STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

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September 30, 2020

In the Matter of a Commission Inquiry into Electric Vehicle Charging and Infrastructure

Docket No. E999/M-17-879

INITIAL COMMENTS OF FRESH ENERGY, MINNESOTA CENTER FOR ENVIRONMENTAL ADVOCACY, SIERRA CLUB, AND UNION OF CONCERNED SCIENTISTS

Fresh Energy, Minnesota Center for Environmental Advocacy, Sierra Club, and Union of Concerned Scientists (the "Clean Energy Groups" or "CEGs") submit these initial comments in response to the Commission's July 20, 2020 Notice of Comment Period.

Now more than ever, planning for transportation electrification is essential. Effective utility programs are necessary to both increase adoption of electric vehicles (EVs) – which will reduce Minnesota's greenhouse gas (GHG) emissions, better public health, and reduce household expenses – and to ensure that new EV charging loads are integrated efficiently with current and planned renewable energy generation. We commend the Commission for requiring Minnesota's investor-owned utilities to file annual Transportation Electrification Plans, which have provided valuable insight into the utilities' plans to support EV adoption in their service territories. We appreciate the opportunity to participate in this docket.

1) Planning for an electrified transportation future is more relevant and urgent than ever before

The rapid change between last year and this year underscores the need for near-term action to accelerate and plan for transportation electrification. In the past year, the political, economic, and technological landscapes have shifted dramatically, offering opportunity and a new urgency for swift deployment of EVs, alongside bracing challenges such as a forecasted state budget deficit of $2.4 billion next year where previously there had been a surplus.[1] These changes

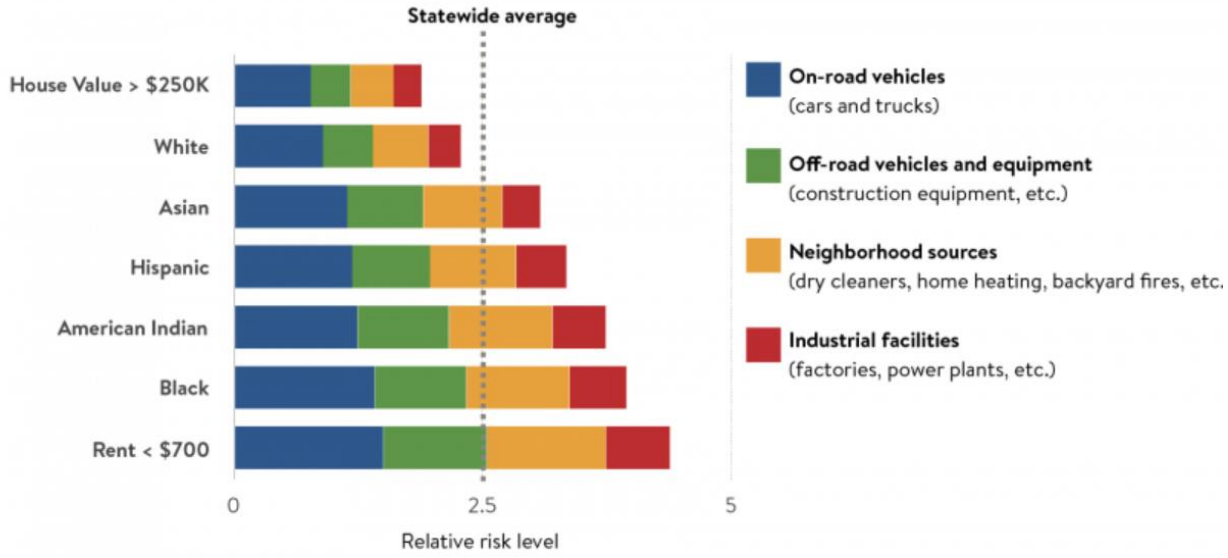
[1] Briana Bierschbach, *Star Tribune,* "Minnesota facing $4.7 billion shortfall in future budget fueled by pandemic." Published July 31, 2020 (Link)

highlight the increasingly important role utilities have in promoting and expanding EVs in the near-term, and bridging the gap in public investment and funding expected due to economic fallout from the COVID-19 pandemic.[2]

1.1. Securing clean air for those most impacted by air pollution is increasingly urgent in a global health crisis

This year's Transportation Electrification Plans cannot be assessed separately from what is happening with the COVID-19 pandemic, particularly when given that there is a heighted risk of morbidity and death from COVID-19 due to prolonged exposure to air pollution, to which transportation is a major contributor. A recent Harvard study found that people living in regions of the United States with high levels of air pollution are more likely to die of the virus than people who live in less polluted areas.[3] According to the study, even a small increase in long-term exposure to PM2.5 leads to a measurable increase in the COVID-19 death rate. This issue is particularly critical for lower-income and minority communities, who experience disproportionate exposure to air pollution from transportation (as seen in Figure 1 below) and who have also experienced higher mortality rates from the COVID-19 pandemic.[4] Now more than ever, the public health benefits of electrifying transportation are clear.

Figure 1: Air Pollution Risks are Unequal[5]



[2] *Ibid.* $4.7 billion state budget deficit forecasted for budget years 2022 and 2023.
[3] Xiao Wu, Rachel C. Nethery, M. Benjamin Sabath, Danielle Braun, and Francesca Dominici, *Exposure to Air Pollution and COVID-19 Mortality in the United States: A Nationwide Cross-Sectional Study*, April 24, 2020
[4] Shelley Francis, *Electric Cars, Frontline Communities, Air Pollution: COVID-19 Mortality*, April 16, 2020 (Link)
[5] Minnesota Pollution Control Agency, "Disproportionate impacts in Minnesota" web page. Retrieved Sept 30, 2020 (Link)

1.2. The trend towards electric vehicles is accelerating despite immense economic uncertainty and disruption

Electric vehicle adoption continues to grow rapidly, with 10,631 EVs registered in Minnesota as of June 2019.[6] And this growth continues despite the COVID-19 pandemic and resulting economic downturn: global EV sales in 2020 are expected to match the 2.1 million sold in 2019, despite an expected 15% decline in total passenger car sales.[7] In other words, electric vehicle sales are getting stronger while sales of conventional vehicles take a hit. In Minnesota, we can expect continued growth in adoption due to multiple factors: decreasing EV costs; automakers' plans to bring hundreds of new models to the market in the coming years; and the pending adoption of the Minnesota Clean Cars rule.

1.3. Equity must be built into all decision making and policies that support transportation electrification

Electrifying transportation is also an environmental justice issue. The Commission rightly recognized the importance of focusing on equity and environmental justice in its February 1, 2019 Order ("General EV Order") in this docket, which requires utilities to spell out how their plans and component programs support equity, and again in its July 20, 2020 Notice of Comment Period, which asked if proposed EV programs "achieve equitable outcomes for customers" and if there were "gaps" that the Commission should address[8]. It is well documented that lower-income communities experience disproportionate exposure to air pollution from transportation due to proximity to bus depots and highway and truck corridors.[9] According to the Minnesota Pollution Control Agency, while 32% of all Minnesotans are living with air pollution above risk guidelines, that percentage is much greater for certain communities: 46% for low-income communities and 91% for communities of color and indigenous communities.[10] This leads to increased instances of asthma and lung disease and can also lead to reduced cognitive performance and higher instances of learning disabilities.[11]

Clearly, not all Minnesota communities experience the same impacts from traffic-related pollution, and these disparate impacts result from a legacy of systemic racism in transportation planning. In the 1960s, the Minnesota Highway Department constructed I-94 through the African

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[6] Alliance of Automobiles Manufacturers (2019). *Advanced Technology Vehicle Sales Dashboard.* Data for BEV and PHEV in Minnesota. Retrieved September 29, 2020. (Link)
[7] International Energy Agency, *Electric car sales this year resist Covid-19's blow to global car market,* June 15, 2020. (Link)
[8] Minnesota Public Utilities Commission (PUC), *Notice of Comment Period,* docket E999/CI-17-879. (Link)
[9] Citizens Utility Board (CUB), *EV For All: Electrifying Transportation in Low-Income Communities*, 2020 at page 3 (Link)
[10] MPCA et. al, *The Air We Breathe*, July 2019, at page 9. (Link)
[11] *Id.* at 3

American Rondo community, destroying homes and businesses, disconnecting neighborhoods, and effectively dismantling a once-thriving community.[12] Centering equity in transportation electrification planning is critical to ensure that the communities most harmed by transportation-related decision making in the past stand to benefit from decisions made moving forward.

But centering equity is not restricted to the purview of the utilities. Additional examination of how to operationalize this principle within the Commission is warranted. **The Clean Energy Groups ask the Commission to consider how it itself might take action to center equity in its own decision making and operations.** There are no simple answers, yet consideration of the "how" is a welcome and important first step to possible subsequent procedural action by the Commission.

To support in this examination, the Clean Energy Groups offer a small set resources that elucidate the need and challenges to integrate equity effectively while also offering potential solutions for the Commission to consider or adapt for its own use.

The first and most robust is the "Opening Comments of the Greenlining Institute" filed August 21, 2020 in response to the California Public Utilities Commission (CPUC) Energy Division staff proposing a draft Transportation Electrification Framework.[13] The Greenlining Institute set out the historical context and present need for such a framework to not only reference equity but to embed it throughout the framework and subsequent proceedings. While the entire set of comments is offered as a useful resource to the Commission, the following sections stand out as being particularly relevant to our discussion here:

- **Section III. Operationalizing Equity: How to make equity real**, and
- **Section IV, Part B.** *CPUC should lead by example in developing an equity centered [Transportation Electrification Framework] that IOUs can use to craft their [Transportation Electrification Plans]*

The second is a resource closer to home. The Minnesota Pollution Control Agency (MPCA) has developed its own comprehensive frameworks and policies to address and incorporate environmental justice concerns into the agency's actions and responses pollution. As a result, MPCA has not only produced original research and analysis that other public entities and stakeholders may readily draw on, such as the information contained in this filing and cited to MPCA, it has also created a framework, policy, and an advisory board to guide it. While the entire body of work is worth consideration, we highlight a few key documents to review:

[12] Metropolitan Council, *Rethinking I-94: Engaging Communities to Improve the I-94 Corridor*, February 13, 2019. (Link)
[13] The Greenlining Institute, *Opening Comments of the Greenlining Institute on the Energy Division Staff Proposal for a draft Transportation Electrification Framework Chapter 6 "Equity,"* August 21, 2020. (Link)

- **MPCA Environmental Justice framework**,[14] completed in 2015 and which includes an accompanying implementation report that covers MPCA's activities related to the framework during 2015 and 2016
- **MPCA Environmental Justice Policy,**[15] a short policy drafted in 2012 to set the definition of environmental justice within the scope of the agency
- **MPCA Environmental Justice Advisory Group**[16] landing page, which outlines the purpose of the group and lists who currently serves

2) Xcel Energy

On August 12, 2020, Xcel Energy announced an ambitious vision supporting 1.5 million electric vehicles across its utility service territories by 2030, or roughly 20% of vehicles.[17] According to Xcel, this vision, if realized, could reduce GHG emissions by 5 million tons annually by 2030 while saving customers $1 billion annually from reduced fuel costs.[18] The announcement spans light-, medium-, and heavy-duty vehicles, and calls for increased partnerships "from policymakers, regulators, customers, automakers, and our communities."[19]

The Clean Energy Groups commend the Company for taking a clear and public stance on the importance of accelerating the transition to EVs for reasons of climate, health, and costs. What follows is an examination of the near-term actions needed to support such a vision. While Xcel Energy has demonstrated leadership in proposing programs to support residential EV charging, public charging infrastructure, and most recently multi-dwelling unit charging, other areas such as medium- and heavy-duty EVs require more attention, alongside expanding marketing and outreach to ensure that rapid increases in EV adoption and subsequent charging needs can be managed to reduce carbon emissions and put downward pressure on rates for all customers.

2.1 Opportunities to support medium and heavy-duty vehicle electrification are expanding in Xcel Energy's service territory

Just as light-duty vehicles represented the first frontier of electric vehicles, so medium- and heavy-duty vehicles represent the next, and in increasingly visible ways. On July 14, 2020, the governors of 15 states and the District of Columbia announced they had signed a collective

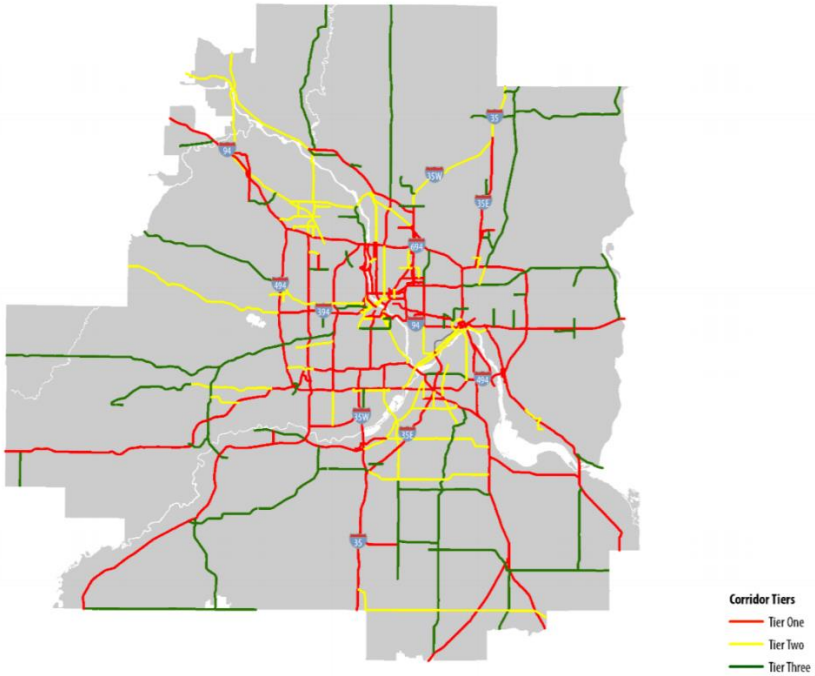
[14] MPCA, *Environmental Justice Framework,* Dec 17, 2015. (Link)
[15] MPCA, *Environmental Justice Principles and Practices,* October 11, 2012. (Link)
[16] MPCA, "MPCA Environmental Justice Advisory Group" webpage. Accessed Sept 30, 2020. (Link)
[17] Xcel Energy, "Xcel Energy's new electric vehicle vision to save customers billions while delivering cleaner air." Aug 12, 2020. (Link)
[18] *Ibid.*

[19] *Ibid.*

Memorandum of Understanding to zero out emissions from new of trucks and buses, with a goal that zero-emission vehicles account for 30% new sales by 2030 and 100% of new sales by 2050.[20] This came on the heels of California passing its Advanced Clean Trucks rule in June 2020, which requires an increasing number of zero-emission truck sales through 2035.[21] Battery vehicles are positioned to be the lead solution for achieving these policy aims, making deliberations over how best to support medium and heavy-duty EVs within the utility purview ever more pressing.

A key motivator for electrifying trucks and buses is to reduce the harm from diesel exhaust to communities sited along major truck and bus routes. These concerns extend to Minnesota, especially in the relatively dense Twin Cities metropolitan area, which Xcel Energy serves, and which houses a high number of major freight corridors. For instance, an urban freight study conducted by Minnesota Department of Transportation found that low-income populations in the Twin Cities were 20% more likely to be negatively impacted by heavy-duty vehicle traffic than non-low-income populations.[22]

Figure 2: Regional Key Truck Corridors, tiered in part by truck volume[23]



Source: CPCS analysis

[20] Natural Resources Defense Council, "15 States Take Historic Action on Transportation Pollution." July 14, 2020. (Link)
[21] Natural Resources Defense Council, "California Makes History with Clean Trucks Rule." June 25, 2020. (Link)
[22] Minnesota Department of Transportation, "Rethinking I-94: technical appendix 6: Urban Freight Study," at page 27. (Link)
[23] CPCS for Metropolitan Council, *Regional Truck Highway Corridor Study,* Aug 2017. Figure ES-3 at page vi. (Link)

Order Point 14.b of the Commission's General EV Order directs the utilities to identify and discuss a range of EV-related efforts, including those that would "assist in the electrification of vehicle fleets *with a focus on medium and heavy duty trucks and buses"* (emphasis added).

Xcel Energy notes that there are 9,048 light-duty EVs in its territories, alongside eight heavy-duty EVs which represent the electric transit buses operated by Metro Transit.[24] No medium-duty EVs are yet present. However, per Xcel Energy's own forecasts this will not remain true for long. By 2025, Xcel estimates between 222 and 667 medium-duty EVs will be in its service area, alongside 142 to 508 heavy-duty EVs.

These forecasts follow a growing trend of consumer-end use deliveries, i.e. "urban freight," which has experienced an acute uptick during COVID-19 pandemic and which often relies on medium-duty vans to perform its last-mile deliveries. Already there have been a slew of electrification commitments from major operators. This year alone has seen Amazon ordering 100,000 electric delivery vehicles, and UPS (which in 2018 already boasted 1,000 electric vehicles) placing its own order for 10,000 electric delivery vans.

The Minneapolis-St. Paul metropolitan area is headquarters to *eighteen* Fortune 500 companies, a high number relative to its size.[25] This number includes major retailers like Target and Best Buy, the latter of whom is already a member of Ceres' Corporate Electric Vehicle Alliance,[26] and consumer foods companies like General Mills and Land O' Lakes. These examples illustrate the unique opportunity Xcel Energy has in Minnesota to not only support and encourage companies' transitions to electric fleets, but also to prepare for the expanded EV charging infrastructure and managed charging programs that will be required to both service these fleets and ensure that such electrification is beneficial to the grid in terms of reducing GHG emissions and ratepayer costs.

To-date, Xcel Energy has been successful in engaging Metro Transit in its bus fleet electrification plans, which is responded to in more detail in Section 2.4 below. Xcel has also requested a formal modification to its Public Fleet Service Pilot to include private participants as part of docket E002/M-20-745 (i.e. COVID-19 Relief and Recovery proceeding) which is a good first step in supporting additional medium- and heavy-duty vehicle electrification. Formal discussion of that proposal will continue within that docket, but the Clean Energy Groups includes it as a note given its relevance to the topic of the Transportation Electrification Plans.

[24] Xcel Energy Transportation Electrification Plan filed for 2020 as part of docket E999/CI-17-789. Table 2 at page 10. Hereafter referred to as "Xcel TEP".
[25] USA Today, "Fortune 500 companies list: 1 out of 3 are located in just six major cities. " Nov 1, 2018. (Link)
[26] Ceres, "Corporate Electric Vehicle Alliance" webpage. Accessed September 30, 2020. (Link)

Medium- and heavy-duty vehicle electrification will continue to progress and evolve here in Minnesota. We suggest Xcel Energy continue to expand its program offerings beyond its Public Fleet Service Pilot and develop additional program proposals that support electrification of medium and heavy-duty vehicle fleets of all kinds through adequate infrastructure deployment, advisory and education services, and electricity rates, including public and private fleets, and on- and off-road vehicles.

2.2 Xcel Energy should proactively engage in Minnesota Pollution Control Agency's electric school bus pilot while finalizing its own plans for a V2G pilot

School buses are another type of heavy-duty vehicle that has demonstrated progress towards electrification, as outlined extensively by the Clean Energy Groups in our initial comments filed last year.[27] Our comments last year also discussed components to consider when designing a vehicle-to-grid (V2G) electric school bus pilot program, including "behind-the-meter" (i.e. non-grid connected) and "front-of-the-meter" (i.e. grid-connected) configurations. Unfortunately, no new details on Xcel's proposed electric school bus pilot were included in the Company' 2020 Transportation Electrification Plan, which only noted that "the Company is…working to determine program viability, including evaluating vendors and discussing opportunities with customers."[28]

Yet interest in electric school buses has only grown since Xcel's 2019 Transportation Electrification Plan, especially in Minnesota. In early 2020 the Minnesota Pollution Control Agency (MPCA) released the final program goals of Phase II funding under the Volkswagen Diesel Settlement. This included **$4.7 million** dedicated to replacing diesel school buses with electric ones, spurred in large part by strong public interest.[29] Such interest is motivated in part by a desire to protect school children, who, MPCA notes ,"face heightened exposure to diesel exhaust from the self-polluting nature of buses with their large doors opening and closing, and the tendency of buses to idle during loading and unloading periods," and who are "exposed to *5 to 15 times the levels* of particulate pollution than at nearby monitoring sites."[30] (emphasis added)

To assist with its electric school bus replacement program, MPCA launched a pilot program in August 2020 to place up to six electric school buses across Minnesota by fall 2022. Applications to participate in pilot program are due October 13, 2020 and per the stakeholder convenings in preparation for the pilot launch, MPCA has asked electric utilities to partner with applicants. Minnesota Power has heeded the call, summarizing in its 2020 Transportation Electrification Plan

[27] Docket No. E999/CI-17-879. Initial Comments of Fresh Energy, Minnesota Center for Environmental Advocacy, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists, filed July 31, 2019, page 4 – 5. (Link)
[28] Xcel TEP, at page 20.
[29] MPCA, "Phase 2 (2020 – 2023): Minnesota's plan for Volkswagen settlement funds (Fact Sheet)", Feb 2020. (Link)
[30] MPCA, "School bus retrofits and idle reduction" webpage. Accessed Sept 30, 2020. (Link)

its efforts to engage school bus manufacturers and operators in anticipation of MPCA's pilot program and stating that its role "would be as a partner in support of a customer proposal."[31]

The Clean Energy Groups urge Xcel Energy to follow Minnesota Power's lead and similarly partner with potential applicants for the MPCA pilot program, if it has not already done so. **The Clean Energy Groups also recommend that Xcel file its V2G pilot program by the next Transportation Electrification Plan filing date**, and include both a timeline for developing the pilot as well as key pilot considerations such as meter configurations.

2.3 Additional channels of marketing and outreach should be considered to shift more EV customers onto managed charging programs

There are 1,754 customers are on a managed charging program, which accounts for about 19.4% of all EVs in Xcel's service territory.[32] In its Transportation Electrification Plan filing, the Company summarizes its various efforts to increase customer engagement and interest in its existing managed charging programs, including upgrading its EV Advisor Tool and working with dealerships to provide potential EV owners details on Xcel's existing residential EV programs. While the implementation of Xcel's EV Home Service next year will no doubt assist in getting more customers to shift to off-peak charging, the Clean Energy Groups also recommend Xcel innovates in how it reaches customers. For instance, in addition to dealership outreach and online tools, Xcel could consider tracking increases in electricity use for customers and proactively reaching out to those customers to check if they have purchased an EV and if so, to educate and encourage them to join an existing residential EV program.

2.4. Xcel energy is making progress on addressing inequities in owning and operating electric vehicles through its Multi-Dwelling Unit program offering and support of electric transit buses

Xcel Energy filed its Multi-Dwelling Unit pilot proposal on September 10, 2020. The Clean Energy Groups commend the Company on designing a Multi-Dwelling Unit pilot program with broad stakeholder input, as evidenced by attendance at the Company's August 19, 2020 stakeholder workshop. Of particular interest is Xcel Energy's partnership with HOURCAR, a local nonprofit carsharing organization that has committed to electrifying its fleet over the coming years, and with whom Xcel Energy is working to provide electric carsharing services onsite at multi-dwelling

[31] Minnesota Power Transportation Electrification Plan filed for 2020 as part of docket E999/CI-17-789. Page 16. Hereafter referred to as "MP TEP".
[32] Xcel TEP, Table 3 at page 11

units, with a focus on serving affordable housing residents who may or may not own a personal vehicle. Full discussion on the pilot proposal will continue in docket E002/M-20-711.

Xcel also outlines the planning underway with Metro Transit to add charging infrastructure to a new bus facility that could support up to 100 electric buses,[33] which would be significant increase over the eight electric transit buses currently in use. The facility is also exploring storage and solar to assist in with electric bus charging, which could help ensure the increased electric load from more transit buses is managed to optimize renewable energy and reduce GHG emissions while also shifting load to off-peak, thereby avoiding the need for expensive grid capacity upgrades. These efforts, though in early stages, are supported by the Clean Energy Groups, for their adherence to beneficial electrification principles by optimizing grid use and minimizing costs to ratepayers while also decreasing transportation pollution and allowing non-EV owners the opportunity to use and benefit from electric vehicles.

3) Otter Tail Power

Otter Tail Power (OTP) filed its Electric Vehicle Charging and Infrastructure Pilot Program earlier this year under docket E017/M-20-181 and that program was orally approved at the Commission hearing on the matter on August 27, 2020. The proposal expanded on OTP's intentions outlined in 2019's Transportation Electrification Plan to build out its public charging infrastructure and expand its load control program to include EV charging, which would allow those customers to benefit from off-peak rates without the need of a second service installation. OTP uses its 2020 Transportation Electrification Plan to reiterate the merits of its current EV pilot proposals, noting that once they have "gained maturity" OTP "plans to expand its offerings in both residential/multi-unit, business, and fleet areas."[34] The Clean Energy Groups find this a reasonable course of action considering OTP's role as a rural service provider whose territory has only 60 EVs and is expected to have lower rates of EV adoptions over the next few years.[35]

3.1. Technology exists to support EV charging programs at multi-unit dwellings

Otter Tail Power notes in its filing that while charging programs for multi-unit dwellings are not a part of its current EV proposal, there is potential and interest to expand future offerings to such residences "provided suitable charging hardware is available."[36] Such suitable options already exist, as most evidenced by Minnesota Power's recent filing in docket E-015/M-20-638. This filing includes a proposal for a residential EV charging rewards pilot that utilizes existing hardware to

[33] Xcel TEP at page 21.
[34] Otter Tail Power Transportation Electrification Plan filed for 2020 as part of docket E999/CI-17-789. Page 16. Hereafter referred to as "OTP TEP"
[35] OTP TEP at page 6.
[36] *Id.* at page 8.

track and incentivize off-peak charging among all EV owners, including those living in single-family homes or multi-unit dwellings. As Minnesota Power describes it in their filing,

> *Minnesota Power customers that participate in the EV Charging Rewards Pilot Program would also receive a C2 device (GPS data-logging telematics device) that can be installed in their vehicle by simply inserting the device into the vehicle's diagnostics port. The C2 device connects directly to the [electric] vehicle, which provides a reliable connection to all types of charging data. Using GPS and geo-fencing tools, charge events can be classified by utility service territory. Data collected from the vehicle is processed on the device and would be securely transmitted back to determine the rewards available to the customer.*[37]

Additional advances in electric vehicle technology itself will also expand options to manage charging without the need of a smart charger. As the Clean Energy Groups note in their initial comments to Minnesota Power's filing,

> *While smart chargers are one tool for load management, automakers have been doing pilots with their Open Vehicle Grid Integration Platform (OVGIP)*[38] *where "smart" charging may take place within the EV itself using telematics to communicate to the utility. While not available outside of pilots, OVGIP appears to be on the path toward commercialization. We encourage [utilities] to also consider OVGIP or other telematics-based approaches …for future direct and indirect load management programs.*[39]

Finally, Xcel Energy recently filed its multi-unit dwelling program under docket E-002/M-20-711, which outlines vastly different options to address charging at multi-unit dwellings.

Both programs may be useful to OTP to follow and evaluate as it considers expanding its EV program offerings to include multi-unit dwellings in the coming years.

4) Minnesota Power

Minnesota Power (MP) filed its residential EV charging rewards and rebates pilot program soon after its 2020 Transportation Electrification Plan. While note a formal part of the Transportation Electrification Plan, the filing nonetheless deserves commendation. The Clean Energy Groups

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[37] Minnesota Power Petition for Approval of residential Electric Vehicle Programs, docket E015/M-20-638. July 31, 2020 at page 18. (Link)

[38] OVGIP pilots exist including Xcel Energy's and Southern California Edison's. Also see this presentation by Electric Power Research Institute (EPRI) and seven automakers. EVs and regular cars today often have telematics for vehicle-to-vehicle communications, infotainment systems, GPS, and other features. Managed charging is added to these existing telematics functions in OVGIP so that communications is directly to the utility, load serving entity or to a cloud aggregator without communicating to the charging station.

[39] Initial Comments of Clean Energy Groups on docket E015/M-20-638, at page 11. (Link)

have offered full comments on the proposal in the assigned docket, E015/M-20-638. Comments on additional aspects of Minnesota Power's 2020 Transportation Electrification Plan follow.

4.1. Utility participation in electric school bus pilot program is crucial to its success

Minnesota Power notes in its filing the "great opportunity" electric school buses pose, both in terms of advancing transportation electrification and serving as grid assets during off-use periods.[40] MP then goes on to outline its efforts to date in engaging in MPCA's electric school bus pilot program design (as introduced earlier in these comments) and states it has "actively engaged with a large provider of school bus operations in the Duluth area and an electric bus manufacturer to explore options for applying [to the MPCA electric school bus pilot program] to bring an electric school bus to the region."[41]

Not only is this engagement attentive to MPCA's request for utilities to partner with pilot applicants, it also serves to advance medium and heavy-duty vehicle electrification efforts as stipulated under Order Point 14.b.iii of the Commission's General EV Order. **We commend Minnesota Power's participation to-date in MPCA's electric school bus pilot program planning**. We look forward to seeing if Minnesota Power does partner with an applicant ahead of the October 13, 2020 pilot application deadline. If successful, we ask Minnesota Power to consider incorporating V2G demonstration or evaluation into its joint application.

4.2. Transit buses are an important component of electrifying heavy-duty vehicles

Transit buses are well-suited to lead the first wave of heavy-duty electrification, due in part to battery electric vehicle availability, compatibility of routes with charging, and associate benefits to air quality improvements.[42] Electric utilities are similarly well-suited to assist in this transition, as evidenced by Xcel Energy's expanded efforts with Metro Transit referenced in Section 2.4 above.

Minnesota Power is "aware of the Duluth Transit Authority's seven electric transit buses,"[43] of which six are part of a federal and state-funded demonstration pilot,[44] and has implemented a commercial EV rate to support these buses. However, there remains an opportunity for additional partnership with Duluth Transit Authority (DTA), for instance to support conversion of the demonstration project into a permanent implementation.

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[40] MP TEP at page 16.
[41] *Ibid.*
[42] National Renewable Energy Laboratory, *Financial Analyses of Battery Electric Transit Buses,* June 2020 at page 1. (Link)
[43] MP TEP page 7
[44] Duluth News Tribune, "Status update on electric buses in Duluth? It's complicated," July 5, 2019. (Link)

We encourage Minnesota Power to consider how it can best support both DTA and other transit providers in its service territory in their transitions to battery electric buses, with a focus on ensuring demonstrations of such vehicles are successful and lead to permanent and/or expanded use of battery electric buses in transit fleets.

5) Conclusion and Recommendations

We thank the Commission for the opportunity to review and provide comments on these Transportation Electrification Plans. With transportation electrification evolving quickly, maintaining annual filing of these plans not only provides stakeholders valuable insight into these utilities' preparations for an electric future, but also an opportunity for us to weigh in and contribute to the discussion.

We recommend the Commission approve the plans with the following modification:

- Require Xcel Energy to file a proposal for an electric school bus pilot that demonstrates vehicle-to-grid capabilities by or before the 2021 Transportation Electrification Plan filing date

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CERTIFICATE OF SERVICE

I, Anjali Bains, hereby certify that I have this day, served a copy of the following document to the attached lists of persons by electronic filing and electronic mail.

Initial Comments of Fresh Energy, Minnesota Center for Environmental Advocacy, Union of Concerned Scientists, and Sierra Club

Docket No. E999/M-17-879

Dated this 30th day of September 2020

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