



January 13, 2026

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

Re: Docket No. E002/M-25-142 – Xcel’s 2025 Transportation Electrification Plan  
and Integrated Distribution Plan

Dear Ms. Bergman:

ChargeScope appreciates the opportunity to provide comments in response to the Commission’s November 13, 2025 Request for Comments on Xcel’s 2025 Transportation Electrification Plan (TEP). Xcel’s 2025 TEP represents a meaningful evolution of the Company’s EV portfolio that reflects program learnings across states, changing market conditions, and regard for cost-effectiveness while being responsive to requirements set forth in the Commission’s 2024 TEP Order. Aligning EV charging investments with system planning and interconnection processes provides a solid foundation for continued refinement to ensure that Xcel can support 1.5 million EVs by 2035 while delivering broad customer, grid, and environmental benefits.

In particular, ChargeScope supports the transition from the Optimize Your Charge passive managed charging program to the Charging Perks active managed charging program, which will provide enhanced system value by more closely aligning program objectives and customer compensation with grid needs. Recommendations provided herein focus on the continued success and evolution of Xcel’s EV load management offerings.

More broadly, ChargeScope supports the move away from utility-owned charging infrastructure pilots toward a model that consolidates rebates and advisory services to increase flexibility, lower cost, and enable broader participation by third-party developers, including those serving multifamily housing, fleets, and public charging customers. Additionally, coordination with Conservation and Optimization programs and inclusion of

enhanced residential rebates for income-qualified customers, expanded advisory services, and flexible commercial infrastructure demonstrate progress toward support of more equitable transportation electrification.

## **BACKGROUND**

ChargeScape is the continuation of over a decade of experience gained through the foundational work of the Open Vehicle-Grid Integration Platform (OVGIP), which was initially launched as a pilot collaboration between Ford, BMW, General Motors, and other EV automakers. The OVGIP served as an industry-first initiative to explore how electric vehicles could support grid stability and energy management through demand response and managed charging.

In 2024, following the success of OVGIP's pilots, ChargeScape was officially established as an independent joint venture with BMW, Ford, Honda and Nissan as investors. ChargeScape's long-term data agreements with these and other original equipment manufacturers (OEMs) allow us to provide secure, reliable EV telematics data access, advanced EV load control, and direct access to the EV driver for the purposes of customer enrollment and engagement. ChargeScape's areas of expertise include active EV load control via telematics and networked EVSEs, localized load management to deliver asset-level optimization, and bidirectional charging (V2X). ChargeScape currently serves as an EV aggregator for Xcel's Charging Perks Program in Colorado in addition to providing OEM-direct vehicle-grid integration services for more than a dozen utility programs across North America.

## **RECOMMENDATIONS**

- 1. Approve the proposed Charging Perks active managed charging program to provide the Xcel with enhanced ability to cost-effectively manage EV charging at both the bulk and distribution system levels.*

ChargeScape encourages the Commission to approve Xcel's proposed Charging Perks active managed charging program. The incorporation of active EV load management strategies is critical as residential whole-home time-of-use (TOU) rates become widely available to Minnesota customers starting in 2026, potentially replicating the synchronized charging patterns and associated timer peaks observed in the Optimize Your Charge program. Charging Perks will help to alleviate feeder constraints that the introduction of TOU rates could actually amplify, allowing EV load growth to be integrated in a way that reduces peak demand, defers distribution and transmission investments, and supports Minnesota's long-term affordability and clean energy goals.

Behavioral or “passive” managed charging associated with Optimize Your Charge or whole-home TOU rates may reduce demand during peak hours at the bulk system level, but has been proven to yield the unintended consequence of rebound “timer peaks” when EVs simultaneously begin charging at the start of the off-peak period.<sup>1</sup> Utilities have found that timer peaks caused by TOU rates can actually create a higher spike in demand than flat rates due to the larger volume of EV charging sessions during in a shorter (off-peak) window of time<sup>2</sup> which can actually increase stress on distribution assets, most notably accelerating transformer degradation.<sup>3</sup>

By contrast, active managed charging allows utilities to utilize technology that actively distributes EV charging across off-peak hours to mitigate demand peaks caused by residential TOU rates. This benefit of timer peak mitigation at the bulk level comes in addition to affording utilities the flexibility to address distribution-level constraints on specific assets, such as a transformer or a feeder. These constraints may not coincide exactly with off-peak hours and therefore cannot be managed through TOU rates alone. Charging Perks’ active managed charging technology will enable Xcel to unlock additional grid value at the distribution level and during periods of renewable overgeneration or localized system stress.

ChargeScape further supports Xcel’s proposal to align incentive levels with the grid value delivered by different optimization strategies, which is essential to maintaining cost-effectiveness and ensuring that program costs are justified by measurable system benefits. Access to charging data for program non-participants is critical to development of counterfactuals, allowing for comparison of charging behavior across participants and non-participants to quantify program impact. Additionally, historical charging data for program participants prior to enrollment can support pre- and post-enrollment analyses to further quantify value delivered by the program. ChargeScape agrees that cost recovery through a future rate proceeding is more appropriate than through the Energy Conservation and Optimization (ECO) portfolio framework.

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<sup>1</sup> Smart Electric Power Alliance. “Residential Electric Vehicle Rates That Work.” November 2019. Page 11. <https://sepapower.org/residential-ev-time-varying-rates-that-limit-system-peaks-highlights/>

<sup>2</sup> Electric Power Research Institute. “Distribution System Scenario Planning: Case Study and Guidance on Considering Scenarios and Investment Approaches in Distribution Planning.” August 2024. Page 19. <https://www.epri.com/research/products/000000003002030781>

<sup>3</sup> Alexeenko, Polina and Bitar, Eilyan. “Achieving reliable coordination of residential plug-in electric vehicle charging: A pilot study.” January 2023. <https://www.sciencedirect.com/science/article/abs/pii/S136192092300055X>

- 2. In addition to reporting metrics for Charging Perks, monitor effectiveness of TOU rates in shifting customer EV charging behavior to help inform future EV load management offers.*

Xcel's proposed EV load management portfolio includes both active and passive tools, namely the Charging Perks active managed charging program and behavioral/passive TOU rates. In the near term, ChargeScape supports Xcel's proposal to allow customers who enroll in a TOU rate to access EV Charger and Wiring Rebates. This approach promotes charging behavior that benefits the grid while accommodating the current limits of manufacturer-authorized participation. TOU rates can serve as a transitional mechanism that expands access to financial support for customers purchasing an EV and installing a Level 2 charger while active load control is not yet available on their equipment. At the same time, Xcel notes that approximately 46 percent of EVs in its Minnesota service territory are already eligible to participate in Charging Perks through existing authorized channels, and that eligibility will continue to expand as OEMs prioritize telematics development to support scalable utility programs.<sup>4</sup>

As customer eligibility grows and the program's value is further proven out, performance metrics can be used to reassess whether TOU enrollment should continue to provide a pathway to rebates or whether Charging Perks enrollment should become the primary eligibility requirement. Charging Perks is poised to deliver a stronger customer experience by financial compensation and a simple "set-it-and-forget-it" solution for EV customers. Active managed charging more effectively shifts EV load by ensuring charging occurs outside peak periods even when customer behavior varies. Utilities have consistently observed superior load-shifting outcomes under active programs. For example, Eversource observed a 21 percent increase in kWh shifted to off-peak hours for customers enrolled in active managed charging compared to passive approaches.<sup>5</sup> Therefore, for customers with eligible equipment, enrollment in Charging Perks should be a requirement when receiving EV Charger or Wiring Rebates, with mandatory enrollment into a TOU rate serving as a fallback option only if their equipment does not support active managed charging.

Customer experience data further supports this approach. Xcel's Charging Perks program in Colorado has produced strong results, with nearly 88 percent of participants reporting that enrollment directly through OEM channels was easy and 92 percent citing bill savings as their primary reason for enrolling. These results underscore the importance of program

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<sup>4</sup> Document ID [202510-224529-01](#) in Case 25-142. Page 62.

<sup>5</sup> Demand Side Analytics and Cadeo. "Connecticut Statewide Electric Vehicle Charging Program: Program Cycle 1 EM&V Report." June 2024. Page 166.

simplicity and clear value propositions. In contrast, TOU rates—where savings accrue gradually and are often less visible—have proven less effective at driving participation. For example, since 2019 Con Edison has offered EV TOU rates alongside the SmartCharge New York (SCNY) managed EV charging program, yet enrollment in the EV TOU rate reached just 0.3 percent compared to the SCNY program enrollment rate of 25 percent.<sup>6</sup>

3. *Future TEPs and Integrated Distribution Plans (IDPs) should jointly consider pathways to enable and motivate residential light-duty vehicle-to-everything (V2X) participation in load management programs.*

The combined TEP and IDP framework in Minnesota will help to ensure that bidirectional EV capabilities are fully considered across relevant proceedings. TEPs traditionally treat EVs as a curtailment asset or flexible load that can be shifted or curtailed unidirectionally to support grid operations. At the same time, EV batteries can also function as a bidirectional capacity resource, depending on the capabilities of the vehicle and customer willingness to participate. Pilots for electric school buses are already underway as part of existing Commission proceedings to demonstrate V2X potential for heavy duty EVs. Looking ahead, many automakers – including all of ChargeScape’s investors – will have bidirectionally capable light-duty EVs in the market by the end of 2026, creating an opportunity for Xcel to unlock additional system, customer, and ratepayer value by tapping into residential EV batteries.

Residential light-duty V2X capabilities span multiple use cases, including Vehicle-to-Grid (V2G), which exports power back to the grid, Vehicle-to-Home (V2H), which provides backup power or peak load support for a residence, and Vehicle-to-Load (V2L), which allows EVs to directly power appliances or devices without necessarily requiring a grid-parallel connection. As the market approaches an inflection point, utility programs will need to more holistically address EVs as an asset class and bridge the gap between viewing EVs solely as managed load and recognizing them as distributed battery resources. Doing so will require utilities to develop a clearer understanding of EV battery value in order to establish appropriate incentive levels and program structures.

The scale of this opportunity is significant. The average light-duty EV battery in the United States is approximately 60 kWh, nearly five times larger than a typical residential stationary battery system, which averages about 12.5 kWh.<sup>7</sup> With bidirectional charging hardware expected to be available at scale by 2030,<sup>8</sup> reducing near-term barriers related to utility

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<sup>6</sup> NY DPS Case 18-E-0138. “Joint Utilities Petition to Extend the Managed Charging Programs.” Filed April 9, 2025. Page 11.

<sup>7</sup> [https://atb.nrel.gov/electricity/2024/residential\\_battery\\_storage](https://atb.nrel.gov/electricity/2024/residential_battery_storage)

<sup>8</sup> Case 24-E-0165. New York’s Grid Flexibility Potential: Volume II Technical Appendix.

processes and installation costs will accelerate the ability to leverage EV batteries as grid resources. Current upfront costs for residential bidirectional systems may include the charger itself, installation labor, interconnection permits, electrical panel upgrades, and in some cases additional equipment such as home energy management systems, transfer switches, or smart inverters.

Near-term funding and program development are essential to advance V2X integration as a flexible grid resource. Successful deployment, particularly for grid-parallel V2G systems, requires close coordination between utilities and OEMs as well as internal collaboration across interconnection, distribution planning, and operations teams. As customer interest increases and costs decline, streamlined and scalable interconnection processes will become increasingly important.

Today, uncertainty around installation costs, utility requirements, and interconnection timelines remains a key barrier to customer adoption. EV load management programs that incorporate V2X assets will help bring clarity for customers, OEMs, and installation contractors in Minnesota while providing market assurance at this early stage. This is particularly important given recent research showing that 51 percent of customers would allow their utility to discharge their vehicle battery for grid services if they are compensated and guaranteed a minimum battery state of charge.<sup>9</sup>

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<sup>9</sup>[https://www.researchgate.net/publication/382725582\\_Assessing\\_Public\\_Opinions\\_of\\_and\\_Interest\\_in\\_Bidirectional\\_Electric\\_Vehicle\\_Charging\\_Technologies\\_A\\_US\\_Perspective](https://www.researchgate.net/publication/382725582_Assessing_Public_Opinions_of_and_Interest_in_Bidirectional_Electric_Vehicle_Charging_Technologies_A_US_Perspective)

## **CONCLUSION**

Charging Perks reflects a scalable and well-designed approach to EV load management that builds on operational experience and aligns with evolving system needs. By enabling direct and opt-in management of EV charging, the program equips Xcel to optimize customer EV charging at both the bulk system and localized distribution level. Approval of the Charging Perks Program will enable active managed charging as a critical tool for integrating growing EV load in a manner that advances grid reliability, customer affordability, and Minnesota's clean energy objectives. ChargeScape thanks the Commission and other stakeholders for the thoughtful consideration of its comments.

Sincerely,

/s/

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