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***Via* Web Portal**

Steven V. King, Executive Director and Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
1300 S. Evergreen Park Drive S.W.
Olympia, Washington 98504-7250

Re: **Docket UE-160799: Comments of Puget Sound Energy in Response to Notice of Opportunity to Comment on Draft Policy and Interpretive Statement Describing Commission Policy Related to Utility Investment in Electric Vehicle Supply Equipment pursuant to RCW 80.28.360 and Commission Regulation of Electric Vehicle Charging Services**

Dear Mr. King:

Puget Sound Energy ("PSE", "Company") appreciates the opportunity to respond to the draft policy statement on utility investment in, and Commission regulation of, electric vehicle charging services. PSE offers some general comments on the policy statement followed by specific responses to the questions raised in the Notice.

1. General

PSE thanks the Commission for its thoughtfulness in issuing the Draft Policy Statement in UE-160799. The subject of utilities providing services or programs for its customers related to electric vehicles is an area of active policymaking, with utility commissions considering these questions in many states, including the other west coast states of California and Oregon. Transportation electrification can provide many benefits to citizens in Washington, both direct and indirect[1]. Some of these benefits such as lower fuel costs and reduced greenhouse gas emissions accrue immediately. However, they only become meaningful for fulfilling public policy goals when there is sufficient scale in the electric transportation marketplace.

[1] RCW 80.28.360

To that end, collaboration among the many involved parties to make a meaningful contribution to public policy goals by increasing adoption should be a primary focus at this early stage in the market. Open and productive collaboration between the citizens of Washington State, utilities, transportation planners, government agencies, fleets, drivers, vehicle manufacturers, and charging station manufacturers will be necessary. The Commission has taken an important step in issuing this policy statement that promotes continued collaboration, while also allowing for continued evolution and competition in technology.

PSE's comments below outline several areas of support for the Commission's policy statement as drafted, as well as other areas where additional clarity in the policy statement would be beneficial.

Areas Where PSE Supports the Policy Statement As Currently Drafted

Utility Participation Is In The Public Benefit

HB 1853 clearly outlined that utilities should be involved in supporting electric vehicle deployment, and that the legislature did "provide a clear policy directive and financial incentive to utilities for electric vehicle infrastructure build-out". PSE appreciates the Commission's recognition of this intent, which is apparent throughout the draft policy statement, including:

- The legislative direction to *provide a clear policy directive and financial incentive to utilities for electric vehicle infrastructure build-out*[2] does, in the policy statement *establish a public purpose for investor-owned utilities to pursue electrification of the transportation system*[3]. The Commission's policy statement is *supporting transformation of the EV market through utility provision of a portfolio of regulated EV charging services that maximize the benefits of EVs to the electric system and allow a competitive market for EV charging services to continue to develop.*[4]
- *It is not necessary or possible for the Commission to determine in this Policy Statement whether it has jurisdiction over every conceivable type of electric vehicle charging service which may be offered by regulated utilities. Rather, the guidance provided in this policy statement is meant to support a finding of public use, and describe how the Commission will regulate such services, assuming it finds they are subject to its jurisdiction.*[5]

Flexibility in Program Design and Over Time

PSE agrees with the Commission that electric vehicle charging is likely to continue to evolve. To that end, allowing utilities flexibility in program design is the right approach to respond to this market's evolution. No specific business model has yet been clearly dominant in this area,

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[2] UE-160799, Draft Policy Statement, Paragraph 60.
[3] Ibid
[4] Ibid
[5] UE-160799, Draft Policy Statement, Paragraph 26.

and the participation of multiple entities will support the growth of this evolving market. PSE appreciates the Commission's attention to this need in its statement, specifically *the EVSE market is still in an early stage of commercial development in which a variety of approaches – both regulated and un-regulated – are being tested and implemented in state and regional markets today.*[6]

The Commission's approach of relying on a business case evaluation to ensure that benefits are commensurate with costs[7] provides the right framework to allow flexibility over time as market conditions change.

Areas Where PSE Seeks Additional Clarity in the Policy Statement

Stakeholder Group

The Commission made clear its preference that utilities coordinate with other parties, especially in coordination with WSDOT[8] on any DC Fast Charging stations and in convening a single joint stakeholder group[9]. PSE agrees that stakeholder coordination is important for many reasons. However, there are several areas where the policy statement, as written, could provide additional clarity with respect to the role of stakeholders so that expectations are clear. For example:

1) What is the role of this group?
2) Who should convene this group?
3) How should the other stakeholders coordinate activities with this group?
4) Are there other issues that should be addressed in this group?

PSE believes informed and coordinated efforts by parties funding charging infrastructure in Washington State, including utilities, will increase the efficiency of monies spent and will improve the experience of the electric vehicle driver.

Given there are numerous parties to Docket UE-160799, past Commission and Legislative proceedings, and competing business models, it is important that the policy statement make clear that the role of a stakeholder group is intended for communication and coordination, and not for the approval of utility programs. Program review and approval, modification, or rejection is the purview of the Commission, and should not be judged by vendors with competing business models. Utilities, under the oversight of the Commission, bear the burden to develop programs that do not stifle competition, as is discussed at length in this docket.

PSE suggests that the stakeholder group be established soon to both help the utilities stay abreast of other developments in Washington State, and to provide the forum to inform the ongoing work of the utilities. To start the group, PSE suggests the following means for convening and managing the group:

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[6] UE-160799, Draft Policy Statement, Paragraph 22
[7] UE-160799, Draft Policy Statement, Paragraph 23
[8] UE-160799, Draft Policy Statement, Paragraph 68
[9] UE-160799, Draft Policy Statement, Paragraph 88

- The utilities should work with UTC Staff, Public Counsel, WSDOT, and Department of Commerce to establish a quarterly meeting schedule. The three utilities subject to regulation will rotate organizing duties on an annual basis.
- To enhance coordination, other participating members of the group, notably UTC Staff, Public Counsel, WSDOT, and the Department of Commerce will be invited to share their plans and progress with the group.
- Because filings may happen more frequently than quarterly, the organizing utility will maintain a summary email list, starting with the service list for Docket UE-160799.
- This list can serve as the mechanism to notify the group of upcoming filings, pursuant to paragraph 88 in the draft policy statement.

This group may also be an appropriate forum to discuss other challenges in the future, but at this time the communication of programs is a sufficient purpose for the stakeholder group.
For administrative consistency, PSE also suggests that notice of upcoming filings by utilities be provided 30 days ahead of time to stakeholders. This would align with the process currently set in rule for conservation advisory groups.

"Provider" versus "Manager"

PSE appreciates the Commission's work to ensure customer choice in programs and allow the utilities to pursue different business models and services. In the draft policy statement, the Commission defines that in the "Provider model, utilities own and operate the entire EV charging infrastructure and that rates must be "fair, just, reasonable, and sufficient to recover the cost of the service". In the "Manager" model, utilities must offer services that allow customers to choose and/or own their own EVSE, and provide grid benefits through direct load control or demand response.

The "Provider" and "Manager" categories define the services around several areas including utility ownership of the EVSE, load control, public access to the charging service, and method of ratemaking. Not all programs and business models will fit cleanly into the "Provider" or "Manager" categories as defined. For example, if a utility were to offer "make-ready" for public charging, as has been done in California, it may not be in the customers' best interest to have direct load control on this type of service. A corollary would be a utility offering to own EVSE for residential charging with load control as a "provider."

For ratemaking, strict adherence to cost based rates for specific programs could create a barrier to utilities providing needed charging infrastructure. As was determined by Washington's Joint Transportation Commission, public electric vehicle charging is not profitable as a stand-alone entity at the current time[10]. Utilities could be important providers of this service under a portfolio of programs. Other parts of the policy statement require utilities to provide low income and education and outreach programs, which may add costs early, but may not have benefits

[10] http://leg.wa.gov/JTC/Documents/Studies/EV/FinalReport_EVChargingNetworksWEB.pdf

commensurate with their costs. The policy statement further requires utilities to meet reliability standards, which other non-utility service providers are not obligated to provide. All of these factors are important to increasing adoption of electric transportation and PSE supports utility provision of education and outreach programs, working to enhance low income access to electric transportation, and high reliability standards. However, given the challenges in funding public infrastructure and the additional requirements, PSE believes that strict cost-based rates for programs are not appropriate at this point in time.

Given the evolutionary nature of electric vehicle charging infrastructure, PSE suggests that the Commission decide each program and portfolio of programs based on its merits, rather than try to specifically classify programs as "Provider" or "Manager" at this time. The policy statement makes clear requirements for programs, such as that the services are provided on a non-discriminatory basis and meet the portfolio cost-benefit tests. Defining specific models closely at this point may unintentionally limit valuable programs.

The Commission has already provided flexibility to design both programs and portfolios of programs to meet changing market needs through the business case analysis. A business case analysis would include an evaluation of current and likely future market conditions and propose solutions to meet those market conditions. Depending on the needs, the portfolio of programs may change over time.

Regulation of Utility Programs and Costs and Benefits

The legislature, the Commission in this policy statement, Washington State's EV Action Plan and others have found there is a clear public purpose for the utilities to pursue electrification of the transportation system. The legislature has further found that utilities should be directed and incentivized to do so.

As has been discussed at length in Docket UE-160799 and elsewhere, there are many direct and indirect benefits associated with transportation electrification. As previously discussed in PSE's comments, these benefits do begin to accrue immediately, but may not become meaningful to many citizens until transportation electrification has reached a significant scale of deployment. As the Commission has cited in this draft policy statement, market transformation is necessary to help achieve these long term benefits. PSE appreciates the Commission's attention to the importance of maintaining balance between costs and benefits, while recognizing that costs may sometimes be incurred before benefits accrue. The legislature also provided guidance to help that costs are commensurate with benefits by including a rate impact cap in HB 1853.

Given that scale is necessary to achieve benefits over the long term, it is appropriate for the Commission to consider both the direct and indirect benefits of transportation electrification at this early phase of the market. This could be accomplished by allowing the costs of utility programs to exceed the direct benefits of the utility programs, bounded on the high side by a societal cost test and application of the "net rate impact" test as included in the draft policy statement. Application of these two requirements would ensure that the costs did not exceed the direct and indirect benefits at this stage in the market, and that there would be a cap on the

amount of investment to achieve indirect benefits, given that they may take some time to accrue on a meaningful scale. As the market reaches sufficient scale, the market would be expected to take over based on the direct benefits, and that the indirect benefits would simply be benefits to all. The Commission could update its policy statement after the market has reached sufficient scale.

Given that the electric vehicle market is early in its development and there does not yet exist a competitive market of entities deploying solely their own capital to build out networks of charging stations, the cost-benefit approach described in the previous paragraph will not create "unfair competition". However, any expenditure of any utility capital should enhance competition and technology development through competitive RFP processes, which should be repeated with each new program cycle. This provides incentives for charging station and technology developers to enhance their offerings, and ensures that the utilities are continuing to support innovation. Through this process, utilities can enhance competition and development, but also seek to minimize costs.

2. *Specific Questions Raised in Notice*

What is the definition of "Electric Vehicle Supply Equipment," and how should the Commission consider ownership of EVSE as a factor to determine whether a utility serves as a "provider," or "manager" of EV charging services?

Electric Vehicle Supply Equipment includes the charger, charging cord and plug, wiring necessary to supply power to the charger, any supporting equipment such as foundations, anchoring, or other directly supporting equipment. It is important to note that this physical equipment may be supported by communications or software as well, which is integral to the operation of the EVSE.

As discussed in earlier comments, PSE requests that the Commission not establish a bright-line test such as outlined in the "provider" and "manager" models based on ownership at this point, but rather consider whether the business case for a program or portfolio of programs meets the market needs and provides public benefit.

What criteria should the Commission use to determine whether a portfolio is "balanced"?

PSE believes that the overarching requirements of non-discriminatory service to similarly-situated customers, consideration of costs and benefits, and submittals of sound business cases serve as the appropriate determinations of whether a portfolio of programs is balanced. Because market needs in both customer needs and vehicle types are likely to change over time, what may constitute a balanced portfolio is likely to change over time as well. For example, there are currently a significant number of passenger electric vehicles in PSE's service territory, but electric buses are in their early phases and may require future programs. In another example, many passenger electric vehicles today are owned by individuals, whereas in the future, ride-share vehicles may dominate. The electric vehicle market is at an early stage and utilities, automakers, charging station manufacturers, and consumers are gaining experience in the electric

vehicle market. It is reasonable to expect that through information sharing amongst the stakeholder group and with other parties, business case development, and program reporting, the utilities will gain more experience and offer better balanced portfolios of programs based on market needs.

What specific policies should the Commission adopt regarding interoperability of utility-owned charging infrastructure? We expect that both the EVSE hardware developed by the manufacturers and the software and communications components to continue to advance and develop rapidly over time. Accordingly, how should the Commission ensure that EV owners are not locked in to a certain type of technology (either hardware or software) as the market develops, and what role should the Commission have in assuring some type of backend interoperability between the EVSE at the hosting site and the operator of the overall EVSE systems?

PSE appreciates the UTC's attention to the issue of interoperability. Considerable progress has been made in this area by the light duty electric vehicle industry, but it is likely that it will continue to be an area of development for some time. PSE considers interoperability in three ways: 1) hardware interoperability; 2) software interoperability; and 3) customer experience.

In hardware interoperability, much work has been done to standardize the hardware interface between light duty electric vehicles and chargers. This resulted in the Society of Automotive Engineers J1772 standard for Level 2 charging, which is used by nearly all light duty electric vehicles. Despite this work, several physical connection standards for Fast Charging, such as the SAE Combination connector, the CHAdeMO connector, and Tesla's connector are still in use. Updating hardware standards is an area of active participation by vehicle manufacturers, charger manufacturers, and standard setting bodies.

Good program design is starting to address this issue through placement of multiple chargers or multiple types of connectors at charging locations. PSE believes there is both sufficient incentive and standard-setting activity to continue to improve hardware interoperability. With regard to hardware interoperability of utility-owned infrastructure, the Commission should ensure that the utility has considered interoperability in its business case such that it has a plan to meet the needs of those market segments identified in the business plan, including hardware interoperability over the program life cycle.

Software interoperability is currently an area of considerable development and debate. Multiple hardware and software vendors use software and communication standards that they developed and these systems form an integral part of their business models. Given the relatively small market and large number of hardware and software vendors, there is a risk that one or more of these vendors fail. The Commission's role in helping mitigate this risk depends on who is purchasing the EVSE and software. As outlined in RCW 80.28.320, with the exception of the activities of the utilities, the Commission does not have purview over the practices of charging service providers. For any utility programs regulated by the Commission, the standards of prudent decision-making would apply. These standards, coupled with the development of the business case, allow the appropriate multi-faceted balance of factors that include vendor risk and interoperability over time.

Customer experience interoperability has not been clearly defined and may vary by network or charging station manufacturer. For chargers used in specific vehicles, such as fleet or individually owned vehicles, standardization of the customer experience at the vehicle's principle overnight charging location may not be necessary, as customers can adapt to different interfaces, much as they may with a new cell phone. In public charging this approach is not sufficient. Given the relatively small number of public electric vehicle chargers today, different customer experiences, including requirements to join private networks to access chargers or different payment methods, may be a barrier to market adoption. This issue is an ongoing area of debate and development. For example, some European charging networks voluntarily agreed to provide interoperability to customers[11]. The California Air Resources Board is currently considering this issue as required by California's Senate Bill 454, the Electric Vehicle Stations Open Access Act[12]. Utilities should be required to consider how any utility-owned chargers will work with the existing customer experience over time.

All three types of interoperability affect not only the utilities, but also other current or potential future funding agencies, including WSDOT, Department of Enterprise Services, and the Department of Ecology. Further, the issue crosses state and even national lines, just as electric vehicles must do. Because of the breadth of this issue, PSE sees this as another important area of collaboration, but an area that Washington State should not yet specifically regulate.

To better inform all parties and begin, PSE suggests that a meeting of the stakeholders and all Washington State parties funding charging infrastructure with outside experts could be convened. The stakeholder group, working with the other funding parties, provides a mechanism to both stay abreast of standards development in other areas and a group that could establish voluntary interoperability standards or agreements in Washington at the appropriate time. Should voluntary efforts fail, regulation could be an option.

What policy mechanisms or standards are available to promote system-wide interoperability for drivers, such that EV drivers can charge any EV model and pay for the charge without joining a multitude of charging networks? Does the Commission have a role in overseeing the development of these standards or protocols, or should it provide guidance on the characteristics of an open EVSE system or a more common interoperable platform?

As discussed previously in these comments, PSE is not aware of any currently enacted standards in the US in this regard, though some other states and other countries are exploring this issue or have enacted mandates for interoperability. The Commission does have mechanisms available to require that utilities use certain standards, which can be accomplished through rule. However, as previously discussed, at this time it would be premature for the Commission to specify standards.

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[11] http://www.afirev.fr/en/home/, https://electrek.co/2017/02/07/electric-vehicle-charging-networks-europe/

[12] http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB454

As previously discussed, PSE supports use of the stakeholder group, which would include the Commission, as a mechanism to inform all parties building infrastructure in Washington of interoperability issues and for determining the best path for interoperability. This path could include implementation of policies or rules to encourage or require interoperability.

The Commission requests feedback on its proposed policy allowing for a single joint stakeholder group to participate in review of utility EV charging service program design and review.

PSE supports a joint stakeholder group to assist with both more efficient operations and more efficient dissemination of information. As commented earlier, it is important to clearly identify that the role of this group is to share information and not to judge utility program design.

3. Conclusion

PSE commends the Commission for taking a proactive stance to encourage growth of electric vehicles where it benefits utility customers. The identification of utility involvement as being in the public interest, allowing flexibility in utility program design, seeking a path forward on interoperability, and improving coordination are all mechanisms that will enhance market transformation in Washington State.

PSE appreciates the opportunity to provide responses to this draft policy statement. Please contact Nate Hill at (425) 457-5524 for additional information about this filing. If you have any other questions please contact me at (425) 456-2110.

Sincerely,

Ken Johnson
Director, State Regulatory Affairs