Seattle Electric Vehicle Association

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From: John C. McCoy
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To: The Washington Utilities and Transportation Commission
David Danner, Chairman
Jeffrey Goltz, Commissioner
Philip Jones, Commissioner
Steven V. King, Executive Director and Secretary

Re: Puget Sound Energy's Electric Car Charging Rebate Proposal
Docket No. UE-131585 (Advice No. 2013-15)
Item #A.1 on the April 10, 2014 Open Meeting Agenda

The Seattle Electric Vehicle Association (SEVA) would like to offer our enthusiastic support for Puget Sound Energy's (PSE's) proposal to provide $600 rebates to residential electricity customers for the cost of installing Level 2 charging equipment at their homes.

Founded in 1979, SEVA seeks to promote understanding and use of electric vehicles (EVs), and our membership includes many PSE electric service customers. We have seen firsthand how the initial costs of setting up Level 2 charging (over and above the cost of the vehicle) often dissuade potential EV drivers from buying or leasing their first EV, and we believe that this rebate will go far in helping overcome this hurdle. The proposal will benefit EV buyers, other ratepayers, and the environment, preventing many tons of greenhouse gas emissions from entering the atmosphere. We believe this proposal is a model that other electric utilities should emulate, and we encourage the Washington Utilities and Transportation Commission to approve it.

The reasons to support this proposal are many:

- **The rebate proposal improves energy efficiency.** Electric motors are inherently more energy efficient than internal combustion gasoline engines, converting about 60% of the energy supplied by electricity into motion. By comparison, an internal combustion engine only converts around 20% of the chemical energy supplied by gasoline to motion -- much of the rest of the energy is converted into waste heat. So, increased adoption of EVs improves efficiency and reduces the total amount of energy needed to drive the same mileage.

- **Greater EV use will further the State of Washington's greenhouse gas reduction goals.** With RCW 70.235, the Legislature committed to reducing Washington's greenhouse gas emissions to 1990 levels by the year 2020, with further reduction targets in the decades that follow. The largest share of Washington's emissions are from transportation. An average 24 mpg gasoline car emits 4 to 5 tons of carbon dioxide into the atmosphere in a typical year of driving. Once emitted for a single morning's commute, these CO_2 molecules heat the planet and acidify the oceans for more than 100 years. Each new EV that replaces a gas car can reduce the state's emissions by about 2 to 3 tons per year on PSE's current generation mix, or by the full 4 to 5 tons per year

when combined with PSE's Green Power renewable energy option.

- **The rebate will help PSE customers save money on transportation costs.** EVs are very cheap to operate, costing about 4 cents per mile as compared to 8 to 16 cents per mile for gas-powered cars of various efficiencies. Still, the upfront costs often create a significant barrier to entry for potential new EV drivers. The Federal government and the State of Washington are doing their part to support EV acquisition with income and sales tax incentives, and car manufacturers are also currently taking losses on every EV they sell, as they attempt to grow the market and reduce costs over time. Unfortunately, there is currently limited help for the charging equipment: the Federal pilot program that once provided charging equipment and installation credits has ended. With this proposal, PSE is very helpfully stepping into that gap and doing its part to support EV adoption. Over time, this will save its customers money.

- **Most EV charging happens overnight when electricity supply is both cheap and plentiful, and other demand is low.** This means that even high EV penetration rates are unlikely to drive infrastructure or supply costs for PSE. It also provides new markets for overnight hydro and wind power.

- **The additional EV-driven load will save the rest of the ratepayers money, as well.** Greater electricity use for EVs will provide additional kilowatt hours on which to spread PSE's fixed costs, mitigating electricity rates for all customers, not just the EV drivers.

An increasing number of EV and plug-in hybrid car models is available for sale or lease in Washington State. These include the Nissan Leaf, the Chevrolet Volt, a suite of models from Ford (Focus EV, C-Max Energi, Fusion Energi), the Tesla Model S, the Cadillac ELR, the Toyota Prius Plug-In Hybrid, the Smart Fourtwo Electric, and the Mitsubishi i-MiEV. Coming soon are new innovations like the BMW i3, which also improves efficiency by using a carbon fiber body to further reduce weight. Each of these cars has different characteristics and advantages in terms of carrying capacity, all-electric range and total range with gasoline, in the case of the hybrids. But all of these EV options use a standardized Level 2 plug for 220-Volt charging at homes and businesses, which makes PSE's rebate program appropriately focused. With Level 2 charging, EV drivers are assured that they can get the range they need in reasonable amount of time.

Again, we applaud PSE's proposal and urge the Commission to not only support it, but also encourage the other regulated utilities in your purview to adopt similar measures. In addition, we would welcome expansion of the program to multi-family and commercial customer classes in the future. Feel free to contact me if you have any questions or wish for more information about EVs or SEVA.

Sincerely,

John C. McCoy