



September 16, 2020

Mr. Mark Johnson
Executive Director and Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
Olympia, WA 98503

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COMMISSION

Re: Climate Solutions comments on Docket UE-200607, Avista's Transportation Electrification Plan

Dear Mr. Mark Johnson,

Climate Solutions thanks you for the opportunity to provide comments on UE-200607, Avista's Transportation Electrification 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.

The transportation sector is responsible for the largest share of both Washington and Idaho's greenhouse gas emissions and other toxic pollutants, making electrification of transportation a critical component of achieving Washington's statutory greenhouse gas limits and addressing climate change and air quality in both states.^{1,2} 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 programs, education, and resources will also help accelerate the transition to cleaner transportation powered by clean electricity.

Climate Solutions is very supportive of Avista's proposal to implement this Transportation Electrification Plan and we urge its approval. We are excited about its scope and believe the benefits of implementing this plan will be significant. We also have some suggestions on how to augment or implement programs in the plan which we hope will be considered by Avista during program development and implementation, and by the UTC as it evaluates future transportation electrification proposals. Specifically, we want to emphasize the importance of incorporating demand management into all programs, close partnership and collaboration with community organizations, flexibility and an iterative process, addressing barriers to medium- and heavy-duty electrification, and ensuring low-income and vulnerable communities experience both direct and indirect benefits from electrification.

¹ Washington Department of Ecology, "2017 greenhouse gas data." <https://ecology.wa.gov/Air-Climate/Climate-change/Greenhouse-gases/2017-greenhouse-gas-data>.

² Idaho Department of Environmental Quality, "Greenhouse Gases." <https://www.deq.idaho.gov/air-quality/air-pollutants/greenhouse-gases/>.

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General comments

According to numerous greenhouse gas reduction pathways studies (see the “Deep Decarbonization Pathways Analysis for Washington State” and “Meeting the Challenge of Our Time: Pathways to a Clean Energy Future for the Northwest”), on-road transportation must be nearly completely electrified, relying on power from a clean grid, by 2050 in order to meet greenhouse gas reduction goals. In addition to this imperative, the electrification of transportation has numerous health and economic benefits. Currently, over 1,000 Washingtonians die annually as a result of air pollution—much of which would be eliminated by switching to electric vehicles.³ And as Avista’s plan notes, “if all light-duty vehicles were electric, this would result in regional savings of over \$1 billion per year.”

As the plan correctly states, due to electric vehicles reaching cost parity in the next few years, we will see accelerated growth starting as early as 2023. Washington already has the second highest rate of electric vehicle penetration, and penetration will continue to grow as we achieve cost parity.⁴ It is critical that utilities take a lead role in planning for the transition to electrification in order to maximize customer benefits of electrification and minimize potential impacts to the grid. In order to support high levels of electric vehicle adoption, the groundwork in terms of electric vehicle supply equipment (EVSE), education, demand management strategies, equitable access, and more must be laid now. Avista is rightly focusing on near-term actions to support transportation electrification, and we encourage ambition in order to assure that the region benefits as much as possible from this shift.

Given the rapidly changing technology landscape, we strongly suggest that plans are iterative and can be reevaluated and adjusted during the evaluation for the mid-year reports. A lot can change in five years in the transportation electrification sector, and we want to ensure that Avista’s programs and plans can adjust to a changing landscape. Since utility support is so important for the advancement of transportation electrification, we encourage frequent plan iteration and updates to ensure it is updated in alignment with shifting contexts. We are appreciative of the reporting metrics that Avista has proposed, though we suggest adding a metric regarding stakeholder engagement.

Guiding Principles

Climate Solutions is in broad agreement with the guiding principles listed in the draft plan. We would like to specifically emphasize and comment on three of the principles listed.

Grid integration and net benefits

We are glad to see that grid integration that provides net benefits for all customers is listed as a principle. Washington’s Deep Decarbonization Pathways Study found that the share of energy coming from the electricity

³ Puget Sound Clean Air Agency, “Air Pollution & Your Health.” <https://pscleanair.gov/161/Air-Pollution-Your-Health>.

⁴ U.S. Department of Energy Alternative Fuels Data Center, “Electric Vehicle Registration Counts by State.” <https://afdc.energy.gov/data/10962>.

sector could more than double as we electrify current uses of fossil fuels.⁵ 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 under the Clean Energy Transformation Act. As a part of this transition, utilities will need to work to integrate the variability of renewables and electrification.

In determining the net benefits stemming from programs, and in prioritizing programs, we encourage Avista to look at benefits comprehensively. In addition to evaluating the economic impacts to ratepayers, Climate Solutions strongly suggests the broader social impacts, the social cost of carbon, and the public interest are considered in order to better select and prioritize projects. 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.*⁶

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 and these wide ranges of benefits should be evaluated.

Cost-effective, integrated management

Load management strategies to avoid large increases in peak demand should be a critical component of utility strategies to electrify the transportation sector. As the draft plan notes, Avista found that each electric vehicle without managed charging presents net benefits, but with managed charging, those benefits are 28% greater. 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. Therefore, we strongly agree with including demand management into all program offerings under this plan.

We are extremely supportive of Avista’s plan to offer a pilot commercial TOU rate starting next year, and to follow that with a residential TOU rate pilot, among other demand management strategies listed. As the plan notes, demand charges are a noted impediment to electrification, particularly of larger, commercial vehicles and fleets, and replacing these with a TOU rate would greatly assist customers in transitioning their fleet and reducing the pay-back period for electric vehicle purchases. Traditional rates can in fact eliminate financial benefits from electric vehicle ownership, preventing customers from experiencing the potential financial, health,

⁵ 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.

⁶ RCW 19.405.040. <https://app.leg.wa.gov/RCW/default.aspx?cite=19.405.010>.

environmental, and social benefits mentioned above. Avista’s pilot TOU offering will be a crucial tool in enabling electric vehicle adoption and for studying best rate practices for transportation electric vehicles.

Partner and collaborate with key stakeholders

Working with a variety of different stakeholders that bring unique perspectives will be crucial for achieving widespread electrification of electrification. We would like to particularly highlight the importance of partnering with organizations who have strong community ties, a high level of trust within the community, and those that are identified as highly impacted communities within Avista’s service area. The Clean Energy Transformation Act clearly states that all customers must benefit from the transition to clean energy, and it is important that this sentiment also apply to utility transportation programs as well. Therefore, communities should be involved in the decision-making process for determining what programs that would directly benefit them would look like. We are aware that Avista has already developed strong partnerships with community service organizations in its area and we would strongly encourage these partnerships to be further fostered and expanded. The support of this Transportation Electrification plan from service organizations that Avista has partnered with is a testament to the importance and effectiveness of this work. Given that Avista will be spending up to 30% of transportation electrification funding on community and equity-related programs, it is extremely important that these programs are well-designed so they have the desired impact; doing so will require partnerships and collaboration with those who have deep community ties and can advise on what will be beneficial and popular in the community. Obtaining community trust and support is crucial for transportation electrification programs to succeed and provide benefits to all utility customers. After all, if people are wary and have not bought into the program’s purpose, and if they do not see how a program will benefit them, they will rightfully be uninvolved or resistant. Everyone should be able to reap the direct and benefits of transportation electrification. Therefore, working with trusted community partners and organizations to ensure that offerings meet community needs and desires is extremely important. We would also suggest that community support is integrated either into this principle or as its own and that a related point is added to the analysis and reporting: for example, number of community partners that were worked with.

Programs and activities

EVSE installations and maintenance

- Public 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.⁷ Polling also indicates

⁷ 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/>.

that one of the largest concerns about purchasing an electric vehicle is charging infrastructure, with half of drivers worrying about finding a charging station.⁸

Avista should help provide the visible resource of public DCFC fast charging by working with partners as detailed in the plan. We agree that there is a need for some public fast charging in sites that will support both intra-city and longer distance travel, and that Avista-owned chargers should complement those offered by third-parties and thus expand coverage to the benefit of all by provided needed infrastructure and visibility. 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 Avista to explore potential partnerships like this to ensure that DCFC fast charging is accessible to those who need it within its territory, and to more broadly provide visibility for electric vehicles.

Public level 2 charging is also an important resource, for which siting considerations are different than for DCFC fast charging. Listening to customer feedback on where this charging type should be sited will be crucial to ensure that chargers are sited where they will be utilized. We suggest considering siting near multi-family buildings where residents may not otherwise have charging access, especially in buildings that do not have dedicated parking for all residents.

Overall, we strongly recommend that public charging sites are open to all, interoperable, and do not require special membership access.

- *Workplace, fleet, and MUD AC level 2 charging*

Offering workplace, fleet, and multi-family dwelling charging access is important to ensure that electric vehicle access isn't limited to those who have the capability to charge vehicles at home. The inability to do so 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. Although the availability of workplace charging is often viewed as an employee benefit, building owners may be concerned about increased electricity usage. We appreciate that Avista will offer ways of addressing this split incentive by helping cover costs, and that there will be options for utility-owned or third-party-owned EVSE. This will provide customers important choices, both of which have benefits, and spur beneficial competition. We are glad Avista will be incorporating 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 and helping achieve the plan's goal of up to 30% investment targeting disadvantaged communities and customers.

⁸ Green Car Reports, "Poll suggests more Americans might buy an EV—if only they had a place to charge"
https://www.greencarreports.com/news/1121698_poll-suggests-more-americans-might-buy-an-ev-if-only-they-had-a-place-to-charge.

- *Residential AC level 2 charging*

Avista providing EVSE and partially covering wiring costs will likely support electric vehicle uptake, given reduced costs, provided that this program is well-publicized, including through dealer engagement. We are glad that off-peak charging will be facilitated and other demand management strategies will be tested. It is also important for customers to be offered choices in EVSE and program offerings. We encourage Avista to consider the potential future lease and rebate programs mentioned in the plan, as well as other EVSE ownership options in order to maintain flexibility and customer choice. Utility ownership provides a number of benefits, including technology support and maintenance, but it is also important that customers not be forced into one option.

Education and outreach

Avista has an important role to play in educating its customers about transportation electrification, thereby encouraging uptake of these technologies. Avista already has an established relationship and frequently communicates with its customers. This means the utility has a particular opportunity to educate its customers. Given their importance, we encourage Avista to be ambitious in its education programs.

Engagement with dealers is an important part of education and outreach, and we are happy to see the plan includes this. 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.⁹ A recent investigation showed that around a third of dealerships did not provide any information on charging infrastructure and available incentives, and two-thirds of dealerships did not display electric vehicles prominently.¹⁰ There is an opportunity for Avista and dealerships to collaborate on providing customers these resources that will help them feel more comfortable purchasing an electric vehicle. Other utilities in Washington have had success with dealer referral rewards, so we believe these would be successful for Avista as well and are glad to see them in the plan.

In addition to engaging with dealers, the plan includes engagement with customers and the general public. An EV Experience Center as described in the program could provide valuable information for potential purchasers and we would encourage that as much hands-on experience as possible that can be offered, such as ride-and-drives and EV rentals, be included. We also suggest that Avista consider partnering with other companies and organizations that engage in electric vehicle education to expand its reach and impact. The plan also mentions potentially siting charging for on-demand Transportation Network Company (TNC) drivers at such a center; if located in a convenient location, this could provide additional visibility for vehicle electrification. Furthermore, working with TNC drivers to electrify is an important fleet electrification opportunity. Often drivers cannot afford the current upfront cost of electric vehicles, but given the lower cost of fueling electrification and

⁹ 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>.

¹⁰ Sierra Club, “Rev Up Electric Vehicles: A Nationwide Study of the Electric Vehicle Shopping Experience.” https://www.sierraclub.org/sites/www.sierraclub.org/files/press-room/2153%20Rev%20Up%20Report%202019_3_web.pdf.

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 DCFC fast charging programs mentioned above). Therefore, we are excited that Avista will deploy a pilot program to support TNC fleet electrification, especially since it will lead to amplified benefits given other, complimentary program offerings. We also suggest that demand management strategies and technologies are incorporated into these programs.

We also want to emphasize that in addition to collaborating with dealers, EV Experience Center visitors, and customers as a whole, Avista should make a concerted effort to reach out to community partners and organizations in vulnerable communities. Proactive efforts will need to be made to ensure that information about electric vehicles is heard by everyone, and that the information is communicated in a way that is responsive to community needs and desires—working with trusted community organizations can help ensure this is the case.

Community and low-income support

Transportation electrification provides significant health and economic benefits that everyone should have access to. It is imperative to ensure that low-income communities and communities of color, who are already disproportionately impacted by air pollution and have fewer resources to mitigate harms, experience both direct and indirect benefits from transportation electrification.¹¹

As discussed above, for programs to truly have an impact, they have to address barriers faced by the community and provide options that they want. That is why it is important to work with partners that are trusted by the community. We are glad to see that Avista intends to partner with others including the Spokane Transportation Collaborative and can also build on its previous, successful pilot programs with two community service organizations. Additionally, as already mentioned, helping TNC drivers access electric vehicles is important. It is important to note that not only may drivers serve disadvantaged communities, but many TNC drivers are themselves low-income, and being able to drive a vehicle with lower operation costs would be a tremendous benefit.

We would also like to highlight the importance of medium- and heavy-duty electrification in relationship to its benefits for vulnerable communities. Lower-income communities and communities of color are more likely to live in areas that experience higher air pollution, much of which comes from vehicle travel. Diesel emissions from medium- and heavy-duty vehicles are particularly harmful. Promoting the electrification of these vehicle classes will provide health benefits.

Overall, we urge Avista to consider community and equity not just as a standalone item, but to incorporate it into other programs. For example, when working with transit agencies or school districts, prioritize routes for electrification that go through vulnerable communities and areas with poor quality. Prioritize electrifying fleets that operate in areas that typically have worse air quality and are identified on the Washington Environmental

¹¹ Washington State Department of Health, “Washington Environmental Health Disparities Map.”
<https://fortress.wa.gov/doh/wtn/WTNIBL/>.

Health Disparities Map. When engaging with dealerships, ensure that used electric vehicles are included in their promotion efforts, and that they count toward the referral program.

Commercial and public fleets

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 supporting the near-term electrification of light duty fleets and forklifts followed by commercial delivery vehicles as stated in the plan, we encourage Avista to explore opportunities for electrifying larger vehicles such as garbage trucks. Though some applications are currently more prevalent and achievable than others, it is also reasonable to assume that, given the significant operational cost savings, these vehicle types will become more common. It will be important to be prepared and have the groundwork laid to support their deployment. 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 supports the pilot commercial and residential TOU programs and other load management experiments listed in the plan that will help determine the best demand management strategies for different contexts, and encourages the utility to continue analyzing innovative rate structures and designs that encourage smart transportation electrification. For commercial transportation electrification, research indicates that removing demand charges and implementing TOU rates are effective in promoting off-peak charging and help customers more affordably transition their fleets.¹² Avista's proposed pilot seems to align with these best practices, though we want to note that certain facilities may exceed 1 MW of maximum demand and we want to ensure the utility partners with these customers to ensure they too can cost-effectively electrify. Electrification of medium- and heavy-duty vehicles can provide tremendous benefits to community health and to the grid, if managed well, making such programs important in the short-term so as to achieve long-term benefits.

Just as it is important for Avista to set a good example by electrifying its own fleet and supporting employees in driving electric (under the Utility Fleet Electrification, Facilities and Employee Engagement program), it is also important for municipalities to do the same. For example, the City of Spokane has committed to the purchase, conversion to, and use of electric vehicles.¹³ We recommend that Avista partner with municipalities in its territory and assist them with electrifying their fleets and providing the requisite charging infrastructure for operations and for employees who drive to work.

¹² Synapse Energy Economics, Inc., "Best Practices for Commercial and Industrial EV Rates."

https://www.nrdc.org/sites/default/files/media-uploads/best-practices-commercial-industrial-ev-rates_0.pdf.

¹³ Spokane Municipal Code 15.05.050. <https://my.spokanecity.org/smc/?Section=15.05.050>.

Climate Solutions is excited to see Avista's plans to design and pilot programs for school buses and mass transit. 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.¹⁴ There are other benefits as well: for example, bus drivers have credited the quiet electric buses with reducing their stress levels. As Avista works on the school bus pilot, it should 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.

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. We encourage Avista to work with transit agencies to determine rate structures and other management techniques that are mutually beneficial as a part of its commercial pilot TOU rate. Climate Solutions is very supportive of Avista's work on this pilot, and we are excited that the utility plans to roll it out next year. As the plan notes, Spokane Transit Agency, which is in the process of purchasing battery electric buses, currently estimates that 45% of associated electricity bills will come from demand charges. In addition, the electrical infrastructure for larger customers will likely often require capacity upgrades or extensions. Avista should be a ready and willing partner in this regard for transit agencies and other medium- and heavy-duty customers.

Conclusion

Thank you again for the opportunity to provide comments on Avista's Transportation Electrification Plan. Climate Solutions greatly appreciates the efforts of the utility in developing this plan to increase the adoption of widespread transportation electrification and we urge the UTC to approve this docket. We also recommend incorporation of the above suggestions as programs are being implemented and as the UTC evaluates future filings. Specifically we believe the following are important overarching goals:

- Incorporate demand management into all programs
- Closely partner with community organizations to determine community barriers, needs, and desires related to transportation electrification
- Ensure that low-income and vulnerable communities benefit directly and indirectly from programs and play a role in shaping programs
- Support electrification of medium- and heavy-duty vehicles
- Continue providing education and outreach to customers
- Incorporate community feedback and learnings from implementation and pilots into programs as an iterative process and ensure timely updates given the rapidly changing technology landscape

¹⁴ Gina M. Solomon, et al., "No Breathing in the Aisles: Diesel Exhaust Inside School Buses."
<https://www.nrdc.org/sites/default/files/schoolbus.pdf>.



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 a part of the mid-period report, program iterations, and future plans.

Sincerely,

A handwritten signature in black ink, appearing to read "Leah Missik", is written over a circular scribble.

Leah Missik
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Climate Solutions

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