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November 2, 2022

**—VIA EMAIL & U.S. MAIL—**

Mr. Steven M. Kahl, Executive Director
North Dakota Public Service Commission
State Capitol Building, Dept. 408
600 East Boulevard
Bismarck, ND 58505-0480

RE: REQUEST FOR COMMENT REGARDING MEASURES TO PROMOTE GREATER ELECTRIFICATION OF THE TRANSPORTATION SECTOR PURSUANT TO THE INFRASTRUCTURE INVESTMENT AND JOBS ACT (CASE NO. PU-22-147)

Dear Mr. Kahl:

Northern States Power Co., doing business as Xcel Energy, (the Company) submits the following comments in response to the Commission's Notice of Issues and Request for Comment issued on October 3, 2022 in the above referenced case (October Notice). In the October Notice the Commission scheduled a public hearing regarding the electrification of transportation and identified additional topics of interest for further comment at that hearing and in written comments. The Company also filed an initial set of written comments in June 2022 in regarding our plans and efforts to promote greater electrification of the transportation sector, per the amended Public Utility Regulatory Policies Act of 1978 in response to the Commission's March 30, 2022 request for comment.

## Background

Pursuant to the IIJA, the Public Utility Regulatory Policies Act was amended by adding the following standard:

Each state shall consider measures to promote greater electrification of the transportation sector, including the establishment of rates that –

(A) Promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure,

(B) Improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles; and

(C) Accelerate third party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and

(D) Appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

Xcel Energy's electric vehicle (EV) vision is to power 1.5 million EVs across the areas we serve by 2030. This means that 20 percent of all vehicles within our footprint would be replaced with electric vehicles by 2030, or a 30-fold increase over the penetration levels in 2020. Through new EV customer programs, charging infrastructure, and our energy, we are bringing our long history of clean energy leadership to transportation, developing innovative partnerships with our communities, customers, and others. With 30 times more EVs on the road by 2030 than today, our objective is to reduce emissions, lower fuel and maintenance costs for EV drivers, and keep energy bills affordable for all customers.

The current Administration's clean transportation policies have set the stage for increased EV adoption. Federal funding for EV charging authorized by the IIJA -- through the EV Charging Program and the Charging Fueling and Infrastructure Program -- will provide new sources of investment in public charging. This will create additional public-private partnership opportunities to test new EV technology deployment, aid the build-out of charging infrastructure in lesser-served areas, and overall, lead to a better experience for Xcel Energy's customers. Additionally, many other sources of funding authorized by IIJA will advance transportation electrification through support for activities such as medium and heavy-duty vehicle electrification, advanced battery manufacturing and development, and research on vehicle to grid technology integration. For example, North Dakota and Federal officials unveiled a plan on Oct. 19, 2022 to create a mineral processing plant in Mercer County, North Dakota that would supply car brand Tesla with materials needed to create EV batteries. The IIJA would provide $115 million toward the project, which would create an estimated 150 jobs.

**Requested Comments**

In its Notice of Issues and Request for Comment the Commission identified interest, based on previous comments, in the following issues for additional comment:

1. *Whether ownership of electric vehicle charging stations should be permitted by regulated utilities. If permitted, under what conditions?*
2. *What should the Commission consider regarding unfair competition between third-party charging entities and regulated utilities?*
3. *Should the Commission consider special tariffs or rates for residential electric vehicle charging?*

4. *Whether the Commission should consider pilot programs in anticipating of the electrification of the transportation sector? If so, what pilot programs?*
5. *What is the anticipated distribution system impact from residential and fleet charging?*

Following are the Company's responses to each of these requests.

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1. *Whether ownership of electric vehicle charging stations should be permitted by regulated utilities. If permitted, under what conditions?*

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Both personal vehicles and commercial fleets are increasingly relying on battery powered EVs, rather than internal combustion engines.[1] Investment and commitments from automakers and policies supporting or requiring components of the transition have resulted in increased investment in the infrastructure needed for EVs, but significant additional investment and execution will be necessary.

We see utility programs as critical to both enhancing and accelerating the benefits of transportation electrification across three primary use cases of home charging, fleet and workplace charging, and public charging. These benefits take three primary forms:

- **Downward pressure on electric utility rates**. Programs that efficiently serve new EV load will help enable both EV-drivers and non-EV drivers to benefit from this transition.
- **Lower costs for drivers**. Affordable electricity prices allow fueling a vehicle for less than $1/gallon equivalent.
- **Managed load and reduced emissions**. Utilities are responsible for electric supply that is increasingly clean. We see a potential for EV load to be managed to take advantage of increasing levels of renewable resources on the grid, resulting in lower emissions from the transportation sector.

North Dakota, like many other midwestern states, does not yet have the public charging infrastructure necessary for a rapid adoption of EVs for both personal and commercial uses.[2] Research has shown that increased access to public charging stations is associated with faster EV adoption, which likely stems from the reduction in range anxiety and making EV adoption more feasible for more people.

We believe that North Dakota Law allows the Commission to consider and approve utility investment in electric vehicle charging infrastructure and charging stations. Under Chapter 49-02-11 of the North Dakota Century Code, the Commission retains

[1] ND DOT NEVI Plan – EV Forecasts on page 52-53.
[2] ND DOT NEVI Plan, p. 59-60.

authority to "ascertain and fix just and reasonable standards, classifications, rules, or practices to be observed and followed by any or all public utilities with respect to the service to be furnished." An "electric public utility" is defined as "a privately owned supplier of electricity offering to supply or supplying electricity to the general public."[3] An electric public utility does not include "a person that uses an electric vehicle charging station to *resell* electricity to the public *if the reseller has procured electricity from an electric service provider* that is authorized to engage in the retail sale of electricity . . . ."[4] The Commission has authority over any investments in electric vehicle charging infrastructure that are made by a public utility.

As discussed in our June 15. 2022 comments, we believe that utility investments in electric vehicle charging stations can help facilitate and support greater adoption of electric vehicles and equitable access to charging stations while also providing benefits for EV drivers and electricity customers.

2. *What should the Commission consider regarding unfair competition between third-party charging entities and regulated utilities?*

While competition with third-party charging is an important consideration, there has been limited investment in the public fast charging market in North Dakota. We believe that utility investment may be needed to develop a market in North Dakota. Rather than resulting in unfair competition, utility investment can help create an EV demand that can make the North Dakota market more attractive to third-party providers. Currently, the largest national charging companies have been largely absent from the state. There is simply not enough of a third-party charging market to support future needs and utility investment would aid in establishing the market rather than competing with it in some unfair manner.

As the overall public charging market grows and third-party investment increases, it may be valuable for the Commission to periodically assess the current state of the public charging market and utility investment in public charging infrastructure. The Company is open to further discussion on implementing an assessment with the Commission and other interested parties.

[3] N.D.C.C. § 49-03-01.5.
[4] *Id.*

The lack of infrastructure and the challenge of meeting driver needs only grows exponentially as EV adoption accelerates. Utilities have a significant role to play in meeting those needs not currently being met. By meeting the short-term public charging needs, a utility's public charging investment will catalyze a more robust competitive market in the future by helping to increase EV adoption and accelerating public charging utilization rates.

*3. Should the Commission consider special tariffs or rates for residential electric vehicle charging?*

Yes. To avoid a large ramp up in peak impacts and additional costs resulting from EV charging, EV programs and tariffs should be crafted to encourage off-peak charging, which can be accomplished using time-varying rates that send strong price signals through low energy charges overnight and much higher rates during on-peak times. In Minnesota, the Company has several EV charging programs that use time-varying rates with price signals encouraging off-peak charging. For residential participants in these programs, we have seen the vast majority, over 90 percent, of charging taking place during off-peak time.

Encouraging off-peak charging is critical to unlocking the benefits of electric vehicle adoption and ensuring that all utility customers receive the maximum benefits from utility investments. Off-peak charging can minimize the need for investments in system upgrades and increases in generation resource needs. Off-peak charging also encourages greater utilization of wind generation, as wind output tends to increase overnight and can align with off-peak charging increases.

*4. Whether the Commission should consider pilot programs in anticipating of the electrification of the transportation sector? If so, what pilot programs?*

Yes. Pilots can be used to study potential options for programs that may encourage greater EV adoption in North Dakota. The Company has used several pilots across the many states it serves to gather learnings about residential and multifamily EV charging, public EV charging, and fleet EV charging. By using pilots, the Company minimizes the potential impact of investments while gathering learnings that are critical to developing other pilots and future permanent programs and tariffs across all states. We discuss several pilots we have implemented and, in some cases, expanded to permanent programs in our Minnesota service territory in our June 15, 2022 comments.

*5. What is the anticipated distribution system impact from residential and fleet charging?*

Identifying system upgrade projects related to a specific EV Charging installation is challenging. The impacts on the distribution system are dependent on the speed of EV adoption in the state as well as existing system infrastructure in the locations of new EV installations. When a customer adds load without notifying the Company, we typically become aware of the need for a system upgrade after the new demand is added to the system. Once an issue is known, engineering will assess the system considering existing loading, number of customers, equipment being used, size of the equipment, service distance, and transformer size. Responsibility for upgrades would be determined from this analysis. Future capabilities linked to advanced metering infrastructure may improve our understanding of customer load additions. Utility EV programs can help mitigate this challenge by providing an easy path for customers to notify the Company of their EV project and charging needs.

Any upgrades that are required to the Company's system, such as transformer upgrades, pads, poles, new service conductors and metering will be executed by the Company under existing service policies. As a general matter, determination of customer responsibility is governed by a revenue justification policy called the revenue/expenditure ratio. As defined in our Company policies at a high level, if construction costs will be in excess of 3.5 times the anticipated increased annual revenue, then the customer is responsible for the excess expenditures.[5]

The need for system upgrades can also be caused by cumulative incremental growth in load, caused by numerous customers adding additional load to an area. Currently, EV growth in our service territory has not triggered significant system upgrades that are identified as related to EV charging. However, as EV adoption continues to grow, EV expansions are more likely to trigger system upgrades. Our work to continue to refine our processes to track these system upgrades will need to continue improving along with this growth.

## Closing Comments

The Company sees great potential for increased EV infrastructure and adoption in North Dakota in the coming years. As demonstrated above, the Company believes that utility involvement in supporting EV adoption and infrastructure development, including engagement with stakeholders, is crucial to reducing market barriers,

[5] Provisions are included in our North Dakota Electric Rate Books in Section 6, Sub-section 5.2 (Sheet No. 6-28)

providing reliable and equitable access to electrified transportation, and optimizing grid efficiency.

The Company is in the early stages of evaluating opportunities and approaches to promote EV adoption and installation of charging infrastructure for North Dakota. The Company would seek to implement pilots and programs similar to those that are available in other service territories, while tailoring the offerings to North Dakota customers and their interests.

Xcel Energy appreciates the opportunity to provide additional information to the Commission on transportation electrification and looks forward to additional discussions in the future.

Please contact me if you have any additional questions or comments about the information we have provided. Thank you.

SINCERELY,

ALEX NISBET
REGULATORY POLICY SPECIALIST

cc: Mr. Jack Schuh
Mr. Victor Schock