Oregon
Tina Kotek, Governor

OREGON DEPARTMENT OF ENERGY

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AGENDA

Title: Environmental Justice and Equity Working Group – Oregon Energy Strategy

Date: August 16, 2024

Objectives:
The purpose of this Working Group is to:

- Hear priorities for Environmental Justice and Equity in the Oregon Energy Strategy.
- Understand opportunities to evaluate equity and environmental justice effects of different pathways to meeting Oregon's clean energy objectives.
- Provide expertise and feedback to inform this evaluation.

Environmental Justice and Equtiy Working Group Members:

Beyond Toxics	Lisa Arkin
BlueGreen Alliance	Ranfis Villatoro
Breach Collective	Nick Caleb
Coalition of Communities of Color	Nikita Daryanani
Community Energy Project	Greer Klepacki
Citizens' Utility Board	Sarah Wochele
Euvalcree	Noah Scott
Klamath and Lake Community Action Services	Christina Zamora
Northwest Energy Coalition	Alma Pinto
Northwest Energy Coalition	Alessandra de la Torre
Office of Sustainability, Multnomah County	Silvia Tanner
Oregon Public Health Institute	Masha Cole-Tagaeva
Oregon Rural Action	Kaleb Lay
Rogue Climate	Jess Grady-Benson
Rural Organizing Project	Hannah Harrod
Self Enhancement Inc	John Maddalena
Spark Northwest	John Seng
Tribal Consultant	Mark Healy
Verde	Anahi Segovia Rodriguez
Wy'East	Robert Wallace

Agenda

2:00 – 2:20	Welcome and Introductions	Ben Duncan, Kearns & West
2:20 – 2:40	Reflections from last meeting	Lauren Rosenstein, ODOE
2:40 – 2:50	Timeline Update	Ruby Moore-Bloom
2:50 – 3:05	Overview of Energy Modeling	Ruby Moore-Bloom, Clean Energy Transitions Institute Elaine Hart, Moment Energy Insights Ruchi Sadhir, ODOE
3:05 – 3:30	Discussion of reference scenario data and assumptions	
3:30 – 3:45	Discussion of alternative scenarios	
3:45 – 4:00	Future participation, wrap up, and next steps	Lauren Rosenstein, ODOE

Oregon Department of **ENERGY**

Oregon Energy Strategy
Environmental Justice and Equity Working Group

Lauren Rosenstein and Ruchi Sadhir
August 16, 2024

OREGON DEPARTMENT OF ENERGY

OREGON DEPARTMENT OF ENERGY

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

Our Mission

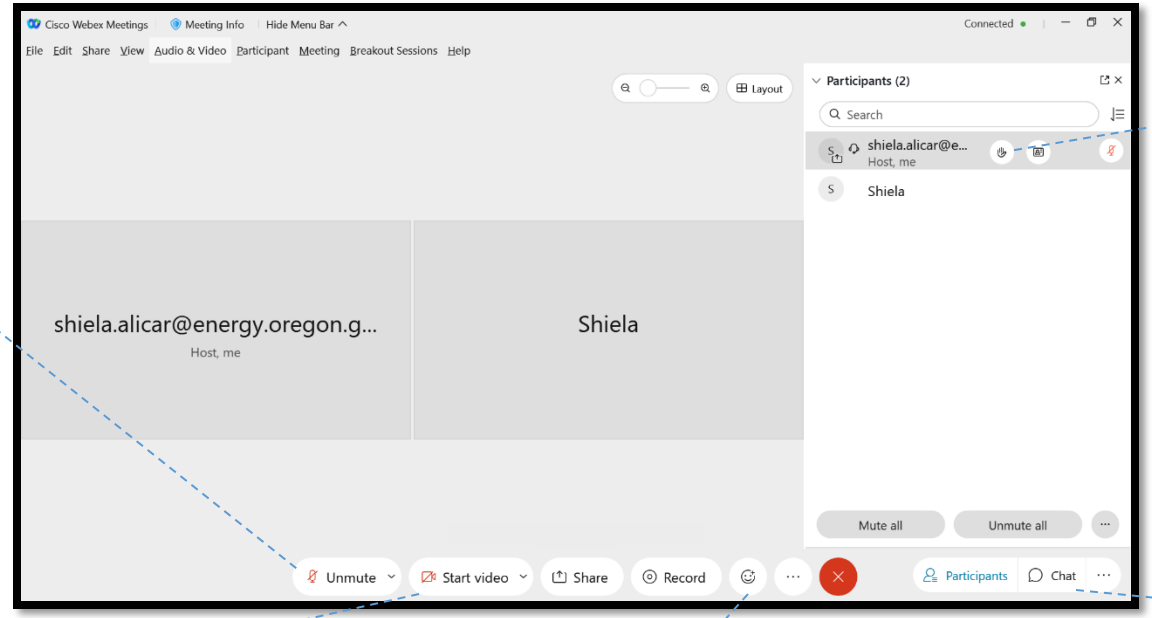
The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and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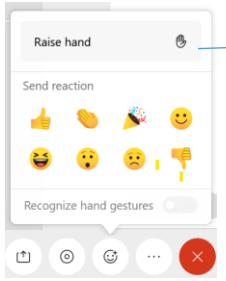
Start video — *Webcam Off*

Reactions



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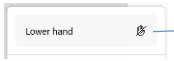

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Second Raise Hand Option

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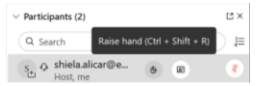

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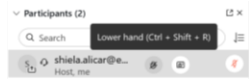
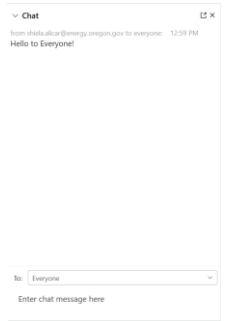
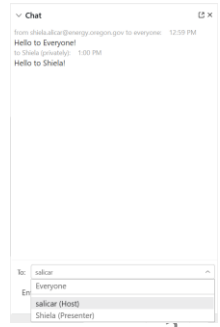


Chat



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).



PURPOSE OF THIS WORKING GROUP

- Hear priorities for Environmental Justice and Equity in the Oregon Energy Strategy.
- Understand opportunities to evaluate equity and environmental justice effects of different pathways to meeting Oregon's clean energy objectives.
- Provide expertise and feedback to inform this evaluation.

Note: focus is on the modeling; discussion of policy recommendations will take place in early 2025.

GROUP AGREEMENTS

- 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.

AGENDA

1:00 – 1:20	Welcome and Introductions	Ben Duncan, Kearns & West
1:20 – 1:40	Reflections of last meeting	Lauren Rosenstein, ODOE
1:40 – 1:50	Timeline update	Ruby Moore-Bloom, Clean Energy Transition Institute
1:50 – 2:45	Presentation and discussion - Overview of energy modeling - Discussion of reference scenario data and assumptions - Discussion of alternative scenarios	Ruby Moore-Bloom, Clean Energy Transition Institute Elaine Hart, Moment Energy Insights Ruchi Sadhir, ODOE
2:45 – 3:00	Future participation, wrap up, and next steps	Lauren Rosenstein, ODOE

Note: ODOE will open the floor for comments and questions from observers if time permits. Comments and questions can be submitted to:
https://odoe.powerappsportals.us/en-US/energy-strategy/

INTRODUCTIONS

- In the chat, please share your:
  - Name
  - Affiliation
  - Your pronouns if you are comfortable sharing them
  - One of your favorite areas to spend time in Oregon

WORKING GROUP MEMBERS

ORGANIZATION	NAME
Beyond Toxics	Lisa Arkin
BlueGreen Alliance	Ranfis Villatoro
Breach Collective	Nick Caleb
Coalition of Communities of Color	Nikita Daryanani
Community Energy Project	Greer Klepacki
Citizens' Utility Board	Sarah Wochele
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Self Enhancement Inc	John Maddalena
Spark Northwest	John Seng
Tribal Consultant	Mark Healy
Verde	Anahi Segovia Rodriguez
Wy'East	Robert Wallace

WORD CLOUD

Join at menti.com | use code 5546 2172

Mentimeter

Add three words to describe your objective and/or purpose for joining this working group.

47 responses

19

REFLECTING WHAT WE HEARD

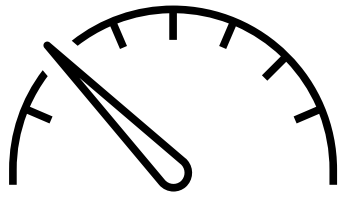
Focus on disparities and differences

- Uncertainty that the **current disparities** will not change in the energy transition
- Identify need to **distinguish between single family versus multi-family**, renter versus homeowner when thinking about energy wallet
- Interest in understanding how **granular the approach can be**, rural is different from coast to Eastern Oregon

SLOWING DOWN

Creating mindful and reflective process

- This part of the process feels truncated
- Is there enough time and opportunity to understand the model and provide meaningful feedback?



OVERVIEW AND TIMELINE: EJ/EQUITY ANALYSIS

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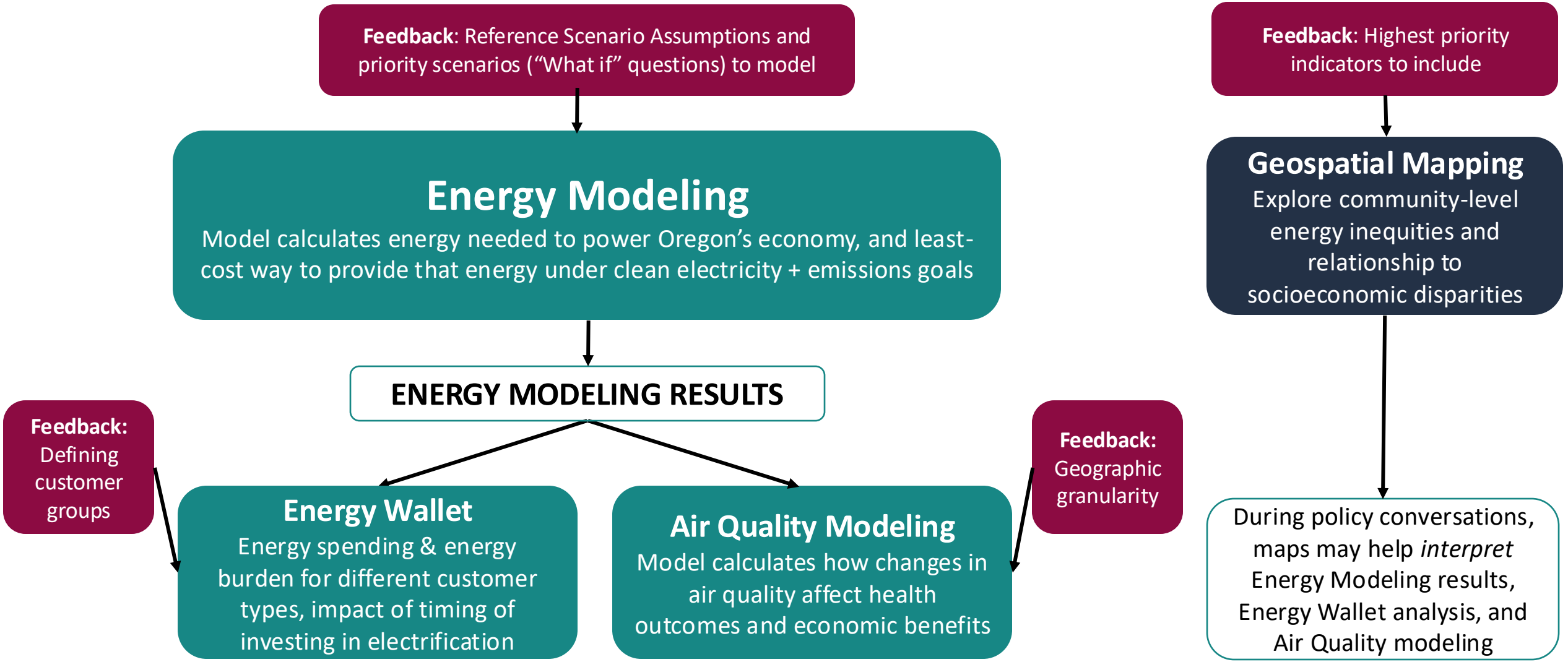
OVERVIEW OF EJ/EQUITY ANALYSIS



TIMELINE & FEEDBACK REQUESTED

ANALYSIS	FEEDBACK REQUESTED	FEEDBACK BY
Energy Modeling	Assumptions in the reference scenario, e.g., • Customer technology adoption (e.g., % of heat pump sales by certain year) • Adoption of distributed energy resources (e.g., rooftop solar, community solar) What If scenarios, e.g., • Vehicle miles traveled (VMT) reduction • Local (i.e., within Oregon) energy production	8/31
Energy Wallet	Defining up to five customer groups + data sources	October
Air Quality Modeling	Level of geographic granularity	October
Geospatial Mapping	• Which indicators/relationships are highest priority to map and analyze? (To explore community-level energy inequities + relationship to socioeconomic disparities). • Are there any additional data sources we should be consulting?	October

ENERGY MODELING APPROACH

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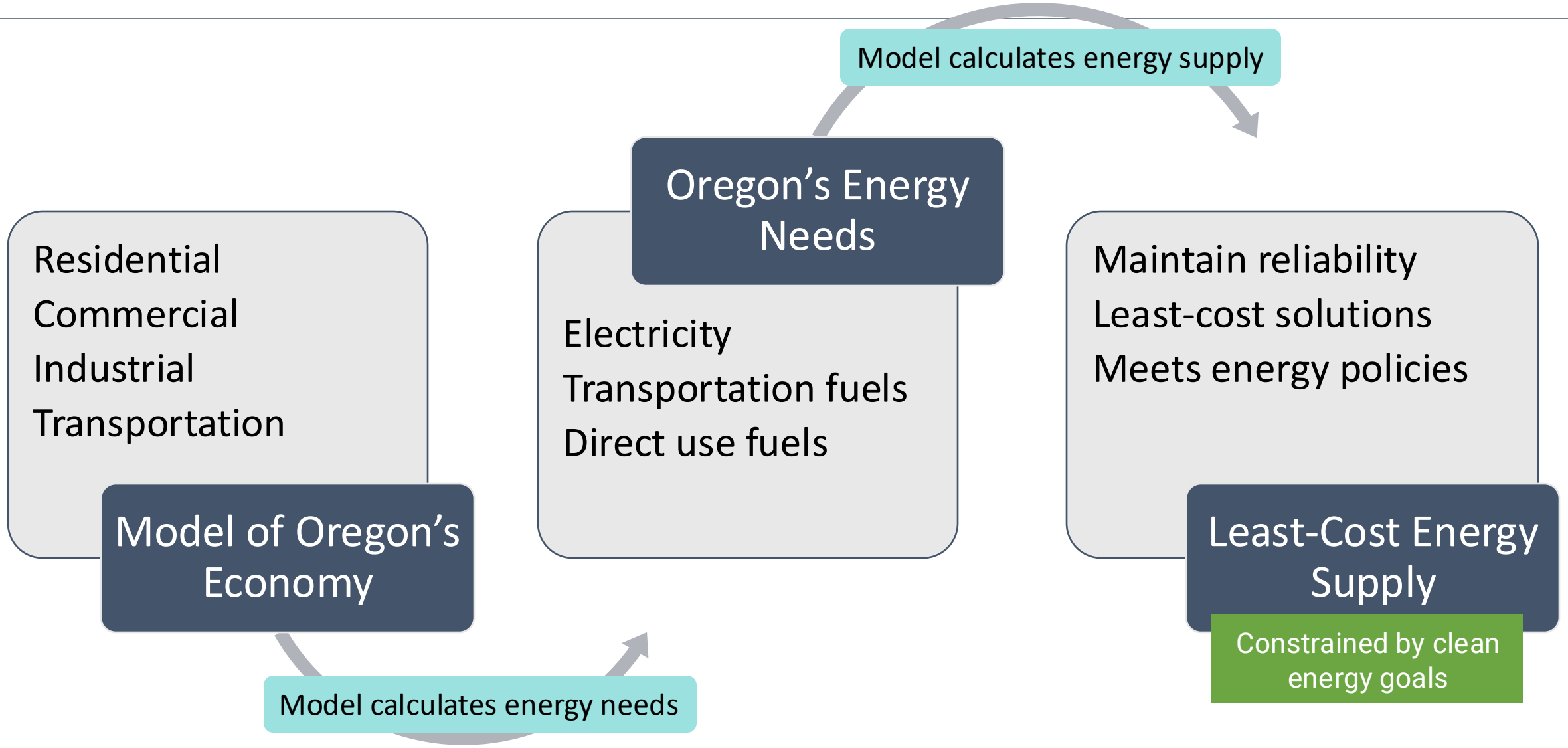
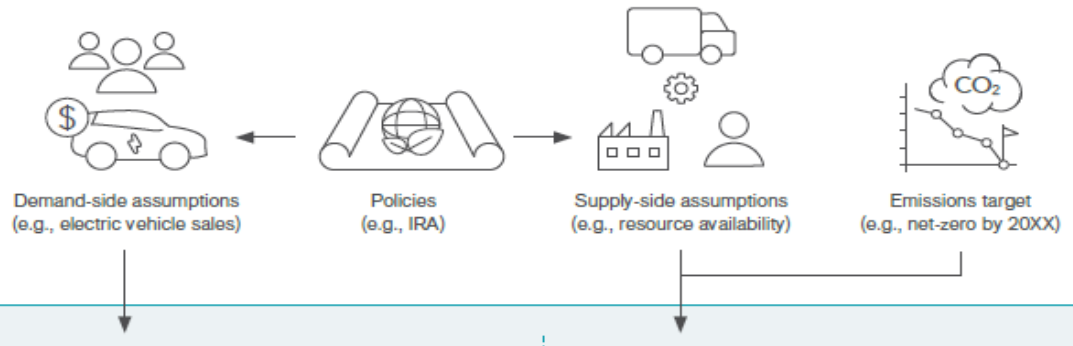
OVERVIEW OF ENERGY MODELING APPROACH

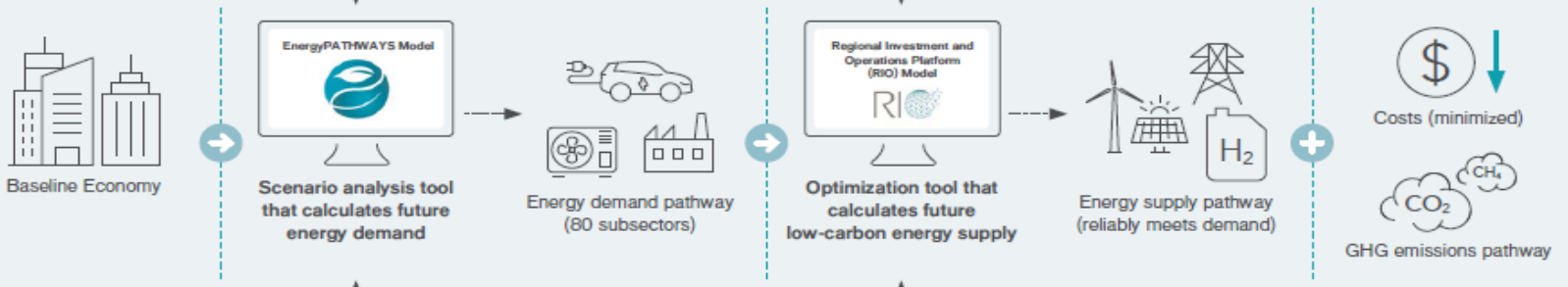


ENERGY MODELING DETAIL

Scenario Assumptions
Model incorporates assumptions about demand-side uses, clean energy policies and incentives, and supply-side resources.



Energy Modeling
Evolved Energy Research uses two models to calculate the least-cost way to provide energy under an emission target: Energy Pathways for demand and RIO for supply.



Best Available Data
Model incorporates relevant and up-to-date energy data from reputable sources, substituted with local data where possible.

Underlying demand data
- Economic subsectors
- Demand technology characteristics
- Capital, operating, and installation costs
- Hourly demand shapes
- Current technology stocks
- Energy service demands
- Fuels efficiencies (electricity, pipeline gas, diesel, etc.)
- Demand drivers (e.g., population)
- Geographies

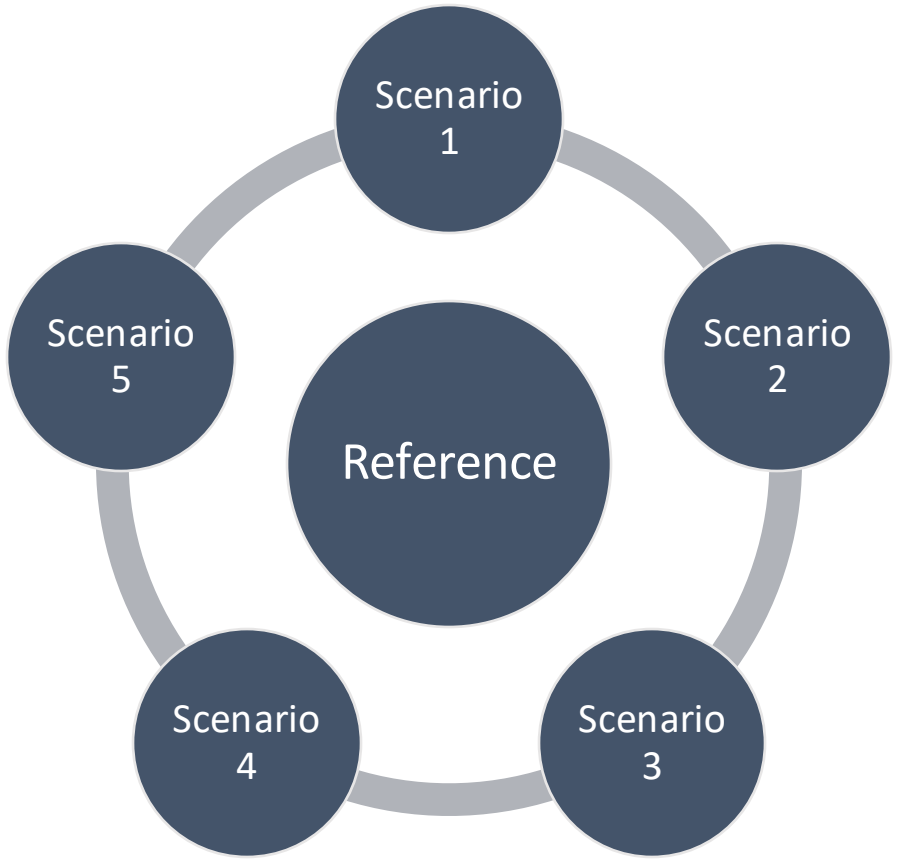
Underlying supply data
- Existing energy infrastructure
- Existing infratructure scheduled retirement
- Scheduled resource additions already committed
- Energy production and conversion infrastructure characteristics
- Energy transport, storage, and delivery options
- Capital, operating and maintenance, and installation costs
- Resource potentials
- Renewable resource production shapes
- Commodity costs and delivery costs
- Gas global warming potentials
- Land use
- Geographies

EVOLVED ENERGY RESEARCH

Clean Energy Transition Institute

ENERGY MODELING SCENARIO DEVELOPMENT

- Reference Scenario
  - Develop Oregon-specific database using best available sources
  - Define Reference Scenario assumptions
    - Starting point assumptions for stakeholders to react to and suggest changes
- Scenario Development
  - Each additional scenario *changes something* from the Reference Scenario
  - Develop set of interesting questions in collaboration with ODOE and stakeholders
    - What are the most pressing questions, uncertainties, and state priorities that will provide the most valuable information to policymakers?
  - Refine to final five scenarios to be modeled



ENERGY MODELING REFERENCE SCENARIO

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REFERENCE SCENARIO DISCUSSION FROM WORKING GROUPS TO DATE

TOPIC	REFERENCE SCENARIO STARTING POINT – OPEN FOR FEEDBACK
Space Heating (residential and commercial)	Assume existing policies play out. **Residential: 65% heat pump sales by 2030, 90% by 2040 (DEQ MOU)** **Commercial: ?**
Weatherization	Weatherize 95% of existing commercial and residential home envelopes by 2040 (suggested starting point based on Oregon Climate Action Commission analysis). **10-20% household energy savings (is this reasonable?)**
Distributed Energy Resources (DERs)	**Targets for rooftop solar + storage** (currently investigating, potential to use data from Northwest Power and Conservation Council)
Light-duty, Medium-duty, Heavy-duty Vehicles	- Light-duty: Advanced Clean Cars I / Advanced Clean Cars II; International Council on Clean Transportation (ICCT) forecasts based on Inflation Reduction Act (IRA) incentives - Medium- and heavy-duty: Advanced Clean Trucks through 2035, ICCT forecasts based on IRA incentives, **Post-2035?** (Discussions in Transportation Working Group)
Vehicle Miles Traveled (VMT)	**VMT per capita assumed to remain constant**, reflecting historical trends since 1990 - Oregon Department of Transportation Climate Strategy has target of 20% reduction in VMT per capita by 2050 - Note: The Energy Modeling does not explicitly model the impact of public transportation, changes in zoning, etc. A lower VMT could represent those changes

Note: *This is not a comprehensive list of all potential Reference Scenario assumptions. Reference Scenario assumptions are currently in development with ODOE and Working Groups and are still open for input.*

REFERENCE SCENARIO DISCUSSION FROM WORKING GROUPS TO DATE (CONT.)

TOPIC	REFERENCE SCENARIO STARTING POINT – OPEN FOR FEEDBACK
Siting and Land Use	- Using data on available land for renewables and transmission from **Oregon Renewable Energy Siting Assessment (ORESA) and/or The Nature Conservancy Power of Place-West** (discussions in Land Use Working Group) - Note: The Energy Modeling does not produce results at a granular geographic level indicating where a facility would be built
Energy Production	- Modeling assumes single balancing area across the West - Energy produced in Oregon can get exported elsewhere, and Oregon can import energy produced elsewhere

Pollution and Air Quality	In addition to the Air Quality modeling, the Energy Modeling has relevant elements:
	- Indoor: Assumptions about **electrification of cooking, heating, and other appliances** in both residential and commercial buildings.
	  - Note: Indoor air quality is not part of the Air Quality modeling
	- Outdoor: **Clean electricity** policy (HB 2021), transition to **electric vehicles**
	  - Note: Wildfire impacts/smoke not directly modeled but can be addressed separately in Energy Strategy report

Note: *This is not a comprehensive list of all potential Reference Scenario assumptions. Reference Scenario assumptions are currently in development with ODOE and Working Groups and are still open for input.*

REFERENCE SCENARIO DISCUSSION FROM WORKING GROUPS TO DATE (CONT.)

TOPIC	REFERENCE SCENARIO STARTING POINT – OPEN FOR FEEDBACK
Reliability	Enforced through constraints in the Energy Modeling - model builds resources to maintain reliability specific to the portfolio of resources it invests in
Climate Change Impacts	- Underlying datasets to determine service demand include changes based on climate change impacts (from Intergovernmental Panel on Climate Change source), including growth in number of air conditioning units installed - Hydro availability: Model currently incorporates low, medium, high hydro years; working with Northwest Power and Conservation Council to potentially incorporate their work on climate change impact on hydro availability.

Note: *This is not a comprehensive list of all potential Reference Scenario assumptions. Reference Scenario assumptions are currently in development with ODOE and Working Groups and are still open for input.*

ENERGY MODELING SCENARIOS

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DEFINING KEY QUESTIONS

Questions drive the shape of the Energy Strategy. What do we want to learn? And what can we learn with the tools that we have?

What are the most pressing questions, uncertainties, and state priorities that will provide the most valuable information to policymakers?

- Feedback requested from you
- "What if" format represents different policy choices or uncertainties

Examples:

- *What if developing new clean energy resources is delayed?*
- *What if consumer adoption of technologies like heat pumps and electric vehicles (EVs) occurs more slowly than expected?*
- *What if transmission expansion to access resources outside of Oregon is harder than expected?*

TRANSLATING "WHAT IF" QUESTIONS TO SCENARIOS

- e.g., What if consumer adoption of heat pumps occurs more slowly than expected?
  - Reference Scenario: 100% sales of heat pumps by 2035
  - Scenario A: 50% sales of heat pumps by 2035 and through 2050

- e.g., What if transmission expansion to access resources outside of Oregon is harder than expected?
  - Reference Scenario: Relatively unconstrained transmission build
  - Scenario B: No transmission expansion outside of Oregon

WHAT IF SCENARIO IDEAS FROM WORKING GROUPS

- What if electrification of transportation and heating is delayed?
- What if there is much more energy efficiency, distributed energy resources, and load flexibility?
- What if natural gas continues to be used in buildings?
- What if transmission can not be built in Oregon?
- What if nuclear power were allowed to be built in Oregon?
- What if there were more load growth from data centers and cryptocurrency mining?
- What if hydrogen end-use markets do not develop as quickly as anticipated? What if hydrogen is more expensive than anticipated?
- What if Oregon sets a more ambitious economy-wide greenhouse gas emissions target?

Feedback requested: Which of these scenario ideas are highest priority? What additional scenarios would you add to the list?

FUTURE ENGAGEMENT

How do you want to engage?

- ❑ Topic-specific meetings in September and October
- ❑ Office Hours
- ❑ Policy Working Group
- ❑ Something not named here

NEXT STEPS

- Next meeting: August 22, 1:00 – 3:00
- Focus of next meeting:
  - All Energy Strategy Working Groups meet for final summary

OPPORTUNITIES FOR FURTHER ENGAGEMENT

Provide Written Public Comment

- Written public comment can be submitted at: https://odoe.powerappsportals.us/en-US/energy-strategy/
- Written public comment is open until August 31

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Thank you

RESOURCES:

Project page: https://www.oregon.gov/energy/Data-and-Reports/Pages/Energy-Strategy.aspx

ODOE's website: www.oregon.gov/energy

Contact us: energy.strategy@energy.Oregon.gov