



OREGON  
DEPARTMENT OF  
ENERGY

# Charting a Course for Oregon's Energy Future

Oregon Global Warming Commission  
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# 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

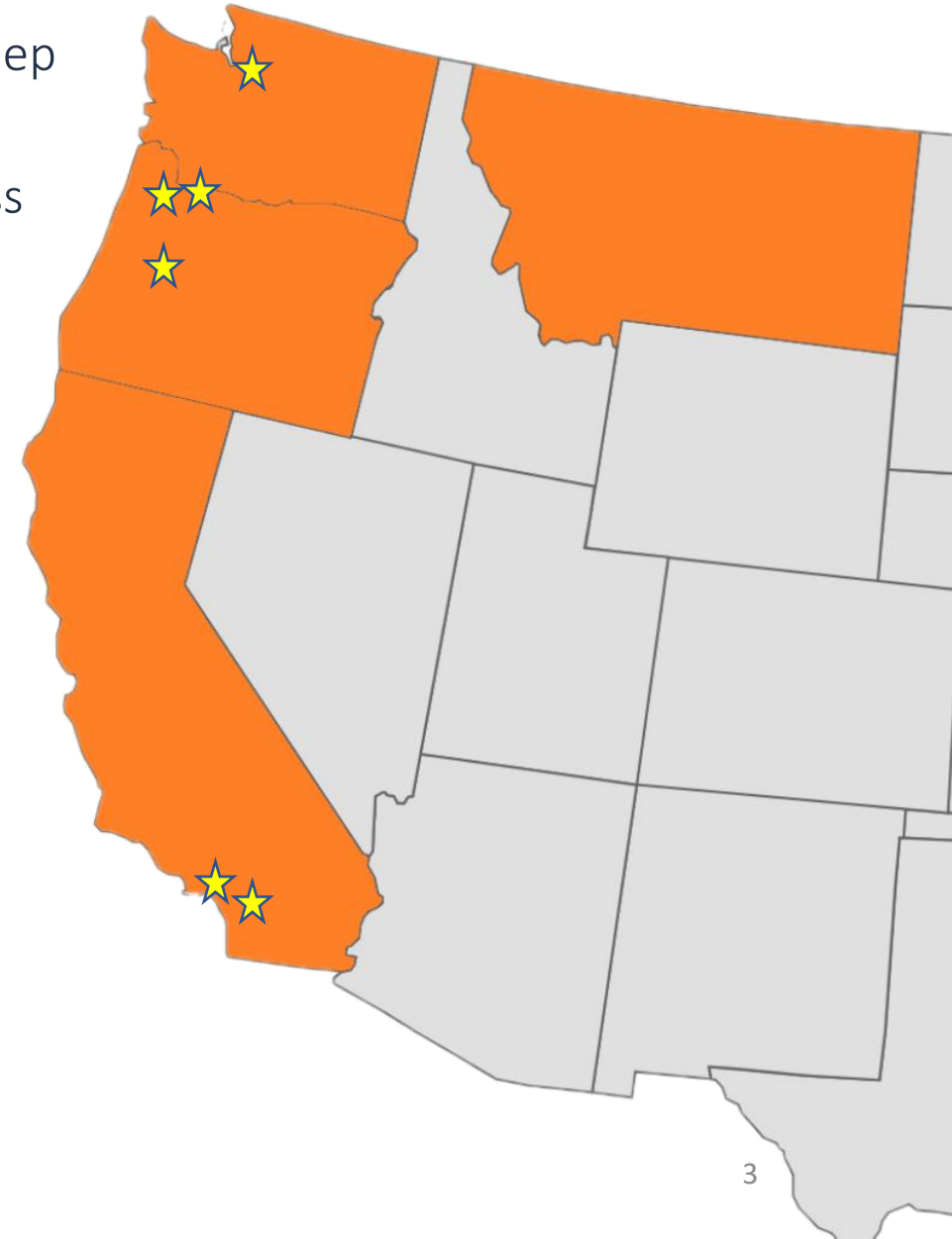
**Charting a  
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## Part I: Introduction

- What will it take to achieve economywide deep decarbonization and 100% clean energy?
- We reviewed 20 technical studies from across the country (mostly the west)

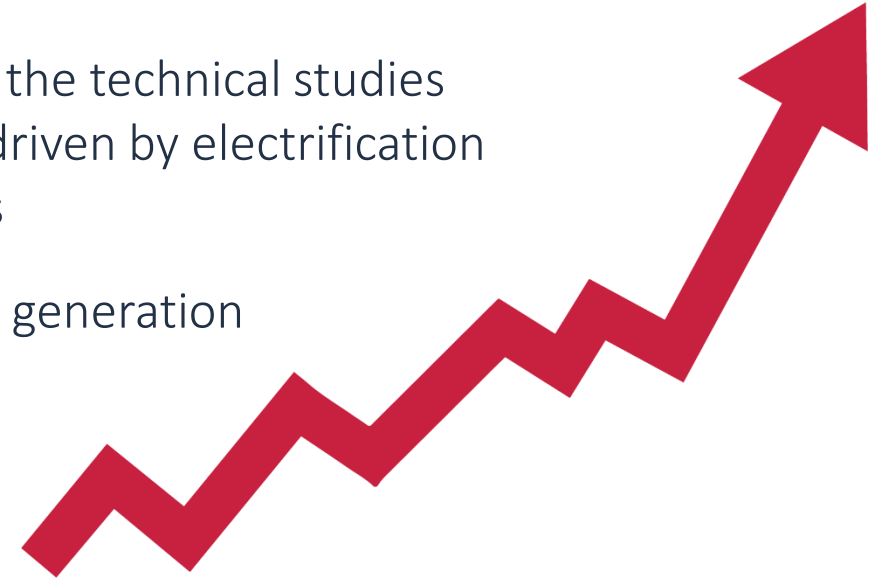
### Key Findings:

- Achieving these policies is possible!
- Four pillars of decarbonization identified:
  - energy efficiency,
  - electrification of end uses,
  - cleaner electricity, and
  - develop low-carbon fuels
- There are multiple pathways to achieve policies by mid-century, each with its own tradeoffs



## Part II: Electric Sector

- Growing the electric sector: Consensus in the technical studies that demand for electricity will increase, driven by electrification of vehicles and some natural gas end uses
- Cleaning the electric sector: Existing fossil generation will also need to be replaced



### Key Findings:

- Energy efficiency continues to play an important role
- Significant amount of new renewable generation required (likely in the tens of gigawatts in Oregon)
- Need to balance tradeoffs involved with clean energy choices—land use impacts, fish and wildlife concerns, total costs, and more

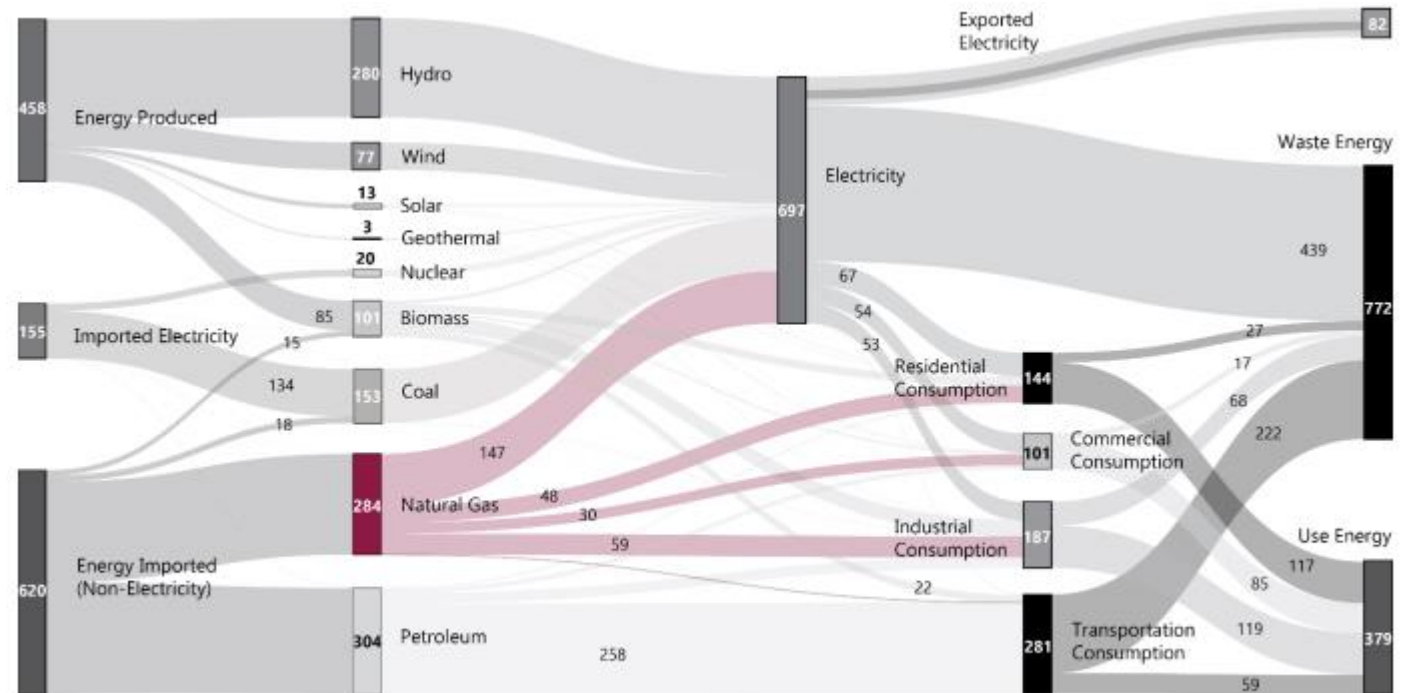
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## Part III: Natural Gas Sector

- Many studies find that it is most cost-effective to achieve decarbonization policies by reducing or eliminating a lot of current uses of natural gas—such as for electric generation and for many heating applications
- Strategic use of gas: In other instances, the continued use of gas resources may prove the most cost-effective path to achieving clean energy policies

### Key Findings:

- Many studies identify a continued need for some dispatchable gas resources
- To achieve policy targets, the gas will need to become cleaner over time by using RNG, carbon capture, or renewable H2



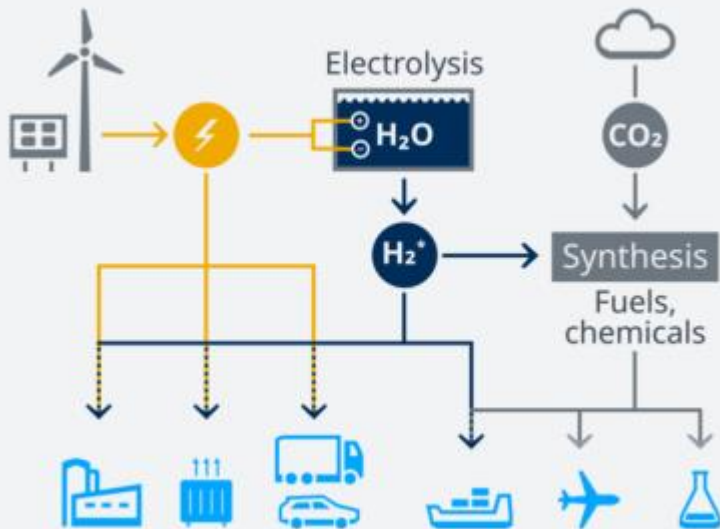
Numbers are in trillions of British thermal units.

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### Part IV: Transportation Sector

- Electrification: Electrifying road vehicles – passenger vehicles, trucks, and buses – is a key element of most deep decarbonization studies. Many studies indicate that sales of new passenger vehicles will need to be all electric by 2035 to achieve significant decarbonization by 2050.

#### Power-to-x: carbon-neutral fuels



Source: DW | \*H<sub>2</sub> = hydrogen

©DW

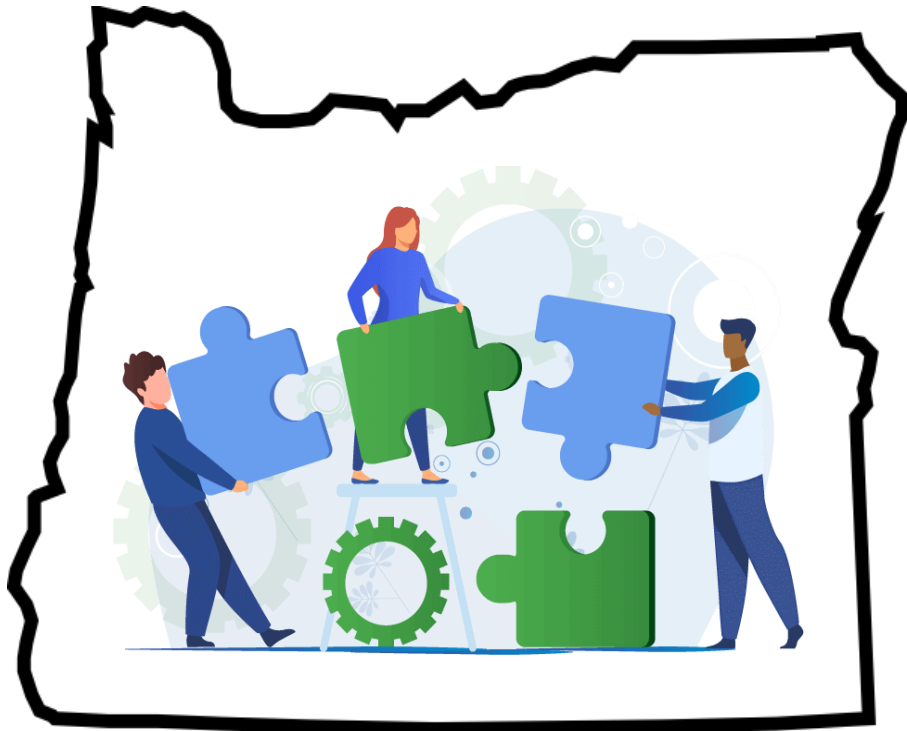
- Equity: A transition to clean transportation requires thoughtful deliberation and robust engagement with industry, communities, drivers, and governments. There is an opportunity to build a more equitable transportation system from the ground up.

#### Key Findings:

- Electrify as many vehicles as possible as soon as possible.
- Use lower-carbon liquid fuel alternatives, such as renewable diesel, for vehicles that cannot be electrified in the near-term.
- Plan for zero-carbon liquid fuel alternatives to decarbonize vehicles that cannot be electrified.

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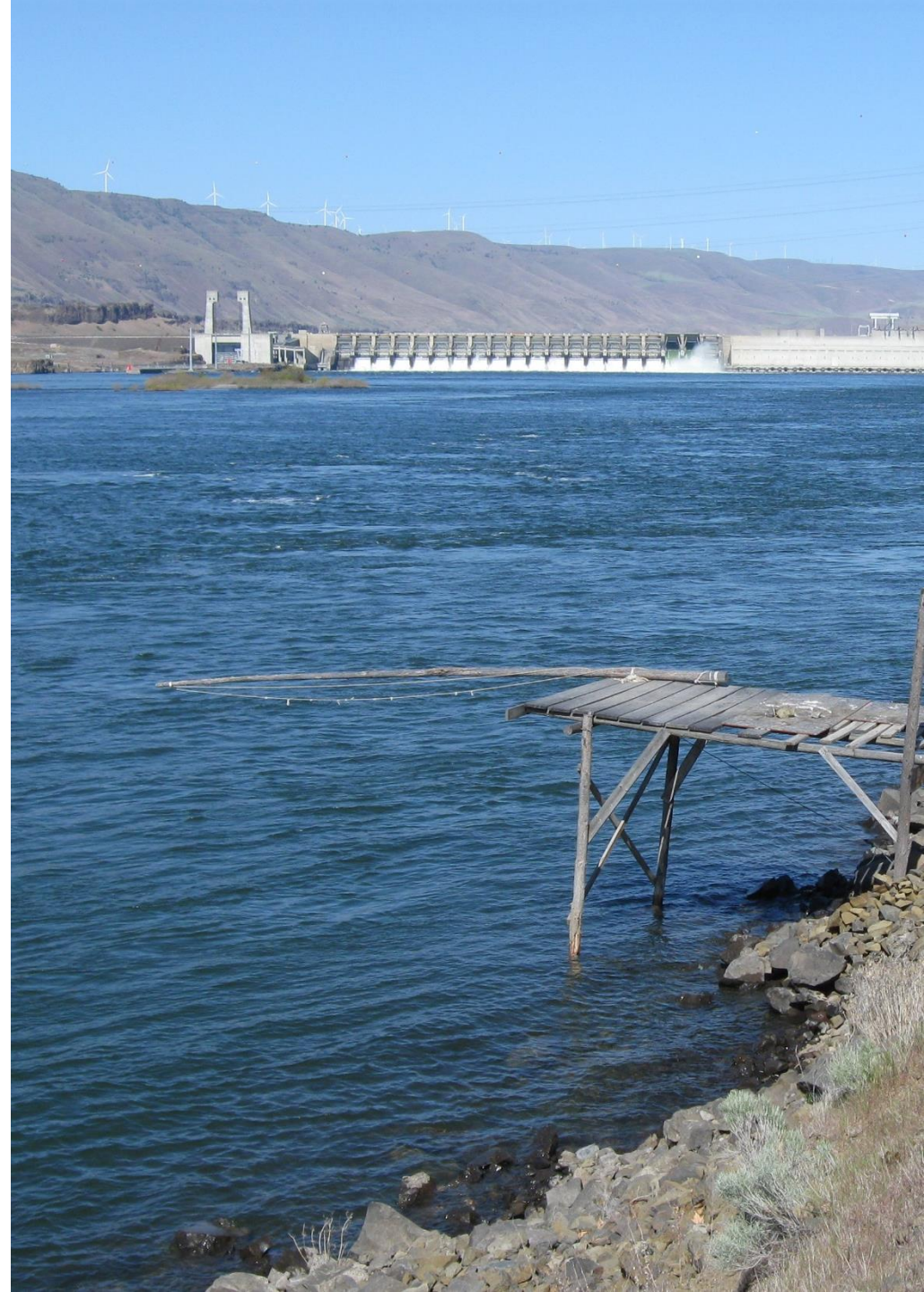
## Part V: Pathway Tradeoffs



- The costs of failing to achieve mid-century clean energy and climate policy goals fall inequitably across Oregonians
- Technical analysis shows us that there are multiple technology pathways to achieve mid-century policy goals
- Significant choices remain, and the tradeoffs of those choices must be carefully considered
- Can Oregonians work together to chart an intentional course for the state's energy future that balances these tradeoffs?

# 2022 Report Recommendation

The state would benefit from an **energy strategy** to align policy development, regulation, financial investment, and technical assistance in support of an intentional transition to a clean energy economy. This strategy could identify specific pathways to meet the state's policy goals that maintain affordability and reliability, strengthen the economy, and prioritize equity while balancing tradeoffs to maximize benefits and minimize harms. Ultimately, this strategy could be used to **make informed decisions and motivate action.**





# HB 3630: COMPREHENSIVE STATE ENERGY STRATEGY FOR OREGON

Directs ODOE to develop a comprehensive state energy strategy identifying pathways to achieve Oregon's energy policy objectives

- Must be informed by stakeholder perspectives
- Must draw from existing resource plans, energy-related studies, and analyses

State energy strategy must account for a variety of factors, such as:

- Costs, efficiencies, feasibility, and availability of energy resources and technologies
- Economic and employment impacts
- Energy burden, affordability, environmental justice, and community impacts and benefits
- Land use and natural resource impacts and considerations
- Energy resilience, security, and market implications

# OREGON ENERGY STRATEGY - MAIN ELEMENTS

Summary of the Energy Strategy and pathways to achieve Oregon's policy objectives

Description of stakeholder engagement and how stakeholder perspectives informed the strategy

Recommendations of policy options

# STATE ENERGY STRATEGY STAKEHOLDER ENGAGEMENT

## Stakeholder Input, Coordination, and Engagement

- Directs ODOE to engage with state agencies, Tribes, and stakeholders representing a diverse range of interests, perspectives, expertise, education, socioeconomic backgrounds, and communities from across the state
- Authorizes ODOE to convene an advisory work group to inform the development of the state energy strategy and stakeholder engagement
- Requires strategy to be informed by stakeholder perspectives



# STATE ENERGY STRATEGY TECHNICAL IMPLEMENTATION

- Technical scenario modeling
- Cost and benefits analysis
- Coordination and engagement
- Pathway refinement
- Report and recommendations



# STATE ENERGY STRATEGY POLICY RECOMMENDATIONS



The policy recommendations will be developed:

- Through engagement with sister agencies and stakeholders
- In collaboration with state agencies to ensure alignment with existing policies and programs
- Building on the findings of the technical analysis

What are the likely **costs and benefits** from this transition?



What is the **scale and pace of change** needed to achieve an economy-wide clean energy transition in Oregon by mid-century?

## WHAT DO WE WANT OUR CLEAN ENERGY FUTURE TO LOOK LIKE, AND HOW DO WE WANT TO GET THERE?

How can we **balance important considerations** around land use and wildlife impacts, community energy resilience, affordability, and the need for new transmission?



How can we ensure that the transition does not hurt our most vulnerable communities, and find ways to **share benefits statewide**?





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# Questions/Comments?

## RESOURCES:

Report online: [energyinfo.oregon.gov/ber](https://energyinfo.oregon.gov/ber)

ODOE's website: [www.oregon.gov/energy](https://www.oregon.gov/energy)

Contact us/request a presentation:  
[odoe.powerappsportals.us/ber-comment/](https://odoe.powerappsportals.us/ber-comment/)