



August 26, 2021

Docket No. E002/M-20-745

Docket No. E002/M-18-643

Mr. Will Seuffert, Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
St. Paul, MN 55101-2147

**RE: Initial Comments of Greenlots on Xcel Energy's Petition for Approval of Electric Vehicle Programs as part of COVID-19 Pandemic Economic Recovery Investments**

Dear Mr. Seuffert,

Greenlots submits these comments to the Minnesota Public Utilities Commission (“the Commission”) in response to its May 27, 2021 Second Notice of Extended Comment Period in the above-mentioned dockets, inviting comments regarding Xcel Energy’s (“Xcel” or “the Company”) Petition for Approval of Electric Vehicle Programs as part of COVID-19 Relief and Recovery (“the Petition”), filed on September 15, 2020.

Greenlots is a leading provider of electric vehicle (“EV”) charging software and services committed to accelerating transportation electrification in Minnesota, and a member of the Shell Renewables and Energy Solutions group. The Greenlots network supports a significant percentage of the DC fast charging infrastructure in North America. Greenlots’ smart charging solutions are built around an open standards-based focus on future flexibility while helping site hosts, utilities, and grid operators manage dynamic electric vehicle charging loads and respond to local and system conditions.

Greenlots is encouraged by and supports Xcel’s efforts to develop these proposals and believe that utilities have a significant role to play in the recovery of the economy, through both relief for customers who are facing hardship as a result of COVID-19, and stimulating economic development, recovery, and job creation over the coming years. Efforts and expenditures to expand access to EV charging infrastructure in Minnesota are well aligned to deliver these benefits while advancing important clean mobility goals and ensuring efficient grid integration of EV load.

Indeed, as Greenlots has emphasized in other proceedings before the Commission, including in its “Inquiry into Electric Vehicle Charging and Infrastructure” docket (E999/CI-17-879), utilities have a critical role to play in accelerating the market for advanced, electrified mobility, overcoming barriers to EV adoption, and doing so in an equitable manner. Utility involvement in this space is also critical to ensure that the significant benefits associated with transportation electrification are maximized and accrue back to the grid and ratepayers. Indeed, electrified transportation likely represents the single greatest opportunity to increase the utilization and

efficiency of the electric grid to the benefit of all utility customers. This is in addition to the significant economic development, cost savings, environmental, public health, and energy security benefits associated with transportation electrification. While this new, dynamic, and oftentimes flexible load is unique in its ability to reduce system-wide energy costs, this will not happen automatically, and will require deliberate planning and programs to both realize and maximize in equitable manner.

The Company's proposed EV infrastructure investments build upon and expand its portfolio of pilots and programs to advance transportation electrification, and will meaningfully expand access to electric transportation, enable EV purchase decisions, and support both current and future EV drivers. With this high level support, below we address the topics that the Commission has identified for comment, while offering further perspective.

**1. Should the Commission approve, modify, or reject Xcel Energy's proposal to build, own, and operate public fast charging stations?**

Greenlots strongly supports the Company's proposal to develop a modest critical backbone of twenty-one strategically located public DC fast charging ("DCFC") sites targeting more remote parts of its service area that are currently not served by the existing fast charging market. Indeed, as Xcel describes, "these charging stations will serve as a vital resource to encourage increased EV adoption, as access to public charging can lower one of the biggest barriers preventing transportation electrification – range anxiety."<sup>1</sup> Greenlots is also pleased with and supportive of the proposed customer engagement and marketing efforts to accompany the development of this infrastructure, ensuring it is visible and local communities are aware these new charging resources.

As Greenlots has emphasized in other dockets containing similar filings from other utilities in the state focusing on addressing rural EV equity through DCFC access<sup>2</sup>, there are enduring EV equity challenges and barriers to adoption that the private market has struggled to address, and these proposed investments are uniquely positioned to help break through these barriers. Indeed, "the Company expects that the use of public chargers will be low in the early years of the service but are still necessary as they provide an essential service to EV drivers throughout all portions of our service territory."<sup>3</sup>

Xcel's driver-focused approach, recognizing that the true customers being served are both current and future EV *drivers*, and not other specific market participants, should be applauded as it prioritizes equity, reliable access, and a harmonized EV charging experience over specific business or commercial interests. While other charging deployment contexts may involve other

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<sup>1</sup> Petition at p. 17.

<sup>2</sup> See E015/M-21-257 and E017/M-20-181

<sup>3</sup> Petition Attachment C at p. 14.

types of customers and market participants being served, such as in workplace, residential, and fleet contexts, and may involve the driver(s) also being the developer or host of the charging infrastructure, this is not the case with public charging. Here, the end customer is the driver, and therefore the program should focus on and be designed around them and their needs, and not the various and differing interests of commercial market participants.

Indeed, one of the most significant and challenging barriers to increased EV adoption by drivers is the lack of adequate, reliable charging infrastructure, particularly public charging.<sup>4</sup> It is critical to understand this fundamental link between charging infrastructure visibility, availability, and EV adoption, as it can both constrain and slow EV adoption when scarce, or act as an EV adoption and market accelerator when prominent and adequately available.

Many drivers disqualify EVs from their purchasing/leasing considerations due to the lack of charging infrastructure and the resulting concern commonly referred to as range anxiety and as Xcel does in its petition. This specific concern and the lack of public charging infrastructure is consistently cited by drivers as a primary barrier to EV adoption. While the market is now seeing more EVs with longer ranges, many currently deployed EVs have batteries that can only support local driving, compounding this issue. Even when EVs with 200+ mile ranges become more fully widespread, this will put increased pressure on DC fast charging, which has particularly high costs to develop and a generally challenging business model. These challenging factors compound significantly in more remote areas such as those which Xcel intends to target.

With the lens pulled out, this particular underserved market state and stage, especially in rural areas, which currently should be considered a market failure, is a classic situation warranting public investment and the involvement of regulated monopolies. Unfortunately, a sustainable, competitive market in the deployment of public charging infrastructure is largely aspirational thus far, and is unlikely to arise prior to the adoption of a critical mass of electric vehicles. This is primarily due to a historic lack of a sustainable private market business case for the ownership and operation of public charging stations based on revenues from charging activities, and this has thus far resulted in a profoundly inadequate amount of private investment in such charging infrastructure. The unfortunate result is that the fundamental economics simply haven't supported sufficient private investment to adequately grow the infrastructure market to support current and future drivers and their adoption decisions.

Greenlots also highlights that the end-to-end utility owned investment approach proposed comes with an important focus on reliability. With this backbone network of charging infrastructure being under control and ownership of the utility, the expectation is that Xcel will appropriately value and extend the same level of reliability and safety to that infrastructure as it

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<sup>4</sup> International Council on Clean Transportation, "Emerging Best Practices for Electric Vehicle Infrastructure" p. iv. Available at: [https://www.theicct.org/sites/default/files/publications/EV-charging-best-practices\\_ICCT-white-paper\\_04102017\\_vF.pdf](https://www.theicct.org/sites/default/files/publications/EV-charging-best-practices_ICCT-white-paper_04102017_vF.pdf)

provides for all other utility services. Indeed, this leverages the core competencies of the utility with respect to ownership and maintenance of widely-dispersed, long-lived electricity-dispensing and metering equipment, and ensuring the safety and reliability of those assets. This is especially critical in rural areas, and where weather and other environmental factors heighten the need and value of reliability.

For this array of reasons, at this stage in the market, utility investment in charging infrastructure – including ownership and operation of charging stations – is an appropriate and necessary role for the utility to help break the market through these barriers, and accelerate the market across a number of key market segments, supporting competition, market transformation, and improving the environment for private investment.<sup>5</sup> For these reasons, the Company's plan to seed EV purchase decisions and support EV drivers and the development of an EV charging market with this modest, targeted investment in DC fast charging infrastructure in remote areas of its service territory should be applauded and supported by advocates of transportation electrification and EV equity, and as the Commission did in its approval of a similar petition last year by Otter Tail Power Company.<sup>6</sup>

Greenlots is additionally very supportive of the Company's proposed three-part rate for charging customers, utilizing an underlying rate structure based on rates approved for Xcel's Residential Time of Use (TOU) Pilot program,<sup>7</sup> resulting in rates that are intended to be comparable with those offered by other DCFC operators in the state. Indeed, "using a time-varying rate that charges customers more during on-peak times will recover the higher costs of producing and delivering electricity during on-peak times from the customers who use the electricity."<sup>8</sup>

Greenlots is encouraged that the Company has taken steps to ensure that customers see price signals associated with serving this load that reflect system and/or local conditions. All too often, in DCFC contexts in particular, price signals are not seen by drivers. The lion's share of the benefits associated with transportation electrification are directly linked to effective load management and grid integration considerations, and the rate schedule-related measures that Xcel has proposed are appropriate, sensible, and directly attributable to this fact.

Greenlots additionally supports the Company's request to defer operations and maintenance costs related to program marketing, outreach, and customer engagement in its existing EV Tracker Account, as the Commission has approved expanded use of this account in prior EV pilots.<sup>9</sup> In order to facilitate operations of the proposed chargers, Greenlots is also supportive of

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<sup>5</sup> See Natural Resources Defense Council, "Driving Out Pollution: How Utilities Can Accelerate the Market for Electric Vehicles", Section 2 "Utility Investment in Charging Infrastructure is Needed to Expand the Electric Vehicle Market". p. 7. Available at <https://www.nrdc.org/sites/default/files/driving-out-pollution-report.pdf>

<sup>6</sup> See October 27, 2020 Order in E017/M-20-181.

<sup>7</sup> Approved in E002/M-17-775, Rate Codes, A72, A74.

<sup>8</sup> Petition Attachment C, p. 18.

<sup>9</sup> See Residential EV Service pilot in Docket No. E002/M-17-817

any necessary waivers to Xcel's Section 6 tariff relating to Customer Wiring, Equipment, and Property.

**2. Should the Commission approve, modify, or reject Xcel Energy's request to accelerate its own fleet electrification?**

Greenlots is strongly supportive of Xcel's proposal to accelerate the planned electrification of its fleet, accelerating this from a ten-year plan to a two-year plan, and importantly leading by example in transportation electrification. These efforts to purchase 40 light-duty EVs for business purposes along with associated charging infrastructure will not only deliver lower emissions and improve the Company's impact on the environment in its service area, but it will also lower maintenance and fuel costs, as EVs tend to have lower overall cost of ownership compared to internal combustion engine vehicles, delivering additional value to Xcel's ratepayers the public. For these reasons, Greenlots supports this proposal while also encouraging the Company to further explore additional ways it can electrify its fleet, including its medium and heavy duty fleet.

**3. Should the Commission approve, modify, or reject Xcel Energy's rebate proposals for light duty vehicles, transit buses, and school buses?**

Greenlots appreciates this innovative and creative proposal to make EV adoption easier and more accessible for Minnesotans by helping to incentivize customer purchases of light-duty vehicles, electric transit buses, and electric school buses. As Xcel describes, "by pairing our education and outreach efforts with additional incentives to encourage customers to purchase EVs, we can encourage increased growth in EV adoption, which stimulates economic recovery while delivering substantial additional benefits. Increased EV adoption will not only benefit the customers who drive EVs, but it will also benefit other customers through downward rate pressure and all our communities through reduced emissions."<sup>10</sup>

**4. Are there other issues or concerns related to this matter?**

Standardization and interoperability are critical considerations in the development of public charging infrastructure, in creating positive customer charging experiences with EV drivers, in guarding against stranded assets, and in supporting competition and innovation in the EV charging product and services market. In line with the Commission's Order on April 21, 2021 approving Minnesota Power's Residential EV Charging program,<sup>11</sup> which stated that "...chargers under the program shall be third-party OCPP (Open Charge Point Protocol) certified", Greenlots encourages a similar specific third-party OCPP certification requirement for chargers procured or incentivized by Xcel as part of these program.

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<sup>10</sup> Petition Attachment C, p. 3.

<sup>11</sup> In docket no. E-015/M-20-638

With respect to payment interoperability and facilitating driver roaming, we suggest Xcel and the Commission consider requiring that chargers developed as part of the public DCFC program operate on networks that have and maintain OCPI-based roaming agreements with other networks. Such agreements allow members of one network to use, and be billed for using, chargers operated by another network, without having to become members of the second network. Networks that do not have established roaming agreements can create additional, unnecessary barriers and challenges to drivers using public charging infrastructure.

### **Conclusion**

Greenlots appreciates consideration of these comments, and we look forward to continued engagement in efforts supporting transportation electrification in Minnesota.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Erick Karlen', with a long horizontal stroke extending to the right.

Erick Karlen

Sr. Advisor, Policy & Market Development