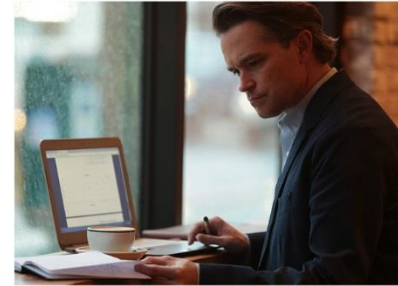


Transportation Electrification Plan Stakeholder Meeting #3



September 23, 2022

Ground Rules

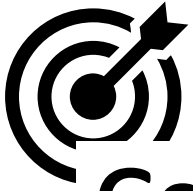
We strive to create a respectful, inclusive environment that embraces diverse perspectives

1. Be present
2. Keep an open mind
3. Share your insights
4. Work with us toward a shared solution

Recommendations & Requests for Meeting Participants

- Use "Gallery View" (icon in top right) when in group discussion
- For technical support, click on "Chat" (icon in tool bar at bottom), toggle to "Tag Galvin-Darnieder / E Source" as recipient, and send your message
- Please use the chat at any time to engage in the conversation or ask questions
- To raise your virtual hand to speak, click on "Reactions" in your tool bar, select "Raise Hand."
- Please keep your camera on during the meeting (icon in bottom left) and unmute when you are speaking
- We will change your participant name in Zoom to be First Name, Last Initial, Affiliation

Stakeholder Engagement Overview



Goal

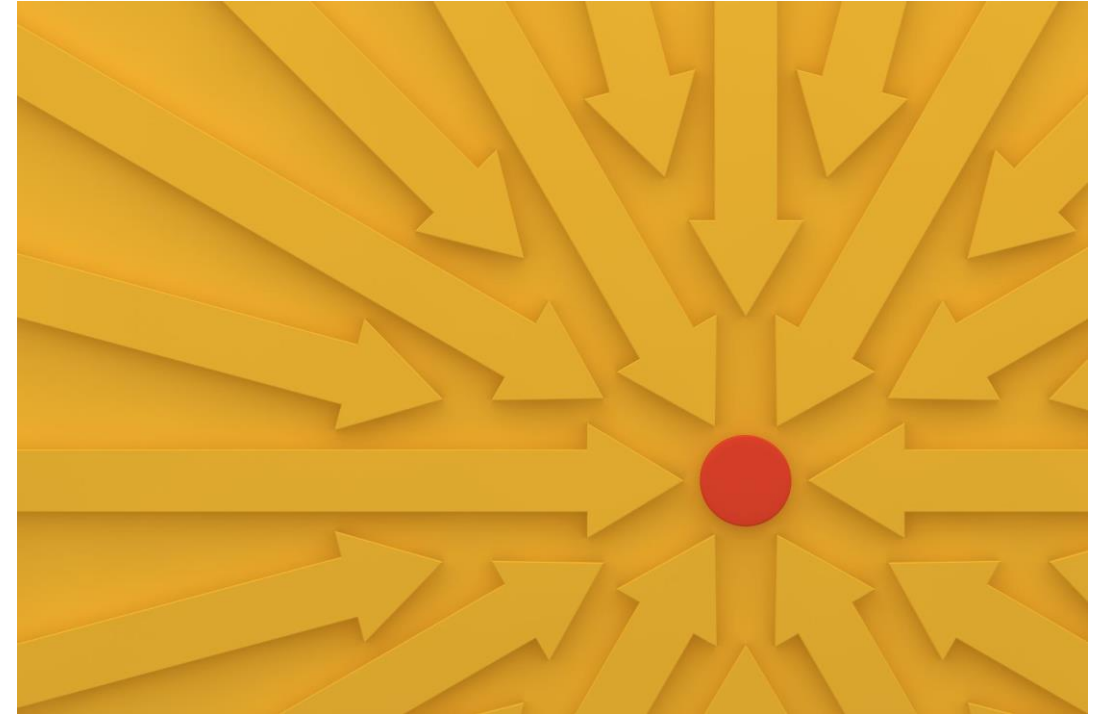
To develop a **robust, equitable, innovative, iterative, and customer-centric transportation electrification plan** (TEP)

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

Today's Objectives

- Introduce the Prospective Program Portfolio and receive feedback on the offerings
- Discuss the portfolio's value proposition, benefits and costs
- Brief on the Portfolio timeline, ongoing engagement opportunities and next steps



Agenda

TIMING	TOPIC	PRESENTER
10:35–10:40	Key Feedback Themes & Actions	Kate Hawley
10:40–11:55	TE Portfolio Program Discussion	Kate Hawley, Steven Alaman, and Berit Kling
11:55–12:05	TE Value Proposition, Benefits and Costs Discussion	Kate Hawley
12:05–12:30	TE Portfolio Timeline & Ongoing Engagement Q&A Next Steps	Kate Hawley

PacifiCorp Presenters



Kate Hawley
Electric Vehicle Senior
Product Manager,
Customer Solutions



Berit Kling
Voluntary Renewables and
Clean Fuels Program Manager,
Customer Solutions



Steven Alaman
Transportation Electrification
Customer Programs Manager,
Customer Solutions

A man and a woman are in a workshop, looking at a tablet together. The man is wearing a blue t-shirt and the woman is wearing a red and black plaid shirt and brown overalls. They are both smiling. In the background, there are shelves with tools and other people working. The text "Stakeholder Themes & Actions" is overlaid on the right side of the image.

Stakeholder Themes & Actions

We Received Feedback from the Following Stakeholders

- | | | |
|---|---|---|
| <ul style="list-style-type: none">• Charlie Allcock Consulting LLC• City of Portland, Bureau of Planning and Sustainability• City of Portland, Bureau of Transportation Climate Solutions | <ul style="list-style-type: none">• Douglas County Global Warming Coalition• Emerald Valley Electric Vehicle Association• The Environmental Center• Green Energy Institute• Natural Resources Defense Council | <ul style="list-style-type: none">• Northwest Energy Coalition• Oregon Citizens' Utility Board• SemaConnect Inc.• Shell Recharge Solutions |
|---|---|---|

Key Feedback Themes & Actions (1 of 2)

Key themes from stakeholders	Actions PacifiCorp is taking
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.
How can PacifiCorp help standardize charging equipment and charging station port access?	PacifiCorp can encourage existing working groups it participates in to improve such protocols. The National Electric Vehicle Infrastructure (NEVI) Formula Program is an important venue to improve in these areas.
Does PacifiCorp conduct outreach on non-EV e-mobility options such as e-bikes, e-scooters, transit, etc.?	Yes, both PacifiCorp's mobile showcase and EV Drive events include local bike shops and e-scooter participation.
Has PacifiCorp investigated any vehicle-to-grid (V2G) pilot programs, or do you envision these in the future?	PacifiCorp is in the process of upgrading its communication system, distributed energy resource management system (DERMS), and other systems that would allow the distribution system to safely and reliability handle V2G power injected onto the grid.
What are the criteria for EV charging equipment to qualify for rebates?	PacifiCorp 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.

Key Feedback Themes & Actions (2 of 2)

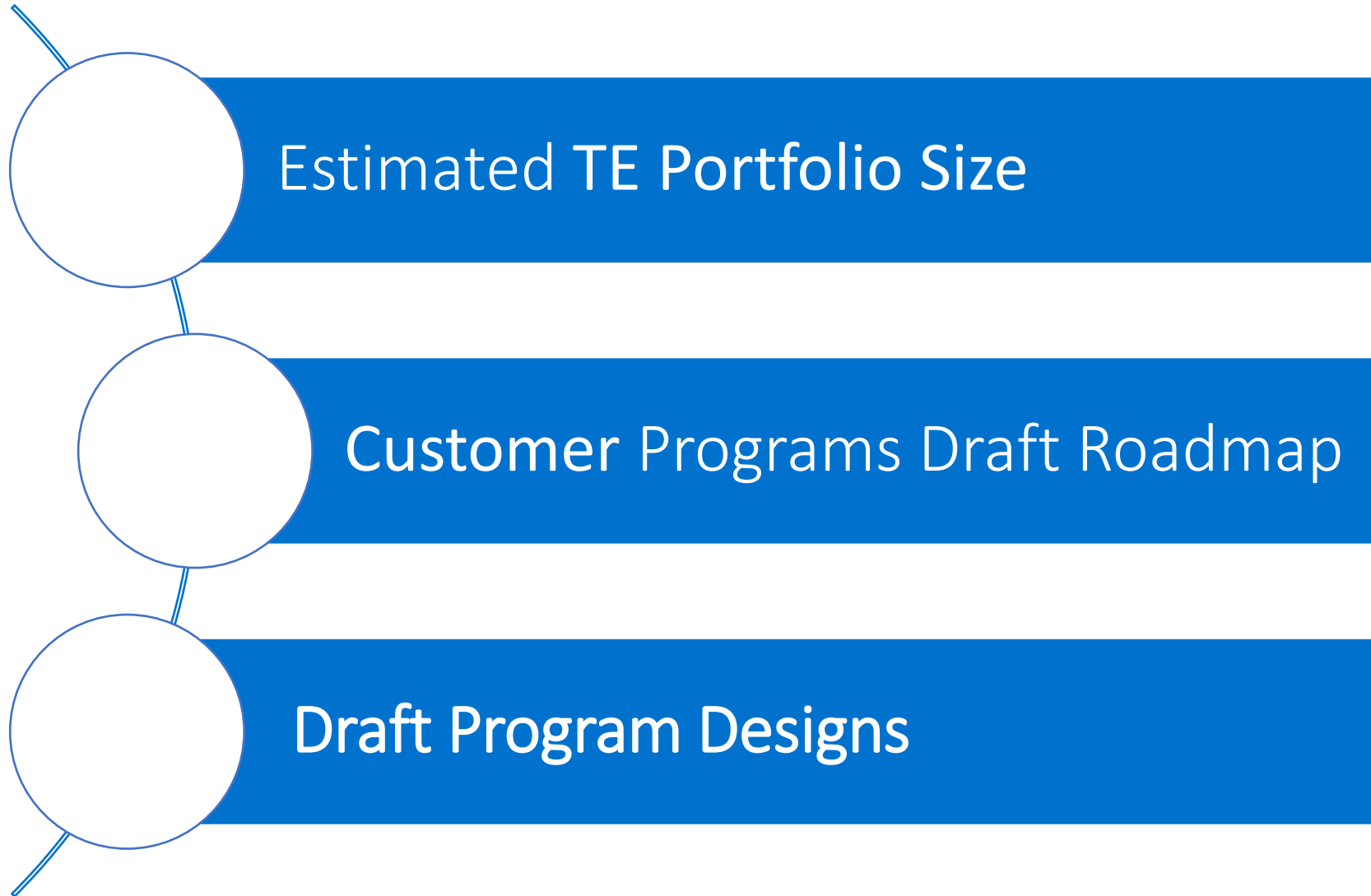
Key themes from stakeholders	Actions PacifiCorp is taking
Are wildfires and their smoke being included in the Pollution Burden Index?	We haven't overlaid wildfire on the pollution metric yet. One challenge would be finding a good data source for wildfire smoke.
What are PacifiCorp's plans to pair EVSE installation with outreach and education targeted to disadvantaged communities?	PacifiCorp is working with the Oregon Department of Environmental Quality (DEQ) to link to its data so that (in the future) if a customer receives a rebate for an EV, they will be directed to PacifiCorp's EVSE rebate program website to acquire a Level-2 charger and a rebate. PacifiCorp is also exploring a direct connection to new EV buyers.
Is there a potential outreach partnership opportunity between PGE and PacifiCorp to have a consistent message?	To achieve this, PacifiCorp is participating in Oregon's statewide campaign, which is funded through clean-fuels dollars.
Do TEINA estimates include corridor traffic?	PacifiCorp did use the TEINA model to estimate DCFC port needs for the "corridor" use within its service area.

**If you have feedback, recommendations for who we should reach out to, or additional resources,
Email us at kate.hawley@pacificorp.com**

TE Portfolio Program



What We Will Discuss



Estimated TE Portfolio Size

Program Type	Estimated Total Value (\$) 2023–2025	Potential Forecasted Maximum Guardrails	Estimated Percentage of Portfolio	Clean Fuels	Sector Support				
					Residential	Commercial	Multifamily	Fleet	Medium & Heavy Duty
Rebates	\$25–\$41 million	\$23–\$66 million	23%		✓	✓	✓		
Make Ready			10%			✓	✓	✓	
Planning, Grid Integration & Load Management			3%	✓	✓	✓	✓	✓	
Public Infrastructure Utility-Owned			14%		✓	✓	✓		✓
EVSE Code Support			4%	✓		✓	✓		
Outreach and Education			10%	✓	✓	✓	✓	✓	✓
Grant Programs			36%	✓	✓	✓	✓	✓	✓

*The estimated ranges are based on varying levels of clean-fuels revenue. With market volatility, PacifiCorp has identified programs that can be ramped up and down

**Estimated percentage by programmatic type includes administration and portfolio operating support costs

Customer Programs Draft Roadmap 2023–2025

	2023	2024	2025
Residential		Residential EVSE Rebate Pilot Program	
		Residential Time-of-Use Rate	
	★	Residential Managed Charging Pilot Program	
Commercial & Multifamily		Commercial & Multifamily Technical Assistance Program	
		Non-residential EVSE Rebate Program	
		Commercial Time-of-Use Rate	
	★	Public Infrastructure Utility-Owned Program	
		★ Support EV Code Ready Enhancement	
Fleet & Medium/ Heavy Duty		Fleet Technical Assistance Program	
	★	Fleet Make-Ready Pilot Program	
	★	Public Infrastructure Utility-Owned Program	
Grant Initiatives		E-Mobility Grant Program	
		Matching Grant Program	
		Grant Writing Microgrants	
		★ Municipal and Community Grant Program	
Outreach		Outreach & Education Pilot Program	

★ New Activity

Draft Program Designs

Residential EVSE Rebate Pilot Program

Description: Residential EVSE Rebate

Customers served: Residential and income-eligible customers

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type	Potential Ports Enabled/EV Participation
Today/Future	~\$2.5M - \$4.0M	<ul style="list-style-type: none">• Increase in utility system revenues offset the cost of increased supply, system upgrades and total pilot costs• Test the impact that Time of Use rates have on EV charging behavior• Increase access to charging for customers• Increase EV adoption leads to reduce GHG emissions and lower the total cost of ownership for customers	Payments are capped at \$500 or \$1,000 for income-qualified customers	2023-2025	Schedule 6	EVSE rebates	3,500 participating customers
Future Enhancements		<ul style="list-style-type: none">• Rebates will cover the total EVSE eligible cost for income-qualified customers• E-bike incentives will be offered to residential customers					
<p>Learning Objectives:</p> <ul style="list-style-type: none">• How satisfied are participants and market actors with the pilot design?• Were participants motivated by the incentive to purchase an EV plus a Level 2 networked charger?• What are the demographics of participating customers? Are we seeing equitable distribution of participants?• How satisfied are participants with participation on the TOU rate?• Are there recommended changes to the pilot design to improve participation?							

Non-residential EVSE Rebate Program

Description: Non-residential EVSE Rebate
Customers served: Commercial and multi-family customers

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type (Make-Ready EVSE & Rebates)	Potential Ports Enabled/EV Participation
Today/Future	~\$2.3M – \$3.3M	<ul style="list-style-type: none"> • Increase in utility system revenues to offset the cost of increased supply, system upgrades and total pilot costs • Test the impact of TOU on EV charging behavior • Increase access to charging for customers • Increase EV adoption to reduce GHG emissions and lower total cost of ownership for customers 	LEVEL 2: Up to \$1,000 not to exceed 75% per port; Level 2 at MUD: Up to \$3,000 not to exceed 75% per port	2023-2025	Schedule 29	EVSE rebates	975 ports over three years depending on incentive type
Future Enhancements	<ul style="list-style-type: none"> • Cover up to 100% of multi-family unit dwelling EVSE costs • Explore adding DCFC rebate program to stack with fleet make-ready program 						

Learning Objectives:

- How satisfied are participants and market actors with the pilot design?
- Were participants motivated by the incentive to purchase an EV plus a L2 networked charger?
- What are the demographics of participating customers? Are we seeing equitable distribution of participants?
- How satisfied are participants with participation on the TOU rate schedule?
- Are there recommended changes to the pilot design to improve participation?

Outreach and Education Pilot Program

Description: Providing future EV drivers with greater awareness and understanding through multiple outreach and educational platforms
 Customers served: Pacific Power communities and customers

	Estimated Funds	Objectives	Timing	Program Type
Today/Future	\$2.7-\$3.9 million	<ul style="list-style-type: none">• Provide positive impressions of EV technology to accelerate the adoption of EVs and EVSE charging infrastructure• Provide customers with basic EV knowledge• Empower motivated consumers with the tools to compare EV and EVSE models for their household, business and fleet needs	2023-2025	Outreach and Education
Future Enhancements	<ul style="list-style-type: none">• Explore and create a workforce development initiative to support the future needs of transportation electrification• Initiate an education program through key partnerships focused on K-5 schools			
Learning Objectives: <ul style="list-style-type: none">• How cost effectively did the pilot influence consumer adoption of EVs by providing EV education and support to customers• Did the pilot increase customer awareness of EVs on Pacific Power’s system• Did the pilot increase customer knowledge TE benefits and encourage customers to participate in TE programs and incentives• Develop a best practice toolkit for marketing campaigns for different customer demographics• Determine how outreach campaigns can improve and maximize TE efforts for future programs				

E-Mobility Grant Program

Description: Grants support projects that advance electric transportation in underserved communities, including areas without ample access to public charging
 Customers served: Non-residential customers in OR, projects must benefit Pacific Power's residential customers in OR.

	Estimated Funds	Objectives	Award Amounts	Timing	Program Type	Potential Ports Enabled/EV Participation
Today	\$3M	<ul style="list-style-type: none"> Support market transformation through advancing electric transportation projects at the community level Enable customer-created innovative projects led at the community level Provide learning and scaling opportunities of TE projects in new communities 	Cover up to 100% of the eligible costs	2020-2022	Grants	~10-12 per year
Future	\$4.7M-7.3M	<ul style="list-style-type: none"> Focus on underserved communities and innovative projects that have educational learnings Build broader awareness of grant opportunities 	Cover up to 100% of the eligible costs	2023-2025	Grants	~10-15 per year

Learning Objectives:

- Uncover opportunities and challenges for delivering a successful grant program to communities
- Analyze usage data from grantees and conduct locational analysis to understand what types of technologies support greater utilization
- Determine how effective is peer to peer roundtables as a tool for continuous improvement
- Understand how continued learning and course correction can be iteratively integrated into the grant program

Grant Matching & Grant Writing Support

Description: Grant matching support funds available to non-residential OR customers who are planning to secure additional funding to support Pacific Power customers with EV-related projects. Grant matching support is designed to offset the costs related to transportation electrification projects

	Program Type	Estimated Funds	Objectives	Award Amount	Timing	Program Type	Potential Ports Enabled/EV Participation
Today	Grant Matching	\$400K	<ul style="list-style-type: none"> Provide customers with necessary matching funds to win additional grant funding Leverage additional funding sources to create larger pool of funds for customers to implement projects 	Support may cover up to 100% of eligible costs requested through Pacific Power	2022	Grants	~2-5
	Grant Writing	\$100K	<ul style="list-style-type: none"> Provide capacity support to customers through grant writing assistance Enable support for smaller jurisdictions in need of assistance 	\$10,000 to \$20,000	2022	Grants	~2 - 5
Future	Grant Matching	\$1.0M-1.5M	Same as above	Cover up to 100% of eligible costs	2023-2025	Grants	~5-10
	Grant Writing	\$300K-400K	Same as above	\$10,000 to \$20,000	2023-2025	Grant	~5-10

Learning Objectives:

- Determine best ways to make customers aware of these matching funds
- Identify average award size that helps customers achieve needs to receiving other funds

Municipal and Community Grant Program

Description: Serving the micro-mobility and school bus needs of Pacific Power communities
 Customers served: Pacific Power communities and customers

New Offer

	Estimated Funds	Objectives	Incentive Amount	Timing	Program Type	Potential Ports Enabled/EV Participation
Future	\$2.5M- \$4.3M	<ul style="list-style-type: none"> Enhance the PacifiCorp fleet program for school districts Support the adoption use of electric school buses in underserved communities Increase ownership of electric bikes for low-income individuals Scale current models for expansion of low-income e-bike programs 	~\$250K per school bus (can pair with fleet program) ~\$2,500 per e-bike	2024 - 2025	Grants	~4 - 8 buses ~100 - 200 e-bikes
	Learning Objectives: <ul style="list-style-type: none"> Better understand community needs and opportunities with regards to electrification Determine if program accelerates school bus adoption for school districts in our communities Determine if program accelerates e-bike rebate programs in our communities. 					

Fleet Make-Ready Pilot Program

Description: Provide a **behind-the-meter** rebate program to fleet customers that will support all make-ready infrastructure
 Customers served: Commercial customers (inclusive of all types of vehicles (class 1-8 vehicles) includes on-road and off-road vehicles

New Offer

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type	Potential Ports Enabled/EV Participation
Future	\$2.7M to \$3.8M (covers first three years)	<ul style="list-style-type: none"> Support and enable market transformation by minimizing the cost of make-ready electric infrastructure Address charging infrastructure knowledge gaps Build confidence with customers as they move towards electrifying their fleets Plan and manage new electric charging loads by creating a network of demand-side resources Ensure integration of off-road vehicles and non-typical fleet customers (airport, rail, forklift) 	Behind-The Meter: ~\$7,000 per port Level 2 ~\$16,000 per DCFC Or Potential Custom Incentive To-The-Meter: Facilitated through line extensions ~ \$5,200-\$9,700 per port Level 2 ~\$10,000-\$23,000 per DCFC	2023 Q1 – 2027 Q4	Schedule 29	Make-ready EVSE and rebates	~400 ports by 2027
	Learning Objectives: <ul style="list-style-type: none"> Determine if program accelerates electric fleet adoption for non-residential customers Better understand customer barriers and opportunities in fleet electrification Identify areas to improve utility processes related to fleet electrification Uncover learnings from data gathered during the pilot related to utilization, EVs adopted, grid impacts, etc. 						

Public Utility-Owned Infrastructure Pilot Program

Description: Utility-owned publicly available charging infrastructure located in underserved communities
 Customers served: Underserved, multifamily, off-corridor roadways, recreational zones

New Offer

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type (Make-Ready EVSE & rebates)	Potential Ports Enabled/EV Participation
Future	\$3.6M-\$5.3M	<ul style="list-style-type: none"> • Provide equitable access to charging throughout service area • Enable new types of right of charging technologies for public access • Build partnerships with communities to co-locate needed infrastructure 	n/a	~Q4 2023 - Q4 2025	<ul style="list-style-type: none"> • Schedule 60 (adjusted to \$/kWh) • Discover income-eligible pricing options for customers 	Utility-owned make-ready with equipment	Level 2 Ports: ~78 Pole Charging Ports: ~125 DCFC: ~12 Total: ~215
	Learning Objectives: <ul style="list-style-type: none"> • Understand timelines for implementation when working closely with communities to co-locate • Uncover strategies for employing income-eligible rates at charging stations • Compare usage of utility-owned stations to customer-enabled stations 						

Residential Managed Charging Pilot Program

Description: Actively manage electric vehicle loads through vehicle- and charger-enabled protocols
 Customers served: Residential customers; potential for expansion to multi-family applications

New Offer

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type	Potential Ports Enabled/EV Participation
Future	\$740K-\$1.0M	<ul style="list-style-type: none"> Load shift to off-peak times Increased customer satisfaction with PacifiCorp service offerings Increase affordability for EV charging for customers Integrate into future DR program efforts 	Upfront Incentive: ~\$100-200 Ongoing Incentive: ~\$20-100	Q2 2023 - Q4 2025	<ul style="list-style-type: none"> Schedule 6 Schedule 29 	Rebates	~500-1,000 (~10% of EV population)
	Learning Objectives: <ul style="list-style-type: none"> Calculate total EV load enrolled in managed charging and potential for managed charging Determine an estimated percent of EV load enrolled in managed charging Understand barriers to participation in managed charging programs Determine if managing electric vehicle versus smart chargers is a better strategy Determine if controllability of the vehicle telematics or EVSE charger enables better program participation Learn how this will get integrated with renewable generation management 						

EV Code Ready Pilot Program

Description: Support code advancement in Oregon by supporting customers in achieving above-state-code EV-ready spaces
 Customers served: Affordable housing commercial new construction customers

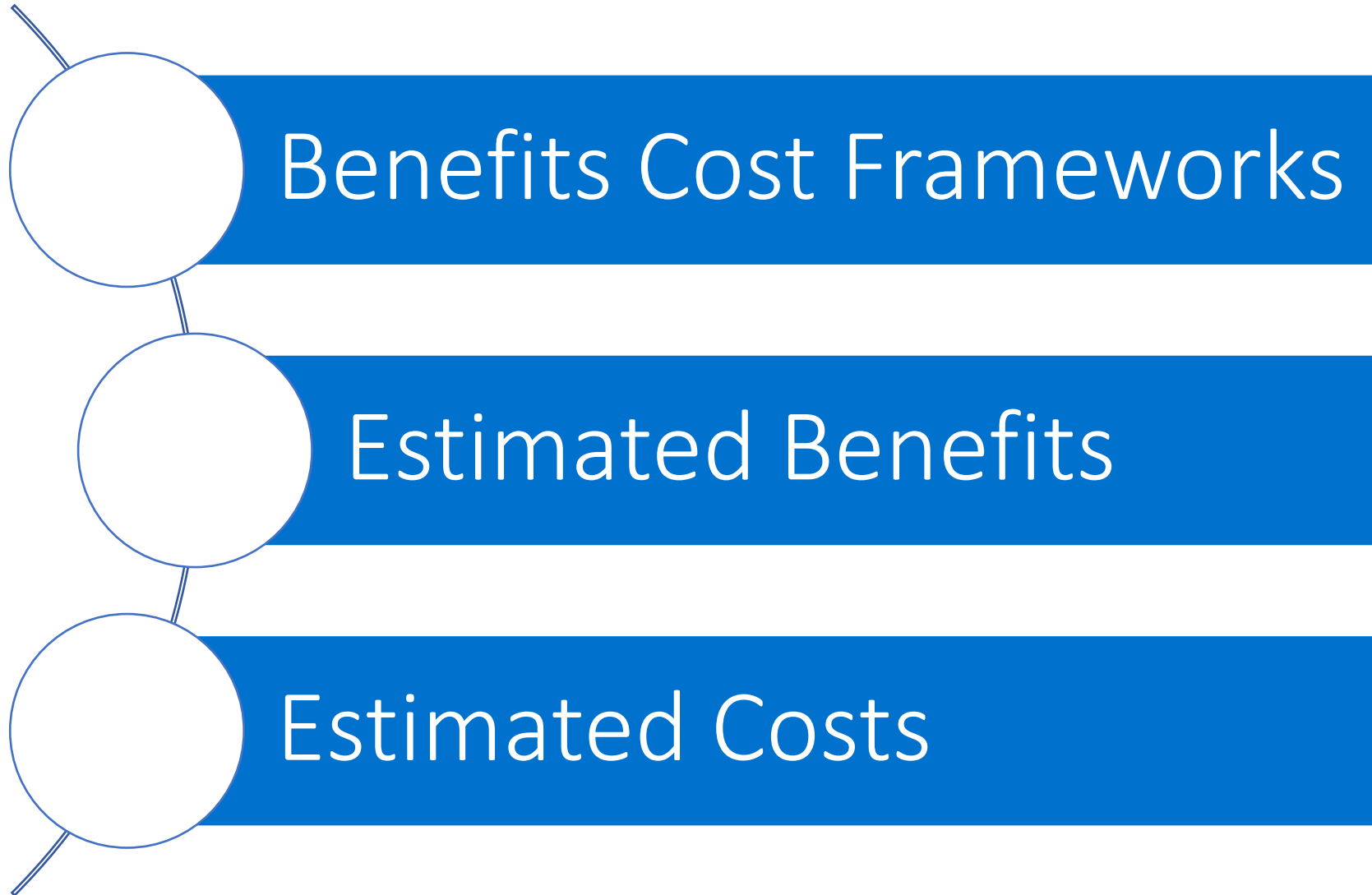
New Offer

	Estimated Funds	Objectives	Incentive Amount	Timing	Rates & Pricing Strategy	Program Type (Make-Ready EVSE & rebates)	Potential Ports Enabled/EV Participation
Future	\$1M–\$1.5M	<ul style="list-style-type: none"> Reduce costs associated with implementing EVSE equipment for affordable housing projects Support advancement of above code participation 	~\$1,500-\$2,500/parking space	Q1 2024-Q4 2025	n/a	Rebates	~200 to 300 parking stalls enabled
	Learning Objectives: <ul style="list-style-type: none"> Compare new construction versus existing building costs for implementing EVSE infrastructure at sites Understand challenges and opportunities for affordable housing developers as they build above code Investigate timelines from EV ready to actual installation of equipment 						



TE Value Proposition, Benefits and Costs Discussion

What we will discuss



Benefit Cost Frameworks

Per Commission direction, we will evaluate **infrastructure measures/programs and the TE portfolio** using:

1. Societal Cost Test (SCT)
2. Ratepayer Impact Test (RIM)
3. Total Resource Cost Test (TRC)

Follows methods outlined in the national standard practice manual as appropriate for electrification

Type of Impact	Impact	SCT	RIM	TRC
Utility	Energy	✓	✓	✓
	Generation Capacity	✓	✓	✓
	T&D Capacity	✓	✓	✓
	Distribution upgrades	✓	✓	✓
	Revenues	✓	✓	✓
Program	Administrative Costs	✓	✓	✓
	Incentive Costs		✓	
Societal	Other fuels	✓		
	GHG emissions	✓		✓
	Other environmental	✓		
	Equity	✓		
	Public health	✓		
	Macroeconomic cost/benefits	✓		
Host Customer	Incremental equipment cost	✓		✓
	Tax incentives	✓		✓
	Non-energy impacts	✓		✓
	Income specific impacts	✓		✓
	O&M costs/benefits	✓		✓

Preliminary Light Duty EV Estimated Net Benefits

Year	Total Number of Light-Duty EVs	Estimated Utility Revenue	Estimated Utility Capacity and Energy Costs	Estimated Net Revenues	Estimated Carbon Benefits	Overall Estimated Net Benefits
		(\$ millions)				
2023	17,376	\$7.7	\$5.1	\$2.6	\$3.2	\$5.8
2024	22,618	\$10.0	\$5.5	\$4.5	\$4.5	\$9.0
2025	29,003	\$12.7	\$7.0	\$5.7	\$6.8	\$12.4
Total	29,003	\$30.3	\$17.5	\$12.8	\$14.4	\$27.2

Notes: Net benefits are calculated as the estimated difference between utility billing and the cost to deliver and supply electricity, and they include estimated benefits from carbon reduction. Carbon benefits are estimated using social cost of carbon assumptions. Impacts are inclusive of medium and heavy-duty vehicles.

Estimated TE Portfolio Size

Program Type	Estimated Total Value (\$) 2023–2025	Potential Forecasted Maximum Guardrails	Estimated Percentage of Portfolio	Clean Fuels	Sector Support				
					Residential	Commercial	Multifamily	Fleet	Medium & Heavy Duty
Rebates	\$25–\$41 million	\$23–\$66 million	23%		✓	✓	✓		
Make Ready			10%			✓	✓	✓	
Planning, Grid Integration & Load Management			3%	✓	✓	✓	✓	✓	
Public Infrastructure Utility-Owned			14%		✓	✓	✓		✓
EVSE Code Support			4%	✓		✓	✓		
Outreach and Education			10%	✓	✓	✓	✓	✓	✓
Grant Programs			36%	✓	✓	✓	✓	✓	✓

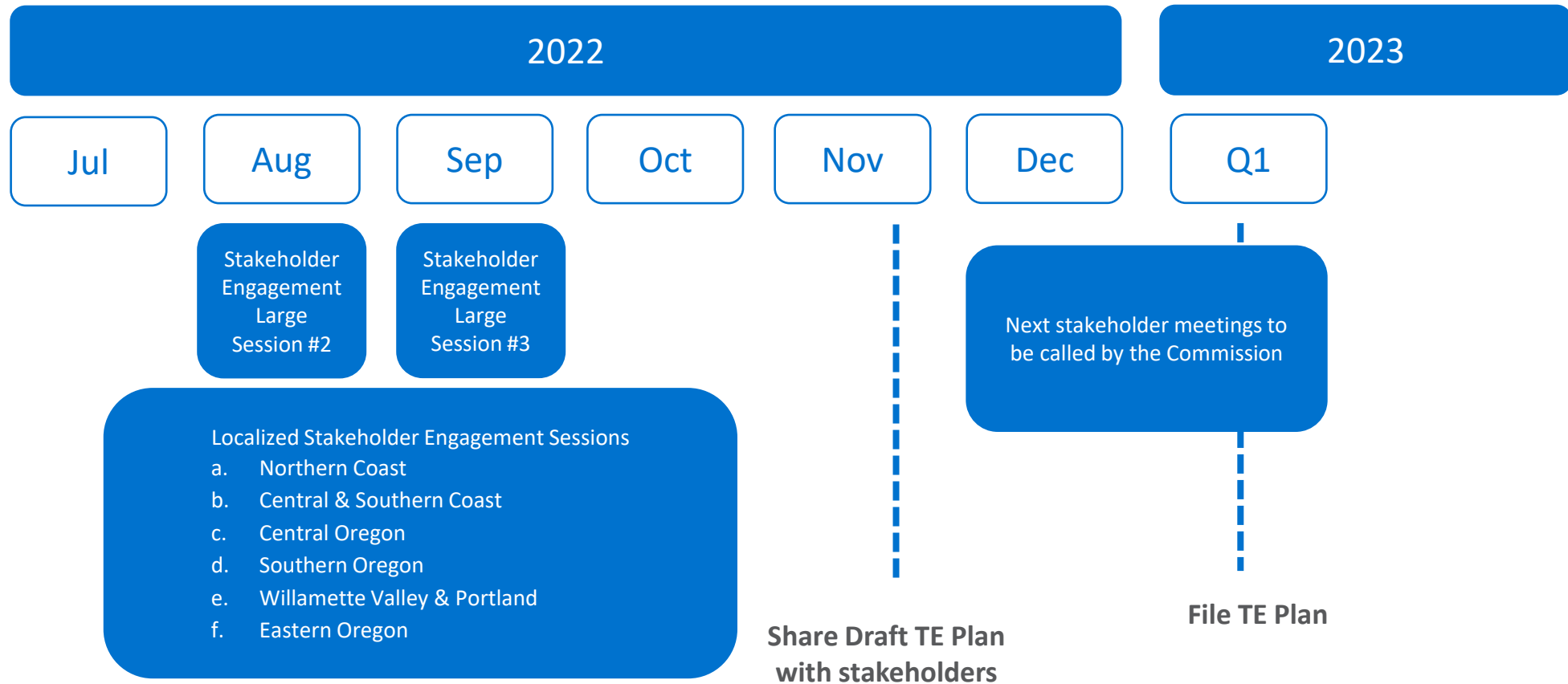
*The estimated range includes a certain level of clean-fuels revenue. With market volatility, PacifiCorp has identified programs that can be ramped up and down.

**Estimated percentage by program type includes administration and portfolio operating support costs

TE Portfolio Timeline & Next Steps



Draft TE Plan Timeline



PacifiCorp Requests Your Feedback

PacifiCorp actively solicits your feedback on what has been presented and discussed today.

We are interested in your thoughts regarding the Portfolio:

- Additional thoughts on portfolio size and focus?
- Insights and feedback regarding new program designs and concepts?

If you have feedback, recommendations for who we should reach out to, or additional resources,

Email us at kate.hawley@pacificorp.com



A young boy with light hair, wearing a plaid shirt and a backpack, stands with his arms raised in a gesture of excitement or triumph. He is positioned in the center of the frame. In the background, several large wind turbines are visible against a clear blue sky. The turbines are slightly out of focus, emphasizing the boy. A red triangular graphic element is visible in the top right corner.

QUESTIONS?

Contact Information:
Kate Hawley, EV Senior Product Manager
kate.hawley@pacificorp.com