

PacifiCorp Oregon Transportation Electrification Plan Stakeholder Meeting #1

Thursday July 7, 2022, 9:30-11:30 am Pacific Time

Meeting Notes

Executive Summary

There were 38 attendees at the July 2022 Oregon Transportation Electrification Plan (TEP) Stakeholder Meeting #1. PacifiCorp shared its goals and objective for this series of meetings that are part of its work to update its Transportation Electrification Plan (TEP) over the course of the next six months. This session provided updates on EV and EVSE charging infrastructure in its Oregon service area. It also covered PacifiCorp's existing TE programs.

Focus was given to PacifiCorp's work to comply with Oregon House Bill 2165's requirements to direct more attention to underserved communities and their TE needs in the future. PacifiCorp shared its initial draft of how to identify underserved communities in its service area, while soliciting feedback on its methodology.

PacifiCorp Transportation Electrification Plan Goal

To develop a robust, equitable, innovative, iterative, and customer-centric transportation electrification plan (TEP).

Stakeholder Engagement Objectives

- Engage underserved communities throughout our service area to support the development of an equitable TEP
- Identify localized market barriers and strategies related to advancing TE within our service area
- Identify and prioritize TE program initiatives that are supported by our stakeholders and will be integrated into the TEP

July 2022 Meeting Objectives

- Revisit current EV adoption and infrastructure within PacifiCorp's service area
- Inform current program offerings and stakeholder engagement strategy
- Discuss and obtain feedback on methodology and approach for mapping underserved communities

[Slides available here <Oregon Transportation Electrification Planning \(pacificpower.net\)>](#)

A list of the meeting participants can be found at the end of this document.

Opening (9:30 am)

The meeting's objectives, agenda, speakers, and ground rules were presented by PacifiCorp's facilitator. This session also included the presentation of PacifiCorp's TEP goal, the objectives for PacifiCorp's Stakeholder Engagement activities as it relates to its TEP, and the specific objectives for this meeting (per above).



Current State of Electric Vehicle Adoption & Charging Infrastructure (9:37 am)

Service Area

PacifiCorp initiated this section with an overview of its service area in Oregon. PacifiCorp serves more 600,000 customers in more than 200 different communities in the state. Only 10% of its customers live in the Portland metro area. PacifiCorp also serves vacation destinations and the key highway corridors that connect them, including Interstate-84, Interstate-5, and US97 in the Bend area. As such, PacifiCorp has an important role in supporting the Oregon's TE goals, from light duty to heavy duty vehicles throughout the state.

Electric Vehicle Adoption

PacifiCorp's customers account for roughly 20% of the 46,000 electric vehicles (EVs) registered in Oregon at the end of 2021. Models from Chevrolet, Nissan, Tesla, and Toyota each account for more than 1,000 registered vehicles in PacifiCorp's service territory. The largest number of EVs in PacifiCorp's service area are in Multnomah, Deschutes, Jackson and Benton counties. EV adoption in PacifiCorp's service area has largely mirrored that in the state as a whole, with year-over-year growth of 150% since 2012.

Existing Electric Vehicle Charging Infrastructure

PacifiCorp next discussed the current penetration of public EV charging infrastructure in Oregon generally and then in its service area specifically. Oregon, to date, has 455 public DCFC charging ports and 1,924 public Level-2 charging ports. From 2019 through 2022, there has been significant growth in the number of public charging ports in the state. Tesla charging stations typically have more ports (per station) than non-Tesla charging stations.

Within PacifiCorp's service area, there are 173 public DCFC charging ports, representing 38% of the state's total. Most of these ports are Tesla-compatible. For Level-2 ports, there are 663 public Level-2 charging ports in the service area, representing 24% of the state's total, with a mixture of Tesla and non-Tesla stations.

PacifiCorp Current Program Offerings (9:52 am)

PacifiCorp filed its initial TEP in 2019. This plan included a wide-range of activities, including

- A community-based charging infrastructure grant program, that has led to the construction and operation of five DCFC charging station pods.
- Free test drive events at a number of communities in the state, including Enterprise, Astoria, Corvallis, Independence, Lincoln City and many other cities in our service area. PacifiCorp plans to continue these free test drive events paired with community events through 2023.
- An e-mobility grant program that has resulted in pilot efforts such as an electric tractor share program in Kirk County.
- Other initiatives, including those on tariff designs, planning studies, regional coordination and continued customer engagement.

PacifiCorp also recently launched a rebate program for residential and nonresidential Level-2 EV chargers. Rebates include \$500 for standard residential customers, up to \$1,000 for residential customers who are income qualified customers, \$3,000 per port for multifamily unit properties (capped at \$36,000 or 12 ports total per property), and \$1,000 per port for commercial customers (capped at \$6,000 or 6 ports). Since the June 2022 launch of the program, 23 residential customers have applied to the program for rebates. Although there have yet to be any applications for multi-family unit properties, PacifiCorp.



Among other activities, PacifiCorp has used the GoForth mobile showcase to offer EV ride and drive events in its service area, along with offering EV education to underserved and rural communities. PacifiCorp has also supported EV-focused events such as Roadmap and the Portland Auto show. PacifiCorp has carried out more than 120 EV-related technical assistance studies for commercial customer sites. The utility's recently updated EV website includes key information a customer would need in considering the purchase of an electric vehicle, including available rebates, tax credit information, and a cost comparison calculator. Lastly, PacifiCorp is engaging with car dealerships throughout its service area, including offering Chargeway beacons at dealership locations to assist in customers EV education.

Clean Fuels Program Offerings

PacifiCorp started implementing the Oregon Clean Fuels program in 2020, with the 2022 grant cycle is open until August 30, 2022. More than \$2.5 million was awarded during the two previous e-mobility grant program to support a number of innovative approaches to electrification including:

- Crook County electric tractor demonstration project
- Klamath Falls and Portland workforce development initiatives
- Athena remote DCFC charging station
- Bend-La Pine electric bus purchase form Lion Electric
- Corvallis-Benton E-bike initiative for income eligible residents.

PacifiCorp has also supported customers via a grant matching and grant writing microgrant support.

PacifiCorp also provides outreach and education activities via enhanced technical assistance that includes providing on call support to grantees, customers, and other parties, which has included help with selecting which electricity tariff to select. Next week, PacifiCorp commences a new collaborative initiative in hosting a round table with grantees to share peer-to-peer learning experiences.

Line Extension Program

Since late 2020, PacifiCorp has line extension allowances to commercial customer that are expanding service to accommodate EVSE Infrastructure. A line extension allowance works almost like a make-ready program for our customers covering *all* the electrical cost upgrades. In nearly all the cases to date, the allowances are covering all the electric cost upgrades. Looking forward, PacifiCorp anticipates expanding the line extension allowance to not just cover electrical, but also civil costs. This is similar to how California's Rules 29 and 24 support EVSE development.

PacifiCorp also provided an overview of other key supporting initiatives that help enable its TE Portfolio to be successful, including

- Encouraging use of tariff structures to support EV uptake and influence charging practices; including exploration of tier-flattening for EV charging under residential rates;
- Planning studies to investigate development of a fleet partner program as well as how to better serve medium & heavy-duty initiatives; and
- Support regional wide collaboratives such as the EV collaborative, WestSmart 2.0 grant program, and the [West Coast Clean Transit Corridor initiative](#)

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Identifying Underserved Communities (10:25 pm)

The objective of this exercise at a high level is to identify underserved communities in PacifiCorp's service area and their physical relationship to existing TE infrastructure – and begin the process of better understanding how these communities can be better served by TE infrastructure going forward. PacifiCorp and other larger utilities in Oregon have been directed by the [Public Utility Commission of Oregon](#)'s implementation of a 2021 state law, House Bill 2165, to support TE via a new meter charge. Fifty percent of this new charge must be spent on underserved communities.

PacifiCorp's presentation focused on its initial work in creating a composite index for underserved communities, and it requested feedback on how the inputs of this index were selected and weighted. The approach incorporated the nine definitions of underserved communities as laid out in HB 2165:

Rental Housing	Residents of Multifamily Housing	Communities of Color
Communities Experiencing Lower Income	Tribal Communities	Rural Communities
Frontier Communities	Coastal Communities	Communities Adversely Harmed by Environmental or Health Hazards

- Question: What does Frontier communities mean?
 - PacifiCorp: According to Staff guidance on HB2165, "Frontier communities are people residing 75 miles by road from a community of less than 2,000 individuals."

PacifiCorp is working to map these characteristics across its service area to identify the relative concentration of underserved communities currently in place. PacifiCorp then aims to concentrate its TE spending for underserved communities under its forthcoming TEP in these locations. The approach PacifiCorp is taking is to develop a composite community score.

PacifiCorp presented the initial version of its approach, and specifically requested input from stakeholders on how this score was developed.

PacifiCorp described the details that goes into each map overlay, starting with how the Pollution Burden index was created from multiple criteria describing Environmental Exposures and Environment Effects. This Pollution Burden was then combined with the eight Population Characteristics using equal weighting to produce a Composite Underserved Community Score. PacifiCorp is not set in using equal weighting, and it anticipates receiving feedback on how weighting should be conducted.

All this work is being conducted at the U.S. Census Block Level, which is the most detailed level of geographic information available from the U.S. Census' American Community Survey. Each Block Level is between 600 and 3,000 residences.

PacifiCorp provided examples of specific traits of underserved communities via a series of maps to indicate initial findings from the nine above metrics, and then a composite map using all nine of the inputs. Across its service area, roughly 38% of all PacifiCorp Oregon service area residents are renters, 18% are multi-family housing, 12% are of part of communities of color; and roughly 90% are lower income. (Lower income definition is based on OPUC guidance, of 125% of medium income, which is roughly \$90,000 of income for a family of four.)

The final issue raised during this section was how to define areas with low density of public charging stations? What is a reasonable level of access to charging, and how far should drivers be required to travel to access a public charging station? PacifiCorp presented a couple options (e.g., a 30-minute drive time, and a 45-minute drive time maximums) in order to generate discussion and feedback from Stakeholders.

Next Steps and Questions (11:10 am)

The Stakeholder Engagement meeting concluded with a session focused on pre-viewing future meeting topics as well as answering additional questions.

Future sessions include both large forum sessions such as this one on August 11 at 9:30-11:30 am PDT and September 23 at 10:30 am-12:30 pm PDT.

Smaller, local engagement, in-person sessions will be held starting on July 21 in Roseburg, OR: These sessions will aim to capture a broad array of information regarding TE and PacifiCorp's updated TEP. Forth, which is assisting PacifiCorp in these sessions, is already working with Pacific Power's regional business managers to ensure that all relevant local stakeholders will be given the chance to participate and share their input on Pacific Power's TEP.

The meeting ended with PacifiCorp thanking the meeting attendees/participants for their input on in transportation electrification grant creation.

If meeting participants have additional feedback, recommendations for who we should reach out to, or additional resources, please contact PacifiCorp via email at kate.hawley@pacificorp.com.

Participant List

Organization
WeaveGrid
NRDC
NW Energy Coalition
Enel
Green Energy Institute
Charlie Allcock Consulting LLC
SemaConnect Inc.
AWEC
FLO
Oregon DEQ
TeraWatt Infrastructure
Shell Recharge Solutions

AMPLY Power
Oregon Dept. of Energy
Oregon Public Utility Commission
WeaveGrid
PGE
Portland Bureau of Transportation
City of Portland, Bureau of Planning and Sustainability
ChargePoint
Cascade Policy Institute
Forth
ChargePoint
Forth
FlexCharging
Oregon Department of Transportation
ChargePoint
The Environmental Center
EVEVA
FreeWire Technologies
Oregon Environmental Council
AEG
Portland General Electric
Oregon Citizens' Utility Board
FlixBus
Climate Solutions
NA
NA

PacifiCorp Attendees

- Kate Hawley
- Steven Alaman
- Alex Osteen
- Peter Schaffer
- Cory Scott

Applied Energy Group Attendees

- Eli Morris
- Robert Strange
- Stephanie Chin

Appendix: Questions & Answers and Comments During the Meeting

Current State of Electric Vehicle Adoption & Charging Infrastructure section

Question or Comment	PacifiCorp Response
What can PacifiCorp do to help standardize charging equipment and charging station port access? It is very challenging to have all the different, seemingly non-compatible systems and need for multiple vendor “memberships”. How can there be better coordination between vendors, utilities, and the Energy Trust of Oregon?	This is an important issue, and there’s an opportunity for PacifiCorp to encourage existing working groups it participates in to improve such protocols. At the national level, the National Electric Vehicle Infrastructure (NEVI) Formula Program is an important venue to improve in these areas. PacifiCorp, likewise, regularly receives calls from EV owners seeking help at PacifiCorp-owned chargers.
These data presented focus on the number and types of ports. However, location of ports is important, too, as some ports (e.g., those located at car dealers or hotels) are not truly “public” ports. Also, it is important to include the adequacy of infrastructure including the availability of ports, as exemplified by two stations in Madras have been out-of-service for a significant amount of time.	Correct on both accounts. PacifiCorp is exploring how to require certain reliability (availability) metrics for future recipients of rebates for EVSE. There is also a work-force issue in rural areas such as PacifiCorp’s service territory that need to be addressed. PacifiCorp is researching how other utilities have resolved these (and other) issues
An attendee commented that using the PlugShare App can help find/select the proper charging station for the EV seeking a charge. Also, the commentor stated that they keep RFID cards from multiple charging providers in their EV to avoid not being able to easily charge at various vendor stations. Another participant suggested that simply having to carry multiple cards is indicative of the non-standardization issue that complicates (and hurts future growth in) EV ownership.	

PacifiCorp Current Program Offerings section

Question or Comment	PacifiCorp Response
What type of outreach is PacifiCorp doing to multi-dwelling owners/residents?	Our activities have included radio advertising and collaborating with community-based organizations. PacifiCorp also plans to conduct a targeted mailing to multi-dwelling owners in the near future by the end of 2022. Some queries from multi-dwelling owners have been received, but no formal applications have been made yet.
Providing technical assistance for multi-family unit dwellings (MUDs) would be great, too.	

<p>PacifiCorp should develop a strategy to enable charging access by renters, including both multi-family and single-family residences. This might include support in financing given that landlords typically have minimal incentive to add EVSE to their properties.</p>	
<p>Does PacifiCorp conduct outreach on non-EV e-mobility options such as e-bikes, e-scooter, transit, etc.?</p>	<p>Yes, both the Mobile showcase and EV Drive Events include local bike shop(s) and e-scooter participation; vendors have provided coupons for rentals, for example.</p>
<p>Is the line extension credit extended to all entities with multi-vehicle parking structures -- apartments, commercial office buildings, commercial retail, other workplace (e.g., industrial) parking?</p>	<p>Yes, it is</p>
<p>Regarding outreach - I would think that the only other addition I would add is that beyond in person events, would be great to have factsheets, radio ads/other advertisements that are opening the lens on all other TE that PAC supports and funds.</p>	
<p>Has PacifiCorp investigated any Vehicle to Grid (V2G) pilot programs or do you envision these in the future?</p>	<p>The utility is in the process of upgrading our communication system, Distributed Energy Management System (DERMS), and other systems that would allow our distribution system to safely and reliability handle power injected onto the grid from V2G activity. Over the longer term, V2G is certainly an opportunity for us to explore, including potentially even including it in our Integrated Resource Plan (IRP).</p>
<p>What are the criteria for EV Charging equipment to qualify for rebates?</p>	<p>The utility conducted an RFI to obtain information from EVSE vendors that had minimum requirements that needed to be met to be included in the rebate-eligible list. Among these include that charger being “hard-wired” (so that it could not be moved to a location outside PacifiCorp’s territory) and be capable of communicating via the OpenADR2.0 protocol, so that the location could participate in demand response programs. PacifiCorp is updating its list of eligible products on a rolling basis, and EVSE vendors should contact us if they are interested in having their equipment be added to the list.</p>
<p>Is there a relationship between tier flattening and perhaps increasing time-of-use (TOU) period price differentials to create more distinct price signals if</p>	<p>This is a good question and one PacifiCorp needs to explore further. PacifiCorp is proposing to conduct a rate study in order to understand supporting electric vehicle rate structures in use today , PacifiCorp</p>

<p>volumetric price signals are going away or being reduced?</p>	<p>would like to enable a wholistic approach to EV charging and other TOU considerations.</p>
<p>As we go through this implementation, particularly in serving multi-unit dwellings in underserved communities, we need to ensure that PacifiCorp’s program requirements in terms of collecting data or mandating demand response participation does not drive the cost up for EVSE charging equipment unnecessarily, costs that the host would have to pay and charge EVSE users a higher rate than would otherwise be needed to cover their costs.</p>	<p>PacifiCorp: In our HB 2165 meter charge proposal, one thing we’re aiming to do this year is that anyone who is coming through either the income eligible program or the multifamily program, PacifiCorp is hoping to cover 100% of the cost of the installation with the monthly meter charge budget – and thus reduce that cost burden that is occurring for those installations that have a tougher time making the economics work.</p>

Identifying Underserved Communities section

Question or Comment	PacifiCorp Response
<p>Which programs are you planning to use this composite map for? Is it for evaluation afterward or for planning some of the programs?</p>	<p>This information might work better for some programs than others. For some programs, it probably makes sense to use only one or a couple metrics rather than the full composite with all layers. For example, for multi-family dwelling programs, it probably makes more sense to look at just the multi-family dwelling unit map rather than the composite map.</p> <p>The utilization of the maps is two-fold. First, PacifiCorp proposes to track its program spending, per the OPUC requirements uses this initial maps as a baseline. Secondly, our expectation is that these maps will help guide us as to where PacifiCorp focuses on adding public infrastructure, though initially there will be additional discussions with different stakeholder groups in those Census Block Areas that rank highest in the composite map to learn what type of infrastructure is needed in which areas. It could also be used, for example, to provide direction to our grant programs, e.g., more charging infrastructure in rural areas.</p>
<p>Using this in terms of directing efforts, this tool might be useful, but in terms of evaluating success of those efforts, there may be issues given it is too broad of a tool. For example, if you’re trying to reach low-income, and someone shows up in a “red” area because it is a high rental area, but it’s all of the owners of rental housing who are purchasing equipment, it would show up as a positive in this example, but we have a better methods to track actual outcomes than simply using maps broken down</p>	

<p>at the quartile level. Some of these data points are easily gatherable for individual actions under each program. For the broad-scale application, it depends on piece-by-piece. However, I am uncomfortable with this broad approach if it is being used to track outcomes in underserved communities.</p>	
<p>Given how varied income and wealth are distributed across rental and multi-family, one attendee expressed his hope that income levels -- which are a more direct poverty and need metric -- would be weighted more heavily than the rental/multi-family data</p>	
<p>Surprised Portland doesn't rate higher with regards to the pollution burden, but I guess the aggregate income-level is higher. There are however, individuals that are very low-income in Portland but the higher-income households distort and almost zero-out the relatively large population of low-income Portlanders. Does PacifiCorp have a strategy to ensure that low-income Portlanders do not get left behind?</p>	<p>Yes, we understand the difference between relative vs. absolute poverty in Portland, given the higher cost of living in Portland. We followed the definition of lower income from HB 2165, though we can reevaluate that definition and modify it as warranted.</p>
<p>I agree that the mapping tool can be very helpful in identifying communities. In distributing benefits and future program design, however, how will PacifiCorp's portfolio be delivering benefits to these underserved communities? Are there ways to track outside of the mapping tool to determine how well programs are reaching underserved communities, too?</p>	<p>Through the AR 654 process, stakeholders are identifying metrics to understand how the TE portfolios are delivering benefits to underserved communities. PacifiCorp is working with stakeholders on best how to monitor and evaluate the our programs will deliver these benefits.</p>
<p>Are wildfires and their smoke being included in the Pollution Burden Index?</p>	<p>We haven't overlaid wildfire on the pollution metric yet. One challenge would be finding a good data source for wildfire smoke. The Pollution Burden index uses U.S. Environmental Protection Agency (EPA) data, which does not include wildfires (to our knowledge).</p>
<p>Totally agree that EVSE installations need to be paired with education and outreach especially in low-income communities. What are PacifiCorp's plans to pair EVSE installation with outreach and education targeted to disadvantaged communities?</p>	<p>We are working with the Department of Environmental Quality (DEQ), to link to their data so that at some point in the future, if a customer receives a rebate for an EV, hopefully they can get directed to PacifiCorp's EVSE rebate program website so they can acquire a Level-2 charger and earn a rebate on it. We also need to figure out how to do a direct connection to new EV buyers.</p>

<p>Is there a partnership between the State rebate program and PacifiCorp's rebate and make-ready outreach and programs?</p>	<p>This is a topic that we will discuss at length in future Stakeholder Engagement sessions: How to get a better portfolio design. Clearly, there's outreach, and then there's education. We need both. In Washington, PacifiCorp has been working on education and not just outreach. That being said, almost all of our grants awarded in Oregon included an education component. For example, PacifiCorp's grants have helped train students on how to operate and maintain charging units. To your point, we need to look at how to do this .</p>
<p>Is there a potential outreach partnership opportunity between PGE & PacifiCorp so that the message is consistent and to leverage outreach dollars?</p>	<p>We are participating in an Oregon' Statewide Campaign to achieve this via a single approach. This effort is funded through clean fuels dollars.</p>
<p>City of Portland could also include education and outreach information on our website that links with other efforts.</p>	
<p>A first-generation Nissan Leaf may not be able to travel the 45 minutes required to find a public charging station. Care needs to be taken in choosing the time and distance metrics.</p>	
<p>Data points all useful, but it is important to consult with the communities to determine where people congregate so that EVSE is used and useful to that community.</p>	
<p>Managing queuing at charge stations. Should there be an obligation to move car within 5 minutes of completing charging, or pay more? There needs to be an ability for other EV drivers to see when a charger will be open. As activity levels at public chargers increases, it is important to make it convenient and accessible to all drivers. Perhaps allowing reservations at charging stations?</p>	
<p>Charging station density should take into account queuing so there should be more than one port at a charging location. (This participant also agreed with the other attendee who emphasized that community input is important to consult for charger siting.)</p>	

Next Steps section

Question or Comment	PacifiCorp Response
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<p>Does PacifiCorp plan to coordinate its Oregon TE plan work with those the utility has in its California and Washington service areas?</p>	<p>Yes. PacifiCorp aims to be consistent our three plans across our overall portfolio, partly to capture economies of scale, e.g., for Ride-and-Drive events, and templates, etc. The separate state efforts are being coordinated in such aspects. However, each state’s budget and specific portfolios are different at times.</p>
<p>In these listening sessions coming up, will there be any focus on Medium- and Heavy- Duty electric vehicles?</p>	<p>Future listening sessions more focused on participatory discussion on USC. We can definitely bring up Medium- and Heavy-Duty as well, including more sessions. Also, want feedback on local sessions.</p>
<p>Matching dwelling time with the charging type is important. L2 chargers should be placed at areas where people will be for a longer durations and placing fast chargers where people are for a shorter durations. Consider tiered pricing options to allow for discounts to low-income EV charging customers to offset the premium cost of relying on public chargers versus home chargers, ideally with the option of linking payment to utility bills.</p>	
<p>City of Portland could also include education and outreach information on our website that links with other efforts.</p>	
<p>I'm sure you are probably already thinking along these lines but matching dwelling time with the charging type is important. L2 chargers should be placed at areas where people will be for a longer durations and placing fast chargers where people are for a shorter durations. I'd also encourage you to consider tiered pricing to allow for discounts to low-income EV charging customers to offset the premium cost of relying on public chargers versus home chargers, ideally with the option of linking payment to utility bills.</p>	
<p>Will today’s presentation be shared with attendees?</p>	<p>Yes, the presentation will be emailed to participants and is posted at Oregon Transportation Electrification Planning (pacificpower.net)</p>
<p>Was this presentation recorded? Will recording be shared?</p>	<p>Yes, at Oregon Transportation Electrification Planning (pacificpower.net)</p>