposal as anything more than an opt-in test, until its impacts on small QF customers are better understood by the Commission and stakeholders.

Minnesota has comprehensive and aggressive clean energy goals, including a net zero electrical grid by 2040. All technologies, demand-reduction strategies, and policies are needed to support these goals, as we move to a cleaner, more just energy economy. Distributed generation and small power production are a necessary part of this transition and are codified in Minnesota statute

⁵Xcel Energy Updated Filing 8/16/24, p. 26

⁶Xcel Energy Updated Filing 8/16/24, p. 27

for that reason.⁷ In addition to this goal under law, there is substantial research to indicate that distributed generation, especially and specifically solar and storage, on its own incentivizes demand reduction and load shifting and can improve on TOU rate implementation, when on-peak times do not line up with renewable generation. As the NREL report Solar Plus: A Holistic Approach to Distributed Solar PV, noted, “Solar plus [storage] increases PV system value through increased solar self-use and grid arbitrage (in TOU rate structures). Solar plus may mitigate some of the negative economic impacts of certain rate structures such as low net metering rates, TOU rates where the peak period is non-coincident with PV output, and demand charges.”⁸

Moreover, given that distributed generation is specifically highlighted under statute as an important tool for achieving the state’s energy goals, it is reasonable to ensure that the customers who take on distributed solar and storage installation are justly and reasonably compensated for their energy and benefits to the grid.⁹ Doing so lowers the barrier for entry for customers to finance projects, and accurately signals to the customer base that distributed generation is worth investing in, in order to assist in the achievement of Minnesota’s clean energy goals.

Additionally, as previously noted in MnSEIA’s Initial Comments, research published by the National Renewable Energy Laboratory (“NREL”) indicates that the simplest solution is the best: to reduce complexity and customer barriers to entry, as well as accurately reflect their positive impact on the grid, under bi-directional time varying rates (net-metered TOU), net metered customers

⁷ Minn. Stat. § 216B.164, subd. 1 (“This section shall at all times be construed in accordance with its intent to **give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.**”) (Emphasis added).

⁸ Eric O’Shaughnessy, Kristen Ardani, Dylan Cutler, and Ryan Margolis. 2017. “Solar Plus: A Holistic Approach to Distributed Solar PV.” National Renewable Energy Laboratory. <https://www.nrel.gov/docs/fy17osti/68495.pdf> p. 43

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. To the maximum reasonable extent, the commission shall set rates to encourage energy conservation and renewable energy use and to further the goals of sections [216B.164](#), [216B.241](#), and [216C.05](#). Any doubt as to reasonableness should be resolved in favor of the consumer.”).

should be compensated for any excess generation at the same rate they are charged. “To balance the need for simple, understandable rates with the desire to accurately reflect utility system avoided costs, customers who are capable of injecting excess energy into the grid from a DER should be compensated at the same time-varying energy rates that they would pay for energy consumption.”¹⁰

Small QF customers aid in overall generation mix, and can significantly reduce peak usage. This contribution does not need to be overcompensated for, as that would be inequitable to non-small QF customers. MnSEIA is simply advocating for this contribution to continue to be properly compensated, consistent with current law and policy. Again, MnSEIA would like to emphasize that Xcel’s current net metering compensation for customers who select the A50 tariff - a flat, average compensation rate due to the flat selling rate - is reasonable. A time-specific average for each time period under TOU rates simply extends current, longstanding Minnesota policy to this updated rate scheme.

Notably, this is a strategy consistent with approaches from other utilities, in a similar TOU case. Minnesota Power (MP), another major Minnesota utility, received approval from the Commission for a multiyear transition to a default residential Time-of-Day rate (TOD) after a multi-year pilot on August 27, 2021.¹¹

As part of Minnesota Power’s implementation, they included a detailed, and gradual four-year transition plan, including exact plans for how they would transfer their customers en masse, and have continued to submit compliance filings before and since the 2021 Order with

¹⁰ Shenot, J., Linvill, C., Dupuy, M., & Brutkoski, D. (2024). *Capturing More Value from Combinations of PV and Other Distributed Energy Resources* (NREL/SR-7A40-90129, 2394648, MainId:91907). <https://doi.org/10.2172/2394648> p. 46

¹¹ *Order Approving Transition From Inverted Block Rate to Time-of-Day Rates* In the Matter of the Petition for Approval of Minnesota Power’s Residential Rate Design. Docket No. E015/M-20-850, Minnesota Public Utilities Commission August 27, 2021. As noted on page one of the Commission’s above order, parties throughout the stakeholder process referred to MP’s proposed rate as both a TOU and ToD (time-of-day) rate.

comprehensive updates. As part of these filings, after the approval of their petition, Commerce advocated for, and the Commission accepted, that Minnesota Power begin a multi-year process of determining how to allow their small QF customers to take service of the new rate scheme.¹²

Minnesota Power has subsequently filed six month updates on their efforts to determine how customers on their Parallel Generation Tariff (the average retail rate tariff available to MP small QF customers) will be able to take service of the new TOD rate. Importantly, and demonstratively, in their most recent compliance filing, MP noted that they would be able to apply the same TOD mapping to their Parallel Generation customers, and would need to **calculate the average retail rate for each TOD period, and seek commission approval of the associated tariff revisions.**¹³

This compliance filing was filed on September 3rd, 2024, in that docket and has received no objections to date. In short, the company is seeking Commission approval for this same approach MnSEIA is advocating for in this docket, for its consistency with existing practice, Minnesota law, and ease of implementation.

The purposeful, gradual multi-year rollout of Minnesota Power's Time-of-Day rate structure demonstrates a focus on properly implementing a complicated rate change, and a clear desire for success from all parties involved, including the company, Commission, and stakeholders.

MnSEIA continues to believe that given the insufficient support for Xcel's first proposal, and a complete lack of supporting data for their updated proposal, a second, expanded pilot is necessary in order to eventually move this rate to an opt-out or default one. To achieve this result, we would propose the following criteria for an updated pilot, but would be open to serious

¹² *Order* In the Matter of the Petition for Approval of Minnesota Power's Residential Rate Design. Docket No. E015/M-20-850, Minnesota Public Utilities Commission, (September 27, 2021).

¹³ *Fifth Six-month Compliance Filing on the Status of Transition to Flat Rate and Default Time of Day Rates* In the Matter of the Petition for Approval of Minnesota Power's Residential Rate Design. Docket No. E015/M-20-850, Minnesota Power (September 9, 2024). p.10

discussion of substantive changes to the methodology.

- The updated pilot should have a floor of at least 20,000 participants, with an opt-in structure. If the minimum threshold is not reached, then this is a sign that there is a fundamental disconnect in communication of the rate and its benefits, or that there is something wrong with the rate itself.
- Pilot should provide bill protection as suggested by multiple parties in this docket¹⁴, both to reassure customers entering the pilot, as well as testing the efficacy of protections on further iterations of the proposal.
- Current time-of-day (TOD) ratepayers should be given the option to opt in to the new TOU pilot, and direct communications about doing so. This provides the opportunity to acquire data about how many customers would prefer the TOU rate versus the existing TOD rate, given that Xcel proposes to cancel their existing TOD rate and roll it into the Time-of-Use proposal.¹⁵

MnSEIA strongly believes that bill protections and a “shadow billing” feature, as discussed by CUB, the OAG, and Fresh Energy, among others, are a necessary inclusion to effectively execute upon TOU rates for residential customers. As noted in the AGO’s comments, bill protections are not a pilot measure, as argued by Xcel, but a necessary component of securing participation in a brand new rate scheme and preventing undue harm to Minnesota consumers.¹⁶ A TOU rate has the potential to radically affect MN residential energy consumption and cause significant reductions in consumption in the long run. However, execution and implementation matter greatly on this front. As indicated by the analysis of the OAG, of data that was not initially provided by Xcel, up to 41 percent of Pilot participants saw their annual electricity bill increase, and 4.79 percent saw annual bill increases of \$50 or more.¹⁷ This speaks to at best a non-result, if not failure, from the pilot period, and speaks to the need for bill protections - in addition to the aforementioned bill increases,

¹⁴Office of the Attorney General Initial Comments 10/15/24, p. 9-11.
Citizens Utility Board Initial Comments 10/15/24, p. 8-9

¹⁵Xcel Energy Initial Filing 12/22/23, p. 25, Xcel Energy Updated Filing 8/16/24, p. 2.

¹⁶Office of the Attorney General Initial Comments 10/15/24, p. 10

¹⁷*I.d.* p. 7, Office of the Attorney General Initial Comments - 10/15/24 Schedule A

Xcel reported to the OAG in response to an information request that 15 percent of low-income participants received bill protection at some point during the Pilot.¹⁸

It is clear from these results that comprehensive protections and communications will be necessary to prevent harm to MN consumers, let alone achieve a positive result. Therefore, a pilot period or at minimum phased implementation, as well as persistent protection and communication tools will be key for properly implementing this rate. If, as multiple parties have expressed, the eventual aim of this rate is to become an opt-out or default rate, then customers need understanding of the rate and protection from initial negative impacts, to ensure they will not be punished for taking on excess uncertainty. Failure to do so will handicap the adoption and impact of the rate, as indicated by significant negative public feedback in response to Xcel's initial proposal.

CONCLUSION

Thank you for your time and consideration of the important issues raised in this matter. While MnSEIA has concerns about implementing this specific rate proposal, we are hopeful about the prospect of implementing a residential TOU rate for Xcel customers, and are grateful for and look forward to further conversation in this docket as the conversation progresses.

Before Commission approval of this or another TOU rate proposal, MnSEIA respectfully and strongly requests the inclusion of further data analysis and research into the impacts of this rate, be it through a second pilot or phased implementation with requirements for comprehensive compliance filings, as suggested by other parties.

Additionally, until a thorough process is opened and conducted by the Commission to comprehensively analyze and understand the impacts of the proposal on small QF customers, and the significant change it represents from the current methodology, MnSEIA strongly requests this rate remain opt-in, rather than opt out. MnSEIA additionally, as discussed, wishes to see that small

¹⁸ *I.d.* p. 10

QF customers remain being compensated at just and reasonable rates if they should elect to take service of this rate, consistent with Minnesota law, current practice, and common sense. Taking the wrong step at this point based on an unproven approach will not move Minnesota forward, but rather backward. Failing at implementation of this rate has the chance of making future widespread ratepayer acceptance and adoption of TOU rates, which is necessary for TOU rates to be effective, less likely.

Sincerely,

/s/ Logan O'Grady, Esq.
Executive Director
MnSEIA
(P) 651-425-0240
(E) logrady@mnseia.org

/s/ Curtis Zaun, Esq.
Director of Policy and Regulatory Affairs
MnSEIA
(P) 651-677-1602
(E) czaun@mnseia.org

/s/ David K. Moberg
Policy and Regulatory Affairs Associate
MnSEIA
(P) 651-280-0381
(E) dmoberg@mnseia.org