Oregon Department of ENERGY

Electricity Demand in Oregon House Interim Committee on Climate, Energy, and Environment

Janine Benner, Director Edith Bayer, Energy Policy Team Lead

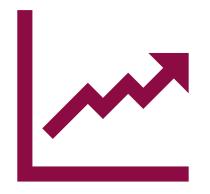
September 23, 2024



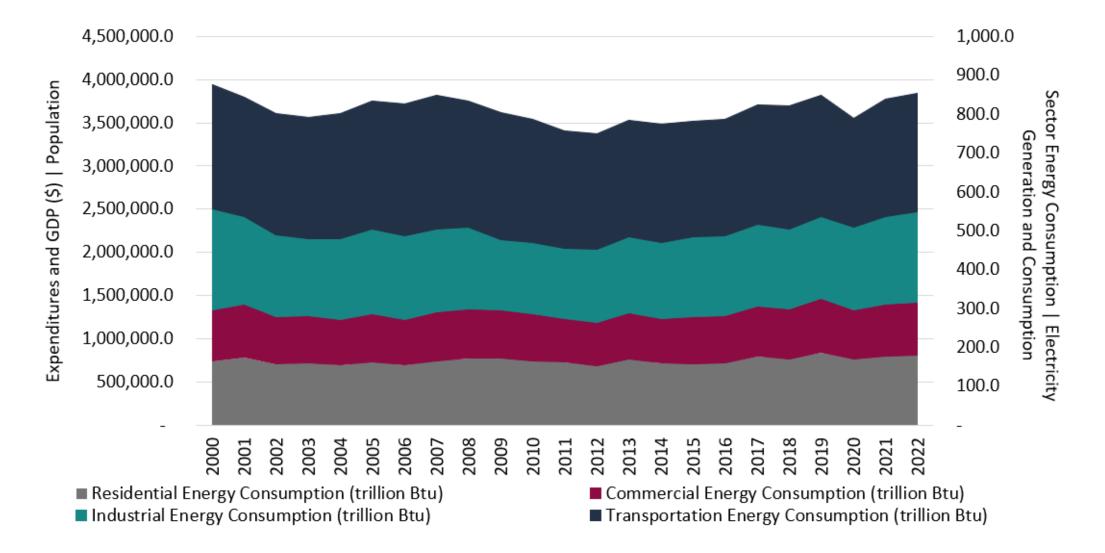


FORECASTING FUTURE DEMAND IN THE REGION

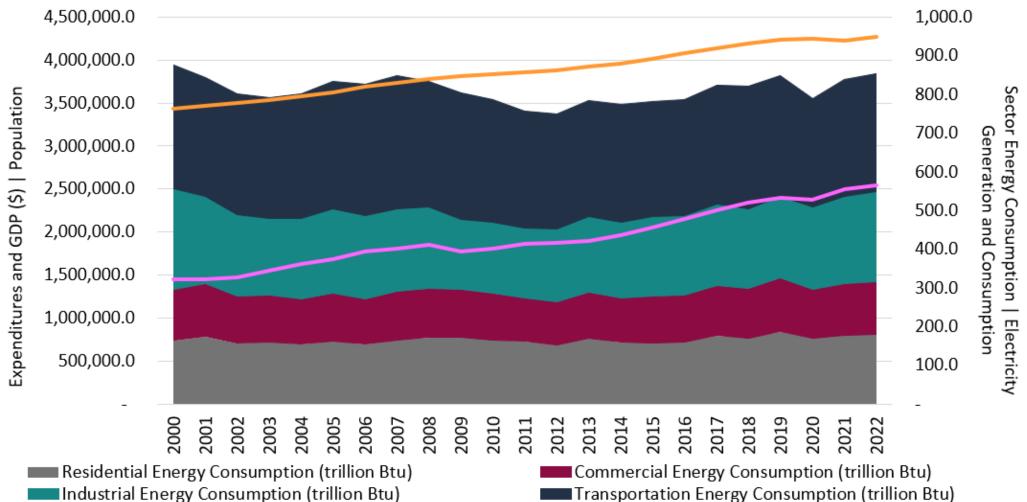
- Pacific Northwest Utilities Conference Committee (May 2024)
 - Anticipates a 30% increase in demand over the next decade
- Northwest Power and Conservation Council (August 2024)
 - Anticipates 2,400-4,000 MW of load growth from the tech sector
- <u>Bonneville Power Administration</u> (August 2024)
 - Anticipates that the region will have a growing deficit in capacity over the next decade
- <u>Western Electricity Coordination Council</u> (report forthcoming)
 - Reports that utilities plan to double investment in generation over the next decade



ENERGY DEMAND OVER TIME Sector Consumption



ENERGY DEMAND OVER TIME Population & GDP

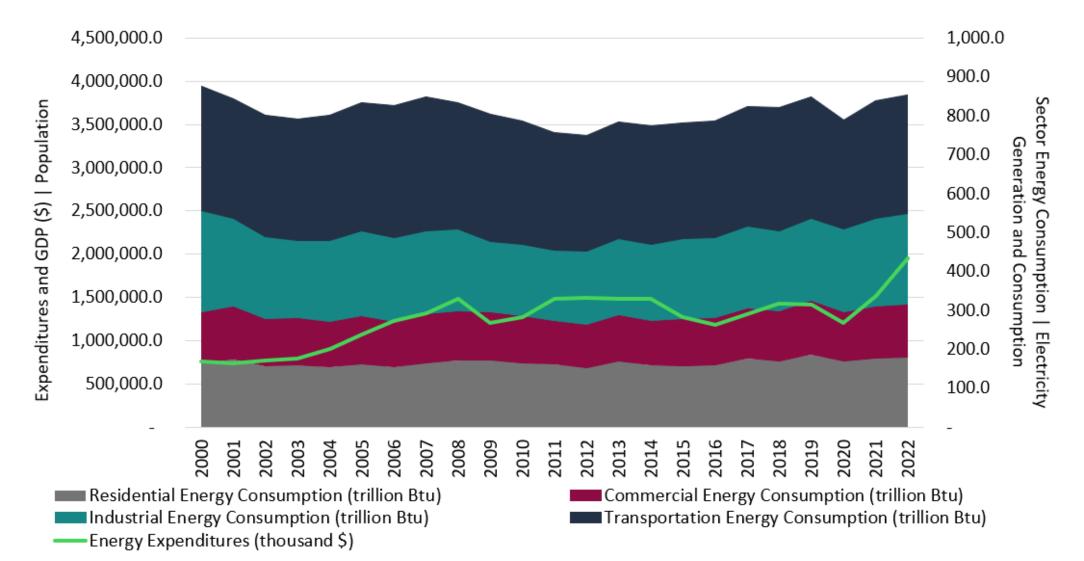


Gross Domestic Product (hundred thousand \$)

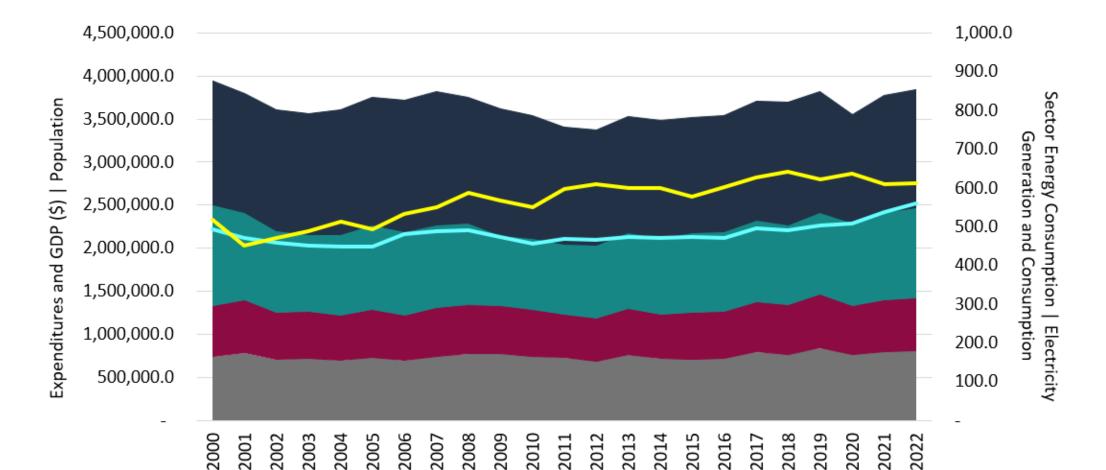
Industrial Energy Consumption (trillion Btu) — Population (hundred people)

4

ENERGY DEMAND OVER TIME Expenditures

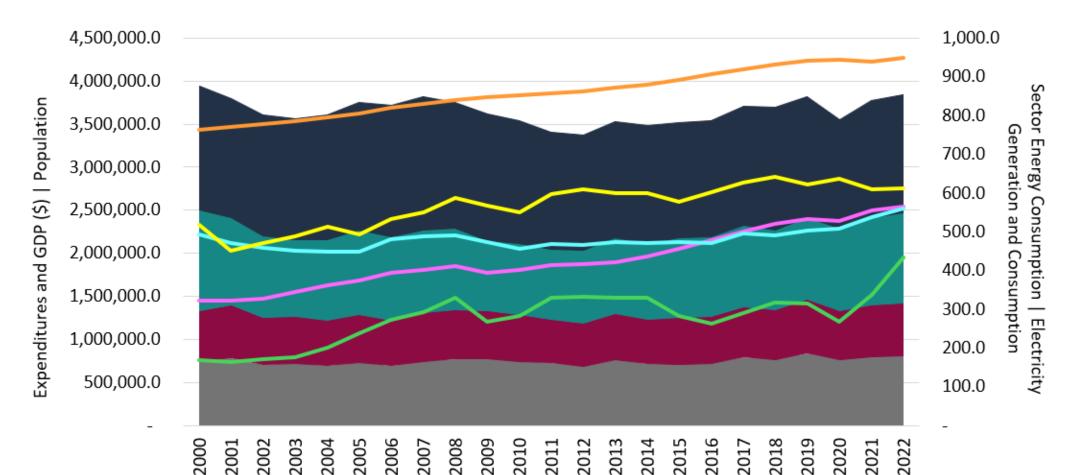


ENERGY DEMAND OVER TIME Electricity Generation & Consumption



Residential Energy Consumption (trillion Btu) Industrial Energy Consumption (trillion Btu) Electricity Generation (hundred thousand MWh)

ENERGY DEMAND OVER TIME



Residential Energy Consumption (trillion Btu)
Industrial Energy Consumption (trillion Btu)
Population (hundred people)
Energy Expenditures (thousand \$)
Electricity Generation (hundred thousand MWh)



The regional forecasts point to a variety of factors that contribute to an increase in demand for electricity. Some of these factors are evident now; others are anticipated in the near future. These factors are not placed in any intentional order.



- Growth in the technology and manufacturing sectors
 - Data centers
 - Semiconductor manufacturing
- Increased use of heating and cooling as more extreme weather patterns emerge
- Anticipated regional population growth
- Electrification
 - Transportation

What does rising demand mean for Oregon?

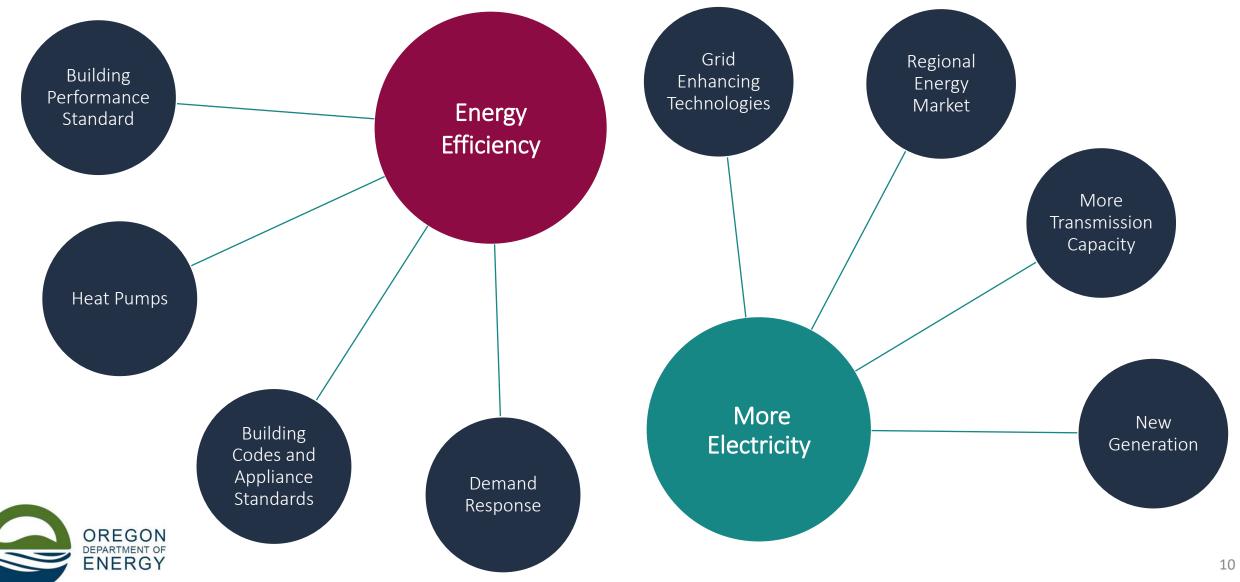
- It's not bad news and these are all *forecasts*; it's a chance to plan and act so that we are prepared if the forecasts are correct
- We need to make better use of the existing grid and our current power supply
- We need more power generation and transmission

What are the risks of not preparing for these forecasted increases?

- Higher energy costs
- Decreased reliability
- Limited economic development opportunities

9

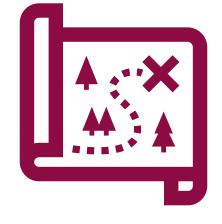
TOOLS TO ADDRESS INCREASING DEMAND



THE OREGON ENERGY STRATEGY

Assessment of pathways and tradeoffs to guide policymakers

- Economy-wide modeling to uncover strategies that can help manage and mitigate uncertainty
- Will incorporate higher data center growth scenario from Pacific Northwest Power and Conservation Council
- Considers the costs and benefits of different pathways to help shape a reliable, affordable, and equitable clean energy transition







Questions?

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