



Transportation Electrification Investment Framework UM 2165

Welcome to Public Workshop 3
TE Portfolio Analysis
July 28, 2021



Operating Agreements

1. Be energy efficient: (Allow room for multiple perspectives. Leave time for everyone.)
2. Stay engaged (connected) without tripping the circuit breaker: (Don't overheat.)
3. Consider environmental conditions: (Mute when not speaking.)
4. Seek understanding: (Listen to understand, not to respond.)
5. Group Norms: (suggestions from participants)



Who's Who

Hosts (OPUC)

Sarah Hall, Resource and Programs Development Manager
Ezell Watson, Director of Diversity, Equity and Inclusion

Facilitator

David Farnsworth, Principal, Regulatory Assistance Project

Presenters

Bob Jenks, Executive Director, Oregon Citizens' Utility Board
Elizabeth Turnbull, Senior Product Portfolio Manager, Portland
General Electric
Kate Hawley, EV Senior Product Manager, Pacific Power
Matt Larkin, Revenue Requirement Manager, Idaho Power
Patti Best, Senior Program Specialist, Idaho Power



Who's Who

Please introduce yourselves in chat.

Name, Organization



Today's Meeting

Section	Time
Welcome and Operating Agreements <ul style="list-style-type: none"> – Sarah Hall, Resource & Programs Development Manager, OPUC – Ezell Watson, Director of Diversity, Equity and Inclusion, OPUC 	2:00 – 2:15 PM
Update on Docket Status <ul style="list-style-type: none"> – Sarah Hall 	2:15 – 2:20 PM
TE Portfolio Analysis – Oregon Citizens' Utility Board (CUB) <ul style="list-style-type: none"> – Bob Jenks, Executive Director, CUB 	2:20 - 3:10 PM
Current TE Portfolio – Portland General Electric (PGE) <ul style="list-style-type: none"> – Elizabeth Turnbull, Senior Product Portfolio Manager, PGE 	3:10 – 3:25 PM
Current TE Portfolio – Pacific Power <ul style="list-style-type: none"> – Kate Hawley, EV Senior Product Manager, Pacific Power 	3:25 – 3:40 PM
Current TE Portfolio – Idaho Power <ul style="list-style-type: none"> – Matt Larkin, Revenue Requirement Manager, Idaho Power – Patti Best, Senior Program Specialist, Idaho Power 	3:40 – 3:55 PM
<ul style="list-style-type: none"> – Next Steps and Closing 	3:55 – 4:00 PM



Docket Update

UM 2165 Investigation

Gaps and benchmarking
Public process
Holistic investment
framework

HB 2165 Implementation

New requirements
TE Plan coordination
Division 87 rulemaking



Presentation Introduction and Questions

Bob Jenks, OR Citizens' Utility Board (CUB)

1. Obligation to serve is defined as a utility's requirement to provide service to anyone willing to pay its set rates. What is the utility's obligation to serve as it relates to TE?
2. What do people think of setting a portfolio budget and then using that to establish budgets for specific projects?
3. Should policies for multi-family housing include elements of non-discriminatory pricing?





Oregon Citizens'
Utility Board

TE Portfolio Approach

Bob Jenks
July 28, 202



Elements of CUB's Portfolio Proposal

- Portfolio Approach
 - Broad set of charging services
- Utility has an Obligation to Serve Load
- Budget developed based on Distribution Revenues
 - Similar methodology to Line Extension Allowance



Context – EVs Per 1000 Residents

3.1	United States
10.7	California
8.4	Oregon
7.5	Hawaii
6.6	Washington



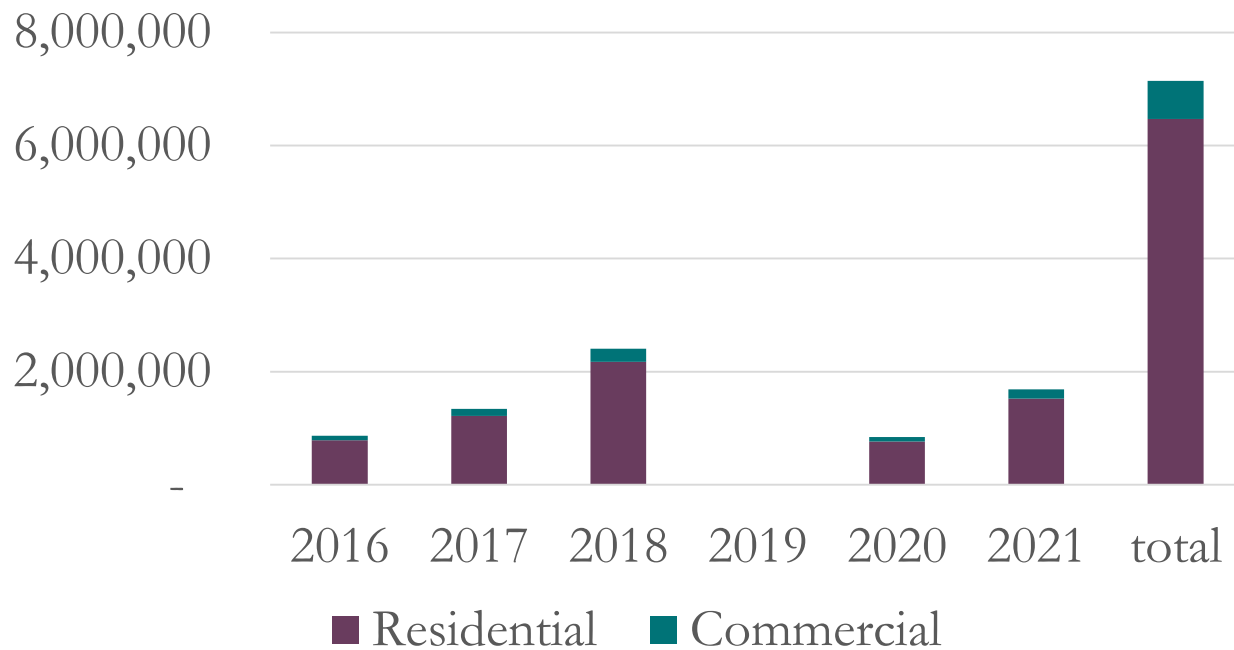
Context: If PGE was a State

- 3.1 United States
- 11.1 Portland General Electric**
- 10.7 California
- 7.5 Hawaii
- 7.5 Oregon
- 6.6 Washington



PGE Decoupling Benefits

PGE Decoupling Credits from EV charging



Context: PUC

- Order 12-013:
 - Net Benefit Test: “beneficial to ratepayers not just the public generally”
 - Charging station is essential at that location
 - No competitive supplier is available
 - Utility has a separate EV rate class
- SB 1547
 - Allows investments which accelerate TE

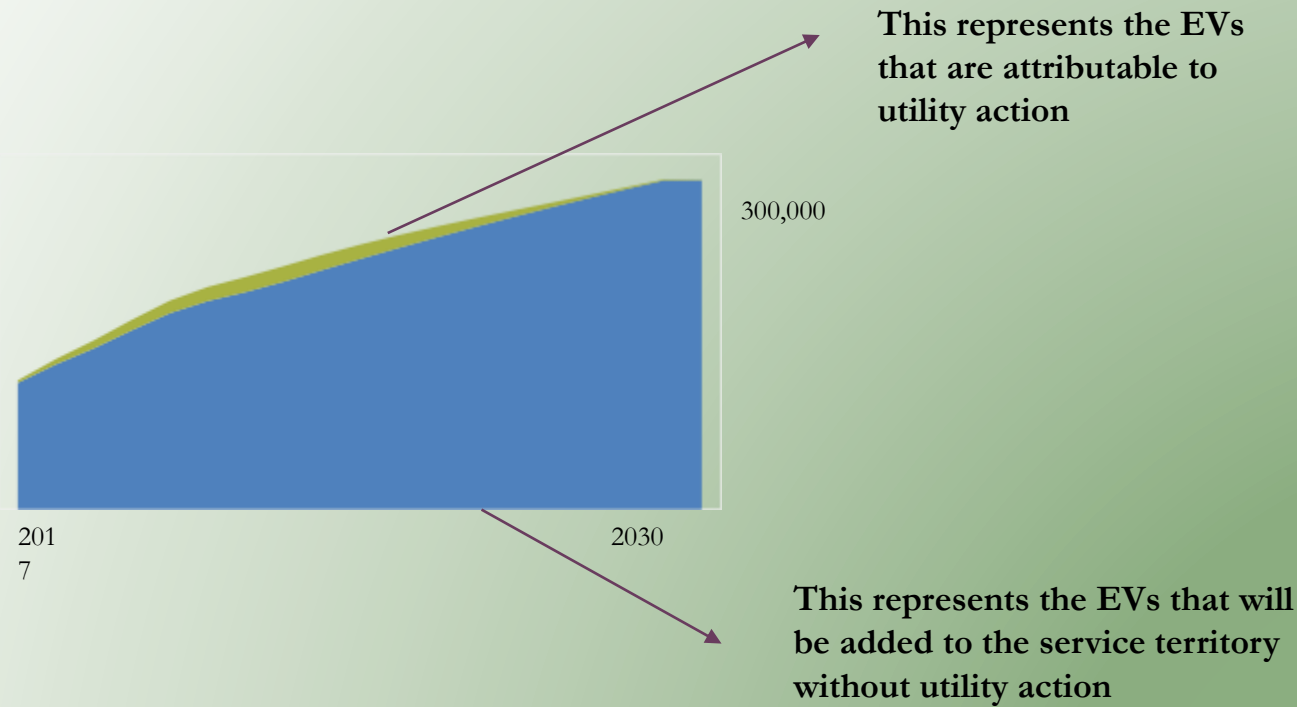


Context: PUC

- Net Benefits Test
- Attribution Methodology (incremental increase in new vehicles caused by investment)
- Measurement and Evaluation



Focusing on Incremental Increase in EVs



Adding Load



Line Extension Allowance

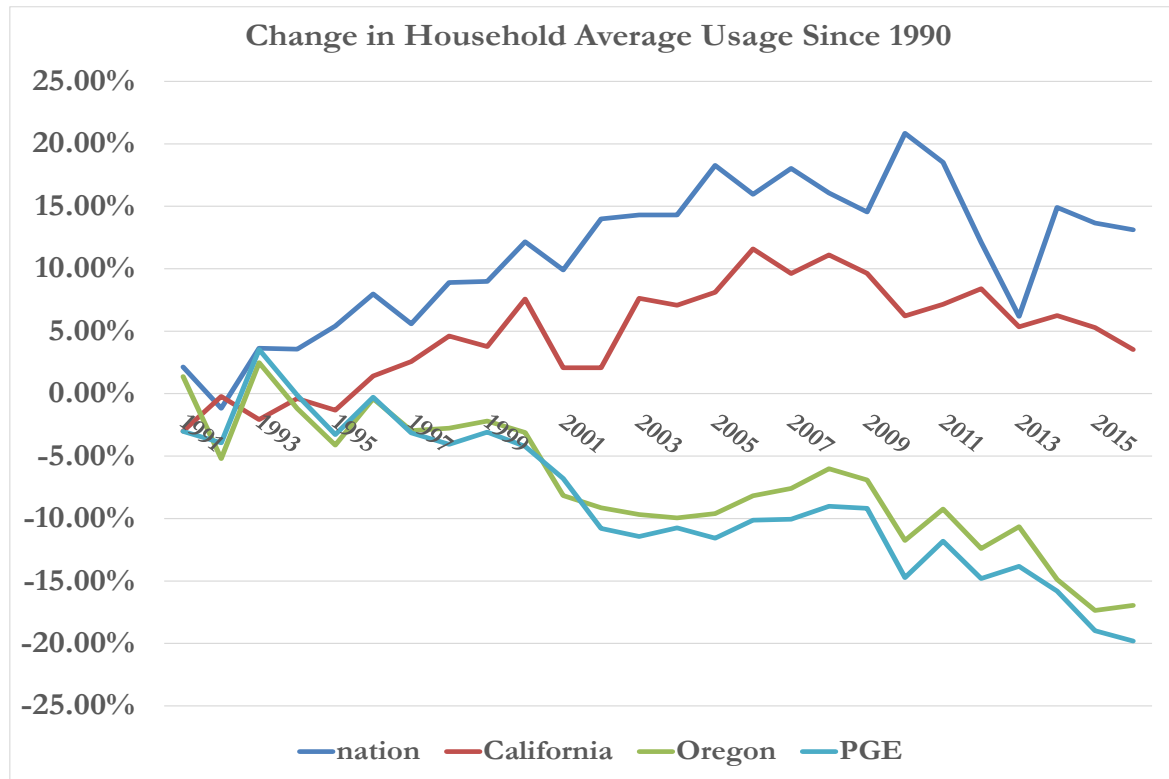
Residential LEA:

4 years of distribution revenue invested in poles, wire, line drop, meter

Because investment is recovered over years, distribution revenue is greater than cost recovery

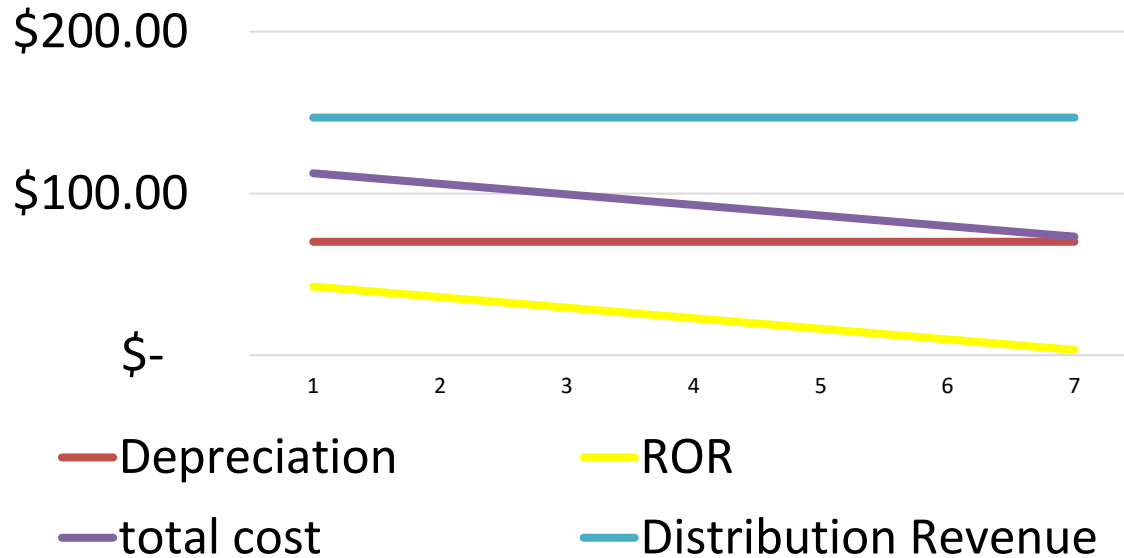


PGE's Distribution System



Line Extension Allowance Methodology

Investing In EV Connection to Grid
\$588 investment/EV
\$58 million/100,000 EVs



Portfolio Budget

- Forward Looking – 5 years ahead
- Form budget based on distribution revenues
- Invest in portfolio of charging services
- Revisit in 2 years
- Doesn't include energy benefits – justify additional programs



Portfolio of Light Duty Charging

- Multiple programs : Workplace, Multi-family, Public Charging, Fleets
- Recognize that some programs are not cost effective by themselves:
public charging
- Allows for non-discriminatory pricing – don't need a driveway for retail rates equivalency.



CUB's Reflections

- Basing the budget on distribution revenues is somewhat arbitrary, but need a way to set a budget for a portfolio programs
- Need a cost test/evaluation tool that allows multiple on-going programs that go beyond pilot programs
- Application of that test cannot become a significant barrier to program investments



Thank You



Transportation Transportation Transportation Transportation Electrification



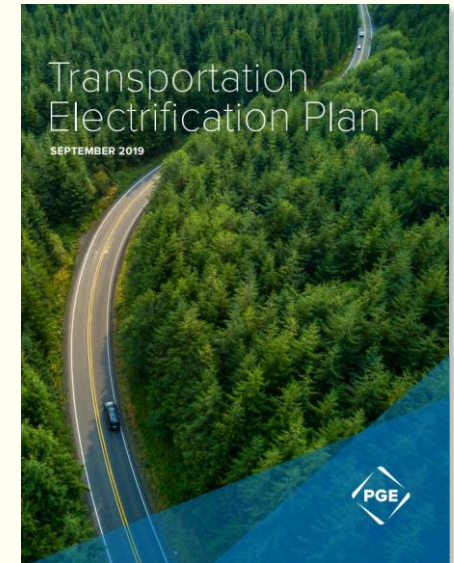
PGE's Transportation Electrification Portfolio

July 2021



Recent Developments: 2020-2021

- OPUC accepted PGE's 2019 TE Plan
- Transportation Electrification Team formed (10+ FTE)
- Program approvals and launches:
 - Right-of-Way Charging Pilot (ADV 20-01 and 20-32)
 - Residential Smart Charging Pilot (ADV 20-18)
 - Business EV Charging Rebate Pilot (ADV 20-19 and 21-15)
 - Fleet Partner Pilot (ADV 21-09)
 - Heavy-Duty EV Charging Pilot (ADV 21-03)
- Flagship Clean Fuels Program activities:
 - Distributed first and second round of Drive Change Fund grants (\$4.6M total)
 - Supported first electric school buses on Oregon's roads
 - Began Vehicle-to-Grid (V2G) research
 - Launched Oregon's Electric statewide campaign with partners



Pillars of PGE's TE Portfolio

Rates and Billing

- Reduce total cost of ownership
- Encourage grid-supportive charging
- Make EV fueling easier to understand
- Ensure fair customer pricing for EV charging

Infrastructure

- Build range confidence
- Support charging reliability
- Encourage infrastructure that is right-sized and future-proofed
- Ensure infrastructure is optimally located to meet customer needs and minimize integration costs

Programs

- Increase awareness
- Encourage adoption of EVs and chargers
- Create new customer value streams
- Ensure efficient grid integration

Clean Fuels Program

- Meet the needs of residential customers, no matter how they travel
- Address equity and the needs of underserved communities
- Flexibly test new technologies and approaches



Customer Segment: Residential / Multifamily



	Rates and Billing	Infrastructure	Programs
Today	<ul style="list-style-type: none"> EV-Only / Whole Home Time of Day Rate Whole Home Time of Use Rate Public Charging Subscription and Point of Sale Pricing 	PGE Public Charging: <ul style="list-style-type: none"> • Electric Avenues • Right-of-Way Charging • Oregon Electric Byways 	<ul style="list-style-type: none"> Residential Smart Charging Program Dealership Engagement Web-Based Tools and Content
Near-Term Vision	<ul style="list-style-type: none"> Residential Rate and Billing Solutions Multifamily Rate and Billing Solutions 	<ul style="list-style-type: none"> Expand Right-of-Way Charging Charging Solutions for Multifamily 	<ul style="list-style-type: none"> Programs for Underserved Communities



Customer Segment: Business / Commercial



	Rates and Billing	Infrastructure	Programs
Today	Demand Charge Free Rate		Business EV Charging Rebates Technical Assistance for Public Charging
Near-Term Vision	Public Charging Rate and Billing Solutions	Charging Solutions for Public/Workplace	Energy Partner (DR) for EV Charging



Customer Segment: Fleets



	Rates	Infrastructure	Programs
Today	Demand Charge Free Rate	<ul style="list-style-type: none"> Electric Mass Transit Pilot Fleet Partner Build Electric Island Demonstration Site Public MD/HD Vehicle Charging 	<ul style="list-style-type: none"> Fleet Partner Plan Business EV Charging Rebates Web-Based Tools and Content
Near-Term Vision	Fleet Rate and Billing Solutions	Expand Fleet Partner Build	<ul style="list-style-type: none"> Expand Fleet Partner Plan Energy Partner (DR) for EV Charging



Clean Fuels Program



	Infrastructure and Grants	Education and Outreach	Emerging Technology
Today	Drive Change Fund	Oregon' Electric statewide campaign	
	Electric School Bus Fund	School Engagement	Smart Charging Pilot
	Oregon Electric Byway DCFC Upgrade	Workforce Development	Vehicle-to-Grid
Near-Term Vision	Continue existing activities	Continue existing activities	Continue existing activities
	Infrastructure in Underserved Communities	Central State Website	New activities as technology trends evolve
		Mobility Hub(s)	



Transportation
Transportation
Transportation
Questions?
Transportation
Electrification

Elizabeth Turnbull, Senior Product Portfolio Manager
Elizabeth.Turnbull@pgn.com



TE Investment Framework Workshop

Pacific Power TE Portfolio

July 28th, 2021



Agenda



Overview of TE Portfolio



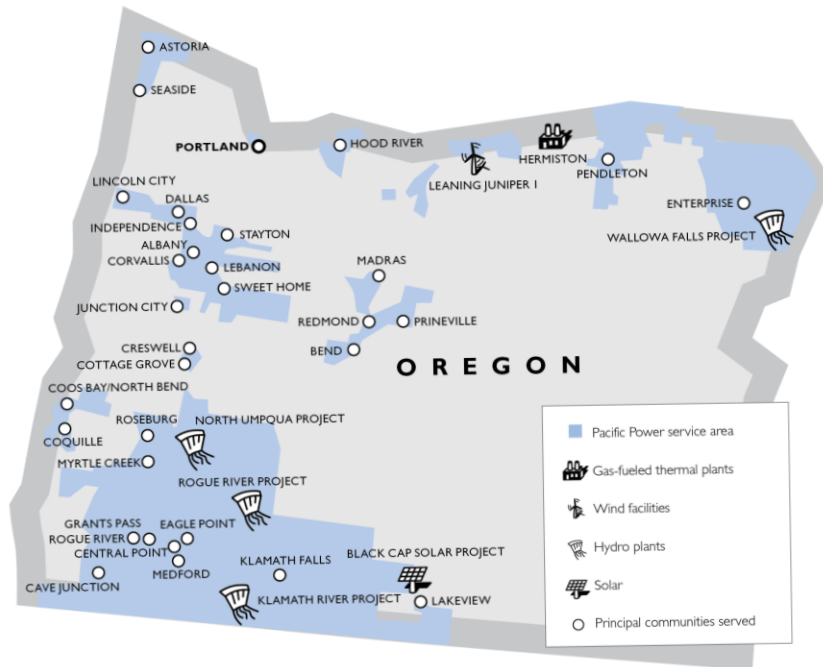
TE Investment Impact



TE Portfolio Next Steps

Who We Serve

- Important Highway Corridors
- Rural Communities
- Significant Vacation Destinations



Oregon Transportation Electrification Portfolio

Pilot Programs

Clean Fuel Credit Programs Program Renews Each Year

Other Key Initiatives

Phase I: Ended 2021

Public Charging Stations

Pacific Power Stations
Fast charging stations in: Bend, Klamath Falls, Madras, Mill City, and Otis

Infrastructure Grant

Competitive EVSE grants All funding awarded

Outreach and Education

- Wattplan Online Tool
- Ride and Drives
- Beacon Deployment
- Technical Assistance

Outreach and Activation

Communication and Enhanced Outreach

Electric Mobility Grants

Competitive EV partnership grants
To support projects that advance electric transportation in underserved areas

Supporting Tariff Design

- Demand charge transitional rate
- TOU Pilot Rates
- Expansion of line extension allowance
- Tier Flattening

Planning Studies

Regional Coordination

Customer Engagement

WestSmart 2.0 Grant

Phase II: Filed 2021

EVSE Residential Rebate

Residential rebate for EVSE Level 2 charging, includes low-income adder

EVSE Nonresidential Rebate

Nonresidential rebate for EVSE Level 2 charging, includes multifamily adder

Outreach and Education

- Decision Making Support
- High Quality EV Experiences
- Planning and Studies

Matching Funds
To organizations and communities applying for external grants

- Public Charging

- Installed DCFC and Level 2 charging pods in Madras, Otis, Bend, Klamath Falls and Mill City

- Outreach and Education

- 87 Technical Assistance Studies completed
 - 2,000 instances of the WattPlan use
 - 6 Community Events Hosted

- Demonstration and Development

- 49 Applications Awarded and 34 Project Completed to Date



Community Impact 2018-2020

Sign options for Level 2 EV parking spaces

Primary EV charger sign

Design and purchase decisions are up to the grant recipient.

Size: Signs are typically 12x18 or 18x18.

Design options: Here are some samples:



Sign resources:

stopsignsandmore.com
myparkingsign.com
evchargesolutions.com
compliancesigns.com

Secondary sign recognizing Pacific Power's assistance

- Smaller than the primary sign, approximately 12x6 or 12x8.
- Installed below the primary sign.
- You can either design your own sign and get Pacific Power's approval, or Pacific Power can provide the sign for you.



Questions? Please email plugin@pacificpower.net

- Electric Bus Support
 - Bend-LaPine Schools
 - Central Oregon Intergovernmental Council
- Electric Agricultural
 - Crook County Fairgrounds
 - Oregon Environmental Council
- Charging Infrastructure
 - North by Northwest
 - Hacienda CDC
- Electric Bikes Ecosystem
 - Corvallis-Benton County
 - City of Mosier
- Outreach & Education
 - The Environmental Center

TE Investment Impact Oregon Clean Fuels 2020 Grants



Current TE Portfolio Overview

	Residential and Nonresidential EVSE Rebate	Outreach and Education	E Mobility Grants & Matching Funds
Objective	To improve customer access and economic viability of home charging and commercial charging	To provide positive impressions of EV technology to accelerate the adoption of EVs and EVSE charging infrastructure.	To reduce the average carbon emissions from transportation fuels in Oregon by 10% below 2015 levels by 2025
Description	<ul style="list-style-type: none"> • Rebate via check or bill credit • Residential and small nonresidential participants must enroll in TOU rate • Income eligible residential customers have the options to enroll in TOU rate • Income eligible and multifamily dwelling units can receive additional incentive dollars 	<ul style="list-style-type: none"> • Decision Support. Providing technical assistance, online tools, marketing campaigns and dealer engagement • High Quality EV Experiences. Partner and support ride & drive, EV showcase tours, etc. • Planning & Studies. Provide support for EV Ready, EV market potential and fleet potential studies. 	<ul style="list-style-type: none"> • Competitive grant process with one yearly cycle starting June 30th and closing August 31st • Off cycle opportunity for communities within Pacific Power territory to apply for matching funds • Must benefit residential customers as a class

Key Supporting Initiatives

- Supporting Tariff Changes
 - Encouraging off-peak usage
 - Facilitating charging station buildout in underserved areas through alternative rate structures
 - Modernizing residential rates to improve charging economics
- Updated TE Oregon Plan
 - February 2022

Planning
Studies

Regional
Collaboration

Customer
Engagement

WestSmart
2.0

Questions





Transportation Electrification in Idaho Power's Oregon Service Area

Matt Larkin
July 28, 2021

Idaho Power's Oregon Service Area

- 4,744 square miles
- ~19,000 customers
- Largest Towns:
 - Ontario, population ~11,000
 - Nyssa, population ~3,000
 - Vale, population ~2,000
- Closest Metropolitan Areas:
 - Boise, Idaho ~56 miles
 - Bend, Oregon ~260 miles

Idaho Power Service Area
– Oregon



Current State of TE Market

- 23 EVs registered in Idaho Power's Oregon Service Area
- 2 DC Fast Charging Stations (1 generic, one Tesla)
- 45% of surveyed Oregon customers are “not very familiar” or “not familiar at all” with EVs
- 55% of those “familiar” or “somewhat familiar” have “never been in or seen an EV” or were “unsure”

Market Barriers

- EV Availability
- Range Concerns
- Public Charging
- Price Concerns

Median Household Income	
Ontario, Oregon	\$36,922
Portland, Oregon	\$71,005
Boise, Idaho	\$60,035

Malheur County has 3 high poverty hotspots:

- Ontario
- Nyssa
- Vale

70% of the county's residents live below the poverty level and 75% of the county's SNAP recipients live in these three towns.

Market Barriers

- Power / Towing Capacity
- Perception:

“Can’t pull a boat or trailer with an electric car.”

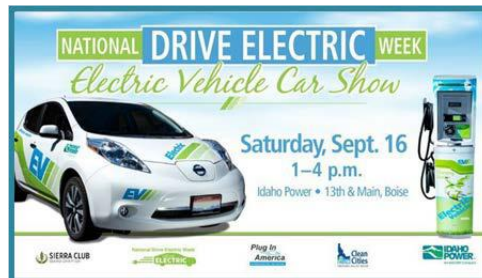
“EVs make no sense at all in the rural west.”

“You can’t take EVs into the mountains.”

“Not interested in off-roading in an EV.”

Current TE Efforts

- Idaho Power's EV fleet and charging station allowance
- Workplace Charging Incentive
- EV Website
- Customer Support
- EV Education & Awareness Program



Questions?

Next Steps - Share Written Comments

Please address any topics from this workshop or investigation. Please submit all comments on workshop topics by August 11.

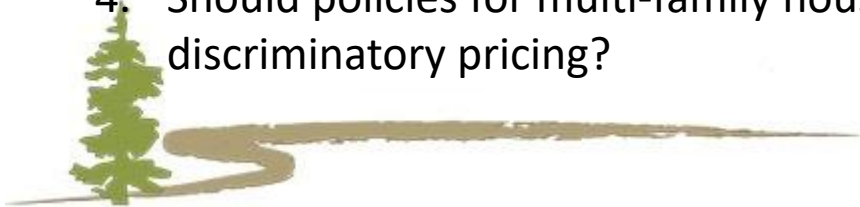
- By email – PUC.FilingCenter@puc.oregon.gov Include “COMMENTS – DOCKET NO. UM 2165” in subject line
- By Mail – Oregon Public Utility Commission, Attn: UM 2165 Public Comment, PO Box 1088, Salem, OR 97308-1088
- By Phone – 503-378-6600 or 800-522-2404 or TTY 800-648-3458, weekdays from 8 a.m. - 5 p.m. Pacific Time



Next Steps - Share Written Comments

Suggested questions for written comments are:

1. How would you characterize the manner in which the PUC currently reviews TE investments, and what are its strengths and weaknesses?
 - a) Should some aspects of the current process be preserved?
 - b) Are there existing processes used by the PUC that could be useful in this context?
 - c) Can you provide examples from other states to support your recommendations?
2. Obligation to serve is defined as a utility's requirement to provide service to anyone willing to pay its set rates. What is the utility's obligation to serve as it relates to TE?
3. What do people think of setting a portfolio budget and then using that to establish budgets for specific projects?
4. Should policies for multi-family housing include elements of non-discriminatory pricing?



Docket Schedule and Next Steps

Join the service list for UM 2165. Request by email:

puc.hearings@puc.oregon.gov

Please join the next workshops!

Monday, August 9, 9:00 – 11:00 AM – State TE program priorities

Friday, August 27, 2:00 – 4:00 PM – HB 2165 Implementation

Wednesday, September 15, 9:00 – 11:00 AM

Wednesday, September 29, 9:00 – 11:00 AM

Wednesday, October 20, 9:00 – 11:00 AM

October – Draft deliverable for public review

December – Staff presentation to Commission

Thank You!

Staff Contacts

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