

PacifiCorp Oregon Transportation Electrification Plan Stakeholder Meeting #2

Thursday August 11, 2022, 9:30-11:30 am Pacific Time
Meeting Notes

Executive Summary

There were 28 attendees from 24 companies and organizations at the August 2022 Oregon Transportation Electrification Plan (TEP) Stakeholder Meeting #2. 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 details on the portfolio guardrails that inform PacifiCorp's transportation electrification strategy, introduced PacifiCorp's goal, objectives and strategies for transportation electrification in Oregon, and discussed PacifiCorp's Transportation Electrification Customer Road Map. Top priority for PacifiCorp was to obtain feedback on these areas from participating stakeholders.

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

August 2022 Meeting Objectives

- Understand our investigation into portfolio guardrails
- Understanding our proposed forecast in our service area
- Alignment/agreement on portfolio value/size

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

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

Stakeholder comments and questions (including PacifiCorp responses, as warranted) are included in the Appendix.

Introduction to the August 11th Session

This is the second session in a three-part series. In July the discussion focused on EV and EV infrastructure current state and PacifiCorp service area characteristics. The August 11th session focused on PacifiCorp's EV strategy and guardrails. The meeting in September is focused on implementation of programs and associated budgets.

Recap: Stakeholder Themes & Actions from July 7th Session

38 attendees attended the July 7th session, with discussion focused on four main topical themes:

- Charging station availability and access
- Underserved community identification process
- Rebates for customer-sited EVSE
- Integrating Multifamily residential sector into PacifiCorp's programs

Guardrails and Constraints

Objectives for this segment were to share information on the four items listed below:

- Background on the Transportation Electrification Infrastructure Needs Analysis (TEINA)
- Deep dive on how PacifiCorp used TEINA to develop our forecasts
- Outputs from PacifiCorp's use of TEINA
- Stakeholder feedback on how PacifiCorp used TEINA

Background on the Transportation Electrification Infrastructure Needs Analysis (TEINA) (slides 10-12)

- Oregon passed SB 1044 in 2019, a law that established statewide ZEV goals in 5-year increments, and resulting in 90% zero emission vehicles by 2035, or 2.5 million vehicles on the road.
- Oregon Department of Transportation released the TEINA tool in 2021. TEINA modeled out the infrastructure needed in the state to meet the SB 1044 goal, essentially the number of charging ports needed in state to support 2.5 million vehicles in 2035.
- PacifiCorp is required to use TEINA to estimate budget "guardrails" or maximums to support infrastructure needs.
- TEINA focuses squarely on the three following infrastructure needs:
 - Workplace L2 chargers,
 - Public L2s,
 - DCFC ports.
- These are only a few elements of a much larger and more holistic TE portfolio that PacifiCorp is exploring.
- Important to note that TEINA outputs do not dictate what TE portfolio budget must be, nor does it assume that the expenses it outputs will become incremental ratepayer costs.

Deep dive on how PacifiCorp used TEINA to develop our forecasts (slides 13-17).

- To use TEINA, PacifiCorp's main input into the model was an estimate of the number of EVs on road in service territory by 2035, or in this version of TE plan, 2025.
- Five different forecasts included in our analysis:
 - One forecast is SBI044, the policy goal.

- Three forecasts are from independent think tanks/consultants.
- One forecast is from PacifiCorp.
- Once the EV forecast was entered into TEINA, and applied to PacifiCorp's OR service area, TEINA outputs the level of infrastructure needed to support that number of EVs.
- TEINA model uses a ratio of ports per vehicle across use cases, and thus, converts EV counts to port counts by summing L2s charging and DCFCs to support the forecast number of EVs.
- TEINA thus creates the port counts needed for ensuring sufficient EVSE charging availability.
- TEINA *does not* say how much of the total infrastructure cost will be utility-supported versus other sources, so PacifiCorp used a slider scale from 0-100% of utility investment share that utility will support. PacifiCorp analyze full range of that scale.
- Multiply through – ports*cost of ports*amount that utility invests in/supports = range of expenditures for each forecast. This results in PacifiCorp's spending guardrail.
- PacifiCorp shared five inputs/forecasts, with three cost ranges/investment shares, resulting in 45 possible guardrails.

Outputs from PacifiCorp's use of TEINA (slide 14)

- When inputting SBI044 policy goal into TEINA, the model says 5,099 ports are needed to be installed in PacifiCorp OR service area by 2025. There are already 836 ports installed in service area, so that leaves an additional 4,263 ports needing to be installed.
- PacifiCorp estimated costs for 4,263 in order to avoid budgeting for the already-installed ports.

Estimated EVSE cumulative needs, by varying forecast scenarios (Slide 15)

- PacifiCorp started with actual year-end EV registrations for forecasting, or where we're currently tracking regarding EVs. We reviewed three different 3rd party national forecasts that represent low, medium, and high scenarios for future EV adoption
 - Low = EIA
 - Medium = Woods McKenzie
 - High = Bloomberg EV outlook
- For each of these forecasts, PacifiCorp used the growth rate and tailored it to our service area
- These scenarios allow us to develop cumulative port needs under different future adoption rates for EVs
- PacifiCorp is constantly refreshing these forecasts, checking the OR dashboard to see if updated, if other market info is available, check total sales and EV proportion accordingly.

Cost estimates per port (Slide 16)

- PacifiCorp used program data to develop different views of costs for installation, equipment, upgrades, program administration, and operations & maintenance (O&M). We then developed estimated cost ranges for EVSE equipment (by type) and reviewed other studies to verify that our cost ranges are reasonable.
 - PacifiCorp's costs were a bit higher than other studies' cost estimates.

Potential TEINA max guardrails (Slide 17)

- PacifiCorp looked at each forecast and the port needs generated from TEINA in 2025.
 - PacifiCorp generated 45 scenarios, 15 of which are shown here.

- Then looked at lower-cost threshold for per-port cost and lower assumption of utility investment as a low case. Also built high and medium cases, and adjusted variables of per-port costs and utility share of investment.
- Depending on forecast, utility investment could range from \$9 million at the lowest to more than \$250 million at the highest. This, obviously, is a huge range, and might be meaningless. However, PacifiCorp considers the highest forecast as representative of the maximum level (or guardrail) the utility needs to prepare for. Put differently, these estimates contextualize what a reasonable investment might look like under each of these scenarios.
- Revenues collected – clean charge, meter revenues, etc. PacifiCorp anticipates some \$25 million to \$30 million in collected revenue.

Goals, Objectives and Strategies

- Slide 19 – Building the Potential TE Portfolio
 - Shifting towards discussing TE portfolio in entirety, vs just TEINA outputs which are just a portion of overall portfolio
 - TEINA is small number of use cases, a portion of holistic portfolio
- Slide 20 – PacifiCorp’s Strategic Framework
 - Strategic framework PacifiCorp employed: GOST
 - Goals
 - Objectives
 - Strategies
 - Tactics
- Slide 21 – Draft Goals and Objectives
 - Goal
 - To be a trusted advisor and support equitable acceleration of transportation electrification across all our communities in the West
 - Objectives
 - Elevate awareness of Transportation Electrification
 - Electrify equitably; enabling access through our service area
 - Manage grid impacts effectively
 - Reduce costs to consumers
 - PacifiCorp is using this goal and four objectives across its service areas in California, Oregon, and Washington
- Slide 22 – Objective 1
 - Elevate awareness of transportation electrification, with five strategies:
 - Build internal workforce knowledge and strategy
 - Support outreach and educational programs
 - Cultivate key partnerships
 - Build comprehensive marketing strategy
 - Provide technical support services to customer

- Slide 23 – Objective 2
 - Electrify equitably, enabling access in our service territory, with five strategies:
 - Develop incentive programs focused on underserved customers
 - Support EV code-ready advancement
 - Build a public infrastructure program for underserved communities
 - Build programs that support advancement of medium- and heavy-duty electric vehicles adoption in underserved areas

- Slide 24 – Objective 3
 - Manage grid impacts effectively, with five strategies:
 - Conduct ongoing planning studies to understand future of grid impacts
 - Develop customer tools to support customers in understanding grid impacts
 - Deploy innovative pilots that support management of future load
 - Develop resiliency strategy to support EVSE infrastructure and future grid impacts
 - Create data management strategies and build reliability programs

- Slide 25 – Objective 4
 - Reduce costs to customers, with four strategies
 - Develop customer incentive programs
 - Identify supporting tariff structures for customers
 - Leverage federal and state funding opportunities
 - Utilize economies of scale by leveraging BHE-wide companies procurement process

Timing of roadmap by objective and strategy (slide 26)

- PacifiCorp solicits feedback on its strategies: Are we moving in right direction?
- PacifiCorp states that lots of activities aimed at meeting these objectives are already ongoing.

Estimated TE portfolio size (Slide 27)

- Information herein presents PacifiCorp's draft Transportation Electrification portfolio, by programs and sectors.
 - PacifiCorp solicits stakeholder feedback on it.
- Left side is programmatic types, and includes 10 discrete line items
- Overall cost-range of the anticipated portfolio ranges from \$25 million to \$41 million for the three-year time period (2023-2025)
- TEINA guardrails, if we included it, would allow PacifiCorp spending to increase to some \$250 million.

- Credit value of clean fuels varies. California credit prices have started to decline significantly, and are currently around \$80. PacifiCorp is quite wary of future credit price, as credit prices are highly volatile due to market changes.

Participant List

Organization

Applied Energy Group (AEG)
AMPLY Power
Cascade Policy Institute
ChargePoint
Chargeway
City of Portland, Bureau of Planning and Sustainability
Climate Solutions
Emerald Valley Electric Vehicle Association
Enel
FlixBus
FLO
Green Energy Institute
Idaho Power
Natural Resources Defense Council
NW Energy Coalition
Oregon Citizens' Utility Board
Oregon Dept. of Energy
Oregon DEQ
Oregon Public Utility Commission
Portland General Electric
Portland Bureau of Transportation
Shell Recharge Solutions
Tesla
WeaveGrid

PacifiCorp Attendees

- Kate Hawley
- Steven Alaman
- Alex Osteen
- Catie Allen

Appendix: Questions & Answers and Comments During the Meeting

Guardrails & Constraints: Outputs from PacifiCorp's use of TEINA

Question or Comment	PacifiCorp Response
<p>Regarding DCFC existing ports, there's differences between Tesla ports and non-Tesla ports. Do you weight Tesla ports the same way as non-Tesla ports? Because not all EVs can use Tesla ports, so do Tesla ports meet the same needs, and do you weigh it the same as other DCFC or no?</p> <p>Stakeholder response: I don't have recommendation on this topic today, but need to keep in mind, because not all DCFC will serve all customers. Be mindful of this.</p>	<p>After presenting the map of EVSE charging infrastructure in PacifiCorp's service area during the first stakeholder meeting, PacifiCorp looked at how many of the chargers were Tesla compatible. That analysis indicated that 43% of DCFC already installed are Tesla. The other 57% are non-Tesla. For L2 chargers, 18% of all L2 chargers are Tesla chargers. The TEINA model, from our understanding, does not differentiate between the two. Rather, it just provides a sum of the total DCFC count.</p> <p>PacifiCorp can consider TEINA model and exclude the existing Tesla percentages. Great feedback opportunity, what stakeholders think we can/should do here?</p>
<p>We should be considering the above issue when accounting for what's available. Big equity implications for weighting Tesla as much as others when providing equitable access for people. Initial thoughts are we shouldn't be weighting Tesla the same as other vehicles.</p>	
<p>Per the above Tesla topic. I analyze the availability of public chargers in Portland. Tesla chargers show up as public but has little note saying they for Tesla only. We go through and flag them as not really being technically public. Our view is that Tesla chargers are not truly public.</p>	

Guardrails & Constraints: Estimated EVSE Cumulative Needs

Question or Comment	PacifiCorp Response
<p>We try to get people to consider EVs. Big issue is how do I charge this while on a trip. I suggest that looking at the actual adoption of EVs in territory isn't the right metric. You can use this, but also the likelihood of people traveling through vast areas of the state that PacifiCorp provides electricity to is important. Think you're using wrong denominator.</p>	<p>PacifiCorp attempts to look at these in a range, because we do not always have those specific values. Look at aggressive expectations to try and contextualize a range of outcomes.</p>
<p>The top end of range doesn't have this yet, b/c not considering point I'm making. Couple months ago we hit 50k EVs statewide, so people will be traveling through PAC service area and want to</p>	<p>TEINA does use corridor charging. We can take this info back and figure out how we might create diff curves associated w/ corridor charging. And</p>

<p>charge. Need to figure out how to consider travelers from outside service area, not just people that live in service area.</p>	<p>what actors/players should be involved in corridor charging.</p> <p>PacifiCorp is open to recommendations on different data sources or other parts of the country that have factored this in.</p>
<p>What's the relationship between blue and red columns? Is blue TEINA's projection of how many chargers needed in PAC territory, vs red is how many PAC expects to supply?</p>	<p>TEINA = cumulative light duty vehicle counts for our service area. We're saying we don't anticipate that cumulative count.</p> <p>PacifiCorp is projecting these numbers to see how we're aligned with current EV adoption. We're comparing what TEINA says compared to other forecasts, as well as compared to our own forecast. And we're trending in the middle, so seems in-line with others' forecasts for EVSE need based on future EV adoption. However, we remain open to feedback as to whether you think we're trending appropriately.</p>
<p>Of the 1,021 chargers in the projection, what share of those are owned by the utility?</p>	<p>PacifiCorp answers this later on in Slide 17 where investigate a low, medium and high scenario of owned and supported charging stations.</p>
<p>It seems as if PacifiCorp is undershooting reasonable expectations given that the number of EVs on road isn't going to be a straight-line projection, it'll increase more exponentially as tech adoption curves do in later years. With multiple EVSE and charging suppliers in the service territory, there will be a whole set of usability issues for customers (logins, access, etc.), which will be frustrating to consumers. There remains lots of work to be done in alignment, it's not just the number of chargers.</p>	
<p>What's the role of the utility, and what's your approach? Are you reacting to market or trying to impact behavior change? Knowing that the amount of chargers impacts adoption rates, and knowing how accessible fueling impacts adoption. We only have 8 years, so more adoption right now is important to avoiding catastrophic impacts. You're on right track for looking at multiple forecasts, need to think through what's the role of utility here.</p> <p>Regarding the budget, how often are you analyzing these forecasts, e.g. on annual basis, etc.? Forecasts</p>	<p>There are different data sources that get refreshed at different times throughout the year. PacifiCorp is looking at EV adoption dashboard produced by Oregon 2-3 times/year. Look at EIA on an annual basis. Look at DMV data on an annual/biannual basis. Data sources fluctuate. Any time we see data/evidence change, we update, minimum on annual basis.</p> <p>There's the balance of being reactive vs proactive, PacifiCorp aims to plan for future needs but we also want to be supporter of EVs and encourage faster adoption.</p>

<p>are never accurate, always changing. How do you monitor and update data?</p> <p>And, are you being reactive to market or trying to influence behavior change?</p>	<p>PacifiCorp is projecting 30% year-over-year growth of the EV market. Markets do grow exponentially, so we try to model within curves, but it's very hard to predict.</p>
<p>TEINA estimates do include corridor traffic. TEINA very granular, many different ports. What I believe PacifiCorp is presenting is actually just forecast for local use (I think). Originally ODOT referred to this as urban and rural. ODOT retains traffic data through corridors, and using this data they developed separate forecast for port counts, with an output entirely for DCFC ports. It's called Corridor Estimate. Ultimately, this data would be augmented on PacifiCorp data presented right now, b/c don't believe PacifiCorp is presenting corridor data right now.</p>	<p>On slide 12, the blue boxes show use cases, and "Corridor" is one of them. PacifiCorp did use the TEINA model to estimate DCFC port needs for the "corridor" use within our service area for the 5 forecasts we included in our analysis. On the high end, using SBI044's EV count, the TEINA model tells us we need 520 DCFC ports to support corridor charging within PAC territory, and on the low end, the AEO forecast yields an estimate of 121 DCFC ports needed, w/ the other forecasts in between.</p>
<p>I have some feedback on slide 15, the "TEINA study forecast vs proposed forecast." I'm thinking about this as the draft staff guidance from the PUC recommends that TEINA be used to establish max budget guardrail. I see value in comparing national forecast, but confused about need to create alternative proposed forecast that scales down. Just because TEINA establishes larger need doesn't mean utility needs to meet all of that larger need, because other entities can. I caution against creating a separate forecast, because TEINA doesn't mean PacifiCorp needs to invest all that, other entities can. Other things will determine actual estimates, so voicing caution around entirely separate forecasts from TEINA</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 volumetric price signals are going away or being reduced?</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 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</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</p>

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.	budget – and thus reduce that cost burden that is occurring for those installations that have a tougher time making the economics work.
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Guardrails & Constraints: Cost Estimates per Port

Question or Comment	PacifiCorp Response
Do utilities have concerns over having adequate grid capacity to support EV charging needs. It depends on what the projections are, so I'm interested to know if there are concerns or not based on low-med-high estimates. Can take this question offline if easier.	<p>Your question is related to the ongoing commission process with Distribution System Planning. Alignment on forecasts directly relevant to grid capacity.</p> <p>PacifiCorp is evaluating this question through two studies. Our updated Distribution System Planning, part 2 filing, to be completed by August 15th, will see lots of discussion around different EV scenarios, and how they're evaluated in context of distribution system capacity needs. For larger statewide views, Integrated Resource Plans encompasses much of this discussion. Evaluating how EV forecasts impacts system needs in future</p>
Regarding slide 16 – does existing buildings vs new building construction matter on costs? How do costs apply to different types of projects?	<p>The values are aimed at providing the all-in cost per port. It assumes a make-ready program for workplace, public L2, and DCFC EVSE actions. This point of feedback is what we want to hear from stakeholders regarding TEINA max guardrails. We're assuming standardized per port cost based on other studies, and ours is slightly higher due to supply chain issues, more rural nature of territory, etc.</p> <p>PacifiCorp investigated the technical assistance studies and a majority of these studies are existing buildings.</p>
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.	

Goals, Objectives and Strategies

Question or Comment	PacifiCorp Response
<p>On slide 24, the 3rd and 4th goals seem very high level, hard to figure out exactly how you'll implement. Hard to imagine how you'll accomplish them; they don't seem as actionable as ones on other slides.</p>	<p>There are a variety of approaches PacifiCorp can take. One prospective approach is to trial innovative pilots, e.g., exploring managed charging program. V2G in the next year or two. Next stakeholder session we'll have buildouts of all these and associated budgets, this session is aimed at obtaining stakeholder – your – feedback.</p>
<p>For slide 25, I want to understand about workforce development approach and processes, plus getting BIPOC benefit, for PacifiCorp's thinking about investments in this space and the procurement process.</p>	<p>PacifiCorp response – goes back to objective 1, elevating awareness. We've funded workforce development in Portland, have used grant money to do BIPOC training on EVs and infrastructure. Klamath Falls, funded workforce development and curriculum. Internally, also doing deep dive and how we build knowledge internally. Moving forward, what are the key aspect of an educational campaign? Grant programs hit workforce development in an open and flexible manner</p>
<p>Many locations have a hard time getting vendors to install DCFC b/c of initial ramp up of paying demand charges. During ramp-up period, what consideration is given to this problem for private vendors trying to set up public charging?</p> <p>That response is great, puts you ahead of other electricity vendors</p>	<p>PacifiCorp has a Schedule 60 rate, a demand reduction rate, that would apply. Also have TOU rate that reduces off-peak demand and demand charges for commercial customers who adopt DCFC equipment.</p>
<p>I'm wondering about locating charging infrastructure within low income, underserved communities. Lots easier to figure it out where money's involved, like home/private chargers, but in underserved communities there will be plenty of issues with where you put public chargers, plus how the utility and/or a municipality can install. Putting charging infrastructure in low-income communities will be challenging.</p>	<p>PacifiCorp is initializing this effort through localized stakeholder engagements. Half of the time in those meetings is spent going through a mapping exercise, participatory mapping, to help determine where stations can best be located in the community. We also have an ongoing internal mapping exercise that utilizes drive times, etc., as an input in order to best prioritize investments over time. We then present these findings in the community stakeholder sessions to obtain "in the field" feedback.</p>
<p>What about EVSE located at rental units? It's far easier to plug in at night for EV owners, and easier on the utility system to do so. But siting EVSE at or near rental housing can lead to issues involving landlord/tenant relationships. How does the amenity for tenants (such as EVSE) get paid for if the tenant can't afford it or doesn't want to pay to</p>	<p>This takes us back to Objective 12, underserved communities, which includes addressing EVSE needs at rental housing. The role for the utility to play might be to own rental housing-sited EVSE infrastructure. We're considering this option. Likewise, is there a role for more robust make-ready program for these people/communities? There could</p>

<p>put it in rental unit. How to deal with this tension and deploy charging for low income too?</p>	<p>be multiple options to address EVSE access for rental housing, some of which are complementary.</p>
<p>Regarding Strategy #2, “Identify supporting tariff strategies for customers,” does it include an affordability tariffs for public charging?</p> <p>Anything that’s identifying how folks who rely on public charging can get rates at cost parity with people who are charging at home. Low-income programs that translate into signing into customer login to get low-income rates, or seeing what other best practices are out there to develop these.</p>	<p>PacifiCorp is exploring commissioning a rate study in its service area to help inform what the optimal rates are to provide, then how to make rates affordable. We’re encompassing this but don’t have position on it right now.</p>
<p>I love that you’re actively doing participatory mapping with communities, it would be great if you can share this resource. Often, we go back to solicit the same input from the same communities, so sharing this info would be useful. I would love to be involved in co-hosting these.</p>	<p>PacifiCorp posts information on its Community-based meetings at https://www.pacificpower.net/savings-energy-choices/electric-vehicles/or-transportation-electrification-planning.html</p>
<p>Is PacifiCorp conducting an impact analysis of strategies regarding being able to achieve objectives? Past TE plans include ample discussion on market barriers. Recognizing market barriers are important because utilities can’t affect all market barriers, e.g., upfront cost of EV is largest market barrier. Utilities simply don’t have much control over this. Still, it is important to develop objectives/strategies to overcome those market barriers that a utility can impact, while being realistic as to the utility limitations/challenges have in implementing strategies.</p>	<p>PacifiCorp’s updated TE plan will continue to discuss market barriers, and all of our localized engagements start with identifying and discussing market barriers. We’ve done some pre-meeting research on these local barriers, too, and included that in the discussion. How can objectives affect (or not) market barriers? Staff guidance has put out metrics that relate to these objectives, and can tie this into barriers</p>

Guardrails & Constraints: Estimated TE Portfolio Size

Question or Comment	PacifiCorp Response
<p>I want to flag that on slide 27, it’s confusing with TEINA max guardrail. Doesn’t sound like it’s \$66M because that’s actually \$200M+. I recommend labeling it something like ‘proposed forecast guardrail’, just not to be misleading.</p>	
<p>Regarding the methodology of how to split budget among different geographic areas, I’d be interested to know how that translates (e.g., the funds on slide 27), What’s that breakdown for Portland vs other</p>	

<p>areas? I would like more concrete estimates by region.</p>	
<p>Why isn't PacifiCorp doing sector support on planning, grid integration and load management for heavy duty? Seems like a critical area to be focused on.</p>	<p>You are correct, we didn't check that box, but need to do so.</p>
<p>Regarding the timing for heavy-duty trucks, they are starting to come. Tesla, for example, is planning to sell theirs later this year. Daimler and Volvo already have them out. Getting together with those companies to figure out where critical charging should be incredibly important right now.</p>	<p>PacifiCorp is exploring how to leverage grant funding to support such work.</p>
<p>The estimated total value in slide 27: is this your budget? It's quite a range. Is this an area that you anticipate digging in with stakeholders and where dollars might be accounted? Could be anywhere in range?</p>	<p>The budget on slide 27 represents a minimum value for the budget. Maximum is what we put in for additionality. Depending on rate impact tests, want to be really cognizant of those, hence keeping a range. During the next session (September 23), we will solicit your opinions on the range values.</p>