December 20th, 2023

Via Electronic Filing

Consumer Affairs Office
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul MN 55101

Re: **Xcel Energy's 2023 Transportation Electrification Plan, E-002/M-23-452**

Dear Secretary Seuffert

Electrify America, LLC ("Electrify America") appreciates the opportunity to provide input to the Minnesota Public Utilities Commission ("Commission") on the Transportation Electrification Plan ("TEP") filed by Northern States Power Company d/b/a Xcel ("Xcel" or "the Company") on November 1, 2023. The Commission issued its notice of comment period on November 17, 2023 that solicits comments from stakeholders on the TEP for filing by December 20, 2023. Electrify America files these comments in accordance with the November 17, 2023 notice.

Electrify America's Footprint

Electrify America, the largest open network of direct current fast charging (DCFC) stations in the U.S., is investing more than $2 billion over 10 years in Zero Emission Vehicle infrastructure, education and access. This investment will enable millions of Americans to discover the benefits of electric driving and support the build-out of a nationwide network of ultra-fast community and highway chargers that are convenient and reliable. To date, Electrify America has built a coast-to-coast network of DCFC stations across over 850 locations and with over 3,700 individual DC fast chargers in total. Electrify America currently operates 6 DCFC stations with 34 DC fast chargers in Minnesota, and it has five more DCFC stations currently under development within the state. These stations remain open to the public 24 hours a day for seven days a week, and are needed to unlock long distance travel across Minnesota and serve local communities that have not connected to Electrify America's network to date.

Comment

Electrify America's comments focus on the Company's discussion of its options for supporting public DCFC development in MN and a recommendation that this TEP also include an examination of rate design changes to reduce the barrier to DCFC station operator business

models posed by demand charges. Specifically, these comments are responsive to Questions 1 and 14 in the Commission's Notice for Comment Dated 11/17/2023. [1]

The Company's TEP states that it considered the following potential options to support the public DCFC sector in accordance with the Commission's order from August 2023.[2]:

- Electric Vehicle Supply Infrastructure ("EVSI") Only
- EVSI Plus Rebates for Public EV Charging Equipment,
- Utility Ownership and Operation of Public DCFC Stations, and;
- Partnerships for Owning and Operating Public DCFC Stations.

Electrify America offers the following comments on each proposed program option.

EVSI Only and EVSI Plus Rebates for Public EV Charging Equipment
Electrify America is highly supportive of make-ready infrastructure programs as they have demonstrated to reduce the capital costs of DCFC station construction and leverage utility know-how to optimize EVSI configurations. Make Ready programs harness the core competency of the utility for line extension infrastructure while maintaining a competitive market for public charging service providers.

Electrify America also supports rebates for Electric Vehicle Supply Equipment (EVSE) and agrees with the Company's discussion of applying scoring methods to ensure that funding is stewarded in an equitable manner to help address accessibility gaps and ensure investment in disadvantaged communities. Rebate programs must be structured in such a way as to not be administratively burdensome.

Utility Ownership and Operation of Public DCFC Stations
Electrify America's opposition to utility ownership of DCFC stations in MN was clearly communicated in the Direct Testimony of Jigar Shah in the proceeding regarding the Company's subsequently withdrawn Petition for Approval of a Public Charging Network, and Electric School Bus Pilot, and Program Modifications docketed as M-22-432.[3] In this testimony, Mr. Shah enumerated Electrify America's opposition to utility ownership due to the likely detrimental effects on competition and continued private sector investment. The entrance into the market of a monopoly utility with the ability to socialize loss-making operations among ratepayers increases the likelihood that market failure of the private sector becomes a self-fulfilling prophesy.[4] Private sector providers of EV charging services must rationally allocate capital and

[1] Q1: "Should the Commission approve, modify or reject Xcel Energy's TEP?" and; Q14: "Are there other issues or concerns related to this matter?".
[2] 2023 Integrated Distribution Plan, Appendix H, p. 26.
[3] M-22-432, Direct Testimony of Jigar Shah on behalf of Electrify America, 2/7/2023, pp. 6-11
[4] Id. p. 6

must avoid finding themselves in a position where they are competing with a monopoly utility that charges EV drivers below cost rates for EV charging as was proposed in M-22-432.

Given the difficulties that Xcel has encountered in station development, reliability, and issues with its vendors supporting the DCFC sites in its Pilot[5], Electrify America recommends that the Company decline to pursue further investments in Company-owned DCFC stations.

Partnerships for Owning and Operating Public DCFC Stations

The Company correctly identifies that this approach includes risks of "additional administrative complexity for contract and site negotiations, as each site may have different and specific partnership-needs compared to others."[6] The Company's efforts to devise creative solutions to advance public DCFC are admirable, but items such as the legal complexities associated with transferring a site lease and property/equipment ownership are likely to impede the scalability of this model.

Commercial EV Charging Rate Design

The Company's proposed TEP did not consider any rate design alternatives for public DCFC stations. Thus, Electrify America proposes that Xcel include a modification to the demand limiter provisions in its tariff for public DCFC stations within the currently proposed TEP or another proceeding to be at the discretion of the Commission. An increase in the number of hours used to divide the monthly usage in the demand limiter provision would help mitigate the impact of demand charges to a greater number of low load factor stations and result in a material improvement in DCFC station economics for these sites. This would have the effect of helping attract the private capital needed to build out a robust public charging ecosystem in MN. Electrify America suggests that the demand limiter text be modified to apply to stations with up to a 24 percent load factor. The demand limiter provision within the tariff could be modified as follows for public DCFC stations:

> "In no month shall the on peak billing demand be greater than the value in kW determined by dividing the kWh sales for the billing month by 175 hours per month."

Xcel's current commercial rate design presently includes a demand limiter that reduces the billed demand for customers with low load factors. The "Determination of Peak Period Demand" section in Xcel's common commercial tariffs include the following provision: "In no month shall the on peak billing demand be greater than the value in kW determined by dividing the kWh sales for the billing month by 100 hours per month."[7] In practice, this provision limits billed demand for charging station sites with load factors below 13.9% presuming a 30 day billing month (100 hrs. ÷ 720 hrs. = 13.9%). While this feature in the rates is constructive, the

[5] 2023 Integrated Distribution Plan, Appendix H, pp. 23-24.
[6] 2023 Integrated Distribution Plan, Appendix H, pp. 29
[7] Northern States Power Company MPUC No. 2, Section No. 5, 8th Revised Sheet 31

demand limiter should be adjusted to bring it into alignment with demand alternative offerings within other states and increase the effective load factors for which demand charges are limited.

Several states have adopted rate designs that offer relief from demand charges for public DCFC stations at load factors up to 20% or higher. For instance, the New York Public Service Commission (PSC) is requiring the state's utilities to implement an EV Phase-In Rate that will reduce demand charges for charging station with up to a 24% load factor, and it rejected a 20% load factor cut off.[8]

For the public DCFC sector, adoption of rate designs that adequately reduce or eliminate the barrier posed by demand charges is crucial to the continued, sustainable investment of private capital in public EV fast charging infrastructure. Improved EV rate design for public DCFC stations is a necessary ingredient to address public charging infrastructure gaps in Minnesota, [9] and in achieving the State's ambitious transportation electrification goals reflected in its policies and in Minn. Stat. 216B.1615.[10]

High demand charges are an impediment to the widespread electrification of the transportation sector in Minnesota and across the nation. These charges, assessed on peak energy consumption during a billing period rather than quantity of electricity used, pose a special economic challenge for high-power, low-utilization uses such as DC fast charging. Research from the Great Plains Institute found that these charges can account for over 90% of electricity costs for DC fast charging, and "lead to operating costs that far exceed the revenue these chargers can receive from customer payments,"[11] a finding echoed in a 2021 U.S. Department of Energy ("DOE") report.[12] This circumstance can discourage EV charging infrastructure investment in the state and delay the build-out of new stations, particularly in rural areas and disadvantaged communities where near-term utilization may be lower. Demand charges also result in significant cost disparities between home and public charging, as residential rates are not subject to demand charges.

---

[8] Alternatives to Traditional Demand-Based Rate Structures for Commercial EV Charging, Case 22-E-0236, p. 32 (Jan. 19, 2023).

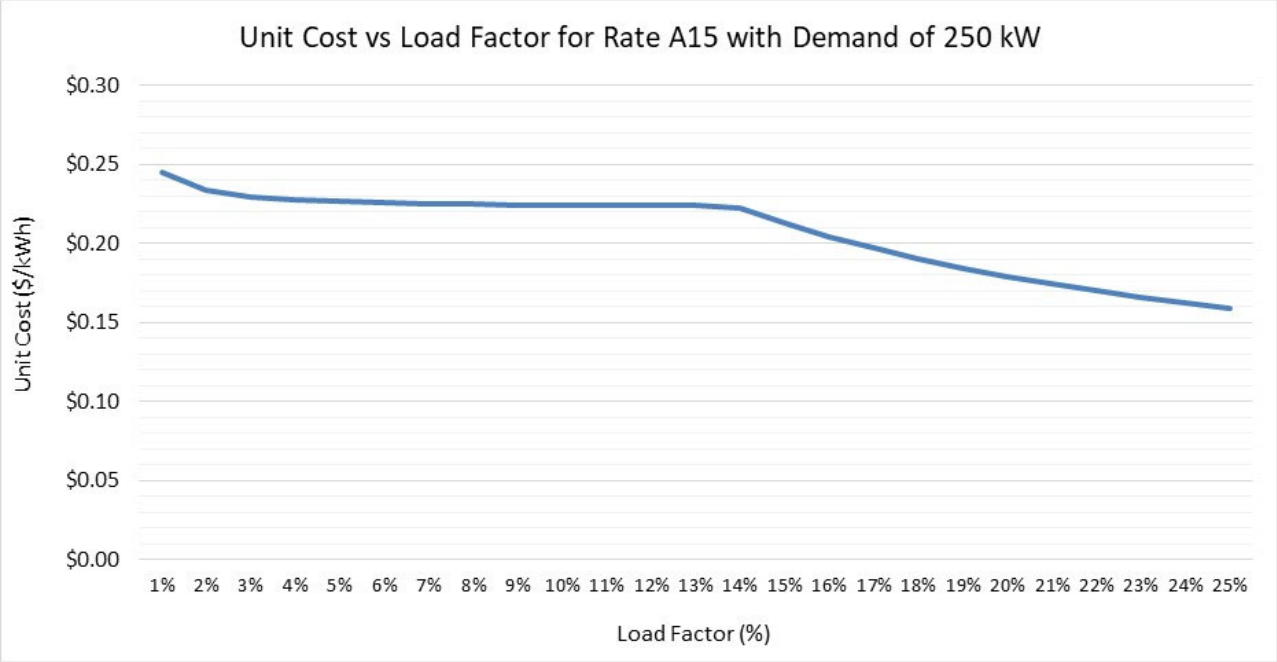
[9] To increase network connectivity, Electrify America analyzed needs across I-90 and I-94 to address current gaps across Montana, Wyoming, Minnesota, North Dakota and South Dakota, and I-20. See Electrify America's National ZEV Investment Plan: Cycle 3, June 2021, p. 33 available at: https://www.electrifyamerica.com/assets/pdf/cycle3_investment_plan_epa.1aa21b9b.pdf

[10] Minn. State. 216B.1615 is available at: https://www.revisor.mn.gov/laws/2023/0/60/laws.12.12.0#laws.12.12.0

[11] McFarlane, D., et al, "Overcoming Barriers to Expanding Fast Charging Infrastructure in the Midcontinent Region," Great Plains Institute, available at https://www.betterenergy.org/wp-content/uploads/2019/08/GPI_DCFC-Analysis.pdf (July 2019).

[12] U.S. Department of Energy, "An EV Future: Navigating the Transition," available at https://8b9a2972-f6bd-463f-ab0e-7b2ba71ee2f1.filesusr.com/ugd/1c0235_965967cdf2bf4b94924c05637398fda3.pdf (October 2021).

The following graphic shows the impact of demand charges on DCFC station unit costs inclusive of riders. The Y axis shows the effective unit costs of energy delivered by the Xcel on distribution rate A15 across a range of EV charging station load factors. This analysis presumes a DCFC station peak demand of 250 kW and calculates costs based on the A15 rate which is likely applicable to most DCFC stations outside of the TOU pilot discussed in further detail below.



Increased charging capacity of new EV models is exacerbating demand exposure at DCFC stations, especially at ultra-fast charging stations (up to 150 kW) and hyper-fast charger stations (up to 350 kW). In the past six model years, the average charging speed of new EV models has increased four-fold, from 50kW to 200kW, and the trend is accelerating.[13]

Although the Commission has approved a general time of use pilot program that includes a limited number of electric vehicle (EV) charging stations with load factors less than 30 percent,[14] this program is limited and not a permanent solution. It is generally expected that Xcel will file a new general TOU rate to be proposed at a future date as a replacement for the pilot.[15] Nonetheless, the Commission should address the demand charge limiter in rates A15 in the interim.

[13] Atlas Public Policy analysis of data from U.S. Environmental Protection Agency and various industry sources.
[14] Under this load factor limitation in the tariff, a charging provider is limited to no more than five charging sites for inclusion in the pilot. Northern States Power Company Electric Rate Book – MPUC No. 2, Rate Code A25, A16, Sec. No. 5, 14th Rev. Sheet No. 33.
[15] Order Approving a Time of Use Pilot and Setting Additional Requirements, MN Docket 20-86 (Feb. 1, 2023).

Conclusion

Electrify America appreciates the opportunity to submit these comments and looks forward to further engagement in this proceeding.

Respectfully submitted,

/s/ Anthony Willingham
Government Affairs & Public Policy Lead—State Government
Electrify America
1950 Opportunity Way
Suite 1500
Reston, VA 20190
Anthony.Willingham@electrifyamerica.com
(571) 786-9934