# Oregon Department of **ENERGY**

## Oregon Energy Strategy Advisory Group Meeting 9

April 23, 2025

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OREGON DEPARTMENT OF ENERGY

# OREGON DEPARTMENT OF ENERGY

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

## Our Mission

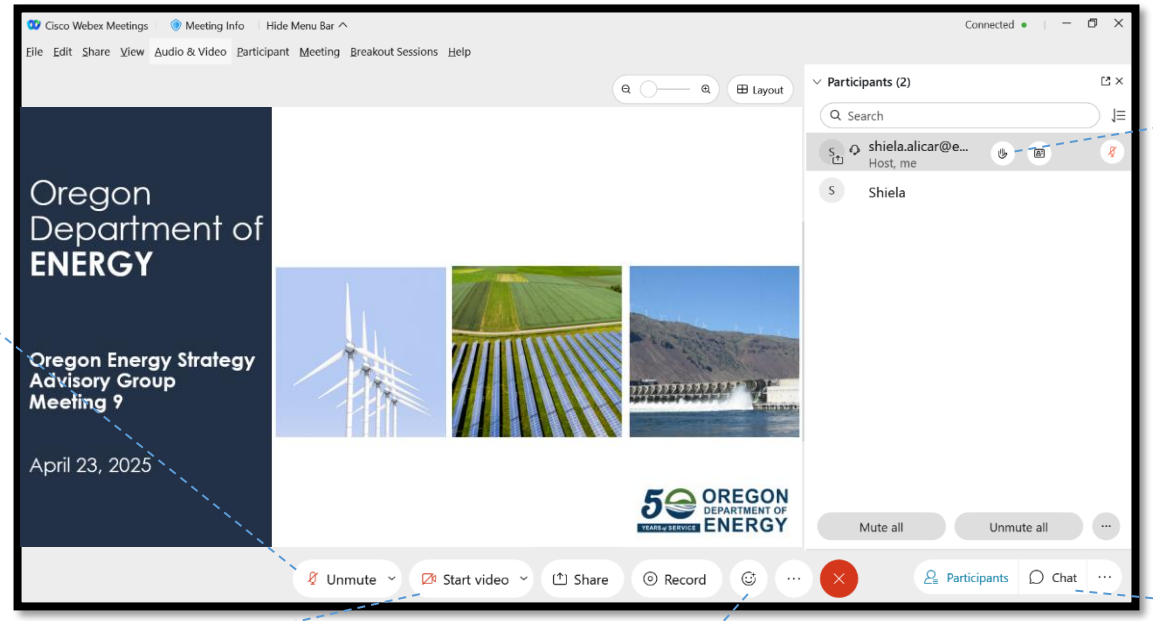
The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and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

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Unmute — *Microphone Off*

## Video Options

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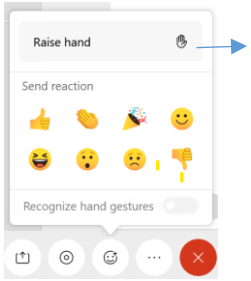
Start video — *Webcam Off*

## Reactions



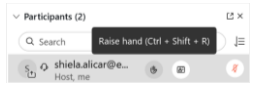

*Click to Raise your hand.*



*Click on Lower hand when you are done.*

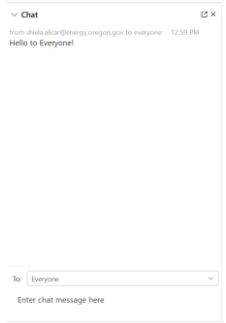
## Second Raise Hand Option

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



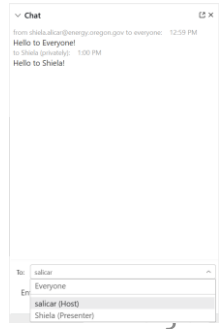

*Click on Lower hand when you are done.*


## 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).*



# Meeting Objectives

- Provide an update on Energy Strategy process, including Energy Wallet results
- Collect feedback on emerging policy framing and ideas for policy actions

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# AGENDA

| | |
|---|---|
| 9:00 – 9:15 a.m. | Welcome, agenda, introductions, approval of last meeting summary |
| 9:15 – 9:45 a.m. | Update on Energy Strategy process<br>- Policy working group activity<br>- Energy Wallet<br>- What's on the horizon |
| 9:45 – 10:50 a.m. | Discussion of policy framing |
| 10:50 – 11:00 a.m. | Break |
| 11:00 – 11:50 a.m. | Continue discussion of policy framing |
| 11:50 – 12:00 a.m. | Next steps |

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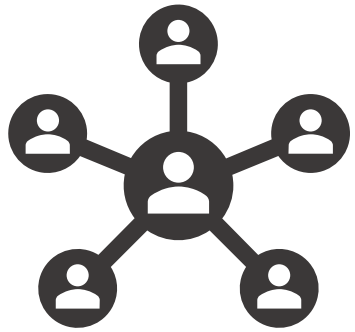
# GROUP AGREEMENTS

- 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.

# ADVISORY GROUP MEMBER INTRODUCTIONS

Please introduce yourself
(name, affiliation)



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# MARCH 20: MEETING NOTES/SUMMARY

## Meeting Summary

### ODOE Oregon Energy Strategy Advisory Group Meeting #8; March 20, 2025

## Attendees

**Present Advisory Group members:** Aaron Orlowski, Andrea Kreiner, Bryan Adams, Christine Golightly, Cory Scott, Diane Brandt, Elaine Prause, Erin Childs, Fred Heutte, Ivy Quatch, Jeff Hammarlund, Jennifer Joly [for Tucker Billman and Scott Simms], Joshua Basofin, Juan Barraza, Mary Kyle McCurdy, Mary Moerlins, Rakesh Aneja, Rebecca Smith, Shannon Souza, Timothy L. McMahan.

**Oregon Department of Energy staff:** Alan Zelenka, Anne Thrall-Nash, Edith Bayer, Jessica Reichers, Jillian DiMedio, Joni Slinger, Josh Price, Mary Kopriva, Lauren Rosenstein, Michael Freels, Rob Del Mar, Ruchi Sadhir.

**Consultant team:** Ben Duncan (Kearns & West), María Verano (Kearns & West)

**Members of the Public in Attendance**: 1

## Welcome and Agenda Review

Ben Duncan (Kearns & West) opened the meeting and presented on ODOE's mission. Ben reviewed the WebEx meeting functions and reminded attendees of the virtual meeting protocols. Ben also reviewed the group agreements and noted that the goal of the Advisory Group (AG) is to promote candid and constructive conversations. Edith Bayer, Oregon Department of Energy (ODOE), shared the following meeting objectives:

- Present an overview of key challenges/barriers emerging from Policy Working Group (PWG) meetings;
- Answer questions and collect reactions and feedback on key barriers; and
- Describe the purpose of the next meeting and the focus of engagement between now and then.

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# ENERGY STRATEGY UPDATE

# FIVE POLICY WORKING GROUPS

| | |
|---|---|
| Environmental Justice and Equity | • Role in providing EJ and equity perspectives in the other working groups<br>• Evaluate analysis and develop recommendations related to EJ and equity |
| Building Efficiency, Electrification, and DERs | • Residential and commercial<br>• Customer-side of the meter |
| Developing Clean Electricity Generation and Transmission | • Electricity generation and storage in front of the meter<br>• Transmission<br>• Development needs and barriers/competing priorities |
| Low-carbon fuels | • Best application of low carbon fuels used in buildings, industry, and transportation<br>• 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)<br>• Charging and fueling infrastructure<br>• Grid integration<br>• Vehicle miles traveled reduction |

# ODOE SET A STRUCTURE FOR DISCUSSION

Meeting 2 | Meeting 3 | Meeting 4

| Pathway / key findings | Challenges and Barriers | Proposed strategies to address barriers | Proposed policy actions |
|---|---|---|---|
| **Vehicle electrification** | | | |
| **Grid integration** | | | |
| **VMT reduction** | | | |

# UPCOMING MEETINGS

**Feb 12**

**Working Group Policy Plenary**
(All Working Groups)

February 20

**Feb 12 – Mar 5**

- EJ and Equity
- Transportation Electrification
- Low Carbon Fuels
- Developing Clean Electricity Generation and Tx
- Building Efficiency, Electrification, and DER

March 20

TODAY

**Mar 14 – Apr 14**

- Building Efficiency, Electrification, and DERS
- Low Carbon Fuels
- Developing Clean Electricity Generation and Tx
- Presentation of Complementary Analysis
- EJ and Equity
- Transportation Electrification

**April 30, 9am-12pm**

- EJ and Equity
- Transportation Electrification

**April 30, 2pm-5pm**

- Low Carbon Fuels
- Developing Clean Electricity Generation and Tx

**May 7**

- Building Efficiency, Electrification, and DERS

May 15

**May 21**

**Final Working Group Policy Plenary**
(All Working Groups)

June 18

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# UNDERSTANDING AND BUILDING ON THE ENERGY PATHWAYS MODELING RESULTS

## Energy Pathways Modeling Results

Model calculates energy needed to power Oregon's economy, and least-cost way to provide that energy under clean electricity and emissions goals.

### Air Quality

Model calculates how changes in air quality affect health outcomes and estimates economic value of those benefits

### Energy Wallet

Changes in energy spending for different sample households, impact of timing of investing in efficient, electric technologies

### Jobs Analysis

Evaluation of the effects of the pathways analysis on direct, indirect, and induced energy sector employment

### Geospatial Mapping

Maps explore community-level energy inequities and relationship to socioeconomic disparities – to help interpret energy modeling results, energy wallet analysis, air quality modeling, and employment effects

# Key Takeaways

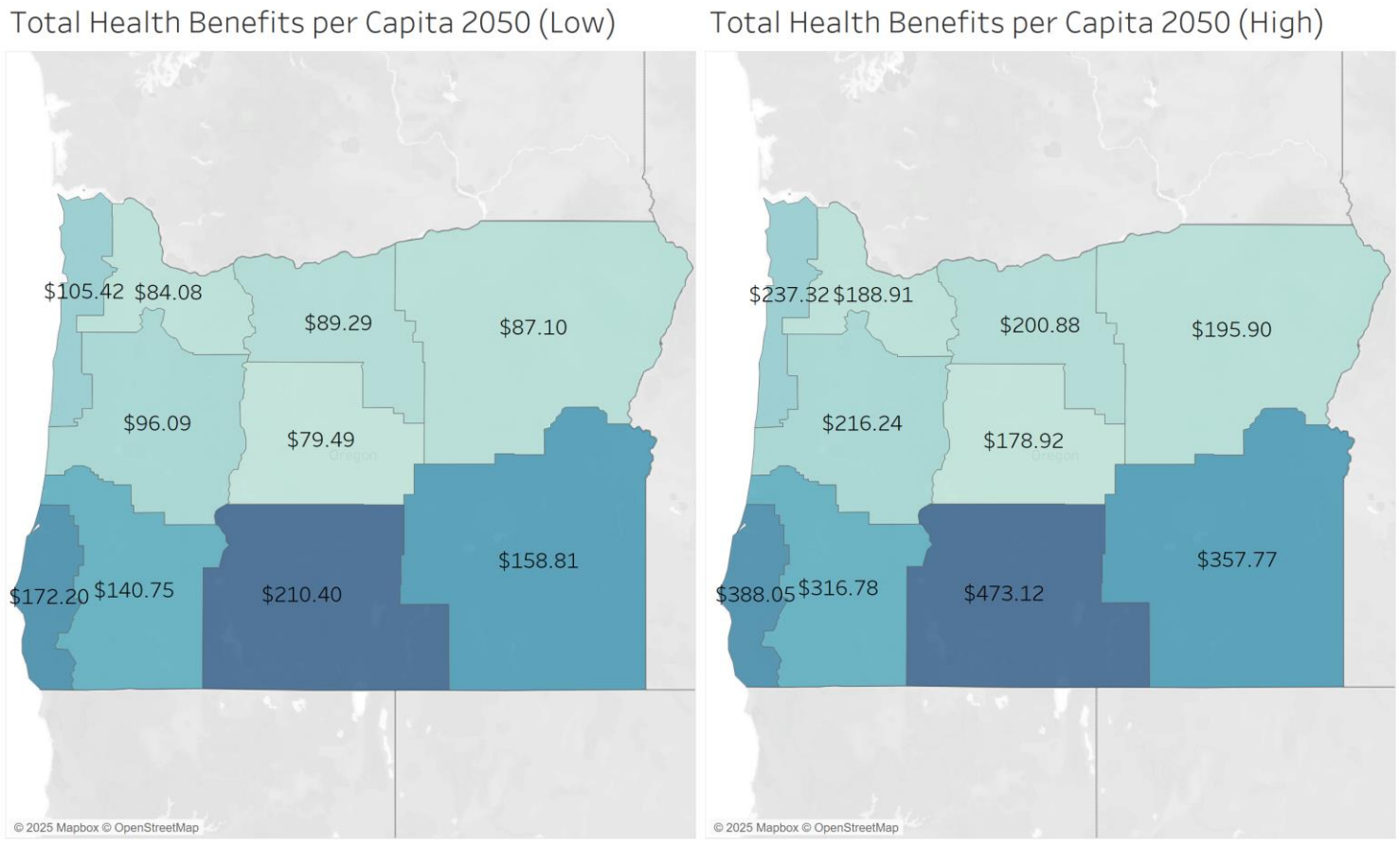
EVOLVED ENERGY RESEARCH

- COBRA analysis indicates significant health benefits associated with achieving Oregon emissions and clean energy targets
  - Between $205 M and $461 M monetized benefits in 2030
  - Between $538 M and $1.2 B monetized benefits in 2050
  - Cumulative present value benefits of $6.3B to $14.1B over the next 25 years
- Absolute benefits follow population by region, but per capita benefits are higher in the southern regions of the state
- Most monetized dollar health benefits are attributed to mortality based on the high value of a statistical life

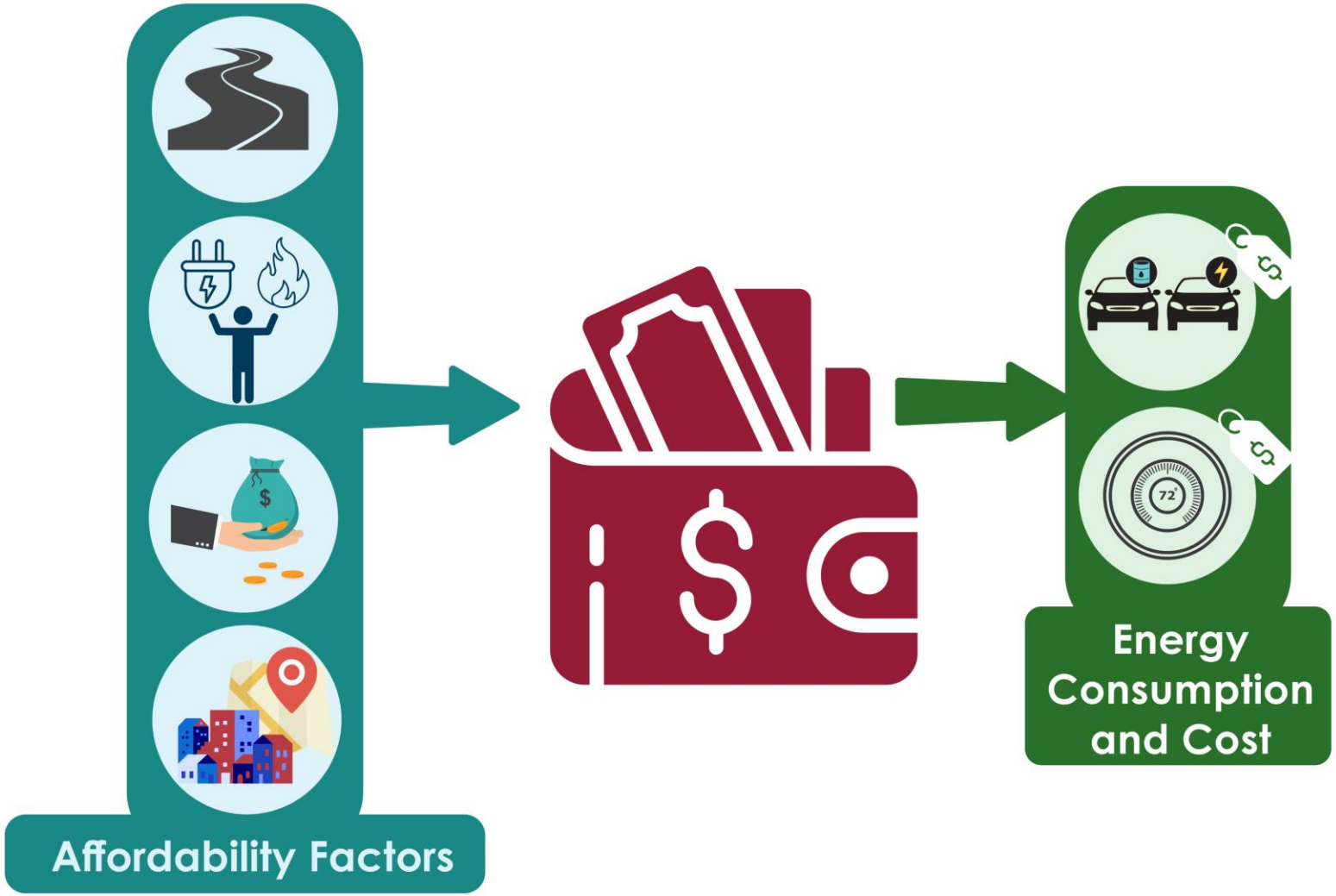
# Health Benefits per Capita by Region in 2050: Reference

EVOLVED ENERGY RESEARCH

- Per capita benefits greater in the southern regions of the state
- Benefits relative to health impacts of particulate matter exposure in 2023
- ~99% of the benefits come from reduced mortality



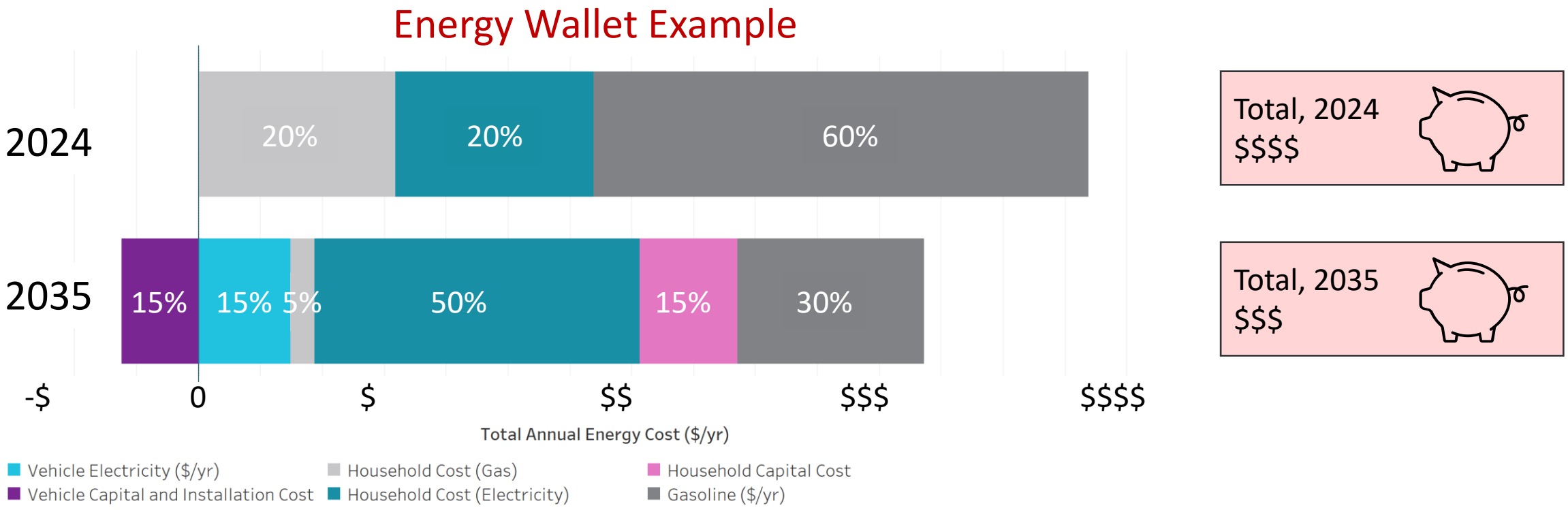
# ENERGY WALLET



# Energy Wallet Illustrates How Technology Adoption Affects Household Energy Costs

EVOLVED ENERGY RESEARCH

- Example household buys an EV and a heat pump in 2035. This changes their energy consumption and therefore costs. They must also pay the difference between EVs/heat pumps and conventional technologies



# Sample Households Energy Consumption

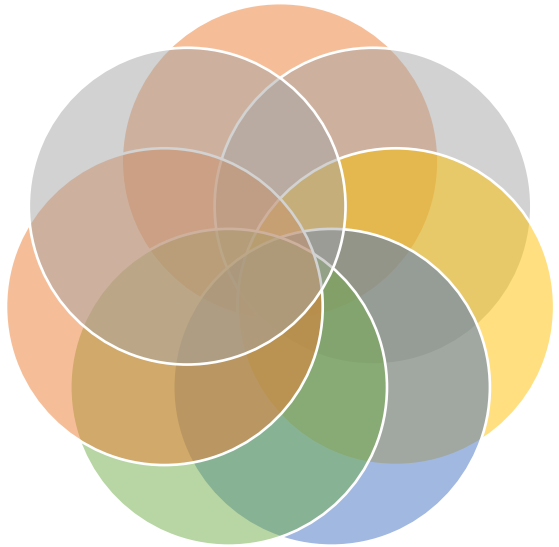
EVOLVED ENERGY RESEARCH

| *Annual Household Usage* | Jessica's   | Stephanie's   | Ruchi's   | Alan's   | Hugh's   |
|---|---|---|---|---|---|
| **Electricity (kWh)** | **9,920** | **6,364** | **15,487** | **18,330** | **8,964** |
| Space heating | - | - | 3,954 | 6,777 | 3,151 |
| Water heating | - | - | 2,754 | 2,759 | 1,712 |
| Air conditioning | 2,168 | - | 2,181 | 2,184 | - |
| Other | 7,752 | 6,364 | 6,599 | 6,610 | 4,101 |
| | | | | | |
| **Natural Gas (therms)** | **821** | **1,023** | **-** | **-** | **-** |
| Space heating | 430 | 712 | - | - | - |
| Water heating | 314 | 250 | - | - | - |
| Other | 76 | 61 | - | - | - |
| | | | | | |
| **Vehicle Miles Traveled (VMT)** | **16,823** | **22,113** | **19,833** | **20,743** | **13,555** |

# KEY TAKEAWAYS

- All five sample households save money with vehicle electrification in most circumstances
- All five sample households save energy from electrification of home heating, but not all sample households save money from heat pump installation, absent policy support
- Multiple factors impact how great the savings could be from electrification of home heating and transportation
  - Energy prices, cost and access to technology based on household income, technological development, production and supply chain challenges
- Policies are important to enable access to cost savings
  - Education, incentive programs, infrastructure development, access to useable technology, and workforce development
- Upfront costs must be addressed to ensure equal access to the savings from electrification
  - Intentional, explicit policies that ensure environmental justice and equitable solutions are required

# KEY CONSIDERATIONS



Cost

Feasibility (including reliability)

Economic and employment effects

Land use considerations and natural resource impacts

Community benefits

Energy burden and affordability

Energy resilience and community energy resilience

Environmental justice

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# POLICY FRAMING

# OVERVIEW OF EXERCISE

- We'll be moving around the room
- Online group members will be using Miro with support from staff joining virtually
- We'll be teeing up an activity, geared toward getting your input into our policy thinking
- The exercise will begin with some background information
- Followed by instructions on what to do

# POLICY FRAMING

| Strategy 1 | Strategy 2 | Strategy 3 | Strategy 4 | Strategy 5 |
|---|---|---|---|---|
| Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) |
|  |  |  |  |  |
| Policy Actions | Policy Actions | Policy Actions | Policy Actions | Policy Actions |
|  |  |  |  |  |

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# TODAY'S FOCUS

| Strategy 1 | Strategy 2 | Strategy 3 | Strategy 4 | Strategy 5 |
|---|---|---|---|---|
| Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) | Policy recommendations (high level) |

# WHAT IS A STRATEGY?


Each strategy represents the direction that Oregon needs to pursue in order to meet our energy policy objectives. These objectives include: reliability, affordability, resilience, and climate.

Strategies are framed as *directional*, drawing on results from the energy strategy *modeling*, as well as from *engagement*. They are organized around key elements/pillars of Oregon's energy system, such as electricity generation and energy efficiency, and account for the interactions between each pillar.

Strategies do not set a concrete goal, such as achieving a certain pace or scale of electrification or resource build-out. Rather, the strategies are meant to guide our state over time.

# STRATEGIES

To meet its energy policy objectives, Oregon must advance along the following five pathways:

| | |
|---|---|
| Strategy 1 | Energy efficiency and electrification of buildings |
| Strategy 2 | Electrification of transportation and reducing vehicle miles traveled |
| Strategy 3 | Distributed energy resources, including solar PV, distributed batteries, and flexible electric loads |
| Strategy 4 | Clean electricity |
| Strategy 5 | Low-carbon fuels |

# STARTING POINT: POLICY RECOMMENDATIONS

Each policy recommendation must consider burdens and benefits to environmental justice communities, applying an equity lens to prevent further disproportionate impacts to historically and currently marginalized communities.

### Energy efficiency and electrification of buildings

- Improve the energy efficiency and quality of existing residential and commercial buildings.
- Advance energy efficient electric heat pumps (and other high efficiency electric equipment) while maintaining electricity system reliability and protecting customers from high future costs and volatility.

### Electrification of transportation and VMT reduction

- Reduce barriers to transportation electrification to ensure vehicles in the state electrify at the pace and scale necessary to meet our goals.
- Prioritize policies and programs that increase transportation options and efficiency.

### Distributed energy resources

- Support integration of electric loads while reducing the impact on the electricity system, and support integration of variable renewable resources.
- Support distributed clean energy resource development to reduce the need for new transmission while increasing the resilience of households and local communities.

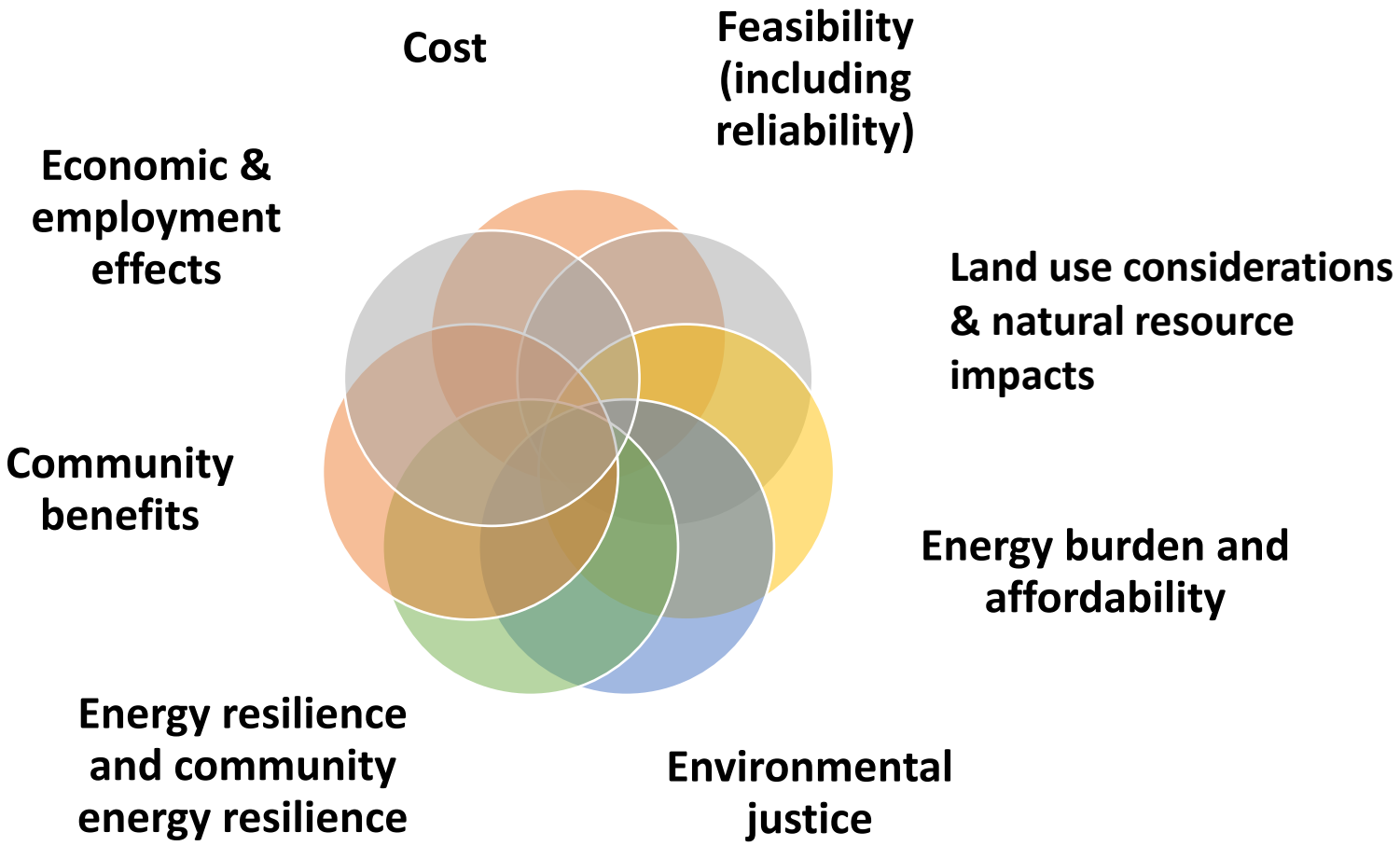
### Clean electricity

- Promote in-state and regional development of clean electricity generation, storage and transmission
- Support regional market and planning opportunities to enhance grid efficiency and lower costs.

### Low-carbon fuels

- Promote development of low carbon fuel resources to increase their overall supply, affordability, and availability.
- Reduce demand for fossil fuel resources and ease the transition burden to low-carbon fuels in hard to electrify applications in transportation, industry, and electricity generation while retaining resilience and safety, including industrial sectors.

# KEY CONSIDERATIONS



# EXERCISE INSTRUCTIONS

Please consider each of the strategies and high-level policy recommendations and answer the following questions:

- What do you like / where do you see benefits?
- What concerns you / where do you see risks?
- Would you re-phrase anything to alleviate your concerns?

Within your answers, include your view of key considerations and how they tie into your responses.

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# NEXT STEPS (10 MIN)

- Working Groups, 4/30 and 5/7: policy actions
- Interagency Steering Group, 5/13
- Advisory Group, 5/15: policy actions
- Final Policy Working Group plenary meeting, 5/21
- Comment Portal, 5/9
- Mid-June Info Session on draft policy recommendations


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Thank You!
www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx