



**April 22, 2020**

**Tacoma Public Utilities  
P.O. Box 11007  
Tacoma, WA 98411**

**Re: Climate Solutions comments on Tacoma Power's Transportation Electrification Strategic Plan and Action Plan**

Dear Cam LeHouillier,

Climate Solutions thanks you for the opportunity to submit comments and recommendations on Tacoma Power's Transportation Electrification Strategic Plan and Action Plan. Climate Solutions is a clean energy nonprofit organization working to accelerate clean energy solutions to the climate crisis. The Northwest has emerged as a hub of climate action, and Climate Solutions is at the center of the movement as a catalyst, advocate, and campaign hub.

Tacoma has long recognized the importance of reducing its greenhouse gas emissions, adopting a goal of 80% reduction from 1990 levels by 2050 when it adopted its original Climate Action Plan in 2008.<sup>1</sup> More recently, the City adopted a climate emergency resolution, affirming Council support for initiatives to reduce emissions in alignment with these goals.<sup>2</sup> The transportation sector is responsible for the largest share, 71%, of Tacoma's greenhouse gas emissions and other toxic pollutants, making electrification of transportation a critical component of addressing climate change and air quality both in Tacoma and throughout Washington State.<sup>3</sup> Utilities are uniquely positioned to catalyze electric vehicle deployment through strategic investments in electric vehicle supply equipment and other services that facilitate widespread transportation electrification. Given customers' high trust in utilities, providing education and resources will also help accelerate the transition to cleaner transportation powered by clean electricity.

Climate Solutions is very supportive of Tacoma Power's decision to use the authority clarified under Substitute House Bill 1512 to create and implement a Transportation Electrification Plan. We are excited about the scope of both the Action Plan and Strategic Plan, and would encourage their adoption soon given that the benefits of implementing these plans will be significant. We also have some suggestions on how to improve upon or implement these plans which we hope will be considered in addition to the current plans' content. These recommendations are described in detail below.

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<sup>1</sup> City of Tacoma, "Tacoma's Climate Action Plan." <https://cms.cityoftacoma.org/enviro/sustain/ClimateActionPlanJuly2008.pdf>.

<sup>2</sup> City of Tacoma, "City Council Approves Climate Emergency Resolution." [https://www.cityoftacoma.org/in\\_the\\_news/city\\_council\\_approves\\_climate\\_emergency\\_resolution](https://www.cityoftacoma.org/in_the_news/city_council_approves_climate_emergency_resolution).

<sup>3</sup> City of Tacoma, "Community and Government Operations Greenhouse Gas Emissions Inventory." <https://cms.cityoftacoma.org/sustainability/CityofTacoma-GreenhouseGasEmissionsUpdateReport2016.pdf>

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## Comments on the Strategic Plan

### *Valuing transportation electrification*

In its Transportation Electrification Strategic Plan, Tacoma Power is suggesting using the Ratepayer Impact Measurement (RIM) test to assess if a product or program is a good utility investment. However, a RIM test does not evaluate all costs or benefits stemming from a particular program or product. At the same time, different programs and products may interact with each other such that their ratepayer and other impacts differ when viewed in combination rather than as separate programs. Many elements of transportation electrification are impacted by scale and by adoption elsewhere. For example, installing public chargers grants visibility that may help a potential electric vehicle purchaser overcome range anxiety and play a role in their decision to buy an electric vehicle, even if they never use those particular chargers. Therefore, we suggest also examining program interactions and ensuring that the benefits from programs that amplify the impacts of other programs be quantified and prioritized.

Climate Solutions strongly suggests the broader social impacts and the public interest are considered in order to better prioritize projects given limited resources and/or capacity. The Washington State Legislature, in the Clean Energy Transformation Act, stated:

*the public interest includes, but is not limited to: The equitable distribution of energy benefits and reduction of burdens to vulnerable populations and highly impacted communities; long-term and short-term public health, economic, and environmental benefits and the reduction of costs and risks; and energy security and resiliency.<sup>4</sup>*

Programs that allow the benefits of transportation electrification to be more widely and deeply felt in environmental, economic, and health terms across populations, and especially by highly impacted communities, should be prioritized as a part of Tacoma Power's current and upcoming Transportation Electrification Action Plans. We believe there are many programs and products that will achieve these aims and look forward to Tacoma Power pursuing them.

In addition to prioritizing projects that best benefit the public interest, we encourage Tacoma Power to continue to take advantage of partnership opportunities, grants, and other ways that would create additional benefit. Doing so is mentioned in part under the Guiding Principle, "Be responsible with utility finances and assets." This could include jointly applying for transit electrification grants with other agencies, partnering with local non-profits to ensure programs are structured per community wants and needs, and engaging with local businesses to reduce their barriers to electrifying their fleets. There are many possibilities, and we believe that taking advantage of these opportunities will help Tacoma Power expand its impact.

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<sup>4</sup> RCW 19.405.040. <https://app.leg.wa.gov/RCW/default.aspx?cite=19.405.010>.

### *Demand Management*

In addition to considering the public interest, we encourage Tacoma Power to also ensure that demand management, such as peak load curtailment and load shifts to off-peak times, is integrated into all programs. Washington’s Deep Decarbonization Pathways Study found that the share of energy coming from the electricity sector could more than double as we electrify current uses of fossil fuels.<sup>5</sup> As Washington moves forward with decarbonizing and electrifying the transportation sector, it is important that utilities are able to manage peak demand and avoid new investments in fossil fuel resources as we transition to a 100% clean energy grid. Therefore, load management strategies to avoid large increases in peak demand should be a critical component of utility strategies to electrify the transportation sector. Even in cases where an individual utility would experience minimal impacts from increased electrification, well managed loads by one utility will contribute to broader system flexibility and ease regional resource adequacy impacts, as well as showcase overall best practices. Programs that can incorporate demand management strategies, or pilots to determine best practices in managing load in a given context, should be prioritized as a part of Tacoma Power’s programming.

### *Guiding principles*

The Transportation Electrification Strategic Plan outlines guiding principles that will guide the development and delivery of related programs. Climate Solutions is in broad agreement with these principles. We also want to draw attention to a couple of items that we believe are particularly important.

Under the principle “Help customers achieve the benefits of transportation electrification,” underserved communities are specifically highlighted as being able to benefit both directly and indirectly from transportation electrification. We agree, but in order for these benefits to accrue, communities should be involved in the decision-making process for determining what programs that would directly benefit their programs would look like. Obtaining community trust and buy-in is crucial for these programs to succeed and provide benefits. The principle description mentions collaboration; we would like this to be emphasized in program development.

This principle also lists commercial fleets and heavy-duty vehicles as a focus, given their outsized contribution to harmful air pollution. Underserved communities disproportionately bear the brunt of this pollution and the related harmful health impacts, as shown on the Washington Environmental Health Disparities Map.<sup>6</sup> The connection between equity and heavy-duty electrification is clear, and it will be important to pursue projects that will alleviate long-standing harms. We call attention to these items since we believe that they must be considered as a part of program planning, community engagement and feedback, and implementation in order for the benefits to be equitably felt.

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<sup>5</sup> Evolved Energy Research, “Deep Decarbonization Pathways Analysis for Washington State.”

[https://www.governor.wa.gov/sites/default/files/Deep\\_Decarbonization\\_Pathways\\_Analysis\\_for\\_Washington\\_State.pdf](https://www.governor.wa.gov/sites/default/files/Deep_Decarbonization_Pathways_Analysis_for_Washington_State.pdf).

<sup>6</sup> Washington Environmental Health Disparities Map. <https://fortress.wa.gov/doh/wtn/WTNIBL/>.

## Comments on the Action Plan

### *Education and outreach*

Tacoma Power has an important role to play in educating its customers about transportation electrification, thereby encouraging uptake of these technologies. Tacoma Power already has an established relationship and frequently communicates with its customers. Public opinion research commissioned by Climate Solutions in December 2017 found that a large majority of Washingtonians and specifically Pierce County residents had a favorable view of their electric utility. This means that utilities have a particular opportunity to educate their customers given they are favorably-viewed, trusted sources of information. Given their importance, we encourage Tacoma Power to be ambitious in its education programs.

As described in the Action Plan, Tacoma Power has already created and implemented education and outreach programs that have led to electric vehicle uptake among its customers, notably in its work with car dealers. We are supportive of Tacoma Power offering a second such “Electric Vehicle Program” with dealers and we also encourage further efforts that would engage with dealerships. According to research done by Cox Automotive, the dealer had a strong influence on almost three-quarters of decisions to purchase an electric vehicle. At the same time, customers expect dealers to offer support such as detailed cost comparisons, charger maps, and assistance with arranging home charger installation—items that dealerships are rarely offering currently.<sup>7</sup> There is an opportunity for Tacoma Power and dealerships to collaborate on providing customers these resources that will help them feel more comfortable purchasing an electric vehicle.

### *DC fast charging*

Public charging stations play an important role in advancing electric vehicle adoption, not only because they provide a needed resource, but also because they provide more visibility for the technology and assurance that charging is available, alleviating anxiety for potential electric vehicle purchasers. As electric vehicles become more accessible, the infrastructure to support them must as well—especially for those who do not have the ability to charge at home. Experts believe that, as more people utilize electric vehicles, the ratio of these vehicles to public charging stations should be between ten and twenty electric vehicles per station.<sup>8</sup>

Tacoma Power should help provide the visible resource of public fast charging by working with partners as detailed in the Action Plan. We would also suggest that gas stations may be an interesting partnership to pursue since siting public chargers at these businesses would provide an element of routine to new electric vehicle drivers, would be a visible site for those who do not currently own an electric vehicle, and would potentially bring customers to partnering businesses. We encourage Tacoma Power to explore potential partnerships like this to

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<sup>7</sup> Cox Automotive, “Evolution of Mobility: The Path to Electric Vehicle Adoption.” <https://d2n8sg27e5659d.cloudfront.net/wp-content/uploads/2019/08/2019-COX-AUTOMOTIVE-EVOLUTION-OF-MOBILITY-THE-PATH-TO-ELECTRIC-VEHICLE-ADOPTION-STUDY.pdf>.

<sup>8</sup> EVAdoption, “What is the ‘Minimum Acceptable’ Ratio of EVs to Charging Stations?” <https://evadoption.com/what-is-the-ideal-ratio-of-evs-to-charging-stations/>.



ensure that DC fast charging is accessible to those who need it in Tacoma, and to more broadly provide visibility for electric vehicles.

It is also important to ensure that the community is engaged and collaborates on determining where these chargers will be sited. Not only will it be important to site them in areas where they will be visible, but it will be important to place them in areas where they will be convenient to use, particularly for people who do not have charger access at home, for on-demand Transportation Network Company drivers, and for people traveling, as a few examples. Additionally, community engagement will be important to ensure that electric vehicle infrastructure is accepted and viewed positively, rather than rejected, by the community. Maintaining positive perception, easy access, and good community relationships is crucial for long-term success.

#### *Campus charging and fleet transition*

It is important for Tacoma Power to demonstrate to other entities the benefits of transportation electrification through its own actions. We support the utility in being ambitious about electrifying its fleet and providing the requisite charging infrastructure for operations and for employees who drive to work.

We would also encourage Tacoma Power to engage with the City of Tacoma on similar initiatives for city-owned vehicles and for charging infrastructure at city buildings. Further, fleet electrification should not be limited to public entities and we would support programs that help businesses electrify their fleets. This may be included in Action 10, “Identify potential commercial and industrial end-users of electrified transportation and seek opportunities to understand and address their obstacles toward adoption,” but it is not entirely clear if commercial fleets consisting of passenger vehicles are part of the intent.

Working with Transportation Network Company drivers to electrify is another important fleet electrification opportunity. Often drivers cannot afford the upfront cost, but given the lower cost of fueling electrification and the high mileage of these vehicles, drivers would very quickly recoup costs as long as charging is available to them (there is a clear connection to DC fast charging programs mentioned above). Therefore, we recommend that Tacoma Power work on electrifying its own fleet as it simultaneously addresses other fleet electrification opportunities, especially those that lead to amplified benefits where programs are pursued in conjunction. We also suggest that demand management strategies and technologies are incorporated into these programs.

#### *Electric vehicle charger pilot*

Creating, offering, and studying the impacts of a time-of-use rate is extremely important and we are glad to see this being considered as a part of a discounted or free charger program. As transportation electrification increases, we will see more demand on our system and want to ensure that this demand is effectively managed to protect regional resource adequacy and prevent unnecessary resource development in the future. For this reason, we encourage the inclusion of demand management into all programs, including this pilot.

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### *Split incentive problem*

The inability to charge an electric vehicle at one's residence is a significant barrier to electric vehicle adoption. However, many people may not have access to parking where a charger may be sited, or, if they rent, they do not have the ability to install a charger. Meanwhile, building owners may be concerned about increased electricity usage. We appreciate Tacoma Power's interest in addressing this split incentive. We encourage the utility to incorporate demand management into this program as well. We also think this would be an opportunity to partner with affordable housing entities, thereby providing direct benefits of electrification to lower-income residents.

### *Transportation electrification at the Port of Tacoma*

Working with the Port of Tacoma on electrification is critical due to their outsized impact in terms of electricity use and in terms of air pollution stemming from Port operations. Climate Solutions is very supportive of the utility partnering with the Port to switch from carbon-based fuels to clean electricity for ocean-going vessels, trucks, cargo-handling equipment, harbor vessels, and so forth.

An important consideration in developing programs is engaging with Port workers. Many work as their own owner-operators and thus own their own equipment. Therefore, programs must be carefully tailored to ensure that workers benefit from them rather than bear financial burdens. Programs that would help workers upgrade to electric drayage trucks without bearing those burdens, for example, would provide benefits both to workers' finances and health, the health of the surrounding community, and the climate. We therefore encourage the utility to engage Port workers on how transportation electrification could benefit them and what barriers must be first addressed.

### *Assisting school districts*

Climate Solutions is excited to see Tacoma Power continuing its work of assisting school districts in electrifying their bus fleet, especially after the success of the first electric school bus deployment by Franklin Pierce School District. In addition to their climate benefits, electric school buses protect children from harmful air pollution that they are particularly susceptible to given their age. One study found that children inside of a diesel school bus may be exposed to as much as four times the level of toxic diesel exhaust as someone riding in a car ahead of the bus--pollution that puts them at significant cancer risk.<sup>9</sup> There are other benefits as well: for example, bus drivers have credited the quiet electric buses with reducing their stress levels.

We not only encourage Tacoma Power to continue this work, but to utilize the ensuing success stories as an educational opportunity for other districts and entities. Sharing these stories will help others realize the wide-ranging benefits of transportation electrification as well as showcase that the technology is available and within reach today.

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<sup>9</sup> Gina M. Solomon, et al., "No Breathing in the Aisles: Diesel Exhaust Inside School Buses."  
<https://www.nrdc.org/sites/default/files/schoolbus.pdf>.

### *Working with transit agencies*

Working with transit agencies to electrify their fleet is another important program offering, as well as an opportunity to explore how to best integrate charging of heavier-duty vehicles onto the grid. Demand management must be considered as a part of this program, and we encourage Tacoma Power to work with transit agencies to determine rate structures and other management techniques that are mutually beneficial. In addition, the electrical infrastructure for larger customers will likely often require capacity upgrades or extensions. Tacoma Power should be a ready and willing partner in this regard for transit agencies and other heavy-duty customers.

### *Commercial and industrial end-users of electrified transportation*

As mentioned above, fleet electrification and electrification of medium- and heavy-duty vehicles is a significant opportunity, since these vehicles are one of the largest sources of poor air quality that leads to negative health impacts, particularly in low-income and vulnerable communities. In addition to working with school districts, transit agencies, and the Port, we encourage Tacoma Power to explore other opportunities for electrifying larger vehicles, such as garbage trucks and delivery vehicles. As prices for electric models decline, it is reasonable to assume that, given the significant operational cost savings, these vehicle types will become more common. Utility programs and rate designs tailored towards medium- and heavy-duty electrification will be essential to ensuring broad grid benefits are realized, and utilities avoid unnecessary upgrades to the grid, instead receiving grid benefits from controlled use patterns.

Rate structures that effectively encourage off-peak charging may be different for heavier vehicles, compared to light-duty electric vehicles. Alternative components of rate design beyond the price of energy, such as non-coincidental demand charges and line extension policies, often impede large-scale deployment of heavy-duty electrification rather than incentivize it. Climate Solutions strongly recommends that Tacoma Power incorporate related pilot programs into this action item in order to determine the best demand management strategies for different contexts. Electrification of medium- and heavy-duty vehicles can provide tremendous benefits to community health and to the grid, if managed well.

## **Conclusion**

Thank you again for the opportunity to provide comments on Tacoma Power's Transportation Electrification Strategic Plan and Action Plan. Climate Solutions greatly appreciates the efforts of the utility in developing these plans to increase the adoption of widespread transportation electrification. We support the adoption of both the Strategic Plan and the Action Plan, and hope this will happen in the very near future. We also recommend incorporation of the above suggestions as programs are being prioritized and implemented. Specifically we believe the following are important overarching goals:

- Consider broader social impacts and the public interest when selecting and prioritizing programs to implement
- Closely partner with community organizations to determine community barriers, needs, and desires related to transportation electrification

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- Ensure that low-income and vulnerable communities benefit directly and indirectly from programs and play a role in shaping programs
- Incorporate demand management into all programs
- Emphasize electrification of medium- and heavy-duty vehicles
- Continue providing education and outreach to customers
- Incorporate community feedback and learnings from implementation into programs in an iterative process

We are excited by the significant opportunity that transportation electrification poses in reducing pollution and maximizing grid efficiencies, and believe utilities will play a significant role in the transformation of our transportation sector. We look forward to further engagement as these programs are implemented and as new programs are created under future Action Plans.

Sincerely,



Leah Missik  
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Climate Solutions



Senior Policy Manager  
Climate Solutions