Oregon Department of **ENERGY**

Oregon Energy Strategy Policy Working Group
Transportation Electrification Breakout Session #2



Jillian DiMedio
March 4, 2025

50 YEARS of SERVICE OREGON DEPARTMENT OF ENERGY

OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

Our Mission

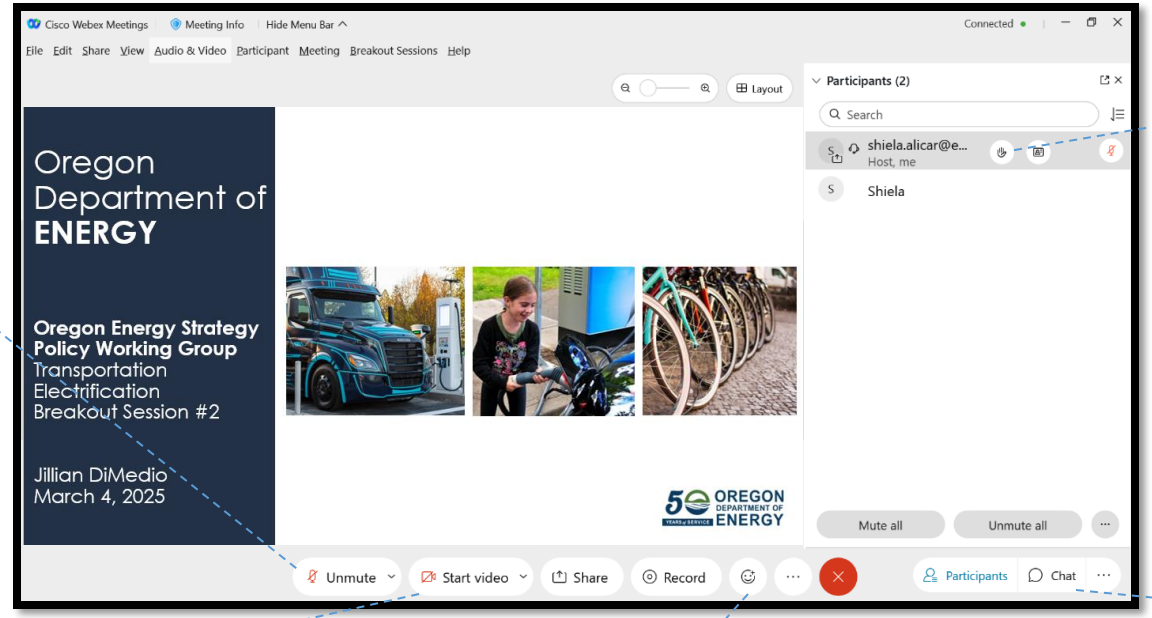
The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

USING WEBEX



Audio Options

Mute — *Microphone On*

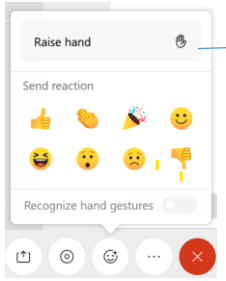
Unmute — *Microphone Off*

Video Options

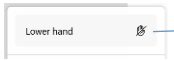
Stop video — *Webcam On*

Start video — *Webcam Off*

Reactions



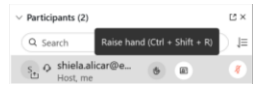
Click to Raise your hand.



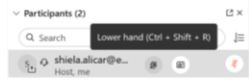
Click on Lower hand when you are done.

Second Raise Hand Option

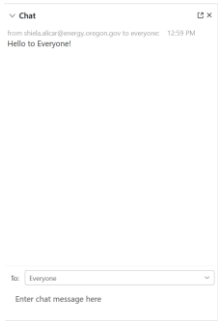
You can also click on the hand next to your name in the Participant list to raise your hand.



Click on Lower hand when you are done.

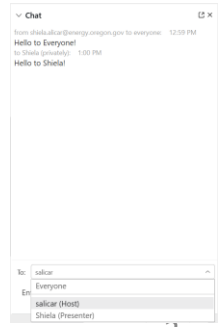


Chat



You can chat to Everyone in the meeting.

You can send a private message to the Host or Presenter (or all Panelists when there is a Panel).

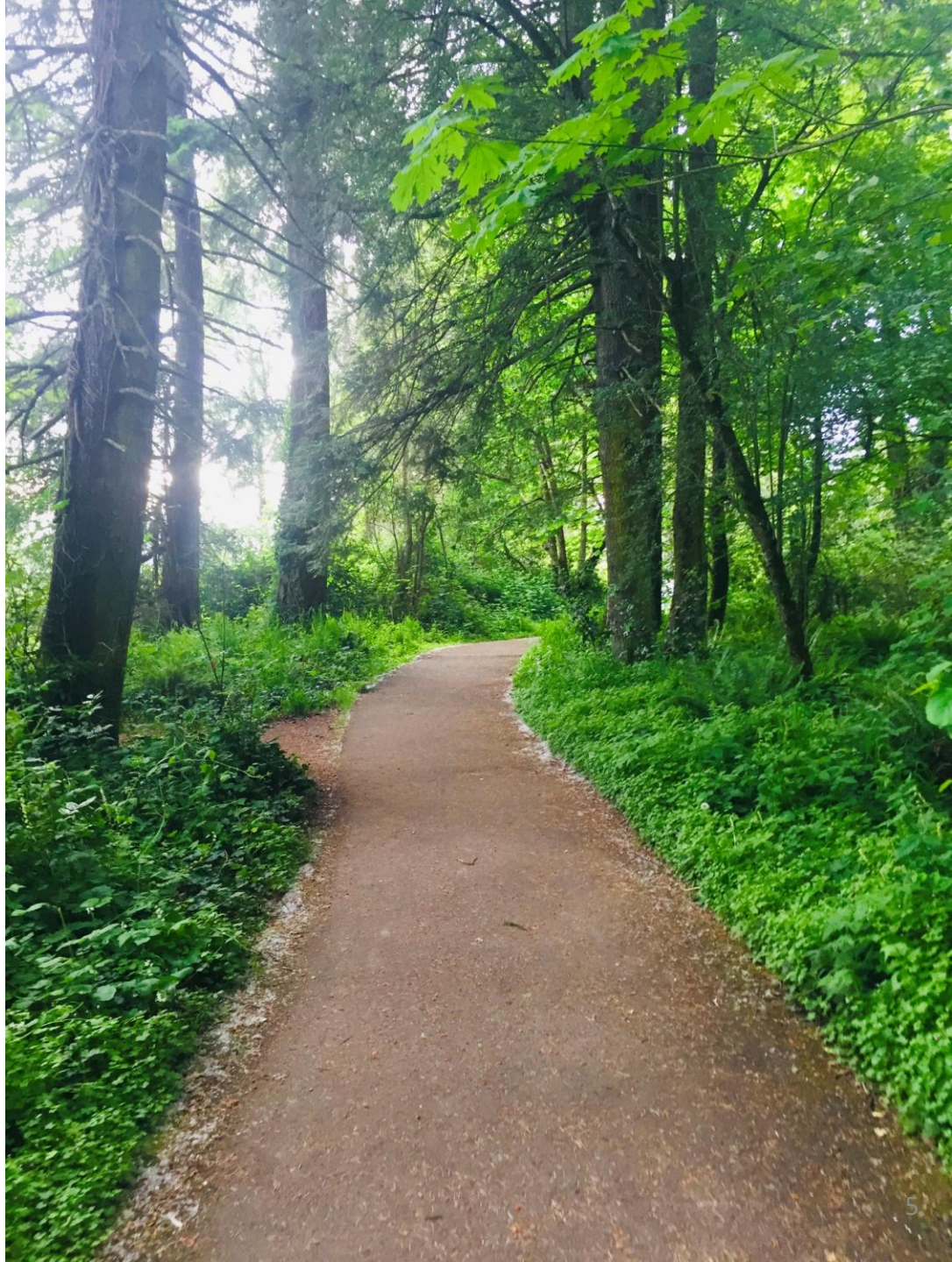


WORKING GROUP SCOPE

Environmental Justice and Equity	• Role in providing EJ and equity perspectives in the other working groups • Evaluate analysis and develop recommendations related to EJ and equity
Building Efficiency, Electrification, and DERs	• Residential and commercial • Customer-side of the meter
Developing Clean Electricity Generation and Transmission	• Electricity generation and storage in front of the meter • Transmission • Development needs and barriers/competing priorities
Low-carbon Fuels	• Best application of low carbon fuels used in buildings, industry, and transportation • Identification of barriers and potential solutions to production and distribution of fuels
Transportation Electrification	• Light-, medium- and heavy-duty zero emission vehicles (battery electric and hydrogen fuel cell) • Charging and fueling infrastructure • Grid integration • Vehicle miles traveled reduction

Working Group Purpose

To provide feedback on transportation priorities, policy gaps, and opportunities in Oregon, and support the development of policy recommendations related to our scope for the Oregon Energy Strategy.



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

ROLE OF WORKING GROUPS

What the role is:

- Substantively engage on results of modeling, technical analyses, and potential pathways
- Consider the costs and benefits of different pathways
- Identify barriers, policy gaps and opportunities
- Surface policy ideas for consideration

What the role is *not*:

- Revisit the modeling inputs or analyses
- Determine a "best" pathway
- Vote on policy recommendations
- Make final decisions about policy recommendations
- Provide only voice informing this discussion

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

MEETING OBJECTIVES

- Build relationships with fellow working group members.
- Brainstorm and discuss top barriers to policy pathways identified.
- Identify key areas of focus for next meeting.

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

AGENDA

9:30 a.m.	Welcome & Process Reminders
9:40 a.m.	ODOE Presentation on Key Finding 1: Vehicle Electrification
9:50 a.m.	Brainstorm & Discussion using Miro: Barriers to Vehicle Electrification
10:30 a.m.	ODOE Presentation on Key Finding 2: Grid Integration
10:40 a.m.	Brainstorm & Discussion using Miro: Barriers to Grid Integration
11:20 a.m.	10-minute Break
11:30 a.m.	ODOE Presentation of Key Finding 3: VMT Reduction
11:40 a.m.	Brainstorm & Discussion using Miro: Barriers to VMT Reduction
12:20 p.m.	Next Steps
12:30 p.m.	Adjourn

Comments and questions from observers can be submitted to: https://odoe.powerappsportals.us/en-US/energy-strategy/

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

TE WORKING GROUP ROSTER

ORGANIZATION	NAME
City of Portland	Ingrid Fish
Climate Solutions	Brett Morgan
Columbia Willamette Clean Cities	Michael Graham
Daimler	Bret Stevens
Eugene Water & Electric Board	Juan Serpa Munoz, Kelly Hoell
Forth	Stu Green
Green Energy Institute	Jamie Johnson
IBEW Local 48	Marshall McGrady
City of Eugene	Logan Telles
Oregon Citizen's Utility Board	John Garrett
Oregon Trail Electric Coop	Charlie Tracy
Oregon Trucking Association	Jana Jarvis
Port of Portland	Lewis Lem
Portland General Electric	Nancy Bennett
Private Citizen	Tonia Moro
Renewable Hydrogen Alliance	Rebecca Smith
Titan Freight Systems	Jason Altamirano
TriMet	Kyle Whatley
Wy'East	Robert Wallace

INTRODUCTIONS

Please share the following with the group in the chat:

- Name
- Affiliation
- Any fun spring break plans?

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

TE POLICY WORKING GROUP MEETING SCHEDULE

Wednesday, February 12 **9 a.m. – 12 p.m.**	Opening Plenary Meeting – All Working Groups
Tuesday, March 4 (Today) **9:30 a.m. – 12:30 p.m.**	First Break Out Meeting
Thursday, April 10 **9:30 a.m. – 12:30 p.m.**	Second Break Out Meeting
Wednesday, April 30 **9 a.m. – 12 p.m.**	Third Break Out Meeting
Wednesday, May 21 **9 a.m. – 11:00 a.m.**	Closing Plenary Meeting – All Working Groups

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

STEP BY STEP PROCESS

Today | Meeting 3 | Meeting 4

PATHWAY	ISSUE STATEMENT/BARRIERS	STRATEGY TO ADDRESS BARRIERS	POLICY ACTION
VEHICLE ELECTRIFICATION	**1. Upfront Cost** *EVs have a higher purchase price than traditional internal combustion engine vehicles.*	"Expand EV market share through incentives"	"Continue funding the Oregon Clean Vehicle Rebate Program"
GRID INTEGRATION			
VMT REDUCTION			

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

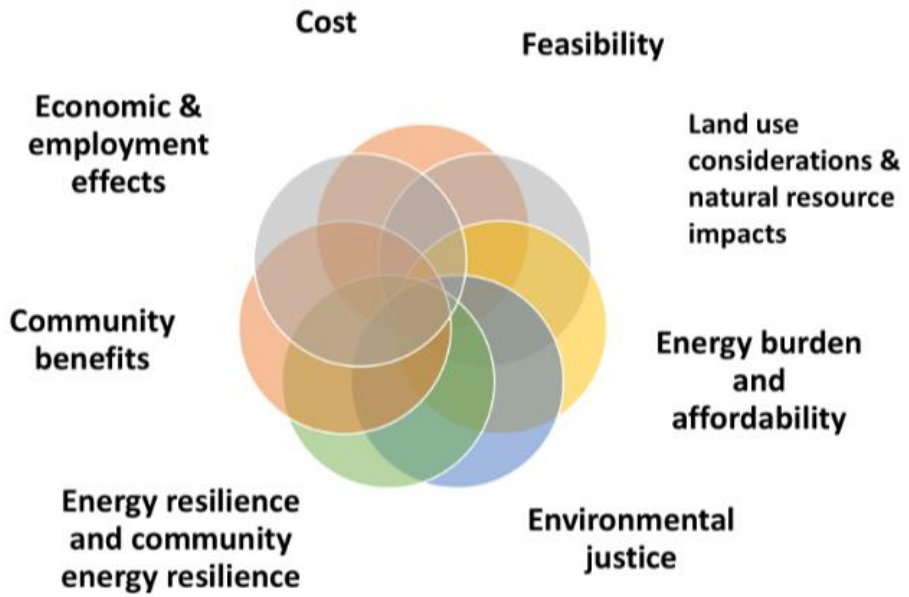
GROUP AGREEMENTS

- Honor the agenda or modify by agreement.
- Listen carefully; seek to learn and understand each other's perspective.
- Encourage respectful, candid, and constructive conversation.
- Keep an open mind.
- Ask questions to clarify and understand why.
- Be open, transparent, inclusive, and accountable.
- Respect differing opinions.
- Seek to resolve differences and find common ground.
- Be conscious of speaking time; step back to allow space for others to contribute.
- Limit chat conversations.

MEETING GUIDANCE

- Focus on providing insight on the barriers to achieving our energy and climate goals.
- Focus on the overarching themes that the model results indicate.
- Consider barriers from the perspective of the different key considerations.
- Offer different perspectives on barriers as appropriate.
- Hold off on identifying solutions since this is the focus of the next meeting.

Energy Strategy Key Considerations



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

KEY TRANSPORTATION FINDINGS

SUMMARY: TRANSPORTATION KEY FINDINGS

- **Vehicle Electrification:** Transportation electrification reduces system-wide energy demand and the cost of decarbonization, and the pace matters.
- **Grid Integration:** Transportation electrification will significantly increase electricity demand but EVs can provide a net benefit to the grid if managed flexibly.
- **VMT Reduction:** Reducing vehicle miles traveled has a large impact on overall energy demand and the costs for maintaining and upgrading the electric grid.
- **Low Carbon Fuels:** Low carbon fuels play a strategic role in decarbonizing transportation across all scenarios, but that role increases as the pace of transportation electrification slows.

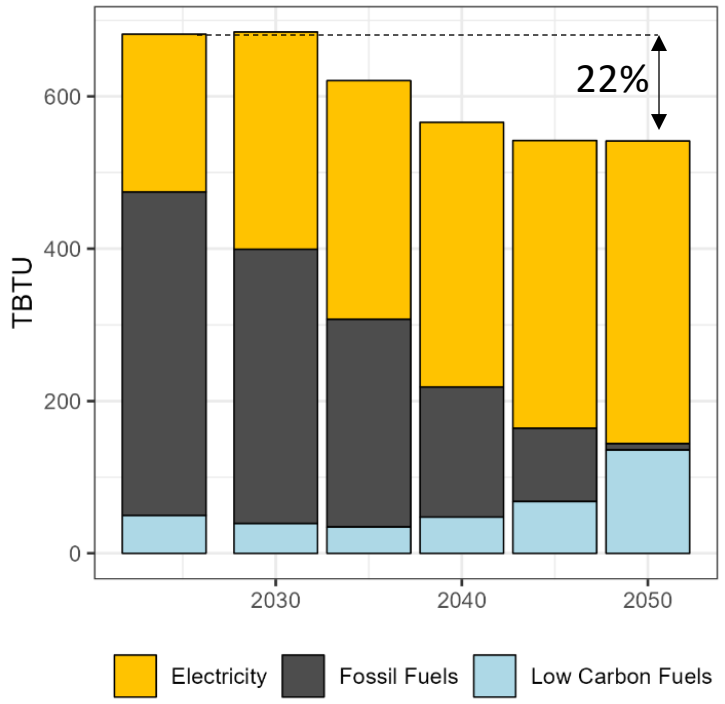
KEY FINDING

Transportation electrification reduces system-wide energy demand and the cost of decarbonization, and the pace matters.

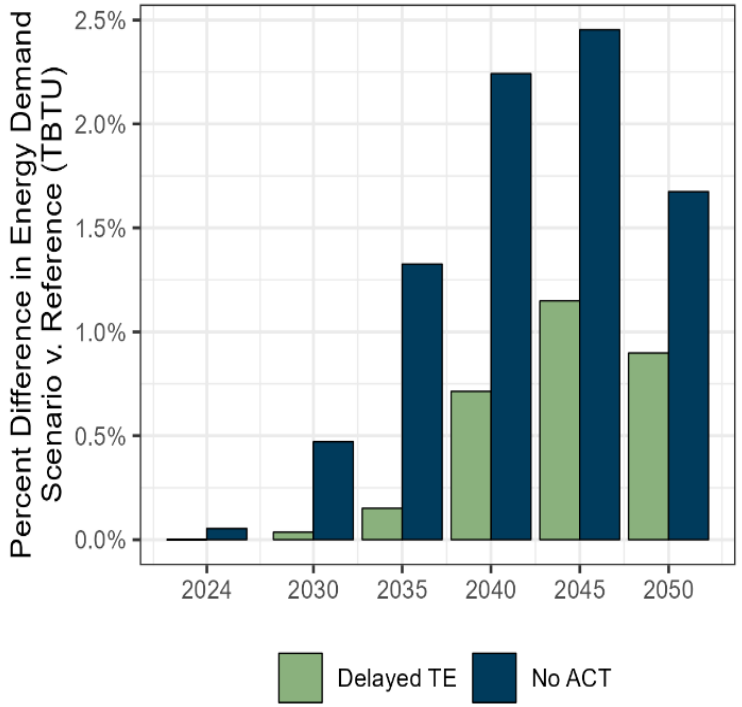
OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

EARLY EV ADOPTION KEY TO COST CONTAINMENT

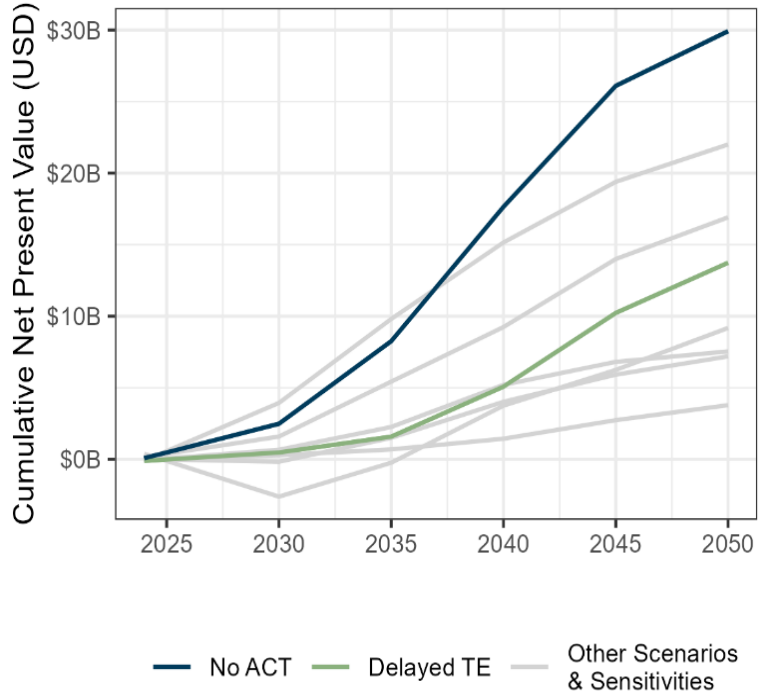
Energy Demand by Fuel in Reference Scenario



% Change in Energy Demand Across TE Scenarios Compared to Reference

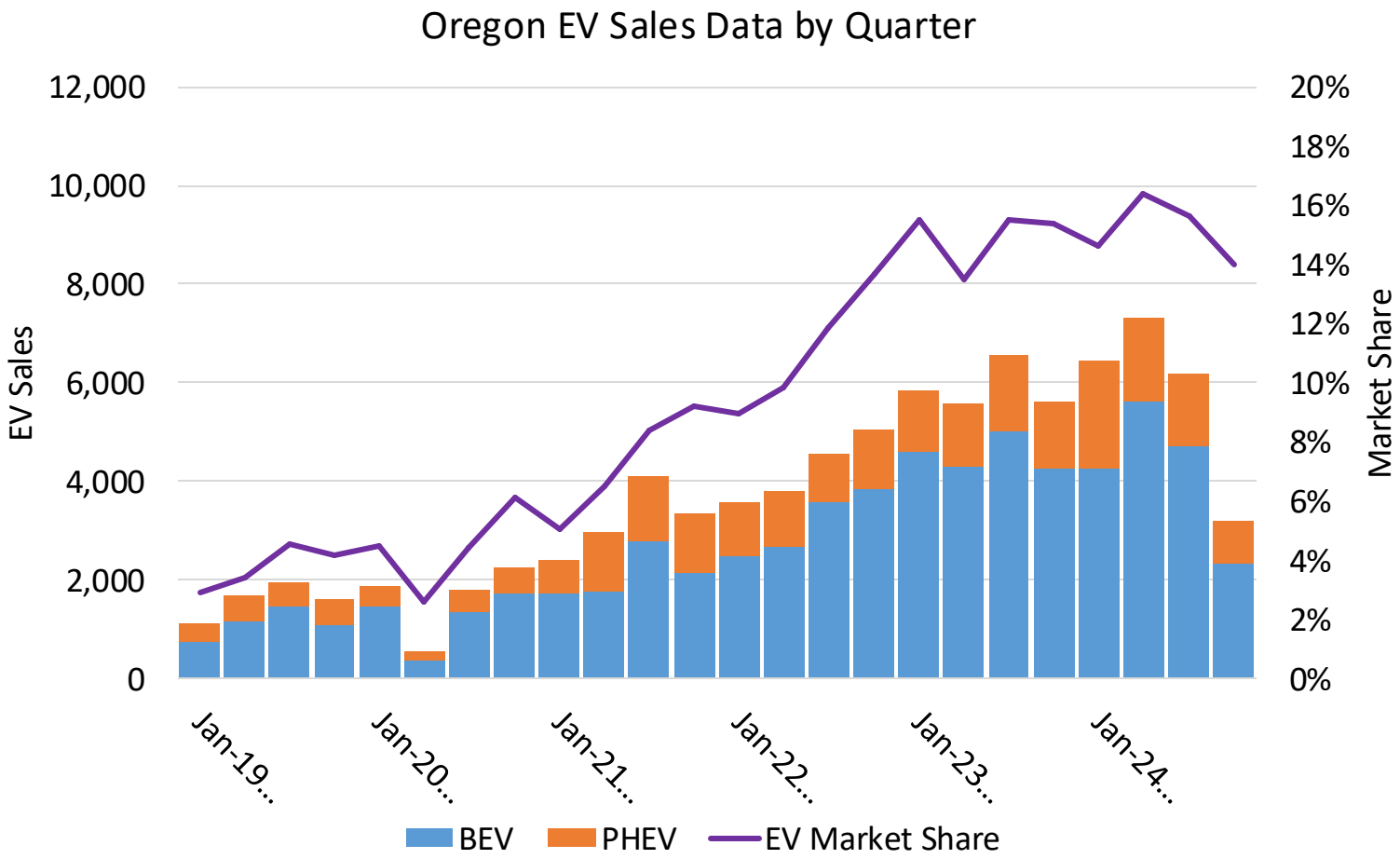


Difference in System-wide Costs in All Scenarios Compared to Reference



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

LIGHT-DUTY EV MARKET SHARE

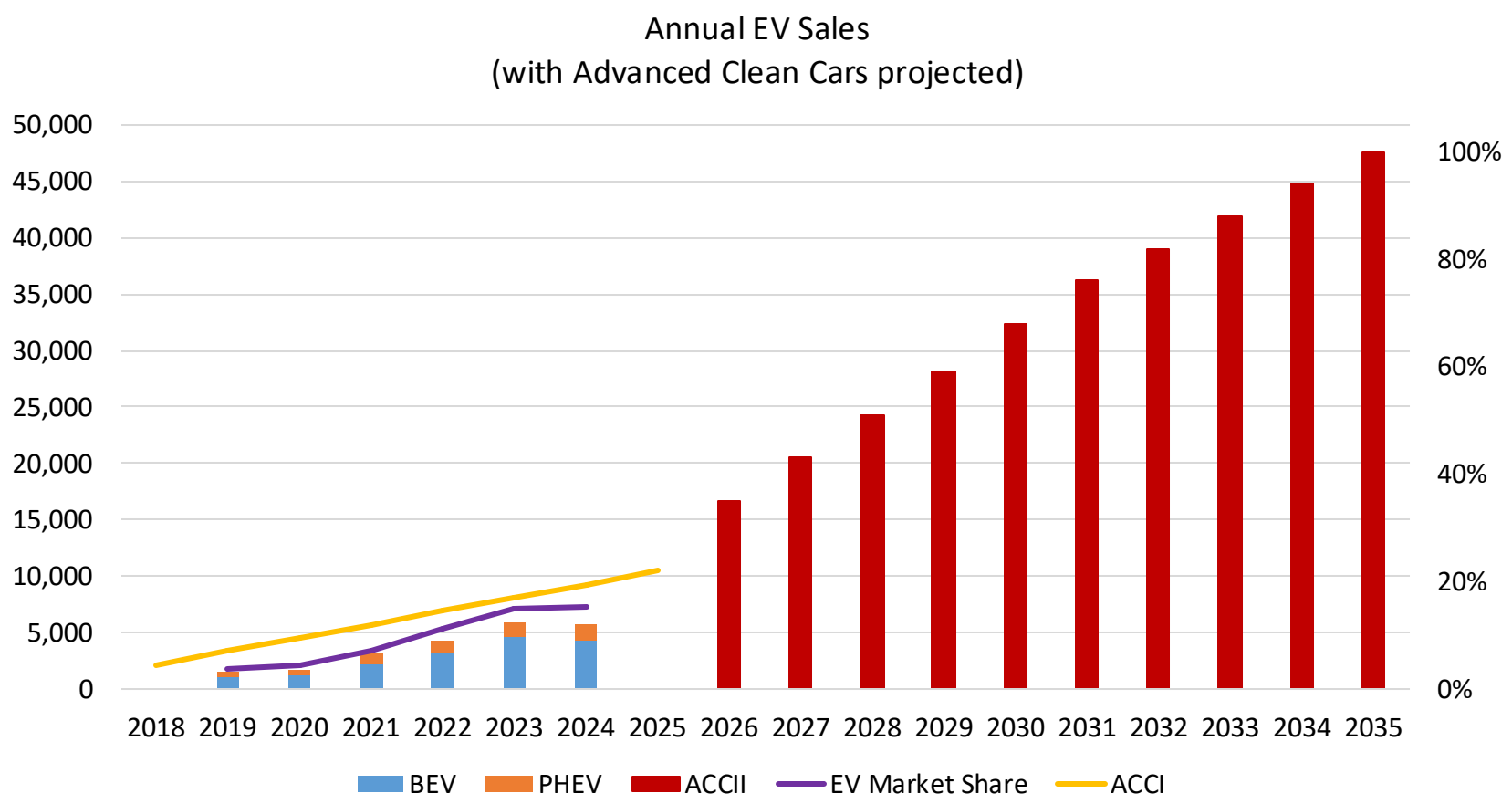


EV Market Share (2024)

- Oregon Average: 15.2%
- National Average: 10.1%

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

LIGHT-DUTY EVS: ACC II TARGETS



Proposed ACC II ZEV requirements

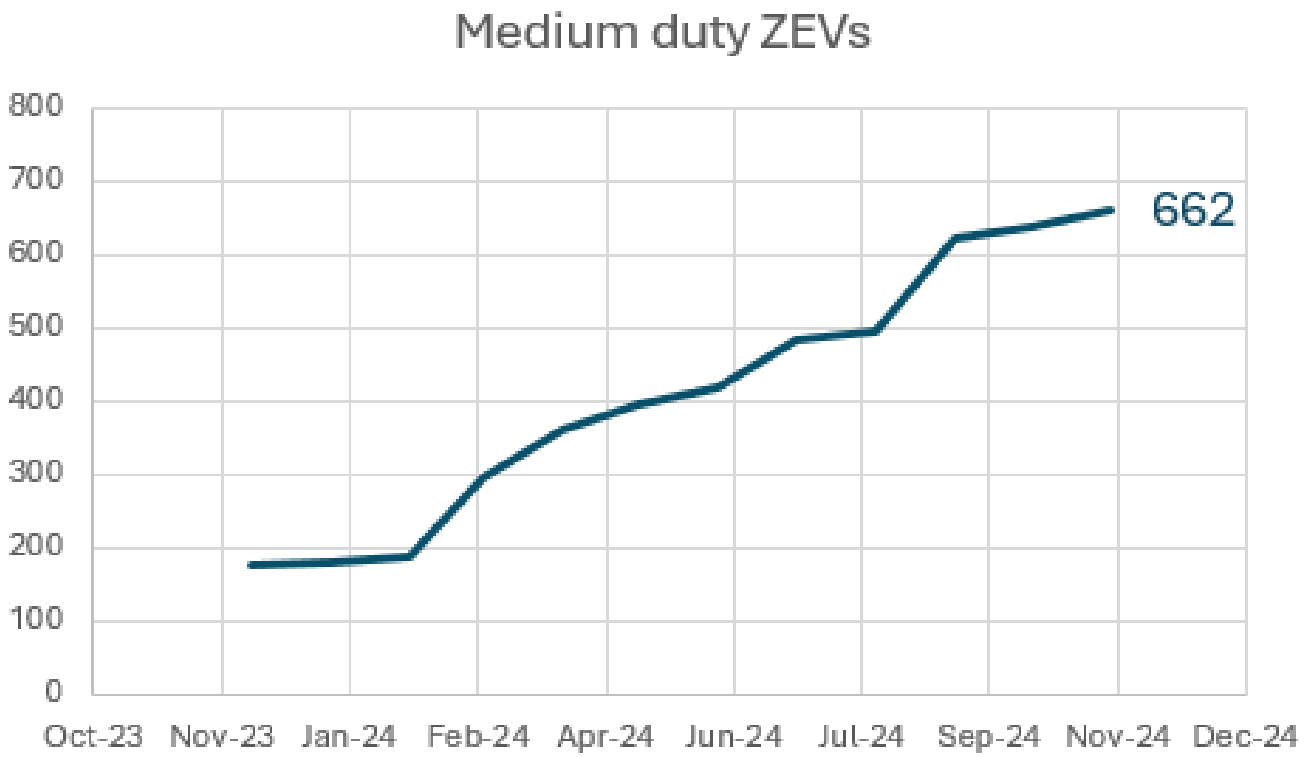
Model Year	ZEV* Percentage Requirement
2026	35%
2027	43%
2028	51%
2029	59%
2030	68%
2031	76%
2032	82%
2033	88%
2034	94%
2035	100%

ZEV = BEV and PHEV

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

MEDIUM- AND HEAVY-DUTY EVS IN OREGON

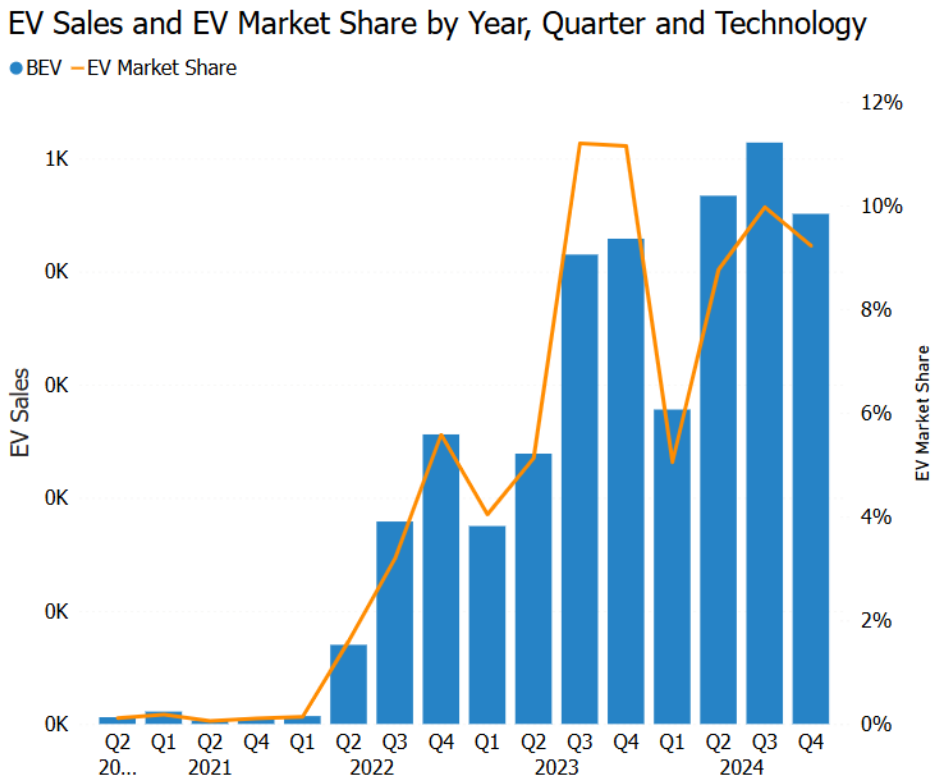
MHD Vehicle Registrations in Oregon



Source: Oregon Department of Transportation

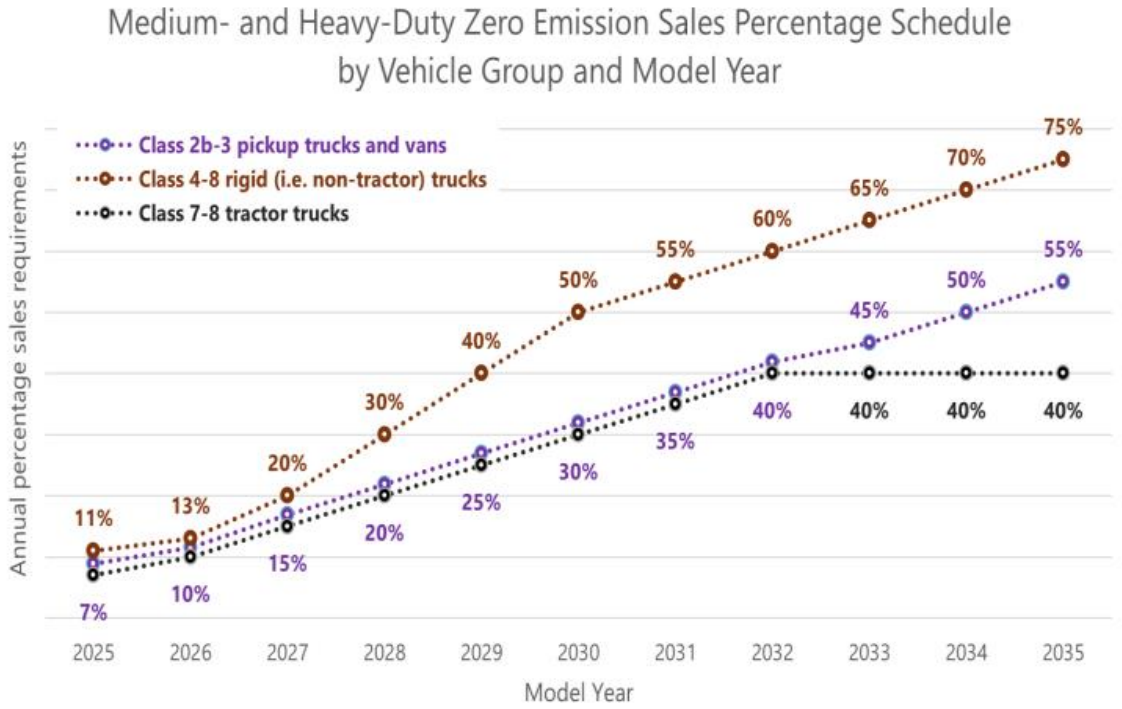
OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

MEDIUM- AND HEAVY-DUTY EVS IN OREGON



Source: Atlas Public Policy's EV Hub

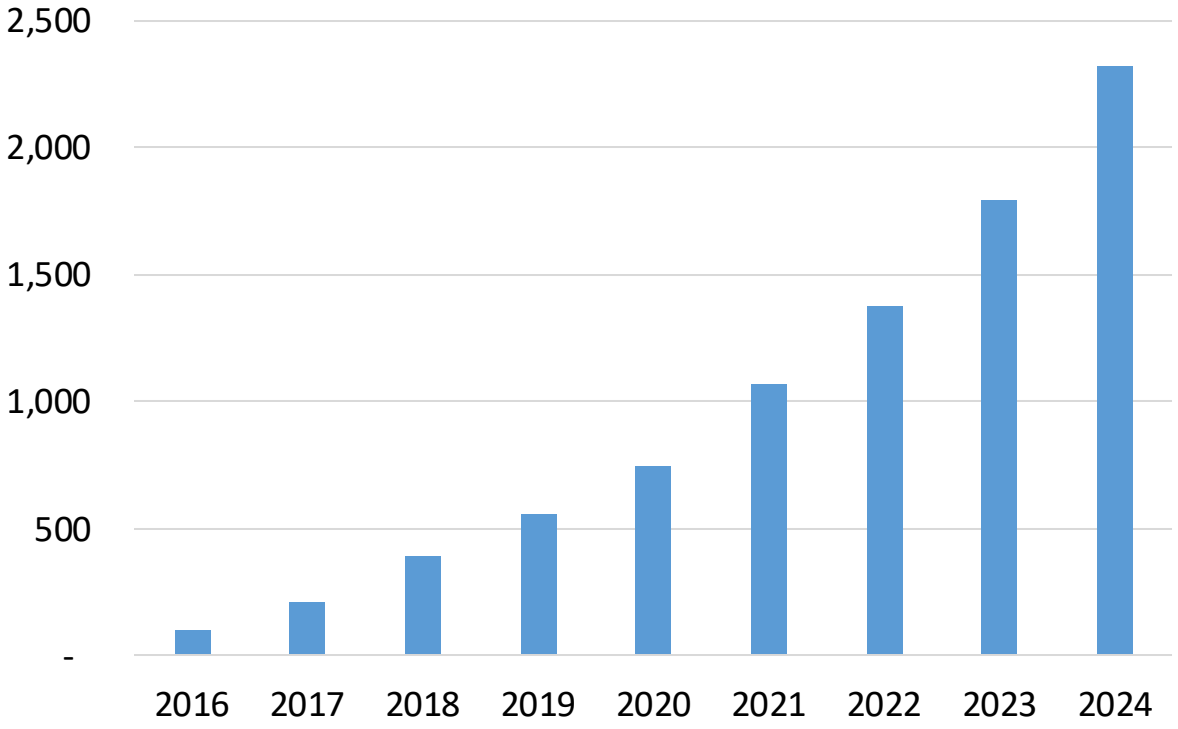
DEQ's Advanced Clean Trucks Rule

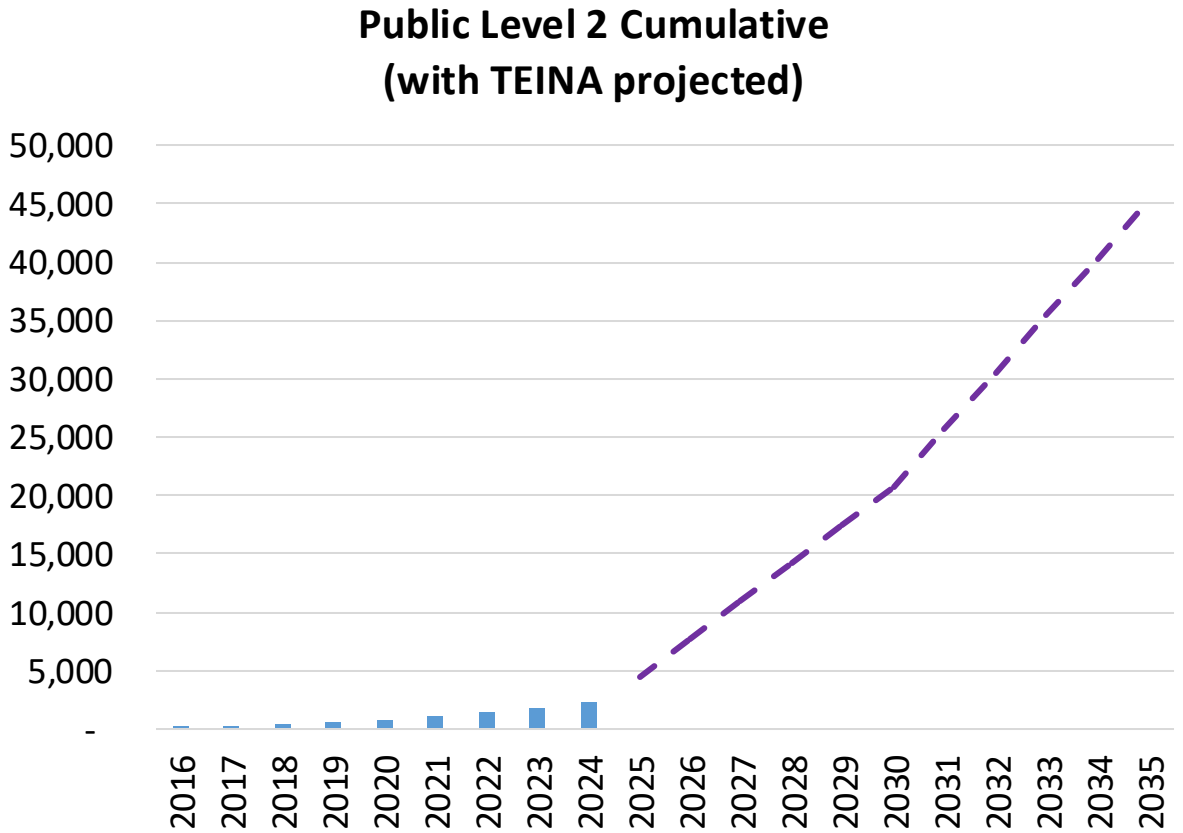


Source: Oregon Department of Environmental Quality

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

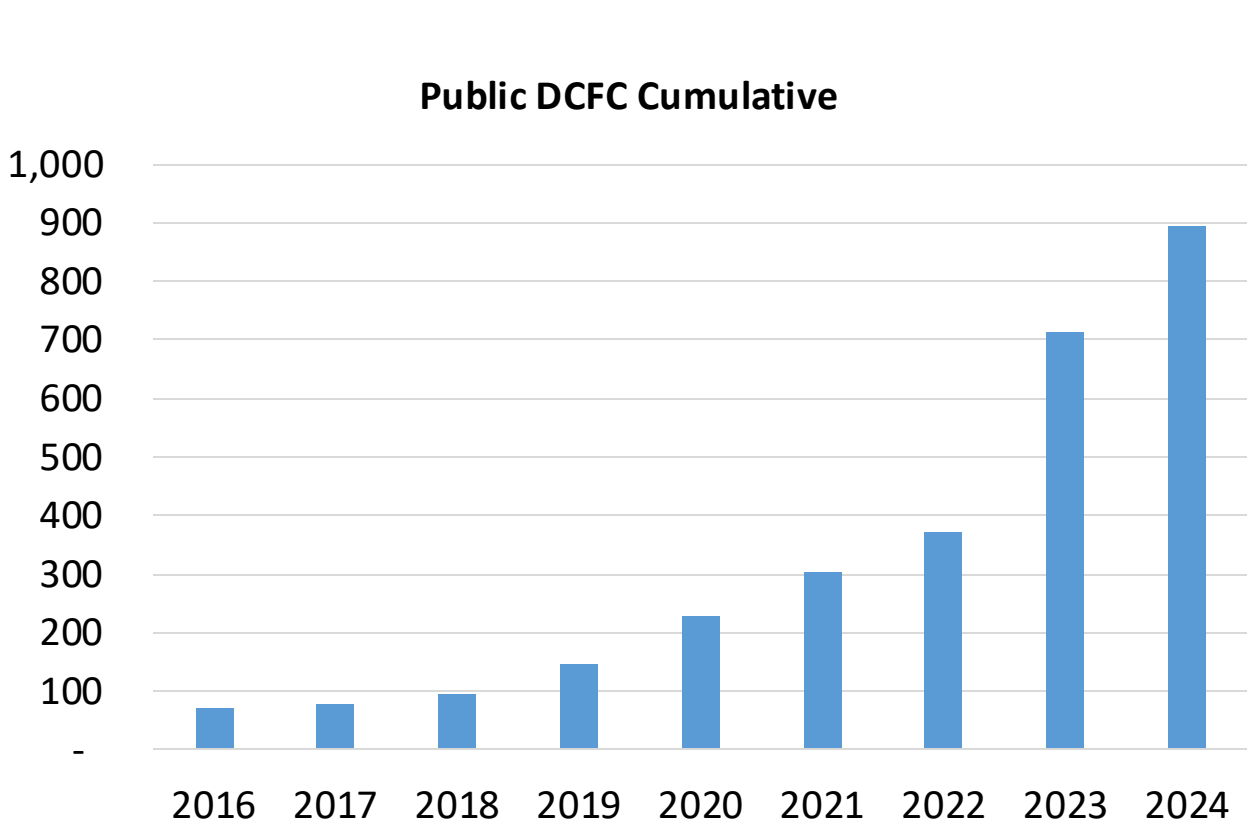
PUBLIC CHARGING INFRASTRUCTURE: LEVEL 2

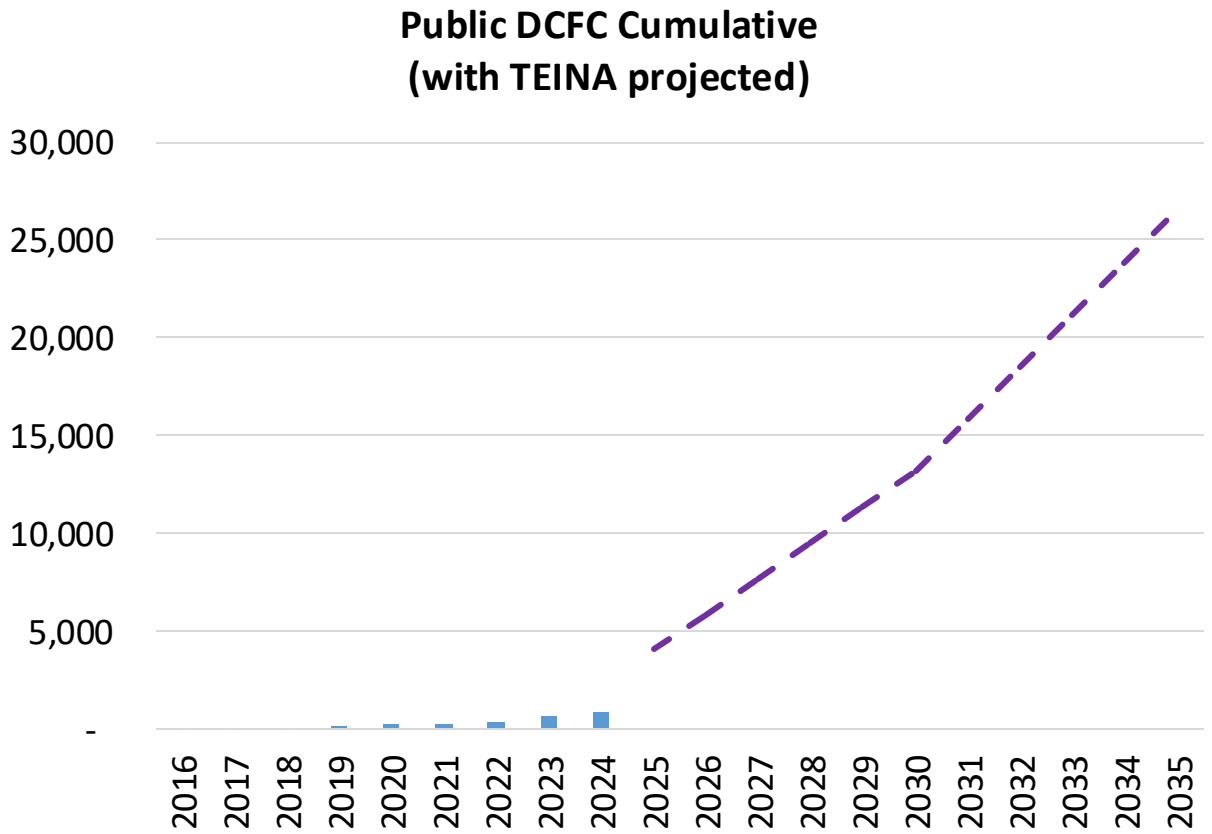




OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

PUBLIC CHARGING INFRASTRUCTURE: DCFC





OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

PUBLIC MHD EV CHARGING IN OREGON

- Electric Island – only public MHD charging in Oregon currently
- Additional projects awarded funding
  - DEQ's Oregon Zero Emission Fueling Infrastructure Grant (OZEF)
  - ODOT's Charging and Fueling Infrastructure program (CFI)

Electric Island – Daimler Trucks North America & Portland General Electric

QUICK MIRO HOW-TO: NAVIGATING

If you use a mouse:

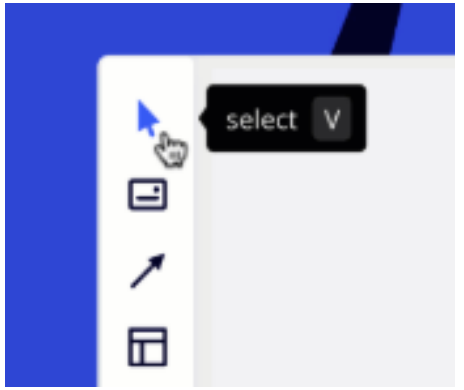
- To move around the board, press the right mouse button and drag
- To zoom, scroll the mouse wheel
- To create the selection field, switch to select tool, click and drag the canvas

If you use the trackpad:

- Slide two fingers to move around the board
- Pinch to zoom
- To select objects, switch to select tool, press and drag the canvas

If you use the touchscreen:

- Drag the canvas to move around
- Pinch to zoom
- Long press and drag to select objects

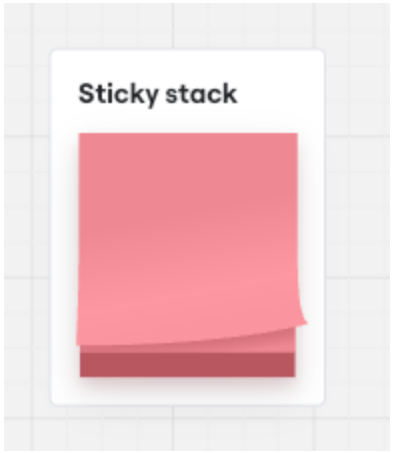


Switch between the 'select tool' and 'hand mode' in top left

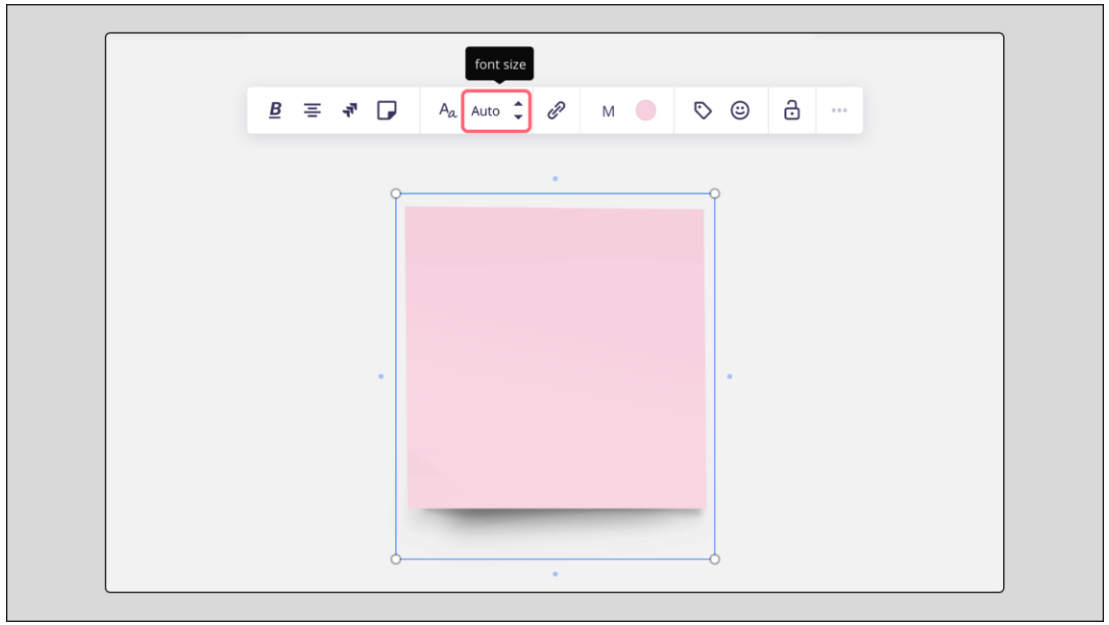
https://help.miro.com/hc/en-us/articles/360017731053-Using-Miro-with-a-mouse-trackpad-or-touchscreen

QUICK MIRO HOW-TO: STICKY NOTES

Step 1: "Click the sticky note icon on the toolbar" (left of screen) or drag a sticky from the sticky stack



Step 2: "To add text to your sticky note, select it and start typing."



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

https://help.miro.com/hc/en-us/articles/360017572054-Sticky-notes

BRAINSTORMING ACTIVITY 1:
BARRIERS TO VEHICLE ELECTRIFICATION

Consider:

- What are current barriers to
  - meeting Oregon's existing vehicle electrification policies, including ACC II and ACT?
  - going beyond existing policy?
- Where is additional data or information needed to overcome existing barriers?

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

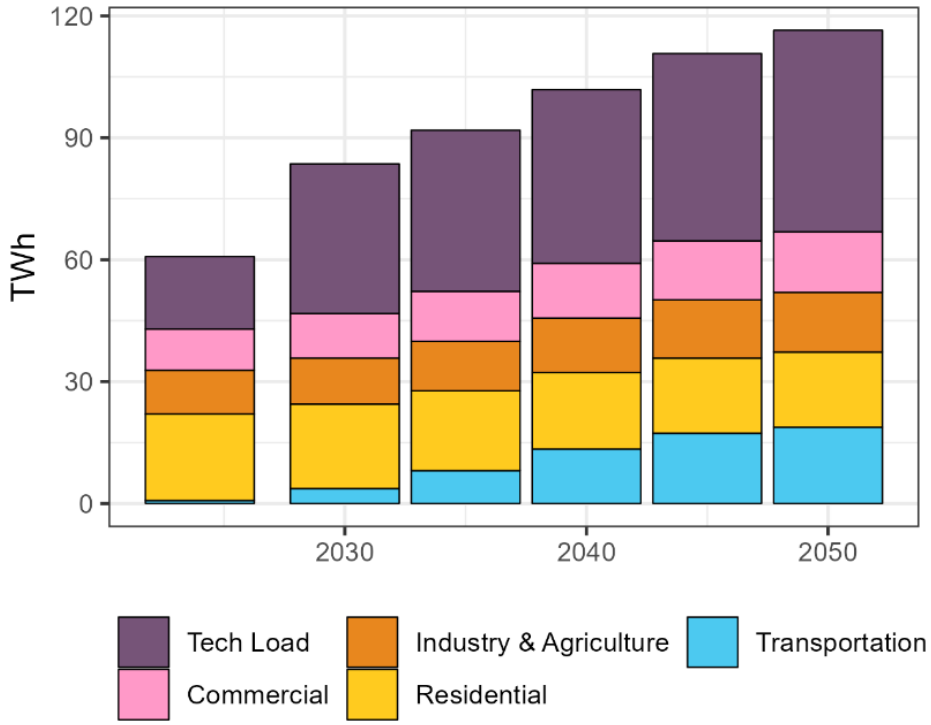
Transportation electrification will significantly increase electricity demand but EVs can provide a net benefit to the grid if managed flexibly.

KEY FINDING

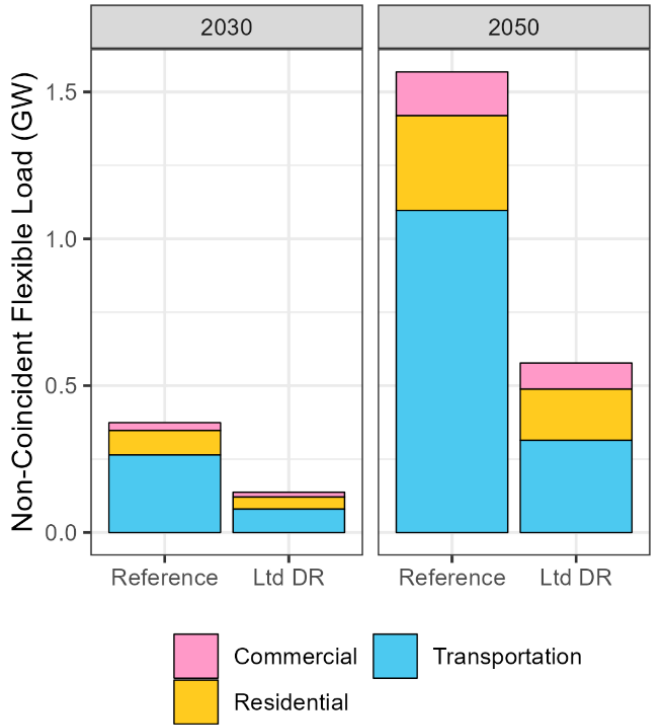
OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

EVS CAN SERVE AS A FLEXIBLE RESOURCE

Electricity Demand by Sector in Reference Scenario



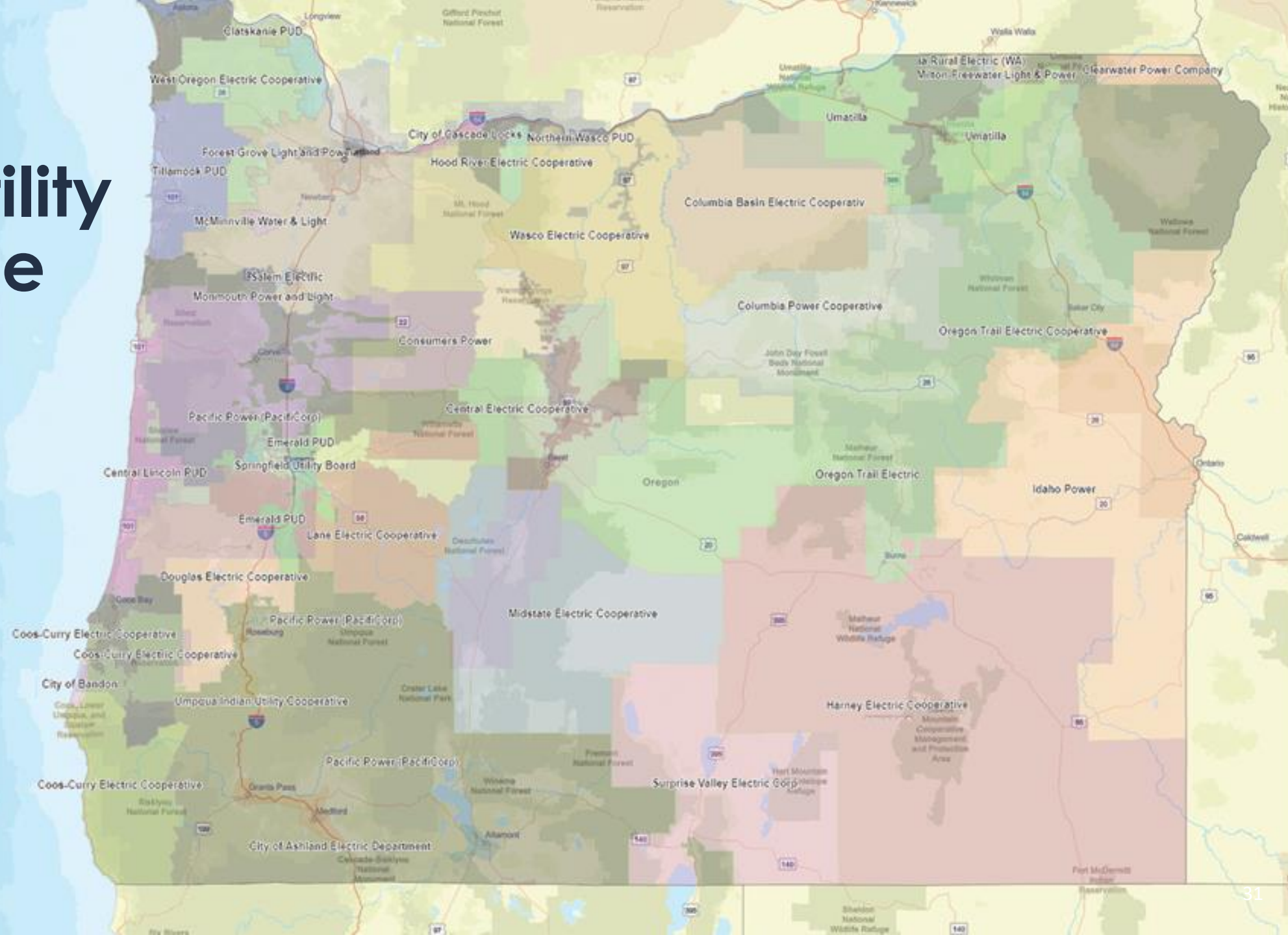
Non-coincident Flexible Load for Reference and Ltd DR Scenarios



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

Oregon Electric Utility Landscape

- 3 investor-owned utilities (IOUs)
- 38 consumer- or publicly owned utilities (COUs)



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

HOW UTILITIES PLAN FOR EVs

Investor-Owned Utilities

- Integrated Resource/Clean Energy Plans
- Distribution System Plans
- Transportation Electrification Plans

Consumer-Owned Utilities

- Local boards and councils
- Bonneville Power Administration

50 YEARS of SERVICE OREGON DEPARTMENT OF ENERGY

MINIMIZING EV IMPACTS TO THE GRID

- TE Planning
- Rate design
- Demand response and managed charging
- Vehicle to grid

Active Managed Charging:

PGE's pilot residential managed charging program

- Launched in 2022
- 7.2% participation rate in 2023 (4,529 customers
- 7,000 customer / 2.6 MW target by EOY 2025

Rate Design:

PAC's Time-of-Use Rates

- 800 EV drivers participate
- Launching new frequency demand response program in 2025

Consider:

- What are current barriers to
  - ➢ Cost-effective and timely buildout of charging infrastructure?
  - ➢ Operating EVs as a flexible load?
  - ➢ Utility upgrades required?
- Where is additional data or information needed to overcome existing barriers?

BRAINSTORMING ACTIVITY 2:
BARRIERS TO GRID INTEGRATION

10 MIN BREAK

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

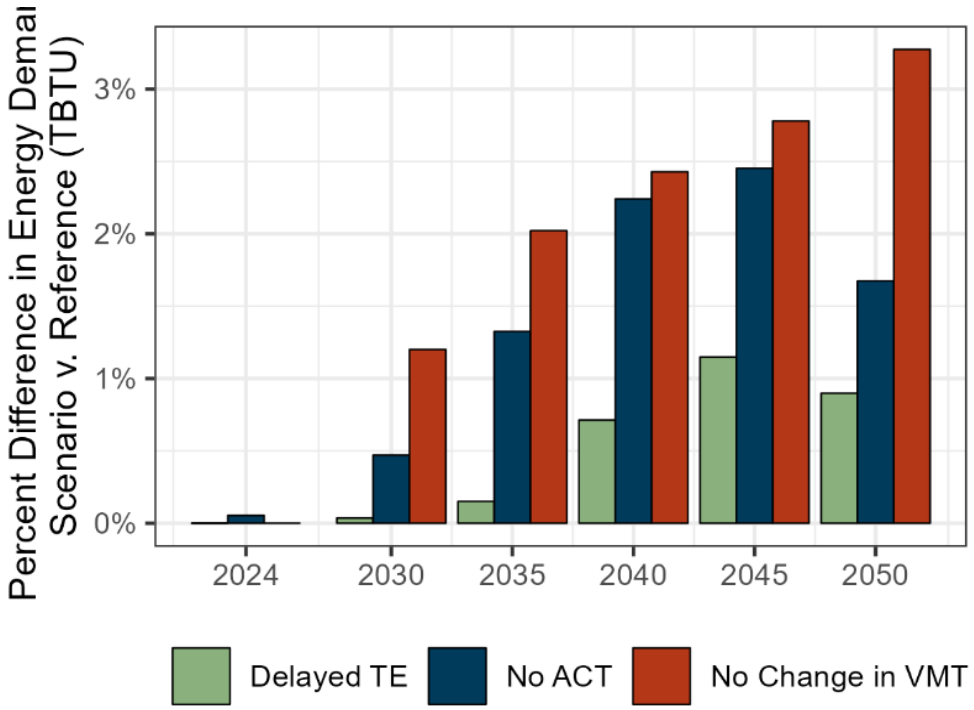
KEY FINDING

Reducing light-duty vehicle miles traveled has a large impact on overall energy demand and therefore costs for maintaining and upgrading the electric grid.

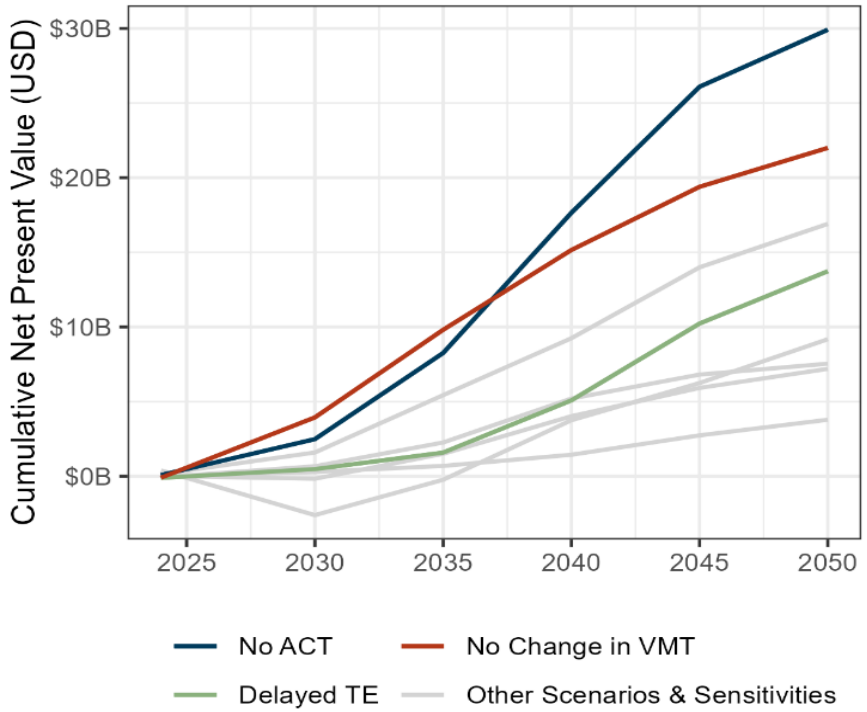
OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

VMT REDUCTION IS A WORTHY INVESTMENT

Percent Difference in Energy Demand in Transportation Scenarios vs. the Reference



Difference in System-wide Costs in All Scenarios vs. the Reference



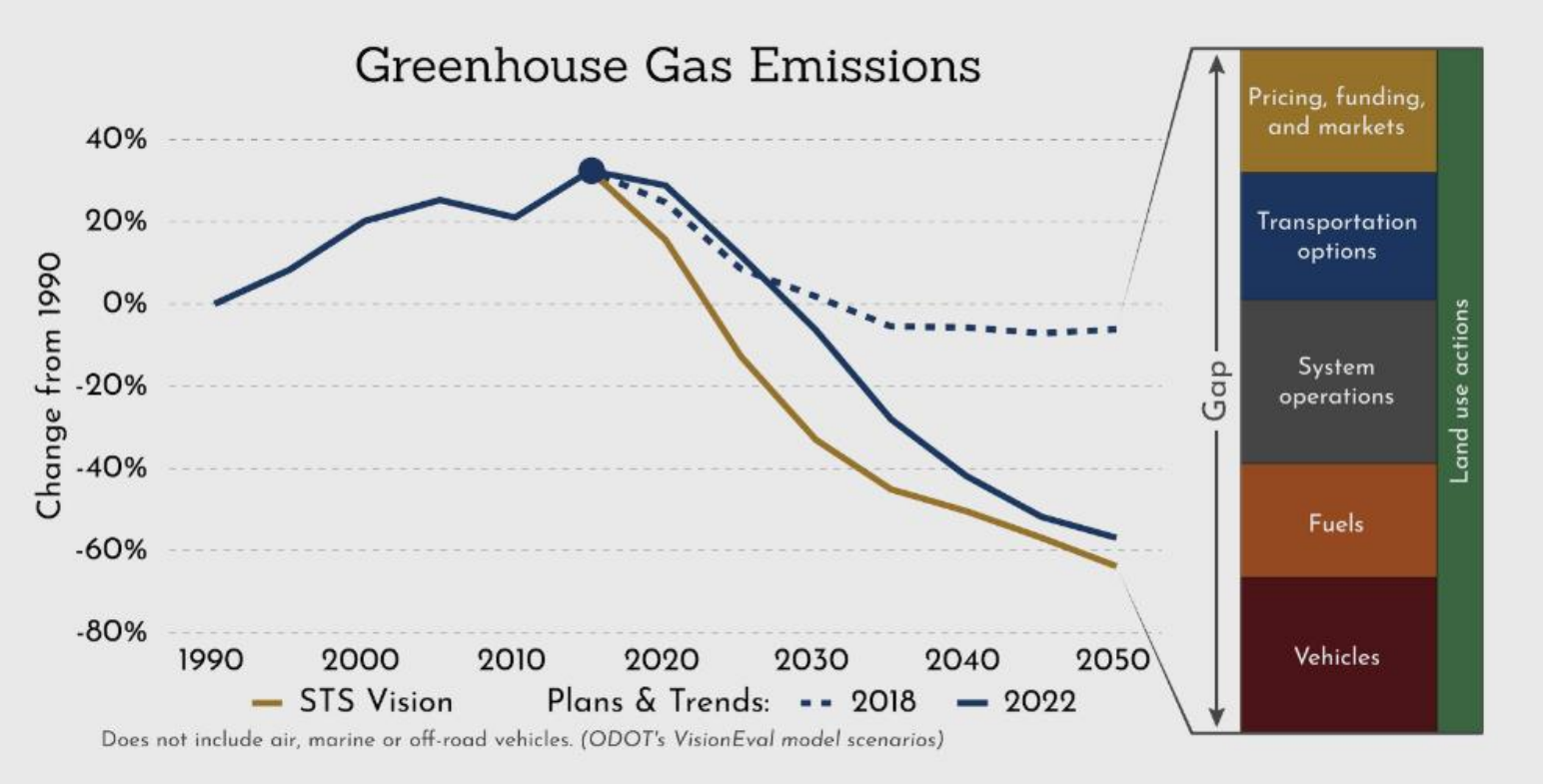
OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

ODOT'S STATEWIDE TRANSPORTATION STRATEGY

Goal: Reduce emissions from transportation to 80% below 1990 levels by 2050

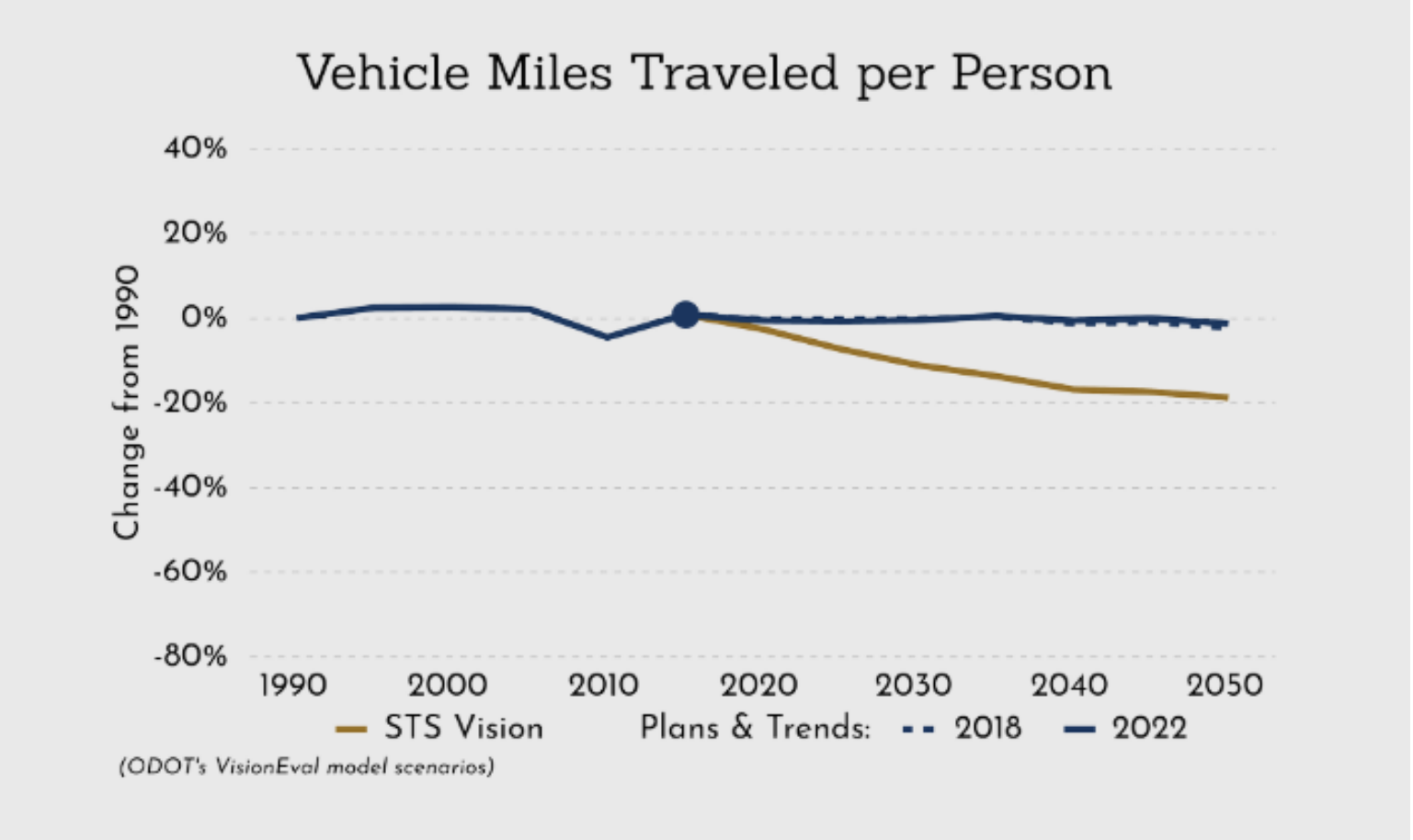
Objectives:

1. Reduce growth in vehicle miles traveled
2. Clean up each vehicle mile



OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

VMT REDUCTION PER CAPITA (LIGHT-DUTY)



Source: Oregon Department of Transportation's VisionEval Model

BRAINSTORMING ACTIVITY 3:
BARRIERS TO VMT REDUCTION

Consider:

- What are current barriers
  - ➢ preventing people and businesses from driving less?
  - ➢ to building out transit, biking, and walking infrastructure? Are the levels of investment sufficient?
  - ➢ to implementing land use and transportation planning policies that encourage less driving, such as Climate Friendly and Equitable Communities?
- What additional data or information is needed to overcome existing barriers?

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

NEXT STEPS

MODELING OFFICE HOURS

February 28 **10 a.m. – 11 a.m.**	Transportation
March 3 **12 p.m. – 1 p.m.**	Fuels
March 7 **10 a.m. – 11 a.m.**	Electricity and Transmission
March 11 **10 a.m. – 11 a.m.**	Buildings
March 21 **10 a.m. – 11 a.m.**	Environmental Justice and Equity

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

UPCOMING MEETINGS

Transportation Electrification Policy Working Group

- April 10, 2025 | 9:30 a.m. – 12:30 p.m.
- April 30, 2025 | 9 a.m. - 12 p.m.
- May 21, 2025 | 9 a.m. - 12 p.m.

Additional Meetings

Presentation of Complementary Analysis

- TBD

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

APRIL 10 DRAFT MEETING AGENDA

1. Review Issues and Barriers
2. Discuss Existing Oregon Policies
3. Brainstorm policy gaps and strategies to overcome barriers
4. Share what we are hearing in other WG meetings
5. Review results of Complementary Analyses

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

CONSIDERATIONS

For our next meeting, please consider:

- What existing policies are in place that help address the barriers?
- Where are additional policies or programs needed?
- What are the policy gaps you want to discuss?
- What do we need to better understand?

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE

EXISTING POLICIES

Overarching
E.O. 20-04 – Economy-wide GHG Emissions Reduction Targets
HB 2021 – "Clean Electricity Targets" for IOUs and ESSs
Climate Protection Program – Declining Cap on GHG Emissions from fossil fuels
Oregon Clean Fuels Program

Policies to Encourage and Enable Light-Duty Vehicle Purchase
Advanced Clean Cars I / Advanced Clean Cars II
Direct Sales of EVs to Consumers
DEQ's Oregon Clean Vehicle Rebate Program (OVCRP) (ongoing)
SB 1044 Statewide LD ZEV targets
Federal Vehicle Tax Credits (30D / 45W)

Policies to Encourage and Enable Medium- and Heavy-Duty Vehicle Purchases
Advanced Clean Trucks / Heavy Duty Engine and Vehicle Omnibus
DEQ's Zero Emission Rebates for Oregon Fleets (ZERO Fleet) (one time, $18M, state and federal)
DEQ's Diesel Emissions Mitigation Grants
Federal Tax Credits (45W)
Diesel Emissions Reduction Act Grants (state & federal)
Multi-State Medium- and Heavy-duty Zero Emission Vehicle MOU

Policies to Increase Availability of Charging and Fueling Infrastructure
ODOT's National EV Incentive Program (NEVI) (one time, $52M)
ODOT's Charging & Fueling Infrastructure (CFI) (one-time, $30M)
ODOT's Community Charging Rebates (CCR) (~$17M, state & federal)
ODOT's Electric Vehicle Charging Reliability and Accessibility Accelerator (EVC-RAA) (one-time, $10M)
ODOE's Energy Efficiency & Conservation Block Grant Program (one time, $1.2M)
ODOT's Carbon Reduction Program (one time, $82M)
DEQ's Oregon Zero Emission Fueling Infrastructure Grant (OZEF) (one time, $18M, state & federal)
Federal Congestion Mitigation and Air Quality Funds (CMAQ) (ongoing)
Federal Tax Credit (40C)
Building Code: HB 2180 EV Charging Parking Space Requirements
Building Code: ORS 94.762 HOAs/Condo Assoc. Must Allow Chargers

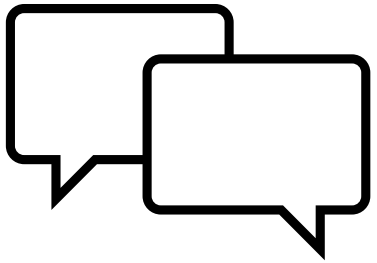
Policies to Electrify Fleets
SB 1044 – LD ZEV Purchasing Requirements for State Fleets
E.O. 17-21 – State Agencies to Assist School/Transit Agency Fleets
VW Settlement Funds / School Bus Replacement Program
ODOE's Public Purpose Charge Schools Program (ongoing)
DEQ's Zero Emission Rebates for Oregon Fleets (ZERO Fleet) (one time, $18M, state and federal)
DEQ's Clean HDV Program for School Buses (one time, $6.5M)
EPA's Clean School Bus Program grant (closed)

Policies/Programs for Education, Data and Awareness
EV Dashboard
Go Electric Oregon Webpage
SB 1044 – ODOE's Biennial Zero Emission Vehicle Report
E.O. 17-21 – Establishes ZEVIWG and ZAP
E.O. 20-04 – Establishes Every Mile Counts Initiative
ODOT's CCR Community Outreach and Engagement Program
DEQ's OCVRP Dealer and DAC Outreach Program
ODOT's Oregon Transportation Emissions Webpage
PAC Outreach and Education Program

Policies to Encourage and Enable VMT Reduction
Employee Commute Options rules (OAR 340-242-0010-0290)
Climate Friendly and Equitable Communities
HB 2017 – Established Statewide Transportation Improvement Fund & Safe Routes to School Fund (ORS 184.740)
HB 2592 – Established Multimodal Active Transportation Fund (ORS 367.091)
ODOT's Oregon Transportation Plan – 20% VMT reduction per capita
Metro's Climate Smart Strategy
City of Ashland E-bike Incentive
EWEB E-Bike Incentive
Portland E-bike Incentive and Workforce Training Program
PAC Municipal & Community Grants (Micromobility programs)
ODOT's Innovative Mobility Program (one time, $20M)
ODOT's Safe Routes to School Program (ongoing)
ODOT's Oregon Community Paths Program (ongoing, state & federal)
Carbon Reduction Program (one time, $82M)

Utility TE Investments and Policies
SB 1547 – IOUs Must Submit TE Plans, Rate Recovery for TE
HB 2165 – Monthly Meter Charge for TE
HB 3055 – Authorizes Gas Utilities to Invest in Trans. Infrastructure
Central Electric Coop Level 2 Charger Rebate
Central Lincoln PUD Level 2 Charger Rebate
City of Ashland – EV and Commercial Charging Rebates
Clatskanie PUD – Level 2 Charger Rebate
Columbia River PUD – Residential and Comm. Charger Rebate
Consumers Power, Inc – Level 2 Charger Rebate
Emerald PUD – Level 2 Charger Rebate
Eugene Water & Electric Board – MFH EV Charging Rebates
Northern Wasco County PUD – Res. & Comm. Charger Rebate
PAC Electric Fleet Pilot Program
PAC Oregon Electric Mobility Grants
PAC Oregon Municipal & Community Grants
PAC Residential, MFH, Business EV Charger Rebates
PAC Commercial & Residential Time of Use Rates
PAC Public Infrastructure Utility-Owned Program
PAC Residential Managed Charging Pilot
PGE Business & MFH Make Ready Solutions
PGE Business EV Charging Rebates
PGE Public Charging Programs (Electric Ave., Municipal Charging Collaboration, Curbside Charging)
PGE Fleet Partner Program
PGE Electric School Bus Fund
PGE Drive Change Fund
PGE Smart Charging (Managed Charging/Panel Upgrade Rebates)
Salem Electric – Residential EV Charger Rebate
Springfield Utility Board – Residential EV Charger Rebate
Tillamook PUD – Residential Charger Rebate

OPPORTUNITIES FOR PUBLIC COMMENT



Provide written public comment

https://odoe.powerappsportals.us/en-US/energy-strategy/

OREGON DEPARTMENT OF ENERGY
50 YEARS of SERVICE


OREGON
DEPARTMENT OF
ENERGY
50
YEARS of SERVICE
Thank You!
www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx