

December 27, 2016

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301-3398

Attn: Filing Center

RE: UM ___ – PacifiCorp’s Transportation Electrification Demonstration and Development Pilot Program

In compliance with section 29 of Senate Bill 1547¹ and OAR 860-087-0030, PacifiCorp d/b/a Pacific Power (Pacific Power or Company) submits the attached application for its transportation electrification Demonstration and Development pilot program.

The Demonstration and Development pilot represents one component of Pacific Power’s initial efforts to accelerate transportation electrification in its Oregon service area. Other components of the Company’s efforts to accelerate transportation electrification include an Outreach and Education pilot program, a Public Charging pilot program, and a proposed Public Direct Current Fast Charger Transitional Rate. Application filings for these components will be made concurrently with this application.

These initial efforts recognize the diverse and dispersed nature of Pacific Power’s service area, which includes regions of the state that can present unique challenges with respect to adoption of emerging technologies. These components comprise the initial phase of the Company’s longer-term transportation electrification strategy and are designed to establish a foundation by which Pacific Power can partner with its customers and communities to better understand the most effective future roles for the Company in expanding support for transportation electrification as this dynamic market continues to mature.

The enclosed pilot program application includes estimated cost information that is commercially-sensitive, which if disclosed could expose the Company to competitive harm. Confidential information is provided as confidential under OAR 860-001-0070.

It is respectfully requested that all formal data requests to the Company regarding this filing be addressed to the following:

By e-mail (preferred): datarequest@pacificorp.com

¹ Oregon Laws 2016, Chapter 28, Section 29.

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By regular mail:

Data Request Response Center
PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, OR 97232

Please direct any informal inquiries to Natasha Siores, Manager, Regulatory Affairs, at (503) 813-6583.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Bryce Dalley", with a long horizontal flourish extending to the right.

R. Bryce Dalley
Vice President, Regulation

Enclosure



Demonstration and Development Pilot

Through a competitive grant funding process, PacifiCorp, d/b/a Pacific Power (Pacific Power or Company) will partner with customers to develop creative, community-driven electric transportation infrastructure projects in its Oregon service area. The pilot program is designed to address the upfront cost barrier of electric transportation infrastructure and to empower the Company's non-residential customers and communities to develop projects with a particular focus on increasing access for underserved populations and testing emerging technologies. The pilot program will provide valuable information for future planning and test the effectiveness of competitive grant funding in accelerating transportation electrification, increasing access for underserved populations and deploying innovative solutions to meet customer and electrical system needs.

The Demonstration and Development pilot represents one component of Pacific Power's initial efforts to accelerate transportation electrification in its Oregon service area. These initial efforts recognize the diverse and dispersed nature of Pacific Power's service area, including regions of the state that can present unique challenges with respect to adoption of emerging technologies. This initial phase of the Company's longer-term transportation electrification strategy is designed to establish a foundation by which Pacific Power can partner with its customers and communities and better understand the most effective future roles for the Company in expanding support for transportation electrification as this dynamic market continues to mature.

This application is structured to clearly demonstrate how this pilot program complies with the Transportation Electrification Program Application Requirements under OAR 860-087-0030. Elements that are common to all three pilot programs proposed by the Company are included in appendices to this application to facilitate an efficient review by the Public Utility Commission of Oregon and other interested parties.

PROGRAM DESCRIPTION: OAR 860-087-0030 (1) (A)

Program elements, objectives, timeline, and expected outcomes: OAR 860-087-0030 (1) (a) (A)

Program Elements

Through a competitive grant funding process, Pacific Power will partner with non-residential customers to develop creative, community-driven electric transportation infrastructure projects in its Oregon service area. Rather than prescribing specific eligible technologies or projects, the competitive grant process is designed to stimulate competition, innovation and customer choice by allowing Pacific Power's customers and communities to bring pilot demonstration projects forward. This flexibility will allow the Company to identify partnership opportunities as they arise and develop insight into its Oregon customers' priorities, market barriers, infrastructure preferences, project economics, implementation timelines and equipment utilization to inform future electric transportation planning efforts.

Application Evaluation and Selection

Following successful practices of Pacific Power’s Blue Sky renewable energy project funding awards, the Company will engage an independent third-party evaluator, selected through a competitive request for proposals process, to review and score projects based on established criteria outlined in Table 1. Pacific Power will work closely with the independent evaluator to ensure that evaluation tools and practices align with program objectives.

Table 1. Applicant Evaluation Criteria

Criteria	Measures
Project Feasibility/ Utilization	<ul style="list-style-type: none"> • Readiness of the project team and reasonableness of the project plan and timeline. • Feasibility study results, including compliance with national, state, and local safety and accessibility requirements. • Expectation that the charging infrastructure will be sufficiently utilized. • Availability of information on equipment connectivity and network communication standards. • Robustness of the ongoing operations and maintenance plan. • Plan to address interoperability and expected pricing model, if applicable. • Proposed method(s) of data sharing with Pacific Power.
Use of Funds	<ul style="list-style-type: none"> • Customer and Company financial commitment and leveraging of funds from other sources. • Alignment of project costs with industry standards. • Reasonableness of the proposed budget (i.e., risk of exceeding budget). • How project is designed to avoid risk of stranded investments.
Innovation	<ul style="list-style-type: none"> • Incorporation of emerging technologies, such as renewable generation, energy storage or direct load control. • Creative project design, partnerships, and utilization of resources, particularly in serving underserved populations.
Educational Benefits	<ul style="list-style-type: none"> • Physical and community visibility. • Education plan and awareness building opportunities. • Exposure to underserved populations, such as multi-family, income qualified and regions with known air quality issues, and remote areas of the state.¹
Environmental benefits	<ul style="list-style-type: none"> • Targeting areas with known air quality issues. • Alignment with the applicant’s broader environmental mission or goals.

¹ While Pacific Power has identified examples of underserved populations, there are likely additional segments that will be identified through the Company’s proposed transportation electrification pilots. Applicants will be expected to explain how proposed projects serve an underserved population, if applicable.

Community benefits	<ul style="list-style-type: none">• Benefits provided to income qualified populations.• Impact of the applicant on the community.• Use of local labor and/or materials.• Accessibility to the public.
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Eligible Expenses

Funding will be available for the charging infrastructure portion of projects. Eligible expenses include capital expenses directly associated with the installation of electric vehicle charging infrastructure, which excludes project management costs, ongoing operations and maintenance costs, energy costs, ongoing network subscription costs, vehicle purchase or lease, or site and infrastructure improvements that would occur without the installation of charging infrastructure (e.g., landscaping, information technology network enhancements). Eligible expenses will be detailed in funding solicitations and applications will be reviewed for compliance with these guidelines.

Program Objectives

Pacific Power’s Transportation Electrification Strategy is provided as Appendix A of this document. The proposed pilot program is designed to support this strategy in a number of ways, including:

- Fostering creative customer- and community-driven solutions to accelerate transportation electrification in Pacific Power’s Oregon service area;²
- Remaining flexible in a rapidly changing market;
- Exploring and addressing market barriers to charging infrastructure development, including awareness and up-front cost. This includes understanding the barriers and solutions prioritized by customers;
- Stimulating the development of charging infrastructure that complements existing and planned public charging stations, including Pacific Power’s proposed Public Charging Pilot program deployment;
- Increasing access to the benefits of electric transportation, particularly for underserved populations;
- Testing emerging technologies and project models; and
- Collecting data to inform future investment in transportation electrification.

Program Timeline

Grant funding will be made available on a quarterly basis through 2019. Pacific Power anticipates issuing the first funding solicitation by the third quarter of 2017, allowing time for Commission approval of the proposed pilot program, program material development and initial outreach. While Pacific Power proposes a one-year requirement for project completion based on the best practices developed for the Blue Sky funding process, Pacific Power will continue to monitor this timeline, along with all other initial requirements, for appropriateness in the context of transportation infrastructure projects. An overview of the anticipated funding cycle is provided in Table 2.

² An overview of current and forecasted plug-in electric vehicle adoption and public charging infrastructure in the Company’s Oregon service area is provided in Appendix A to this document.

Table 2. Demonstration and Development Quarterly Funding Cycle

Ongoing Solicitation	<ul style="list-style-type: none"> • Host application materials and additional applicant resources online. • Encourage interested parties to join the funding cycle notification list. • Build awareness through industry groups, Pacific Power’s Regional Business Managers (RBMs), and Pacific Power’s communication channels (e.g. media outreach, website, brochures, newsletters).
Month 1: Application Submission	<ul style="list-style-type: none"> • Send notice of upcoming application deadline for funding cycle to notification list. • Intensify outreach across communications channels. • Close application period.
Month 2: Evaluation	<ul style="list-style-type: none"> • Pacific Power advances eligible applications to the independent evaluator. • Independent evaluator interviews, scores, and ranks the applicants.
Month 3: Selection and Notification	<ul style="list-style-type: none"> • Review independent evaluation results and make final funding determinations. • Notify applicants and execute funding agreements.

Expected Outcomes

The Company expects the pilot program to increase electric transportation infrastructure development in its Oregon service area by enabling contemplated projects in need of additional partners and inspiring customers and communities to develop new electric transportation projects. A primary goal of the pilot phase of this program is to provide Pacific Power with information about customer and community barriers to project implementation, identified solutions to best meet their needs, the amount of funding required to make more projects possible, the timelines and milestones associated with various types of electric transportation projects, infrastructure usage patterns in different market segments and best practices to inform future programs.

Market baseline assumptions: OAR 860-087-0030 (1) (a) (B)

See Appendix A.

Major performance milestones: OAR 860-087-0030 (1) (a) (C)

Major performance milestones for the program include:

- Issue a request for proposals for independent application evaluator;
- Evaluator selection and contracting;
- Develop application and evaluation materials;
- Solicit applications for the initial round of funding;
- Complete selection for the initial round of funding;
- Execute funding agreement(s) with funding recipient(s);
- Announce initial funding recipient(s);
- Initial funding recipient(s) complete project(s) and fulfill all funding requirements;
- Disburse funding award payment to initial recipient(s);
- Conduct subsequent funding cycle based, adjusting as necessary based on lessons learned;
- Gather data to inform program evaluation; and
- Complete program evaluation.

Where applicable, a description of program phases, including a proposal for when each subsequent program phase will be submitted for commission review: OAR 860-087-0030 (1)

(a) (D)

The proposed pilot program for 2017-2019 represents the first phase of Pacific Power's efforts to partner with customers and communities to develop innovative demonstration and pilot projects. During the pilot period, the Company will engage a third-party consultant to evaluate the effectiveness of the pilot, including estimating benefits to customers. Based on program evaluation results, the Company may request an expansion of the program in 2019 or 2020.

Expected utilization, participation eligibility, and any incentive structure: OAR 860-087-0030 (1) (a) (E)

All non-residential³ Pacific Power customers in Oregon are eligible to apply for program funds with preference given to community-focused organizations, such as 501(c)(3) and city, county and regional governments. Applicants must commit to:

- A plan to ensure infrastructure reliability and utilization over the life of the equipment;⁴
- Perform a site feasibility assessment provided through Pacific Power's proposed Outreach and Education pilot program, or other comparable study, to ensure project feasibility and accuracy of project cost estimates;
- Provide interval charging data and information on driver pricing structure, if applicable, to Pacific Power on a regular basis for the life of the project;
- Install permanent, Pacific Power approved signage to increase awareness and understanding of the benefits and opportunities for transportation electrification, the Demonstration and Development pilot program and other available Pacific Power transportation electrification resources; and
- Participate in program evaluation activities, such as surveys and questionnaires.

The pilot program is designed to investigate customer and community demand for project partnership and the proposed pilot budget is sized to provide confidence to customers that funds will be available when requested, subject to application screening and competition. Pacific Power will use this program to test whether competitive solicitation is an effective mechanism to identify and enable pilot and demonstration projects.

Applicants may request up to 100% of eligible expenses, but are encouraged to explore additional funding opportunities to maximize the impact of Pacific Power's investment. Evaluation metrics will favor applicants providing a funding match and leveraging multiple partners and funding sources. The total of Pacific Power funding and all other funding sources, including tax credits, cannot exceed total eligible infrastructure project costs. Grant recipients will receive reimbursement upon successful completion of the project and confirmation that the project has met all requirements and obligations. Funding is granted as an "up to" amount and final reimbursement may be adjusted for changes in project scope.

³ Includes multi-unit dwelling sites on a non-residential rate schedule.

⁴ Applicants are responsible for defining project life. Evaluation will consider the reasonableness of the proposed project life. Funding agreements will allow Pacific Power to rescind the full amount of funding awarded if equipment is removed or taken offline before the end of the agreed upon project life.

Identification of market barriers, program implementation barriers and program strategies to overcome identified barriers: OAR 860-087-0030 (1) (a) (F)

The pilot program is designed to address the upfront cost barrier of electric transportation infrastructure and to empower customers and communities to develop projects that can address additional barriers to transportation electrification, with a particular focus on underserved populations and testing emerging technologies. Funding recipients will be expected to use co-funded infrastructure as a tool to improve electric transportation awareness, to complement Pacific Power's proposed outreach and education pilot and efforts of other organizations working to accelerate transportation electrification in Oregon.

Pacific Power will focus initial program efforts on applicant solicitation, as a robust applicant pool is necessary for pilot program success. As noted in Table 1, Pacific Power will utilize existing customer communications channels, media outreach, and its Regional Business Managers to reach customers currently considering transportation electrification infrastructure projects as well as to inspire customers to develop additional innovative and impactful projects. Projects selected for funding will be publicized on an ongoing basis to continue to increase awareness and foster additional project development. Through continued solicitation efforts, Pacific Power seeks to develop a robust partnership program, similar to Pacific Power's award-winning Blue Sky renewable energy program funding awards.⁵

In addition to its own outreach, Pacific Power hopes that other market actors, including charging equipment providers, will leverage the availability of project funding when helping customers scope and design electric transportation infrastructure projects. The program evaluation will investigate the most common and effective communication channels for informing customers about the pilot program funding opportunity.

Description of the electric company's role and, if applicable, a discussion of how the electric company proposes to own or support charging infrastructure, billing services, metering, or customer information: OAR 860-087-0030 (1) (a) (G)

Pacific Power will solicit applications, develop the application and funding process, work with the independent application evaluator to assess and select projects, monitor project progress, manage the reimbursement process and collect station utilization data from funded projects. The Company will not own or manage any equipment under this program.

Whether transportation electrification adoption attributed to the program will likely necessitate distribution system upgrades: OAR 860-087-0030 (1) (a) (H)

It is currently unknown to what extent the program will accelerate transportation electrification during the pilot period; however, Pacific Power will closely monitor impacts to its distribution system through the life of the program. The extent to which the pilot program accelerated adoption will be assessed through program evaluation activities, discussed later in this document.

Applicants must provide an approved feasibility study that can be evaluated to identify potential distribution system impacts as well as the reasonableness of required system upgrades. Applications evaluation will consider the extent of distribution system upgrades and whether a

⁵ Since 2006, Pacific Power has helped make 100 community-based renewable energy projects possible through Blue Sky customer funded grants.

proposed project includes technology or additional components that mitigate impacts on the distribution system. Data collected from projects are expected to help Pacific Power understand system impacts across a diverse range of projects.

Where applicable, a discussion of ownership structure: OAR 860-087-0030 (1) (a) (I)

The award recipient will own equipment funded by this program.

Where applicable, a discussion addressing interoperability of invested equipment; OAR 860-087-0030 (1) (a) (J)

Applicants will be expected to address potential interoperability barriers in grant applications.

Where applicable, a discussion of any national standards for measurement and communication: OAR 860-087-0030 (1) (a) (K)

The Company does not plan to mandate particular measurement and communication standards in the initial phase of applications; however, the Company does expect applicants to specify how they will measure utilization, communicate required data to Pacific Power and minimize risk of stranded investments. Pacific Power will monitor the development of standards for measurement and communication and proposed grant applications to determine whether standards should be incorporated into funding requirements.

DATA USED TO SUPPORT THE DESCRIPTIONS PROVIDED IN PARAGRAPHS (1)(A)(A)-(L) OF THIS RULE: OAR 860-087-0030 (1) (B)

Where available, supporting data have been provided above or in Appendix A. Through the pilot, the Company will gather data specific to its service territory that can be used to inform future planning efforts.

A DESCRIPTION OF PROGRAM COORDINATION THAT INCLUDES A DESCRIPTION OF: OAR 860-087-0030 (1) (C)

Stakeholder involvement in program development: OAR 860-087-0030 (1) (c) (A)

See Appendix B.

Efforts to coordinate with related state programs: OAR 860-087-0030 (1) (c) (B)

See Appendix B.

Coordination, if any, of delivery with other market actors and activities, and how the market and other market actors can leverage the underlying program or projects within the program: OAR 860-087-0030 (1) (c) (C)

The primary purpose of this program is to allow Pacific Power to partner with customers and communities to develop projects that test creative solutions to addressing market barriers to transportation electrification. Other market actors can play a critical role in promoting the pilot program by working with customers to develop innovative demonstration projects that can utilize available funding and helping customers identify additional funding sources to maximize the impact of program and customer funds. This program is designed to remain technology and provider neutral and all partnerships that meet program eligibility requirements will be considered for funding. Funded projects will serve as valuable case studies and the Company's evaluation efforts will provide information on barriers, effectiveness of grant funding, and project utilization

that can be used to inform future planning efforts of the Company and other market actors working to accelerate transportation electrification in Oregon.

A DESCRIPTION OF THE ELECTRIC COMPANY’S LONG-TERM STRATEGY TO ACCELERATE TRANSPORTATION ELECTRIFICATION IN ITS SERVICE TERRITORY IN AN EFFECTIVE AND EFFICIENT MANNER AND HOW THE PROPOSED PROGRAM FITS WITHIN THE LONG-TERM STRATEGY: OAR 860-087-0030 (1) (D)

See Appendix A.

A DESCRIPTION OF PROGRAM COSTS THAT INCLUDES, BUT IS NOT LIMITED TO: OAR 860-087-0030 (1) (E)

Estimated total program costs, including incentives, program delivery, evaluation, marketing, and administrative costs: OAR 860-087-0030 (1) (e) (A)

The estimated program cost during the pilot period is roughly \$1.7 million, as shown in Table 3.⁶ The Company anticipates that roughly 85% of program funds will go directly to customers through funding awards, with other program funds dedicated to program administration, evaluation and outreach. The grant funding budget has been sized to assure customers that funding will be available when requested during the pilot period, subject to application screening and competition. Actual funding levels will be driven by customer demand, project viability and requested financial commitment from the Company. Funds not distributed in a given year will be used to increase grant funding availability in the following year. The 2017 budget reflects a lower relative funding level due to expected program approval and implementation timelines.

Table 3. Estimated Program Costs

Cost Category	2017	2018	2019	Total
Grant Funding				
Application Evaluation				
Program Evaluation				
Program Administration				
Total				\$1,685,000

Application and program evaluation costs are informed by the Company’s experience engaging consultants to perform these services for Blue Sky and energy efficiency programs, respectively. Actual costs for these services will be determined through consultant selection and contracting and will vary based on participation levels.

Estimated participant costs OAR 860-087-0030 (1) (e) (B)

Applicants may request up to 100% of eligible expenses,⁷ but are encouraged to explore additional funding opportunities to maximize the value of Pacific Power’s investment. Evaluation metrics

⁶ Due to the nature of the grant funding cycle, some funds committed in 2019 will be paid to customers in 2020.

⁷ See “Eligible Expenses” section above for a list of expenses that grant funding may be used for.

will favor applicants providing a funding match and leveraging multiple partners and funding sources. Participants will be responsible for all project costs not explicitly included in the project funding agreement.

How the electric company proposes to recover costs: OAR 860-087-0030 (1) (e) (C)

The costs associated with the proposed program will be incremental to cost levels currently included in customer rates. The Company proposes to implement a surcharge to recover the operating costs of the pilot program through its existing Schedule 95, Pilot Program Cost Adjustment. The Company further proposes to use a balancing account to track the actual costs and surcharge collections. A tariff advice filing will be made to implement this proposed surcharge during the pendency of the proceeding to review the proposed pilot programs, expected to be in the spring of 2017. The Company will review the balancing account periodically to determine if changes to the surcharge are necessary.

Upon Commission approval of this application, the Company will make an advice filing to modify Schedule 95 (Pilot Program Cost Adjustment) to fund this program. Pacific Power estimates that program costs will result in an average 0.04% rate impact over the pilot period.

**A DESCRIPTION OF THE EXPECTED PROGRAM BENEFITS THAT INCLUDES:
OAR 860-087-0030 (1) (F)**

Program benefits, including to whom and when the benefits are accrued: OAR 860-087-0030 (1) (f) (A)

While electric transportation currently represents a small share of Pacific Power's total revenues, it also represents an opportunity for growth. As discussed in Appendix A, only two out of every 1,000 cars registered in Pacific Power's Oregon service territory currently utilize plug-in electric technology,⁸ however, based on current trends, the number of plug-in electric vehicles registered in the Company's Oregon service territory may quadruple by 2025. This revenue growth is a benefit to all Pacific Power customers, particularly if vehicle charging is performed in a manner that supports grid efficiency, minimizes required distribution system upgrades and improves operational flexibility. The proposed pilot seeks to accelerate transportation electrification, increasing and pulling forward revenue benefits for customers.

The proposed pilot program, and additional pilots concurrently proposed, represent the Company's initial efforts to increase and pull forward the benefits of transportation electrification in its Oregon service area. Given the time required for regulatory approval, program ramp-up, funding solicitation, project review and selection and project completion, the benefits of this program will not likely begin accruing until 2018. Projects installed in 2018 and 2019 will provide valuable information for program evaluation and future planning, however, the majority of revenue generated from these projects will accrue after the pilot period. The pilot program is designed to establish a foundation by which long-term revenue, and associated customer benefits, may be realized as the Company investigates its ability to effectively and efficiently accelerate the adoption curve in underserved populations and throughout its Oregon service area.

Non-residential customers whose projects are selected for funding will receive a direct benefit during the pilot period, in the form of a payment from Pacific Power to help offset all or part of

⁸ Data provided by the Oregon Department of Environmental Quality, through June 2016.

the initial cost of electric transportation infrastructure deployment. Oregon's Clean Fuels Program (OAR 340-253) presents a potential opportunity for non-residential customers to capture additional benefits through monetizing credits generated by supplying electricity as a transportation fuel. Current program rules provide the owner or operator of non-residential electric charging infrastructure with the first opportunity to generate credits for this infrastructure.

While the Commission historically focuses on benefits specific to utility ratepayers, the Company notes the legislative findings that transportation electrification has the ability to improve air quality, reduce greenhouse gas emissions, improve the public health and safety, and create fuel cost savings for drivers, which can be a particular benefit for low and moderate income populations.⁹ Project funding will be targeted to increase access to electric transportation for underserved populations and promote technologies and project designs that improve electrical system efficiency.

Electric system benefits: OAR 860-087-0030 (1) (f) (B)

Present plug-in electric vehicle adoption levels and the relative nascence of utility transportation electrification programs nationwide make it difficult to forecast long-term electric system benefits of electric transportation acceleration associated with this pilot program. Customers applying for funding through this program will be encouraged to incorporate project features that can test and enhance electric system benefits, including strategies to shift charging to off-peak periods, mitigate grid impacts during peak periods and integrate on-site generation. If the Company is successful in increasing the adoption of these technologies and practices as use of electricity as a transportation fuel increases, benefits to the electric system may include increased operational flexibility, such as the ability to harness electric transportation for demand response, and the ability to better integrate variable generation resources, such as wind generation available during off-peak hours. The pilot will provide the Company with deeper insight into typical non-residential electric transportation infrastructure configurations, charging patterns, impacts on the electrical system and the feasibility, costs and benefits of incorporating features to mitigate these impacts.

A discussion of how a net benefit to ratepayers is attainable: OAR 860-087-0030 (1) (f) (C)

In this application, the Company proposes a measured approach to investment in transportation electrification, beginning with an initial pilot phase to test program design, market barriers, and the ability to accelerate transportation electrification beyond what might happen in the absence of the program and the benefits associated with this acceleration. As discussed above, the majority of benefits to Pacific Power's customers will not be realized until after the end of the pilot period as vehicles and equipment continue to generate revenue and provide electrical system benefits over their useful lives. Program evaluation efforts will estimate the benefits that can be attributed to this program to determine whether a net benefit, relative to program costs, is likely to be achieved after the pilot period. The findings from this initial phase will be used to determine whether a second phase of the program is likely to generate a net benefit for customers.

⁹ Senate Bill 1547, Section 20 (2)

A DESCRIPTION OF HOW THE ELECTRIC COMPANY WILL EVALUATE THE PROGRAM THAT INCLUDES, BUT IS NOT LIMITED TO: OAR 860-087-0030 (1) (G)

Timeline of program evaluation and proposed evaluation reporting schedule: OAR 860-087-0030 (1) (g) (A)

Pacific Power will issue a request for proposals for third-party program evaluation services in 2017. Pacific Power will work with the selected evaluation contractor to scope required evaluation efforts and develop an evaluation plan. Evaluation efforts will begin in earnest in 2018, leading up to the development of a program evaluation report to be filed with the Commission in 2019. The program evaluation report will address all reporting requirements specified in OAR 860-087-0040 (1).

Estimated cost of evaluation: OAR 860-087-0030 (1) (g) (B)

The Company has budgeted [REDACTED] for program evaluation, assumed to be spread evenly between 2018 and 2019. This budget estimate is based on the Company's extensive experience contracting with third parties to evaluate energy efficiency programs, recognizing that the exact cost will not be known until contractor bids are received through the competitive bidding process.

How the evaluation will be conducted and whether a third-party evaluation is necessary: OAR 860-087-0030 (1) (g) (C)

The program evaluation will be conducted by a third-party contractor selected through a competitive bidding process. The Company has a long history of working with third-party consultants to evaluate its demand-side management programs and will seek proposals from a qualified pool of consultants to perform evaluation activities for this program.

How the evaluation will address identified barriers: OAR 860-087-0030 (1) (g) (D)

Evaluation efforts will attempt to answer the following questions related to identified barriers:

- How satisfied are customers with the program?
- What is the demand for electric transportation project partnerships in Pacific Power's Oregon service area?
- Which barriers and solutions to overcome barriers have Pacific Power customers and communities identified?
- To what extent does funding pilot and demonstration projects lead to increased awareness of electric transportation opportunities, costs and benefits?
- To what extent does funding pilot and demonstration projects lead to additional infrastructure development?
- To what extent do pilot and demonstration projects accelerate transportation electrification?
- Did the program increase access for underserved populations?
- How did the program stimulate innovation, competition, and customer choice?
- Did the program support system efficiency and operational flexibility, including the ability to integrate variable resources?
- What were the utilization levels of projects and what factors led to differences (e.g., location, market segment, project design)?
- What are the costs and benefits of the program? How are these benefits expected to grow over time?
- How effective were advanced technologies and innovative project designs?
- What are the areas for improvement for the funding process?

The answers to these questions will be used to inform future planning after the pilot period.

A discussion of the method of data collection that is consistent with subsection (1)(b) of this rule and how the data will be used to evaluate the effectiveness of the program: OAR 860-087-0030 (1) (g) (E)

During the development of the program evaluation work plan, the Company will work with the selected program evaluation provider to identify all data needed to answer the questions above. Funding recipients will be required to participate in program evaluation activities, such as surveys and questionnaires, and will be required to provide project utilization and reliability data for use in program evaluation efforts.

The Company will provide the third-party evaluator with data on program costs and project data provided by program participants. The third-party evaluator will be tasked with identifying the best mechanism(s) to solicit feedback from grant applicants and recipients.

The evaluation will also utilize Oregon Department of Environmental Quality data on plug-in electric vehicle registrations to investigate whether adoption has accelerated above the baseline forecast provided in Appendix A. While increased adoption may not be directly tied to the pilot program, this will be a useful metric to assess the effectiveness of the coordinated efforts of organization across Oregon working to accelerate transportation electrification during the pilot period.

A DESCRIPTION OF HOW THE PROGRAM ADDRESSES THE CONSIDERATIONS IN OREGON LAWS 2016, CHAPTER 028, SECTION 20(4)(A)-(F).EVALUATION: OAR 860-087-0030 (1) (H)

Senate Bill (SB) 1547 identified six considerations for the Commission “[W]hen considering a transportation electrification program and determining cost recovery for investments and other expenditures related to a program proposed by an electric company...” A discussion of how the pilot program addresses each of these considerations is provided below.

(a) Are within the service territory of the electric company

All projects selected for funding will be located within Pacific Power’s service area and owned by a Pacific Power customer.

(b) Are prudent as determined by the commission;

The Commission’s prudence review of utility investment focuses on “whether the company’s actions, based on all that it knew or should have known at the time were reasonable and prudent in light of the circumstances which then existed.”¹⁰ In determining prudence, the Commission does not rely on “hindsight judgments” or substitute “its best judgment for the judgments made by the company’s managers.”¹¹ SB 1547 requires the Company to file applications for programs to accelerate transportation electrification. Pacific Power’s proposed Demonstration and Development pilot program represents a prudent approach to meeting the legislative directives of SB 1547. This pilot program, along with the other pilot programs simultaneously submitted by the Company, will test key transportation electrification program design elements at a relatively low cost to customers. The Company intends to utilize competitive bidding processes for third-party

¹⁰ In the Matter of PacifiCorp, dba Pacific Power Req. for a Gen. Rate Rev., Order No. 12-493, Docket UE 246 at 25 (Dec. 20, 2012).

¹¹ *Id.*

services and its extensive experience effectively managing voluntary customer programs to keep costs low for customers.

(c) Are reasonably expected to be used and useful as determined by the commission

In the initial pilot phase, Pacific Power does not assume an expected volume of applications. Pacific Power intends to use this program to test whether competitive solicitation is an effective mechanism to identify and enable pilot and demonstration projects. In addition, the Company seeks to understand the effectiveness of enabling pilot and demonstration projects in accelerating transportation electrification.

The Company notes that even projects with low utilization may be useful if they increase awareness of electric transportation, increase access for underserved populations, generate case studies and data about advanced technologies and innovative project design, reduce range anxiety and increase driver confidence that charging options will be available when needed.

(d) Are reasonably expected to enable the electric company to support the electric company's electrical system

Pacific Power will require a feasibility study as a component of funding applications and will consider a project's impact on the electrical system when evaluating applications. Projects incorporating features or technologies to mitigate detrimental electrical system impacts will be given priority in application scoring.

(e) Are reasonably expected to improve the electric company's electrical system efficiency and operational flexibility, including the ability of the electric company to integrate variable generating resources

Pacific Power will require a feasibility study as a component of funding applications and will consider a project's impact on the electrical system when evaluating applications. Projects incorporating features or technologies that improve operational flexibility, such as integrating on-site energy storage and/or generation or encouraging off-peak charging, will be given priority in application scoring.

(f) Are reasonably expected to stimulate innovation, competition and customer choice in electric vehicle charging and related infrastructure and services.

Innovation

This program is designed to identify and test innovative electric transportation technologies and project designs. In addition to enabling existing projects under consideration, this program is intended to stimulate additional project proposals that otherwise would not have materialized. Regardless of whether the project is selected for funding, this program may inspire Pacific Power customers and communities to develop and, potentially implement, innovative solutions to accelerate transportation electrification.

Competition

The program is designed as a competitive funding process that inspires a range of innovative and additional transportation electrification projects in Pacific Power's Oregon service area. Pacific Power hopes the program will spur additional market competition, particularly in underserved areas, as market actors leverage the availability of project funding when helping customers scope and design electric transportation infrastructure projects.

Customer Choice

This pilot will test the ability of a funding partnership program to stimulate customer choice through flexibility and broad solicitation and does not prescribe specific eligible technologies or projects. Competitive funding is intended to allow customers and communities across Pacific Power's Oregon service area to bring projects forward that meet their unique needs.

**APPENDIX A –
TRANSPORTATION ELECTRIFICATION STRATEGY**

Appendix A – Transportation Electrification Strategy

Consistent with OAR 860-087-0030 (1) (d), this appendix contains: “[a] description of the electric company's long-term strategy to accelerate transportation electrification in its service territory in an effective and efficient manner and how the proposed program fits within the long-term strategy”, including:

- (A) The current condition of the transportation electrification market in the electric company's service territory and the outlook for development of the market in the absence of the proposed program;
- (B) Near and long-term market barriers to the development of transportation electrification and how the electric company proposes specifically to address those barriers;¹
- (C) Near and long-term opportunities for improving the operation and reliability of the electric company's power system through transportation electrification and how the electric company proposes specifically to take advantage of those opportunities; and
- (D) Other factors pertinent to the electric company's plans for transportation electrification.

GUIDING PRINCIPLES

In March of 2016, the Oregon legislature passed Senate Bill (SB) 1547 which, among other things, states that “[t]ransportation electrification is necessary to reduce petroleum use, achieve optimum levels of energy efficiency and carbon reduction, meet federal and state air quality standards, meet this state’s greenhouse gas emissions reduction goals described in ORS 468A.205 and improve the public health and safety;” and that “[w]idespread transportation electrification requires that electric companies increase access to the use of electricity as a transportation fuel;”²

As a leading provider of safe, reliable and affordable energy and a trusted source of information for customers across Oregon, Pacific Power can play a critical role in helping its customers understand and adopt electric transportation options and supporting the state’s environmental goals. In this nascent and rapidly evolving market, it is important to take a measured approach, remain flexible and focus on pilot initiatives designed to inform long-term strategy and investment. The pilot programs and associated transitional rate³ were developed through an extensive stakeholder process and represent the Company’s initial efforts to address market barriers to widespread transportation electrification.

Given the rapidly evolving state of the transportation electrification market, PacifiCorp’s long-term strategy is to remain flexible and responsive to market conditions. In doing so, the Company will rely on a set of guiding principles to inform current and future strategy and initiatives. These principles and specific examples of how they are applied are presented below:

¹ Also see the “Identification of market barriers, program implementation barriers and program strategies to overcome identified barriers: OAR 860-087-0030 (1) (a) (F)” section of the main body of this program application.

² Senate Bill 1547, Section 20(2)

³ Pacific Power is separately proposing a transitional rate for public DC fast charging, proposed Schedule 45. The transitional rate is a stand-alone tariff advice filing that is intended to complement Pacific Power’s proposed transportation electrification pilot program proposals but is not a necessary component of the pilot program proposals.

Lead by example

Adopting and supporting electric transportation in its operations is important to drive market development and empower Pacific Power customers to do the same. To this end, the Company is currently engaged in several electric transportation initiatives:

- Pacific Power pledged to commit at least 5% of its annual vehicle replacement budgets to purchase plug-in electric vehicles through 2024.
- Pacific Power is a partner in the U.S. Department of Energy’s Workplace Charging Challenge and are committed to providing vehicle charging options to employees.
- Pacific Power is committed to the White House’s efforts to accelerate electric vehicle deployment along Department of Transportation Alternative Fuel Corridors.⁴

Understand Oregon customers’ specific market barriers to adopting electric transportation

The Company performed extensive stakeholder outreach throughout 2016 to identify barriers to transportation electrification and determine which of these were best addressed by an electric company. The proposed pilot programs are designed to provide deeper insight into barriers specific to Pacific Power’s Oregon customers and to test Pacific Power’s ability to address these barriers through education, outreach, partnerships and deploying public infrastructure.

Use electric transportation to support a modern and efficient electrical system

If deployed correctly, electric transportation can increase electrical system efficiency and reduce costs for all Oregon customers. Through the initial proposed pilot programs and the deployment of an advanced metering infrastructure (AMI),⁵ the Company seeks to gain new insight into customers’ energy consumption patterns, the impacts of charging infrastructure (particularly fast charging) on the grid, and the extent to which loads can be shifted through education and economic signals. The Company also intends to test the potential for integration of advanced technologies, such as energy storage and renewable generation, into public charging infrastructure. Data collected will inform future system planning and the long-term strategy for how to ensure electric transportation is improving the efficiency of the electrical system rather than hindering it.

Partner with customers to deploy vehicle charging solutions

Pacific Power’s proposed Development and Demonstration pilot program is designed to encourage innovative, non-residential, plug-in electric charging solutions through competitive grant funding. The Company is strongly committed to partnering with its customers and communities to test customer-specific solutions, support underserved populations, and gain new insight into market barriers and charging patterns that will inform future system and program planning.

To reduce the cost of operation of public DC fast charging infrastructure, the Company will also propose through a stand-alone tariff advice filing a new transitional rate to stimulate public charging infrastructure development in its communities. The proposed rate will address traditional

⁴ <https://www.whitehouse.gov/the-press-office/2016/11/03/obama-administration-announces-new-actions-accelerate-deployment>

⁵ On April 8, 2016, Pacific Power formally announced plans to install a network of 590,000 “smart meters” in Oregon through 2019. AMI will provide a platform for two-way communication between the customer meter and Pacific power, enabling near real-time data collection and demand response capabilities.

demand charge barriers while maintaining a price signal to encourage efficient use of the electric system.

Simplify the plug-in electric vehicle charging experience

Customers new to plug-in electric vehicles and/or charging infrastructure require comprehensive and objective information to make informed decisions about desired equipment features, siting, connection to electrical service and how to find and use public charging infrastructure. Through education campaigns, technical assistance and strategic partnerships, the Company seeks to simplify the experience for customers by serving as a “one-stop shop” for electric transportation information. This includes leveraging existing information and services and developing customized resources when necessary.

Support underserved communities

Electric transportation presents an affordable solution for low and moderate income customers, however, the industry is still trying to determine how best to address the barriers for this group of customer. Barriers include upfront vehicle cost and access to capital and charging infrastructure. In 2016, Pacific Power was pleased to partner with Hacienda CDC, Drive Oregon and the City of Portland to test plug-in electric car sharing for income-qualified customers.

Much of Oregon’s public charging infrastructure is located in Portland or along interstate highways, leaving other areas of the state, including much of Pacific Power’s service area without convenient access to public charging options. With private investment currently focused on large urban areas, Pacific Power has a unique opportunity to support charging infrastructure development in the less-urban areas of the state. Pacific Power is an active member of its communities throughout the state, and can act as a reliable and credible transportation electrification resource to customers. Some of these areas are also air quality maintenance areas, where low- or zero-emission electric transportation could provide the added environmental benefit of reducing emissions from traditional vehicles.

The Company looks forward to partnering with its customers through the initial pilot programs to test innovative solutions for these underserved communities.

Leverage funding and lessons learned from strategic partnerships to inform future planning

On December 22, 2016, the United States Department of Energy awarded \$3.9 million to PacifiCorp to support a project to accelerate the development and adoption of plug-in electric vehicles. PacifiCorp is the project lead, in collaboration with Idaho National Laboratory, the state of Utah, several universities, and regional organizations including Drive Oregon and the Rogue Valley Clean Cities Coalition. While project funds are primarily targeted at electrifying corridors in Utah, Idaho, and Wyoming, the project includes several aspects that present potential benefits to Pacific Power customers, including:

- Funding for the Rogue Valley Clean Cities Coalition and Drive Oregon to perform outreach and education in Pacific Power territory.
- Developing new tools for utility integration of charging equipment that may inform potential new policies and practices to reduce infrastructure cost and time associated with new charger installations.

- Investigating “smart mobility” through the integrating of electric bus service, electric taxis, e-bikes, car sharing and crowd sourced commuting service to eliminate the need for personal vehicles within urban areas.

The project presents an exciting opportunity for PacifiCorp to partner with a team of strategic partners and leading experts to accelerate transportation electrification and develop resources that can be used across the Company’s six-state service area.

Phase in investments and keep an eye on the future

The Company is proposing modest three-year pilot programs to test key program concepts before making larger investments. Given the rapidly changing market, the Company believes this is critical to test the effectiveness of different means of addressing barriers while minimizing the risk of stranded investments to customers. When deploying Company-owned public charging infrastructure, Pacific Power will look for opportunities to test advanced technologies to minimize grid impacts and “future-proof” locations by ensuring the infrastructure can accommodate higher-powered chargers and new technologies as they become available.

In addition, the Company is monitoring opportunities to coordinate with other parties to leverage upcoming funding and partnership opportunities.

MARKET BASELINE ASSUMPTIONS: OAR 860-087-0030 (1) (A) (B)

Vehicle Registration

As of June 2016, there are roughly 11,000 plug-in electric vehicles registered and sited in the state of Oregon, 60 percent of which are 100 percent electric.⁶ Based on ZIP code-level data, it is estimated that a third of these vehicles (3,577) are located in Pacific Power territory (Table 1). By comparison, 43 percent of all registered vehicles in the state are sited in Pacific Power territory, indicating that plug-in electric vehicle adoption is lower in Pacific Power territory than for the state as a whole.

Table 1. Oregon Vehicle Registration Summary – June 2016

Vehicle Fuel	Pacific Power *	Oregon Statewide	Pacific Power % of Statewide
Electric	1,994	6,531	31%
Plug-In Hybrid	1,583	4,305	37%
Plug-in Electric Total	3,577	10,836	33%
Hybrid Gasoline	35,119	87,668	40%
Gasoline/Diesel	1,910,939	4,450,807	43%
Other	831	1,389	60%
Total	1,950,466	4,550,700	43%
Plug-in Vehicles per 10,000 Vehicles	18	24	77%

* Estimated based on ZIP code-level data

⁶ Data provided by the Oregon Department of Environmental Quality.

Figure 1 shows rates of plug-in electric vehicle ownership by ZIP code across the state of Oregon, with the boundaries of Pacific Power’s service territory overlaid. As shown, most of the “hot spots” in the state are outside the Company’s territory.

Figure 1. Oregon Plug-in Electric Vehicle Ownership Rates by ZIP Code

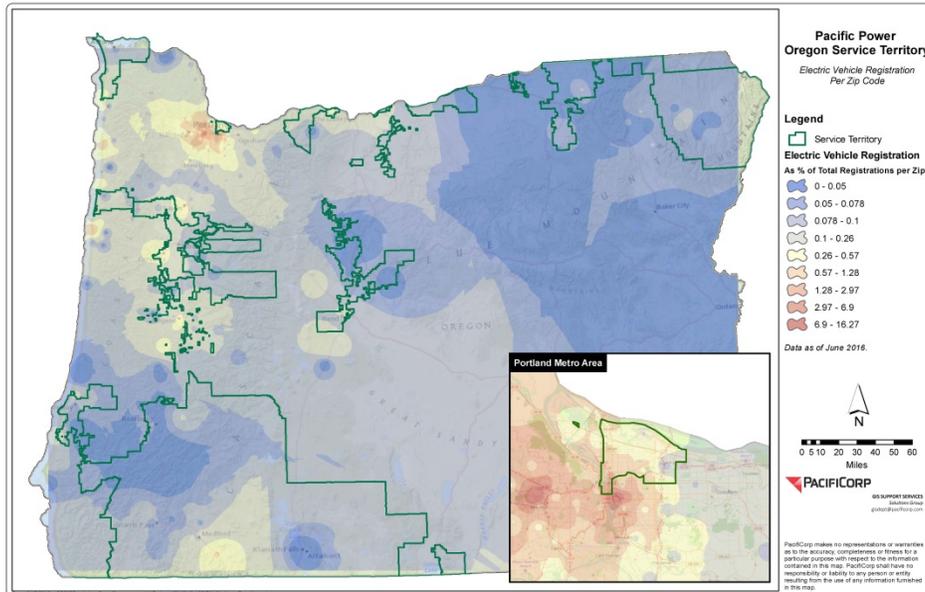
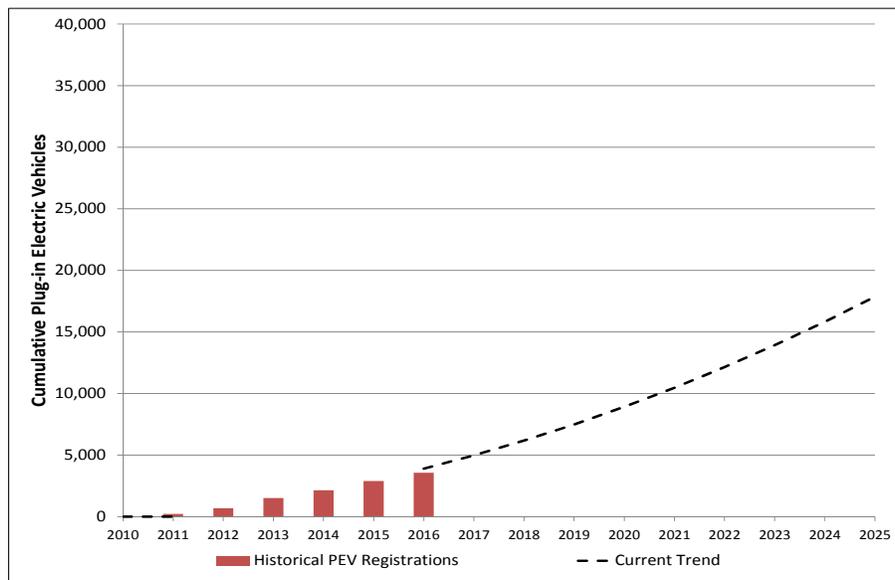


Figure 2 shows the cumulative plug-in electric vehicle registrations in Pacific Power’s Oregon service territory from 2010 through June 2016 and forecasted adoption based on this historical trend. As discussed above, there are an estimated 3,600 plug-in electric vehicles in Pacific Power’s Oregon service territory as of June 2016. If the adoption trend from 2010-2015 continues, it is estimated that there will be about 18,000 plug-in electric vehicles registered in Pacific Power territory by the end of 2025.

Figure 2. Historical and Forecasted Pacific Power Oregon Plug-in Electric Vehicle Registrations*



* 2016 historical registrations through June 2016

Through its program evaluation efforts Pacific Power will investigate the extent to which its pilot programs contributed to accelerated transportation electrification, either by encouraging plug-in electric vehicle adoption or increased electric miles travelled by existing vehicles.

Public DC Fast Charging Infrastructure

There are currently three competing fast charging standards:

- CHAdeMO: Primarily used by Japanese automakers, including the Nissan Leaf. Tesla vehicles can also use these stations with an adapter.
- SAE Combined Charging System (CCS): Primarily used by American and European automakers.
- Tesla Supercharger: Can only be used by Tesla vehicles.

This fragmented market limits driver access to a portion of the available public charging infrastructure and reduces driver confidence that a compatible charger will be available when needed. For example, stations along the West Coast Electric Highway only have CHAdeMO connections, BMW/Volkswagen’s Express Charging Corridors use only CCS connections and Tesla’s supercharger network is only compatible with Tesla vehicles.

Based on data from the United States Department of Energy’s Alternative Fuel Data Center,⁷ there are currently 99 public fast charging locations in Oregon, one-third of which (33) are located in Pacific Power’s service area. However, because of the competing charging standards discussed above, this number overstates the number of stations a given electric vehicle driver can use, as shown in Table 2. For example, a Nissan Leaf driver can only use 21 of the 33 stations and a driver of a vehicle with a CCS connection can only use 10 of the 33 stations.

⁷ Data pulled on November 11, 2016: <http://www.afdc.energy.gov/locator/stations/>

Table 2. Public DC Fast Charging Stations by Connection Type

Connection Type	Stations	Ports
CHAdemo	18	19
CCS	7	7
Dual-Standard (CHAdemo and CCS)	3	8
Tesla	5	36
Total	33	70

Table 2 also illustrates that many of the public DC fast charging stations in Pacific Power's Oregon service territory only have one port, which will reduce driver confidence that a port will be available when needed, particularly as plug-in electric vehicle ownership continues to increase.

It is unknown how many public DC fast charging stations would be deployed in Pacific Power's Oregon service area absent any new Pacific Power initiatives, however, the current state of the market suggests that private actors are not installing many dual-standard DC fast charging stations in Pacific Power communities. Through its proposed pilot programs, Pacific Power will seek to stimulate innovation, competition and customer choice by increasing the availability of public charging infrastructure in these communities to improve the viability of electric transportation adoption.

ONGOING PLANNING

The pilot programs represent Pacific Power's initial efforts to accelerate transportation electrification in its Oregon service area. The Company will monitor the progress of these initiatives and report annually on pilot status and outcomes. Pacific Power looks forward to continuing collaboration with its customers and stakeholders to investigate additional opportunities to accelerate transportation electrification in a manner consistent with its guiding principles.

APPENDIX B –
STAKEHOLDER AND STATE PROGRAM
COORDINATION

Appendix B – Stakeholder and State Program Coordination

STAKEHOLDER INVOLVEMENT IN PROGRAM DEVELOPMENT: OAR 860-087-0030 (1) (c) (A)

Pacific Power's initial proposed pilot programs were developed through an extensive stakeholder process. Throughout the program development process, Pacific Power staff had ongoing conversations about barriers and potential solutions with customers, state agencies, advocates, auto manufacturers, electric vehicle charging companies, and other organizations working to accelerate transportation electrification in Oregon.

In August and September of 2016, Pacific Power held Electric Transportation Public Input Workshops to solicit input on program concepts. Public inputs workshops were held in the following locations and dates:

- Portland: August 3, 2016 (over 30 attendees)
- Medford: August 18, 2016 (11 attendees)
- Bend: September 7, 2016 (8 attendees)

These public input workshops were an invaluable tool to gain insight into barriers for electric transportation in general and in Pacific Power's Oregon service territory specifically. Key themes included:

- Lack of awareness of electric transportation options and benefits;
- Need for a robust network of public charging infrastructure;
- High cost of plug-in electric vehicle options;
- Importance of off-peak charging;
- Need and desire for electric transportation in underserved communities, but barriers to adoption in these areas are not well understood; and
- Current electric rates with demand charges create a barrier to DC fast charging infrastructure development.

Based on feedback received, Pacific Power developed initial pilot programs and a new transitional rate and emailed a four-page overview of these initiatives to interested parties on October 31, 2016, requesting feedback on proposed initiatives. The document was emailed to roughly 150 individuals and the Company received feedback from only three parties, including Commission staff. Comments received focused indicated:

- The overview document did not provide sufficient detail to fully evaluate the merits of the proposed pilots and rates
- The Company should look to coordinate outreach and education efforts with Portland General Electric and other entities working on customer education around electric transportation.
- The on-peak period of the transitional rate should align with Pacific Power's peak demand periods.
- The public DC fast charging transitional rate is an innovative way of addressing demand charge barriers and can serve as a model for other utilities.

- Utilities have a significant role to play in spurring electric vehicle adoption, such as providing consumer education, however, utilities would not best serve customers by owning public DC fast charging stations.

The Company appreciated the limited feedback it received on its overview document and considered stakeholder input in developing its pilot program applications. On December 1, 2016, Pacific Power presented a high-level overview of its proposed pilot programs and transitional rate at Drive Oregon's Energize Oregon Coalition Meeting.

EFFORTS TO COORDINATE WITH RELATED STATE PROGRAMS: OAR 860-087-0030 (1) (c) (B)

The proposed pilot programs and transitional rates are designed to support and complement other ongoing transportation electrification efforts in the state, including:

- Oregon's Zero Emission Vehicle Mandate
- Oregon's Clean Fuels Program (see below for additional information)
- State tax credits for residential and business vehicle charging equipment and alternative fuel fleet vehicles
- Portland General Electric's proposed transportation electrification programs
- Drive Oregon's efforts, including the development of the EV Showcase
- Local communities' climate and/or transportation action plans
- Potential involvement by the Northwest Energy Efficiency Alliance, the Energy Trust of Oregon, or other organizations
- Outreach and education efforts and infrastructure development that may stem from the Volkswagen Clean Air Act Partial Settlement

Oregon's Clean Fuels Program, administered by the Department of Environmental Quality ("DEQ"), requires a 10 percent reduction in the average carbon intensity of Oregon's transportation fuels by 2025 (relative to 2015 levels). Regulated parties are required to register with DEQ and must comply with the standard by balancing credits and deficits for 2016 and 2017 by the end of the 2017 calendar year and yearly by the end of each calendar year starting 2018. Deficits are generated when the carbon intensity of a specific fuel exceeds the clean fuel standard and credits are generated when the carbon intensity of a specific fuel is lower than the fuel standard. Providers of clean fuels may choose to participate in the program as "credit generators" and sell credits to regulated parties with deficits.

The program rules establish a hierarchy of entities that may opt-in to the program as credit generators. For residential electric vehicle charging, the electric utility has the first option to generate credits, followed by a broker (a third-party market participant), and then the owner of the electric-charging equipment. For residential charging, an electric utility must register by October 1st of the current year to generate credits for the following calendar year.

In the fall of 2016, Pacific Power worked with DEQ staff to assess the opportunity to generate residential credits in 2017. Prior to the October 1, 2016 deadline, no electric companies had registered as credit generators. DEQ's rules do not clarify the methodology or process for electric

companies to generate and verify credits associated with residential charging. For example, it is unknown how specific customers with electric vehicles will be identified and how their energy use (fuel consumption) will be measured or estimated. In addition, as of October 1, 2016, no transactions had been recorded under the Clean Fuels Program. At the time, the only public information available with respect to the value of any credits generated was associated with California's low carbon fuel standard credit market. Though a reasonable benchmark, the California market and program is significantly different from the Oregon market and program and therefore it is unclear whether California credit prices are a good indicator for Oregon's program.

In addition to the uncertainty around the magnitude and value of credits, there is a significant lack of clarity with respect to how the Company would use any revenue generated from the sale of credits. Though the Company is eligible to register to generate credits associated with residential electric vehicle charging, it is the individual customers who invested in the vehicles making such credit generation possible. It is unclear whether any revenue generated from credit sales should be credited back to those customers, all customers, or applied to other proposed programs. The Company understands that the Public Utility Commission of Oregon (Commission) has jurisdiction to determine how the revenue is spent; however, to date the Commission has not opined on this issue. The Company is interested in further dialogue with Commission staff and stakeholders on these issues to gain greater clarity and certainty with respect to the disposition of any credit revenue.

As a result of the above-described layers of uncertainty, PacifiCorp did not register as a credit generator for 2017. By choosing not to register as a credit generator for 2017, Pacific Power did not forgo the option to generate credits in the future. In addition, Pacific Power is engaged with DEQ and other stakeholders to develop rules and policy guidance to reduce uncertainty. DEQ initiated a rulemaking in early November 2016 to clarify and improve the rules and fully implement the Clean Fuels Program. The Clean Fuels Program 2017 Rulemaking Advisory Committee has been convened to provide stakeholders with an opportunity to comment on technical and policy issues, as well as the fiscal and economic impact of the proposed amendments when compared to the existing rule. Pacific Power is participating as a committee member and expects some procedural clarity in 2017 regarding how the residential credits will be generated and how the revenue from credits sales will be used. Committee meetings will occur through the spring of 2017. DEQ is scheduled to propose rule changes to the Environmental Quality Commission in November 2017.

Pacific Power intends to register to generate credits associated with public charging infrastructure proposed through the Public Charging Pilot and owned by the Company. Although, as noted above, there is not currently sufficient information to estimate the revenue potential associated with these credits, any revenue that is generated from these credits can be used to directly buy down the cost of the proposed pilot program.

CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's Application for Transportation Electrification Demonstration and Development Pilot Program on the parties listed below via electronic mail as a courtesy to interested parties.

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