

# **Washington Utilities and Transportation Commission**

## **Report on Investor-Owned Utilities Use of Incentive Rate of Return on Electric Vehicle Supply Equipment**

**Engrossed Substitute House Bill 1853, RCW 80.28.360**

**December 31, 2017**

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## **I. Introduction and Executive Summary**

In 2015, the state Legislature enacted Engrossed Substitute House Bill (ESHB) 1853 authorizing the Washington Utilities and Transportation Commission (commission) to allow investor-owned electric utilities an incentive rate of return on investments in electric vehicle supply equipment (EVSE) deployed for the benefit of utility ratepayers.<sup>1</sup> The statute requires the commission to submit a report detailing the use of EVSE incentives, the quantifiable impacts of incentives on electric vehicle deployment, and recommendations about utility participation in the electric vehicle market, due to appropriate legislative committees by Dec. 31, 2017.<sup>2</sup>

The investor-owned utilities are still developing EVSE programs in response to ESHB 1853, and while some have implemented pilot programs, none have formally proposed programs to take advantage of the incentive rate of return. However, the utilities are regularly meeting with stakeholders, who are providing feedback as the utilities develop their EVSE programs.

This report highlights current statutes and policies that support the expansion of electric vehicles (EVs) and supply equipment. The report also presents information concerning current and forecasted EV sales in Washington, current EVSE pilot programs offered by investor-owned utilities, and state agency actions in support of the EV market.

It is still too early to understand what, if any, recommendations to the Legislature are warranted regarding the effectiveness of the incentive opportunity. As described in this report, the utilities are still conceptualizing how they can take advantage of ESHB 1853 and none have proposed a program that takes advantage of the incentive rate of return, or have requested approval to apply the incentive rate of return for investments in EVSE. Therefore, the commission has not gathered sufficient information yet to know if the financial incentives in the bill are effective, and if the Legislature should take additional actions.

However, the commission highlights its Policy Statement Concerning Regulation of Electric Vehicle Charging Services (Policy Statement) that builds upon the legislative direction in ESHB 1853 by providing the investor-owned utilities regulatory guidance. The Policy Statement defines the framework under which investor-owned utilities may offer electric vehicle charging as a regulated service, and when the incentive rate of return is applicable. The commission also adopted policies to improve access to and promote fair competition in the provision of EVSE. The utilities are instructed to adopt a ‘portfolio approach’ that provides customers with multiple service options designed to serve a range of customer types and target multiple segments of the market. The utility programs should also prioritize load management and grid benefits over rate base additions. Finally, in the Policy Statement, the commission adopted policies supporting interoperability, consumer protection, direct benefits to low-income customers, service quality standards, regular and comprehensive reporting, and education and outreach.

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<sup>1</sup> Codified at [RCW 80.28.360](#).

<sup>2</sup> [RCW 80.28.360\(5\)](#).

## II. ESHB 1853 and State Policies in Support of Electric Vehicles

Prior to the passage of ESHB 1853 in 2015, the state Legislature had enacted a number of significant policies to support EV adoption, including tax exemptions and credits for alternative fuel vehicles,<sup>3</sup> plug-in EV charging signage and parking regulations,<sup>4</sup> and policies supporting the use of electric vehicles for state business.<sup>5</sup>

Specifically, in 2005, the Legislature passed a law that exempts certain alternative fuel vehicles, including plug-in electric vehicles, from sales and use taxes.<sup>6</sup> The exemption was extended in 2011 and 2015 and modified in 2016. Today, the sales tax exemption applies to up to \$32,000 of a vehicle's selling price and expires when the Department of Licensing titles 7,500 qualifying vehicles.

In 2009, the Legislature passed legislation encouraging the development of EVSE, directing the Washington State Department of Transportation (WSDOT) to build out an EV charging network along state highways and at key destinations in partnership with other public and private entities.<sup>7</sup> The Legislature also directed action by the Washington Department of Commerce (Commerce), regional transportation planning organizations, and local governments to promote the use of EVs and development of EV charging stations.<sup>8</sup>

In 2014, Governor Inslee signed Executive Order 14-04 directing the state Department of Ecology (Ecology) to evaluate Washington's Low Emissions Vehicles law<sup>9</sup> for improvements and to assess the viability of adopting California's Zero Emissions Vehicle (ZEV) program. A ZEV program requires automobile manufacturers to sell zero emissions vehicles, such as plug-in electrics, as a percentage of their total sales.<sup>10</sup> Ecology's review resulted in the introduction of legislation in 2015 to allow the adoption of the ZEV standard in Washington, but that legislation did not pass.<sup>11</sup> In the same Executive Order, the Governor requested a number of state agencies, including WSDOT, the Department of Ecology, Commerce, and the Office of Regulatory Innovation and Assistance, to take action to promote EV infrastructure development.<sup>12</sup> Through its innovative partnerships program, WSDOT developed a pilot program to identify transportation corridors for charging infrastructure and encourage the deployment of EV charging infrastructure with private financing.<sup>13</sup> These state agency actions will be discussed in more detail later in this report.

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<sup>3</sup> RCW 82.08.809, RCW 82.12.809, RCW 82.16.0496, and RCW 82.04.4496.

<sup>4</sup> RCW 46.08.185.

<sup>5</sup> RCW 43.01.250, 43.19.648, 47.38.070, 47.38.075.

<sup>6</sup> RCW 82.08.809.

<sup>7</sup> RCW 47.38.070.

<sup>8</sup> RCW 35.63.126, 35.63.127, 35A.63.107, 36.70.695, and 43.31.970.

<sup>9</sup> RCW 70.120A.010.

<sup>10</sup> ZEV programs have been adopted in 10 states representing 28 percent of the U.S. vehicle market. These are California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, and Vermont. Source: Center for Climate and Energy Solutions. (2017, November). *ZEV Programs*. Retrieved from <https://www.c2es.org/document/zev-program/>.

<sup>11</sup> S.B. 5423, H.B. 1487, 64<sup>th</sup> Leg., 2015 Reg. Sess. (Wa. 2015).

<sup>12</sup> Executive Order 14-04, 2014.

<sup>13</sup> Washington State Electric Vehicle Charging Infrastructure. (2017). Retrieved from <http://www.wsdot.wa.gov/Funding/Partners/EVIB.html>.

During the 2015 session, the Legislature enacted ESHB 1853, which allows the commission to authorize an incentive rate of return on investor-owned utility investments in capital expenditures for certain EVSE deployed for the benefit of ratepayers.<sup>14</sup> In its findings supporting the bill, the Legislature provided that “state policy can achieve the greatest return on investment in reducing greenhouse gas emissions and improving air quality by expediting the transition to alternative fuel vehicles, including electric vehicles.”<sup>15</sup> In addition, the Legislature found that,

[U]tilities, who are traditionally responsible for understanding and engineering the electrical grid for safety and reliability, must be fully empowered and incentivized to be engaged in electrification of our transportation system. ... Therefore the legislature intends to provide a clear policy directive and financial incentive to utilities for electric vehicle infrastructure build-out.<sup>16</sup>

The law, codified as RCW 80.28.360, allows the commission to grant utilities an incentive rate of return of up to 2 percent on “capital investment in electric vehicle supply equipment on a fully regulated basis similar to other capital investments behind a customer's meter.”<sup>17</sup> The incentive applies only to investments made after July 2015 that “result in real and tangible benefits for rate payers by being installed and located where electric vehicles are most likely to be parked for intervals longer than two hours.”<sup>18</sup> The law also requires the commission to consider policies to improve access to and promote fair competition in the provision of EVSE.

Finally, the law requires the commission to submit a report to the Legislature concerning “the use of any incentives allowed under this section, the quantifiable impacts of the incentives on actual electric vehicle deployment, and any recommendations to the legislature about utility participation in the electric vehicle market.”<sup>19</sup>

In late 2015, the Governor established a goal to increase the number of EVs in Washington state from 8,000 in 2013 to 50,000 by 2020.<sup>20</sup>

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<sup>14</sup> RCW 80.28.360. ESHB 1853 applies only to investor-owned utilities regulated by the Commission. It does not apply to consumer-owned utilities and their programs.

<sup>15</sup> Laws of 2015, c.220 s. 1(2).

<sup>16</sup> *Id.*, s. 1(3).

<sup>17</sup> RCW 80.28.360(2).

<sup>18</sup> RCW 80.28.360(3).

<sup>19</sup> RCW 80.28.360(5).

<sup>20</sup> Washington State Electric Fleets Initiative, (2015, December). Retrieved from [http://www.governor.wa.gov/sites/default/files/documents/ElectricFleetsInitiative12\\_07\\_2015.pdf](http://www.governor.wa.gov/sites/default/files/documents/ElectricFleetsInitiative12_07_2015.pdf) (December 2015). Results Washington (2014). *Goal 3.1.1.c*. Retrieved from <http://results.wa.gov/what-we-do/measure-results/sustainable-energy-clean-environment/goal-map>.

### III. Washington State Electric Vehicle Sales and Growth Projections

Nationally, automobile manufacturers have been producing and selling more EVs at competitive prices and with extended driving ranges.<sup>21</sup> Concurrently, EV sales are growing in Washington state, and industry analysts expect to see steady EV growth for the foreseeable future.<sup>22</sup> As of June 2017, Washington was halfway to its goal of 50,000 deployed EVs by 2020.<sup>23</sup> About 25,000 EVs are currently registered in the state, and WSDOT has documented an annual EV registration growth rate above 35 percent since 2015.<sup>24</sup>

Figures 1 and 2, below, show the total numbers of plug-in hybrid (PHEV) and battery electric vehicle (BEV) registrations in Washington and the counties in which those vehicles are registered.<sup>25</sup> Figure 1 shows that 70 percent of all registered vehicles are BEVs, such as the Nissan Leaf or Tesla Model S. Figure 2 shows that the vast majority of both BEVs and PHEVs are located in the Puget Sound region, with over half in King County.

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<sup>21</sup> Halvorson, B. (November 16, 2017). GM CEO Barra: Profitable, Affordable 300-Mile Electric Vehicles by 2021. *Car and Driver*. Retrieved from <https://blog.caranddriver.com/gm-ceo-barra-profitable-affordable-300-mile-electric-vehicles-by-2021/>; Welch, D. (November 15, 2017). GM sees Path to Elusive EV Profits, 1 Million Sales a Year. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2017-11-15/gm-forecasts-1-million-electric-car-sales-by-2026-as-costs-drop>.

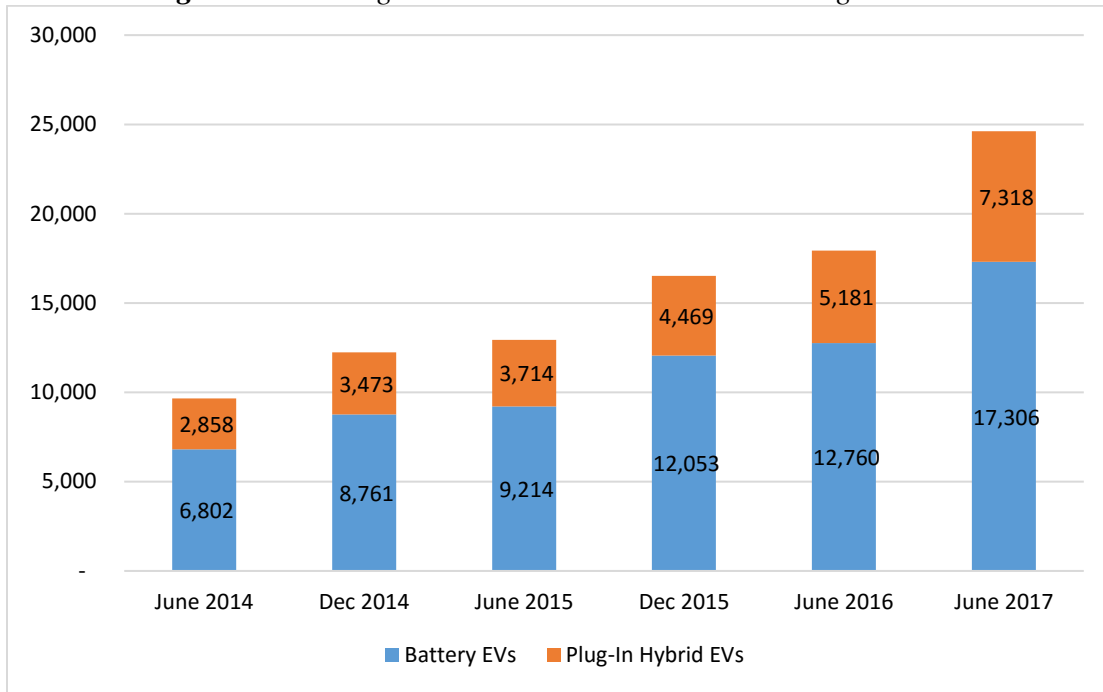
<sup>22</sup> Electric Vehicle Outlook 2017. (July 2017). *Bloomberg New Energy Finance*. Retrieved from <https://about.bnef.com/electric-vehicle-outlook/>; Cooper, A. & Scheffer, K. (June 2017). Plug-In Electric Vehicle Sales Forecast Through 2025 and the Charging Infrastructure Required. *The Edison Foundation Institute for Electric Innovation*. Retrieved from [http://www.edisonfoundation.net/iei/publications/Documents/IEI\\_EEI%20PEV%20Sales%20and%20Infrastructure%20thru%202025\\_FINAL%20\(2\).pdf](http://www.edisonfoundation.net/iei/publications/Documents/IEI_EEI%20PEV%20Sales%20and%20Infrastructure%20thru%202025_FINAL%20(2).pdf).

<sup>23</sup> Washington State Electric Fleets Initiative (2015, December). Retrieved from [http://www.governor.wa.gov/sites/default/files/documents/ElectricFleetsInitiative12\\_07\\_2015.pdf](http://www.governor.wa.gov/sites/default/files/documents/ElectricFleetsInitiative12_07_2015.pdf) (December 2015). Results Washington (2014). *Goal 3.1.1.c*. Retrieved from <http://results.wa.gov/what-we-do/measure-results/sustainable-energy-clean-environment/goal-map>.

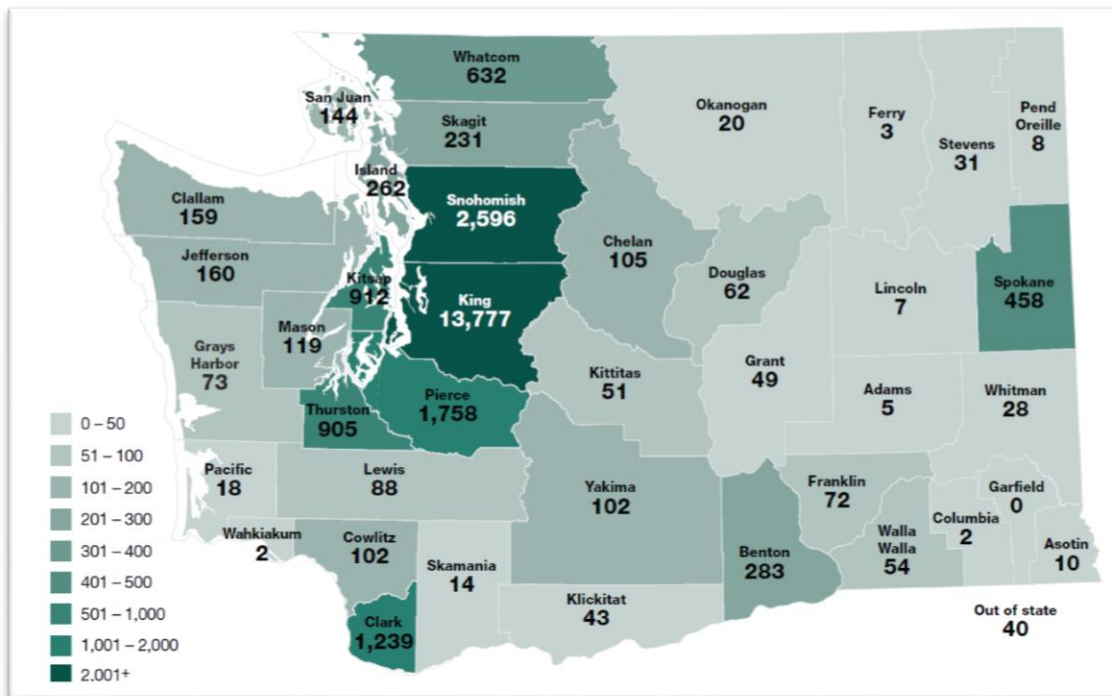
<sup>24</sup> Report on the Number of Plug-In Electric Vehicles. (September 8, 2017). *Washington State Department of Transportation*.

<sup>25</sup> *Id.*

**Figure 1: Washington State Total Electric Vehicle Registrations**



**Figure 2: Electric Vehicle Registrations by County<sup>26</sup>**



<sup>26</sup> Map includes Electric Vehicles (EVs) produced by major automakers since about 2011. It does not include cars that were converted to EVs by their owners, neighborhood EVs, EV models from the 1990s that are still registered in Washington, or

#### IV. Use of Incentives Allowed Under Statute

To date, none of the investor-owned electric utilities regulated by the commission have taken advantage of the capital incentives allowed under ESHB 1853. However, the legislation has provided policy support for utility pilot programs that encourage the installation of EVSE. All three regulated electric utilities are considering programs that will take advantage of the incentive rate of return in the future.

##### Avista Utilities EVSE Pilot Program

Avista Utilities (Avista) is an electric and natural gas utility serving 245,000 electric and 156,000 natural gas customers in eastern Washington, including the greater-Spokane area. On April 28, 2016, the commission approved a two-year EVSE pilot program for Avista to install different types EVSE throughout its service territory. In its proposal to the commission, Avista stated that the purpose of the pilot is to support EV adoption and develop data on EV charging behavior the company can use to develop future long-term EVSE program offerings.<sup>27</sup>

Avista owns and maintains all equipment in its pilot program. It selected Greenlots as the network provider and it is contracting hardware with a number of vendors.<sup>28</sup> To incentivize customer participation in its program, Avista reimburses installation costs up to a maximum of \$1,000 per single-family home and \$2,000 per workplace or public installation. The customer owns and is responsible for electrical wiring behind the utility meter.

Avista plans to install 272 EVSE connections, including 120 Level 2 chargers in single-family residential homes, 45 Level 2 chargers in public locations, 100 Level 2 chargers in workplace, fleet or multi-unit dwellings, and seven DC fast chargers along highway corridors. As shown in Figure 3 below, Avista is near its goal for EVSE at residential homes, but is not experiencing the same response for EVSE at workplaces or public locations.

**Figure 3: Avista November 2017 Quarterly Report: Number of Applications and Installation**

	2-Year Goal of Port Installations	Applicants	Approved Applications	Scheduled Installations	Number of Ports Installed
Residential single family homes	120	168	139	9	102
Workplace/fleet/multi- unit dwelling	100	119	66	8	47
Public	45	68	46	10	18
DC fast chargers	7	5	5	3	2

motorcycles. WSDOT created this map based on data provided by the Washington State Department of Licensing. Data as of June 30, 2017.

<sup>27</sup> See Docket UE-160082, Order 01, Approving Avista Tariff Schedule 77 (April 26, 2016).

<sup>28</sup> Avista has used hardware from Siemens, BTC, Control Module Inc., and Efacec. It is also in beta testing with a unit from Delta.



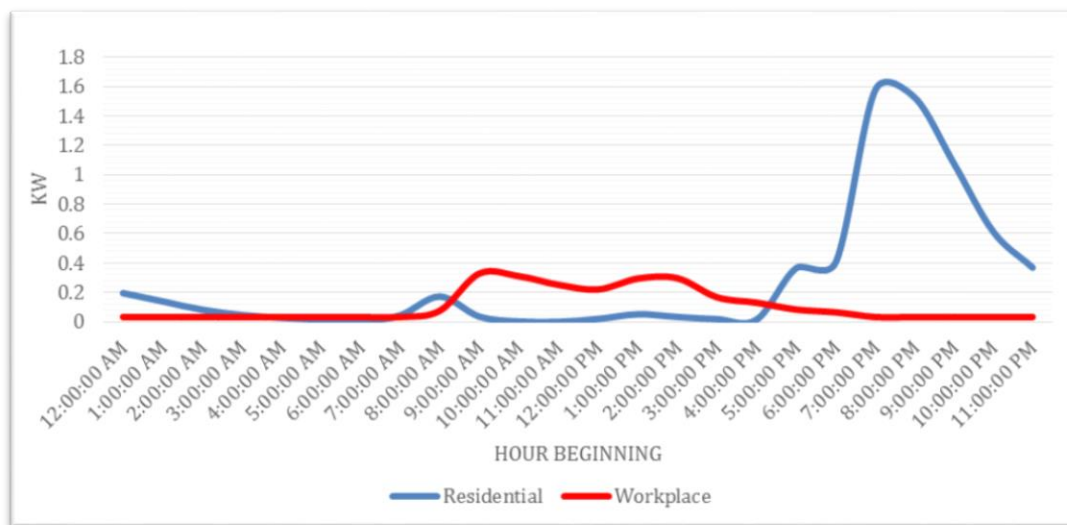
Upon approval of the pilot program, the commission required Avista to file quarterly reports as well as a final report with a program evaluation.<sup>29</sup> The quarterly reports include a wealth of data on the participation levels, expenditures, and revenues for each of its services, load profiles, and the effects of charging stations on load management systems. Figure 4 provides a summary of high-level key statistics through November 1, 2017.

**Figure 4: Avista November 2017 Quarterly Report: High-Level Statistics on Charging Behavior**

Daily average number of charge sessions	67
Daily average kilowatt hours consumed	442
Charging sessions to date	22,352
Kilowatt hours consumed to date	116,945
Pounds of CO <sub>2</sub> saved to date	238,032
Gallons of gasoline saved to date	12,151

Early analysis of Avista’s quarterly reports indicates that EV drivers are charging their vehicles at the times that Avista expected. Figure 5 illustrates the charging behaviors of a single plug-in vehicle driver that has access to both a workplace and residential charger. The driver’s workplace charger use peaks around 9 a.m. and slowly declines into the afternoon. Home charger use peaks between 6 p.m. and 8 p.m. Although this information is from one driver, it is a useful example of early results from the Company’s pilot program.

**Figure 5: Avista November 2017 Quarterly Report: Average Workday Profile – Plug-In Vehicle Driver with Workplace Charging**



Avista’s current pilot program is set to expire in July 2018. However, the Company has informed commission staff that it expects to request an extension of its pilot program through 2019, so that it may continue to gather data and experiment with its program. In discussions with commission staff, Avista has stated that it is seeking ways to minimize the impact of electric vehicle charging on electric grid

<sup>29</sup> See Docket UE-160082, Order 01, Approving Avista Tariff Schedule 77 (April 26, 2016).

operations, such as examining the charging behavior of EV owners who have access to both workplace and home chargers. Understanding how these EV owners charge their vehicles under various load management conditions will help Avista understand where it should focus its EVSE buildout, and whether, and to what extent, this will influence the company's EV-charger rate design. Avista states that it also plans to conduct experiments with demand response to determine how much on-peak load can be shifted to off-peak hours.<sup>30</sup>

### **Pacific Power EVSE Activity**

Pacific Power is a subsidiary of PacifiCorp, which serves 1.8 million electric customers in six states. The company's Washington territory includes Walla Walla, Yakima, and Sunnyside, with 130,000 customers in six counties. Pacific Power also serves 574,000 electric customers in Oregon, and 45,000 in California.<sup>31</sup>

Pacific Power has not yet proposed an EV or EVSE program in Washington. The company has proposed EVSE programs in Oregon and California, and told the Washington Joint Utility Electric Vehicle Stakeholder Group that it will work with stakeholders in late 2017 to develop transportation electrification programs in Washington.<sup>32</sup>

As required by Oregon Senate Bill 1547,<sup>33</sup> Pacific Power filed in December 2016 for approval of three initial transportation electrification pilot programs with the Public Utility Commission of Oregon.<sup>34</sup> These programs are:

- *Outreach and Education Pilot:* This pilot would focus on communications with the public that increase exposure and access to reliable information about electric transportation options and benefits. The company's efforts would include customer communications, self-service resources, community events, and technical assistance for non-residential customers considering EV charging projects.
- *Public Charging Pilot:* Pacific Power proposes to install, own and operate up to seven publicly accessible fast charging 'pods', or groups of EV chargers, in its Oregon service area. Pacific Power proposes to charge drivers a rate that encourages off-peak usage and stimulates competition with other companies providing public EVSE chargers.
- *Demonstration and Development Pilot:* Under this program, Pacific Power proposes to provide grants to non-residential Pacific Power customers to develop creative, community-driven EV charging projects. Funding would be awarded on a quarterly basis, and recipients would be required to share data with Pacific Power for use in future system and program planning.

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<sup>30</sup> Demand response is a type of utility program that incentivizes customers, generally through payments, to shift electricity usage from periods of peak-use, or high market prices, to lower usage hours.

<sup>31</sup> Parent company PacifiCorp also owns Rocky Mountain Power, which has 875,000 customers in Utah, 140,000 in Wyoming, and 76,000 in Idaho.

<sup>32</sup> Draft Minutes from the Washington Joint Utility Electric Vehicle Stakeholder Group, (October 9, 2017).

<sup>33</sup> Oregon Laws 2016, Chapter 28, Section 20(3).

<sup>34</sup> Pacific Power Application for Transportation Electrification Programs, (April 12, 2017). Retrieved from [https://www.pacificpower.net/content/dam/pacific\\_power/doc/About\\_Us/Rates\\_Regulation/Oregon/Regulatory\\_Filings/Docket\\_UM\\_1810/4-12-17\\_Supplement/Application/Supplemental\\_Application\\_REDACTED.pdf](https://www.pacificpower.net/content/dam/pacific_power/doc/About_Us/Rates_Regulation/Oregon/Regulatory_Filings/Docket_UM_1810/4-12-17_Supplement/Application/Supplemental_Application_REDACTED.pdf).

On June 30, 2017, consistent with the direction in Section 32 of California Senate Bill 350, Pacific Power also proposed a modified version of its Oregon programs to the California Public Utilities Commission.<sup>35</sup>

Pacific Power's proposed programs in Oregon and California are currently under review by the states' respective utility commissions. The company has stated that it is working through the approval process in Oregon before it will propose EV programs for its Washington customers, so that it can align its offerings.<sup>36</sup> It will also be looking to Avista's program to provide useful information to inform its own offerings.

### **Puget Sound Energy EVSE Activity**

Puget Sound Energy (PSE) is an electric and natural gas utility serving 1.1 million electric and 800,000 natural gas customers in western Washington.

At the commission's April 24, 2014, Open Meeting, the commission allowed PSE's proposed electric vehicle charger pilot program to go into effect by operation of law.<sup>37</sup> From August 2014 until April 2017, PSE offered a rebate for Level 2 EV chargers installed at residential customers' homes. In total, PSE enrolled more than 2,000 customers in the rebate program.

As part of its program, PSE asked participating customers a number of survey questions about their EV driving and charging habits and is studying the electrical load patterns created by residential EV charging. In discussions with commission staff, PSE stated that electric vehicles on aggregate will increase evening peak electrical loads, which coincides with PSE's peak electric need. However, PSE also stated that it found evening charging loads during the pilot period to be less extreme than it initially estimated. The impact of PSE's pilot program on its system peak load was an increase of about 10 MW, which is less than 0.5 percent of PSE's peak load. Even with significant increases of EVs charging through its distribution grid, PSE stated that it expects only moderate load increases through 2030.

The commission expects PSE to submit a final evaluation of the program by the end of 2017, and therefore does not anticipate that the Company will propose a program that could take advantage of the incentive rate of return under RCW 80.28.360 until 2018.

## **V. State Agency Action in Support of EVSE**

### **Utilities and Transportation Commission**

In June 2016, in response to the Legislature's direction in ESHB 1853 to consider policies to improve access to and promote fair competition in the provision of EVSE, and to evaluate policy issues related to

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<sup>35</sup> Application of PacifiCorp (U 901 E) For Approval of its 2017 Transportation Electrification Programs. Retrieved from <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M191/K851/191851183.PDF>.

<sup>36</sup> Draft Minutes from the Washington Joint Utility Electric Vehicle Stakeholder Group. (October 9, 2017).

<sup>37</sup> See Docket UE-131585.

the implementation of the bill, the commission opened a staff investigation on utility EVSE offerings. After a thorough stakeholder process, the commission issued a [\*Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services\*](#)<sup>38</sup> (Policy Statement) in June 2017. This policy statement, attached to this report as Appendix A, clarifies the commission's jurisdiction and regulation of EV charging services offered by investor-owned utilities, sets the stage for EV charging as a regulated service, and sets policy to promote fair competition among electric vehicle charging services. The Policy Statement is discussed in detail in the recommendations section of the report.

The commission has recognized the need to convene stakeholder groups to review proposed utility programs. Because there are generalized issues concerning EVSE planning, the Policy Statement called for a single, joint-stakeholder group made up of the three investor-owned utilities and, at a minimum, representatives from commission staff, the Public Counsel Office of the Attorney General, WSDOT and the Departments of Commerce.<sup>39</sup> In October 2017, the first stakeholder group met, with attendees including commission staff, state agencies, electric vehicle advocates, private enterprises, and other stakeholders.<sup>40</sup> This group will continue to meet regularly and provide feedback to electric utilities as they develop EVSE programs.

As discussed above, the commission continues to work with the investor-owned electric utilities in their development of pilot and full-scale EVSE programs.

## **Washington Department of Transportation**

The Washington State Department of Transportation (WSDOT), in partnership with public and private entities, has recommended policies to encourage utility participation in the EV charging market. In its [\*Washington's Electric Vehicle Action Plan\*](#), published in February 2015, WSDOT identified actions to engage utilities in broader transportation electrification efforts. These activities, which the commission considered in the development of its policy statement, include:

- Identifying barriers and incentives for electric utilities to promote the use and increased use of electricity for transportation.
- Encouraging utilities to provide public education about EVs.
- Encouraging all utilities to support EVSE installation and provide rebates.
- Requiring utilities to establish an electric transportation department.
- Encouraging utilities to maximize the grid benefits of electric vehicles, and
- Encouraging utilities to purchase and redeploy used EV batteries for a secondary use.

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<sup>38</sup> *Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services*, Docket UE-which160799 (June 14, 2017) [https://www.utc.wa.gov/\\_layouts/15/CasesPublicWebsite/GetDocument.aspx?docID=147&year=2016&docketNumber=160799](https://www.utc.wa.gov/_layouts/15/CasesPublicWebsite/GetDocument.aspx?docID=147&year=2016&docketNumber=160799).

<sup>39</sup> *Id.*, page 40.

<sup>40</sup> State agencies in attendance included the Utilities and Transportation Commission, the Department of Commerce, and the Washington State Department of Transportation.

WSDOT has also worked with other states, utilities, local governments, and private partners to electrify major transportation routes. Partnering with Oregon, California, and British Columbia, WSDOT developed the West Coast Electric Highway, which ensures that DC Fast Charger stations are located every 25 to 50 miles along the entirety of Interstate Highway 5 (I-5).<sup>41</sup> Within the state boundaries, WSDOT is working with public and private partners, utilities, and other stakeholders to use federal funds to install a network of DC Fast Chargers every 40 to 60 miles along US Highway 2 and Interstate Highway 90 (I-90).<sup>42</sup> The initial fast charging network opened for the public in 2012, providing a basic network of charging stations.

In 2016, the state Legislature directed WSDOT to develop a program to encourage private investment in EV fast charging, providing funding through a portion of monies collected through the annual \$150 electric vehicle registration fee that went into effect in July 2016. Through a competitive application process, in July 2017, WSDOT awarded \$1 million in grant funds for projects along I-5, I-90, I-82, and US-395.<sup>43</sup> Energy Northwest, on behalf of several public utility districts in the Electric Vehicle Infrastructure Transportation Alliance, is managing the grant-funded projects in Eastern Washington.<sup>44</sup> Figure 6 below shows where the grant-funded fast chargers are located in Washington.

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<sup>41</sup> The West Coast Electric Highway also includes Highway 101 in Oregon and California, and Highway 99 in California. Retrieved from <http://www.westcoastgreenhighway.com/about.html>

<sup>42</sup> Washington's Electric Highways. Retrieved from <http://www.westcoastgreenhighway.com/WAelectrichighways.html>

<sup>43</sup> Washington State Department of Transportation Notice of Proposed Awards. (May 31, 2017) Retrieved from [https://www.wsdot.wa.gov/NR/rdonlyres/0DED5F62-5C83-456A-BD26-6176941A5F29/0/EVIPP\\_NOPA.pdf](https://www.wsdot.wa.gov/NR/rdonlyres/0DED5F62-5C83-456A-BD26-6176941A5F29/0/EVIPP_NOPA.pdf)

<sup>44</sup> Energy Northwest is consortium of 27 public utility districts and municipalities that provides its members with electric power and services. Formed by the Washington state legislature in 1957, the agency owns and operates four electricity generating facilities: White Bluffs Solar Station, Packwood Lake Hydroelectric Project, Nine Canyon Wind Project, and Columbia Generating Station (nuclear energy facility). See <https://www.energy-northwest.com/whoware/Pages/default.aspx>

**Figure 6:** Washington Electric Vehicle Infrastructure Pilot Program Grant-Funded DC Fast Charging Locations



## WASHINGTON'S ELECTRIC HIGHWAY NETWORK



Finally, WSDOT has taken advantage of opportunities to leverage state funds to bolster the EV Infrastructure Pilot Program. It successfully obtained the national designation of I-5 and US 101 as Electric Vehicle Charging Corridors through the Federal Highway Administration’s Alternative Fuel Corridor Designation Program. WSDOT also submitted a [Pacific Northwest proposal](#) for charging infrastructure along state highways and other key locations in Washington and Oregon through Volkswagen's \$2 billion [Electrify America Investment Program](#). The proposal includes electric vehicle charging equipment at [160 Washington state worksites and parks](#). Electrify America announced plans to install interoperable electric vehicle charging in the greater Seattle area, and along I-5 and I-90, during the next two years.<sup>45</sup>

### Washington Department of Commerce

In July 2010, the Washington Department of Commerce (Commerce) and the Puget Sound Regional Council published [Electric Vehicle Infrastructure: A Guide for Local Governments in Washington](#)

<sup>45</sup> The Electrify America program is discussed in the section concerning Department of Ecology below.

State.<sup>46</sup> The document offers guidance on allowed zoning and land uses affecting EV charging, and provides background information, a model ordinance, model development regulations, and other useful templates and checklists that can be adopted locally.

The proposed 2017–2019 Capital Budget (SB 5981) directed Commerce to develop and execute Clean Energy Fund 3, an \$11 million transportation electrification grant program that targets local governments and retail electrical utilities and prioritizes peak demand reduction. The program can include EVSE components. The proposal did not pass the Legislature in 2017, but may be considered in the 2018 legislative session.

In 2016, the State Building Code Council established a new code requiring new multi-family construction to accommodate EVSE installation.<sup>47</sup> Where parking is provided, at least 5 percent of parking spaces must have EVSE infrastructure.

### **Washington Department of Ecology**

In 2016, a federal court found that Volkswagen (VW) violated the federal Clean Air Act by manufacturing diesel vehicles with software that cheated emissions testing by turning on when the vehicle was tested. As part of a series of settlements, VW agreed to invest \$2 billion in zero-emissions vehicle infrastructure across the country.<sup>48</sup> The settlement also required VW to provide consumer relief and to fund an environmental mitigation trust to alleviate excess nitrogen oxide emissions from affected vehicles.

The court settlement designates the Washington State Department of Ecology (Ecology) as the state's beneficiary of the VW settlement fund. Washington state is eligible to receive \$112.7 million from the mitigation trust. The funds must be spent on replacing diesel vehicles, boats, and other equipment to reduce nitrogen oxide pollution. Ecology is developing Washington's mitigation plan in consultation with the Legislature, WSDOT, the state Department of Health, Commerce, the Governor's office, stakeholders, and the public. Washington is authorized to invest up to 15 percent of its mitigation funds on EVSE. Ecology expects to present a draft of the full plan for public comment by late 2017.

In addition to the environmental mitigation trust, VW has agreed to invest \$2 billion in zero-emissions vehicle projects.<sup>49</sup> VW has established an LLC, [Electrify America](#), to manage these investments and related planning. VW selected the greater Seattle Metropolitan Statistical Area, made up of King, Snohomish, and Pierce counties, as one of 11 areas to receive first-round funding.

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<sup>46</sup> This guide was funded by the Puget Sound Regional Council, US Department of Transportation, Federal Transit Administration, Federal Highway Administration, and the Washington State Department of Transportation. Retrieved from <https://www.psrc.org/sites/default/files/electric-vehicle-guidance.pdf>

<sup>47</sup> WAC 51-50, Chapter 4, Section 427.

<sup>48</sup> Volkswagen Clean Air Act Civil Settlement. (2017). Retrieved from <https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement>

<sup>49</sup> \$800 million was allocated to California, and \$1.2 billion will be spent throughout the rest of the United States.

## **VI. Legislative Recommendations Regarding Utility Participation in the EV Market**

In the findings supporting ESHB 1853, the Legislature found “that the transportation sector is Washington's largest contributor to greenhouse emissions and hazardous air pollutants,” and “that state policy can achieve the greatest return on investment in reducing greenhouse gas emissions and improving air quality by expediting the transition to alternative fuel vehicles, including electric vehicles.”<sup>50</sup> Furthermore, it found that electric utilities are in a unique position to build-out the necessary electric vehicle infrastructure.

“[U]tilities, who [that] are traditionally responsible for understanding and engineering the electrical grid for safety and reliability, must be fully empowered and incentivized to be engaged in electrification of our transportation system. The legislature further finds that it has given utilities other policy directives to promote energy conservation which do not make the benefits of building out electric vehicle infrastructure, as well as any subsequent increase in energy consumption, readily apparent. Therefore the legislature intends to provide a clear policy directive and financial incentive to utilities for electric vehicle infrastructure build-out.”<sup>51</sup>

The bill requires that the commission consider, and allows it to adopt, other policies to improve access to and promote fair competition in the provision of EVSE. To monitor the effectiveness of the financial incentive to utilities provided in the bill, the Legislature required that by December 31, 2017, the commission report back on the use of any incentives allowed by the bill, the quantifiable impacts of the incentives on actual electric vehicle deployment, and recommendations to the legislature about utility participation in the electric vehicle market.<sup>52</sup>

As described in this report, the utilities are still conceptualizing how they can take advantage of ESHB 1853. Two of the three investor-owned utilities have pilot programs, and all three are considering tariff submittals to the commission for future programs that may take advantage of the allowed incentive rate of return. As the utilities are still developing their programs, the commission has not gathered sufficient information yet to know if the financial incentives in the bill are effective, and if the Legislature should take additional actions.

However, the commission highlights its Policy Statement Concerning Regulation of Electric Vehicle Charging Services (Policy Statement), because it builds upon the legislative direction in ESHB 1853 by providing the investor-owned utilities regulatory guidance.

### **Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services**

In its 2017 Policy Statement, the commission provides regulatory guidance to investor-owned utilities to facilitate the implementation of programs that take advantage of the financial incentives in ESHB 1853. The Policy Statement is divided into two parts – the first defines the framework under which investor-owned utilities may offer electric vehicle charging as a regulated service. In the second part of the Policy

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<sup>50</sup> Laws of 2015, c.220 s. 1(1) & (2)

<sup>51</sup> Laws of 2015, c.220 s. 1(3)

<sup>52</sup> RCW 80.28.360(5)



Statement, as required by the bill, the commission adopts policies to improve access to and promote fair competition in the provision of EVSE.

### *Electric Vehicle Charging as a Regulated Service*

The Policy Statement finds that EV charging services that are subject to commission jurisdiction and subsidized in part by revenues from non-electric vehicle customers, are subject to all public service laws applicable to electric companies under Title 80.<sup>53</sup> As such, the utility must demonstrate that its electric vehicle supply equipment is “used and useful”,<sup>54</sup> has been prudently acquired,<sup>55</sup> and that the utility’s programs result in rates that are fair, just, and reasonable.<sup>56</sup>

The commission also determined that in situations where EV charging services are competitive, it would generally support the adoption of a more flexible pricing structure for a utility’s EVSE programs.<sup>57</sup> Existing law allows the commission to adopt “banded rates” at the request of a natural gas or electrical company if the utility is subject to effective competition from suppliers not regulated by the commission.<sup>58</sup> However, EV charging services remain subject to existing statutes that prohibit rate discrimination and unreasonable preference for specific customers.<sup>59</sup>

ESHB 1853 allows the commission to authorize an incentive rate of return of up to 2 percent on EVSE deployed on a fully-regulated basis that is deployed to the benefit of ratepayers.<sup>60</sup> The Legislature also placed a cap on expenditures so that they do not increase costs to the ratepayers by more than 0.25 percent. In the Policy Statement, the commission adopted a stakeholder recommendation to apply the rate impact cap on a “net basis” taking into account the impact of any offsetting revenue associated with the increased energy sales.<sup>61</sup> It also determined that “net” impact to ratepayers should be based on the revenue requirement of the most recently completed general rate case. The commission stated in the Policy Statement that although it is unlikely that customers will park at a DC Fast Charger for more than two hours, it declined to adopt a bright line test that limits the applicability of the incentive rate of return for DC Fast Chargers.<sup>62</sup> The utility still bears the burden of demonstrating that its investments meet the statutory criteria.

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<sup>53</sup> *Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services*, at 10.

<sup>54</sup> *Id.*, at 10.

<sup>55</sup> *Id.*, at 12.

<sup>56</sup> *Id.*, at 13.

<sup>57</sup> *Id.*, at 15.

<sup>58</sup> RCW 80.28.075. Banded rates means that the Commission establishes a minimum and maximum rate and the utility has the flexibility to change its prices within the range.

<sup>59</sup> *Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services*, at 16.

<sup>60</sup> RCW 80.28.360(1).

<sup>61</sup> *Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services*, at 22.

<sup>62</sup> *Id.*, at 23.

*Policies to Improve Access to and Promote Fair Competition in the Provision of Electric Vehicle Charging Services*

The Legislature determined that utilities have a role to play in transforming the market for electric vehicles. However, at such an early stage of the buildout of EVSE infrastructure in Washington, the commission determined that there is no “right” model for utilities to help transform the vehicle market and that flexibility is essential.<sup>63</sup> The second part of the Policy Statement addresses how utility programs can be consistent with the public interest, identifies the types of services that should be offered, and describes the program design elements that are necessary to ensure benefits are provided to all customers.

At the heart of the commission’s Policy Statement is the adoption of a “portfolio approach” to designing and evaluating utility EV charging service programs.<sup>64</sup> Rather than offering a single program, the commission finds that utilities should provide customers with multiple service options designed to serve a range of customer types and target multiple segments of the market. For example, a utility could offer publicly available DC Fast Charging, Level 2 workplace and fleet charging, residential EVSE leases, multi-unit dwelling “make ready” installations, time-of-use rate structures, and low-income programs.<sup>65</sup> Some elements of a utility program could qualify for the incentive rate of return; other parts of the program may not. Because technologies and customers’ needs will evolve quickly, the utility’s portfolio should be able to adapt to a rapidly changing market.

A portfolio approach also prioritizes load management and grid benefits over rate base additions.<sup>66</sup> Load management is essential to ensuring that electric vehicle programs provide benefits to the electrical system and customers that do not own an EV. Absent load management, EV charging services can increase the peak demand of electricity and the need for new capacity generating resources. Therefore, the commission determined that it would be difficult for a program without load management capabilities, such as a demand response program, to result in rates that are fair, just, and reasonable.

In addition to adopting the portfolio approach for program implementation, the commission also adopted policies supporting consumer protection, direct benefits to low-income customers, service quality standards, regular and comprehensive reporting, and education and outreach. The commission’s mission is to ensure that utility service is safe, available, reliable, and fairly priced. In adopting these additional policies, the Policy Statement extends the commission’s standards and practices to utility EVSE programs. It also ensures that the benefits of the programs, and opportunities to participate, are fairly distributed across the customer base.

The commission also determined that the public interest is best served by network interoperability that allows customers to move seamlessly between networks.<sup>67</sup> Although it is premature to adopt specific requirements or adopt a specific form of payment requirement, the commission highlights that interoperability is an important issue and encourages the utilities to participate in the development of

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<sup>63</sup> *Id.*, at 42.

<sup>64</sup> *Id.*, at 33.

<sup>65</sup> An example of a utility portfolio is located in Table 2, at 34.

<sup>66</sup> [\*Policy and Interpretive Statement Concerning Commission Regulation of Electric Vehicle Charging Services\*](#), at 35.

<sup>67</sup> *Id.*, at 39.

standards in a more appropriate industry venue. Until that occurs, the Policy Statement instructed the utilities to include interoperability analysis in their proposals for EV charging services.

Finally, the commission recognized the need to reduce barriers associated with planning and prioritization of transportation investment.<sup>68</sup> Although the electric vehicle market and the buildout of infrastructure is nascent, it already involves dozens of private local and national companies and various government agencies, who often act independently. It is evident that there is a need for coordinating the installation of electric vehicle charging equipment to most efficiently deploy EV infrastructure. Therefore, the Policy Statement supports the convening of a single joint stakeholder group among the three investor-owned utilities and a broad reach of stakeholders, which has already begun meeting. The commission also encourages the investor-owned utilities to work with their regional planning councils so that they can coordinate their actions with local governments and neighboring non-regulated utilities.

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<sup>68</sup> *Id.*, at 30.