December 12, 2018

Mr. Mark Johnson
Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 South Evergreen Park Drive
Olympia, WA 98504-7250

Re: Comments of Climate Solutions on Docket UE-180877, pilot programs and provide a portfolio of products and services to promote market transformation in electric transportation for residential and non-residential customers.

Dear Mr. Mark Johnson,

Climate Solutions appreciates the opportunity to provide comments on UE-180877, establishing new schedules to develop pilot programs and provide a portfolio of products and services to promote market transformation in electric transportation for residential and non-residential customers. Climate Solutions is a clean energy nonprofit organization working to accelerate clean energy solutions to the climate crisis. The Northwest has emerged as a center of climate action, and Climate Solutions is at the center of the movement as a catalyst, advocate, and campaign hub. For 20 years, we have cultivated political leadership in the Northwest under the proposition that clean energy and broadly-shared economic prosperity go hand-in-hand, building a powerful constituency for local and state action on climate and clean energy.

The transportation sector is responsible for the largest share of Washington's greenhouse gas emissions and other toxic pollutants, making electrification a critical component of addressing climate change and air quality in Washington. 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. As the largest electric utility in the state, Puget Sound Energy is at the forefront of this transformation.

Climate Solutions is supportive of Puget Sound Energy's proposal for a wide range of pilot programs to support the electrification of the transportation system. While the programs are modest, we believe they will provide valuable information to and insight to the Company and other utilities to inform more robust programs in the future. We believe that the portfolio of programs are in compliance with the WUTC's Policy and Interpretive Statement Concerning

Commission Regulation of Electric Vehicles Charging Services. However, as the penetration of electric vehicles continues to increase and technologies advance, we recommend that the Company remain adaptable and flexible to broadening and updating the programs. We provide recommendations in detail below for consideration as the Company updates and expands its electric vehicle programs. Specifically, we recommend that the Company incorporate off-peak charging strategies into all pilot programs, put a greater emphasis on medium- and heavy-duty vehicle electrification, consider a broader range of benefits moving forward, and create a low-income workgroup to expand upon current low-income strategies.

I. Incorporate off-peak charging strategies into all pilot programs

While the transportation sector is responsible for approximately half of greenhouse gas emissions in Washington, 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. Research consistently shows the importance of decarbonizing electricity to achieve long-term carbon reduction goals. As Washington moves forward with decarbonizing and electrifying the transportation sector, it is important that emissions do not simply shift over to the electricity sector as a result of new investments in fossil fuel infrastructure. Renewable energy is cost competitive to with natural gas to meet energy needs, but load management strategies to avoid large increases in peak demand should be a critical component of utility strategies to electrify the transportation sector.

Innovative rate structure can be an effective tool for encouraging smart charging behaviors to avoid charging during peak times, which can help to avoid major capital upgrades to the grid, reduce overall system costs, and provide an opportunity to manage the existing infrastructure more efficiently. We appreciate and support the Company's effort in the residential off-peak pilot program effort to test various strategies to incentivize off-peak charging, including both educational and incentive mechanisms. While we would eventually like to see a robust time-of-use rate program, we acknowledge the challenges with changing the rate structure at this time for residential customers, given the interaction with learning a new rate design. However, it is important to ensure that pilots to change charging behavior provide the most useful information possible and can inform more robust programs in the future. Given the similarity to potential rate design structures, Climate Solutions sees a high value in the education strategy in Reinforcement Group 2, education without commitment, as well as the incentive strategy in Reinforcement Group 5, a sliding monthly incentive, because similar types of programs could be replicated at scale. While we do not oppose the other reinforcement group strategies, we see less value in education with a non-binding commitment, and do not believe a fixed monthly incentive is likely to be replicated at scale. Should the Company have challenges with enrollment, we

would recommend prioritizing recruitments for Reinforcement Groups 2 and 5 to achieve a higher precision level with these strategies.

Because of the potential need for new peak capacity if not managed, we feel strongly that as programs evolve, the Company should incorporate strategies for off-peak charging as a component of all of the pilot programs. Even though time-of-use rates may pose challenges for a residential pilot program, we do see potential value in incorporating variable rates or other rate structures in non-residential pilot programs, or other strategies to avoid charging during peak times.

In addition to avoiding peak demand, transportation-specific rate design could also help catalyze further deployment of electric vehicles. Fuel savings are one of the most important factors of vehicle investment decisions, and rate design that has the potential for greater reductions in operational costs owners may be the deciding factor on whether or not to purchase an electric vehicle. If rates can be designed to provide vehicle owners with a low-rate option during low energy demand times, rate structure could help to incentivize more electrification, further aligning with the intent of the law and the policy statement.

II. Consider broad benefits in future programs

With vehicles idle a high percentage of time, electrification creates a considerable opportunity for a more efficient management of energy. Surplus generating capacity is often available during off-peak hours, so strategic deployment of electric vehicle charging infrastructure provides an opportunity for demand response, peak load-shifting, renewable integration, and mobile storage capabilities that can avoid investments in new generation and distribution resources, thereby saving all customers money. In selecting site locations in the various pilot projects, these potential locational benefits should be considered, and data should be collected, in order to provide useful information on monetizing broader grid benefits in future programs.

As the Company begins to consider future program development, we believe the benefits of electric vehicle infrastructure and increased electric vehicle adoption should be more broadly defined for cost recovery and prudence determinations. In RCW 80.28.360, the legislature provided clear direction to utilities to play a more significant role to accelerate the electrification of transportation to reduce greenhouse gas emissions and other air pollutants. Given the legislature's emphasis on reducing climate pollution, enhancing air quality, and allowing the capital cost of the infrastructure to exceed the monetary benefits, it is clear that societal benefits were an underlying intent of the statute. While the Company acknowledges the complicated nature of putting a value on these costs, we know they are not zero, and recommend that the

Commission and Company consider analyses on the social costs of air pollution and carbon pollution for future cost-benefit calculations.

III. Put a greater emphasis on heavy-duty vehicles

The Company has proposed a wide range of pilot programs to promote transportation electrification, but is primarily focused on light-duty electric vehicles. Climate Solutions sees a great opportunity for benefits to flow to low-income and vulnerable communities through broader medium- and heavy-duty transportation electrification, such as mass transit, port drayage trucks, and garbage trucks. Medium- and heavy-duty vehicles are one of the largest sources of harmful pollution that leads to poor air quality, so accelerating electrification in these sectors provides an opportunity for health benefits in local communities that suffer the most from the impacts of pollution.

The technology continues to evolve and prices decline in the medium- and heavy-duty vehicles, so it is reasonable to assume that more ambitious electrification will come from fleets and large vehicles with significantly higher energy use and fuel costs. Medium- and heavy-duty electrification offer significant financial benefits for the vehicle owner due to reduced fuel costs and reduce operating and maintenance costs, and with more controlled use patterns, these applications can provide benefits to the grid if designed intentionally. Transit agencies, municipal and county fleets, short haul freight operators, and others have expressed an interest in electrification. 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.

Rate structures that effectively encourage off-peak charging may be different for heavier vehicles, compared to light-duty EVs. 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 heavy-duty electrification rather than incentivize increased electrification. As discussed, there is clear value in incentivizing off-peak charging, but a non-coincidental demand charge may do very little to shift a fleet operator's charging behavior to off-peak. While the Company does not place a large emphasis on medium- and heavy-duty vehicles in the pilot programs at this time, we recommend that the utility consider adding additional pilot programs targeted at a broader set of heavy-duty applications in the future.

IV. Maintain flexibility for an iterative process

The pilot programs proposed by the Company range from two- to five-year pilot programs. Given the acceleration of technology deployment and projections by WSDOT that electric

vehicle deployment may double in the next three years, pilot programs should remain flexible and adaptable to change at appropriate points in time. We recommend continuing regular advisory group meetings, but additionally, recommend providing an opportunity for stakeholders to discuss and recommend potential changes to the pilot programs or the development of new pilot programs as technology evolves.

As noted in previous comments, Climate Solutions also recommends the inclusion of transportation electrification planning scenarios in utility IRPs. To optimize the full range of potential benefits of transportation electrification, we believe the Company should actively examine commute patterns and incorporate various electrification penetration scenarios to determine the optimal locations of infrastructure in the electrification programs. While the Company is looking to implement pilot programs and collect data, we hope that the IRP can inform future transportation electrification plans and roadmaps for broader electrification plans. Policies and plans for electrification will continue to develop regardless of whether the infrastructure is deployed by the utility as a regulated service, but we believe more benefits will be realized if transportation electrification is more broadly incorporated into utility planning processes.

V. Broaden low-income integration and create a low-income working group

Low-income and vulnerable communities have the greatest need for air quality improvements and the greatest need for cost savings associated with increased electrification, but there are significant barriers to adoption in these communities. We support the Company's proposed low-income program and its emphasis on services rather than light-duty electric vehicles, and appreciate their efforts to work directly with the CAP agencies to design an effective program.

Given the unique challenges to ensuring benefits flow to low-income and vulnerable communities, Climate Solutions recommends that the Company continue investigating ways in which low-income benefits can be more broadly incorporate into the various pilot programs. Climate Solutions recommends that the Commission or the Company convene a work group designed specifically to explore strategies for transportation electrification in low-income and vulnerable communities.

VII. Continue evaluating new strategies for education and outreach

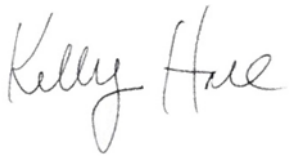
Education and outreach is a major barrier to increased electrification, and this is an essential component of any electrification program. We support the Company's education program, and appreciate the broad emphasis on multiple awareness activities to provide information on the

most effective strategies, such as collateral, website content, events, social media, partnership with auto dealers, employee training, and other tools. We are very supportive of continued education and outreach, encourage the Company to continue examining new and innovative strategies to overcome barriers to customers' understanding of electric vehicles.

Conclusion

Thank you again for the opportunity to provide comments on Puget Sound Energy's proposed pilot programs to promote market transformation in transportation electrification. Climate Solutions greatly appreciates the efforts of the Commission and the Company in developing pilot programs and new frameworks to increase the adoption of widespread transportation electrification. We support the adoption of the pilot programs outlined in this proposal, but recommend that programs are iterative and can adjusted at appropriate times as new information and technologies emerge. 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 evolve.

Sincerely,



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