

A Just Transition to a Clean Energy Future

Where we are and the path ahead

Silvia Tanner
Tim Lynch



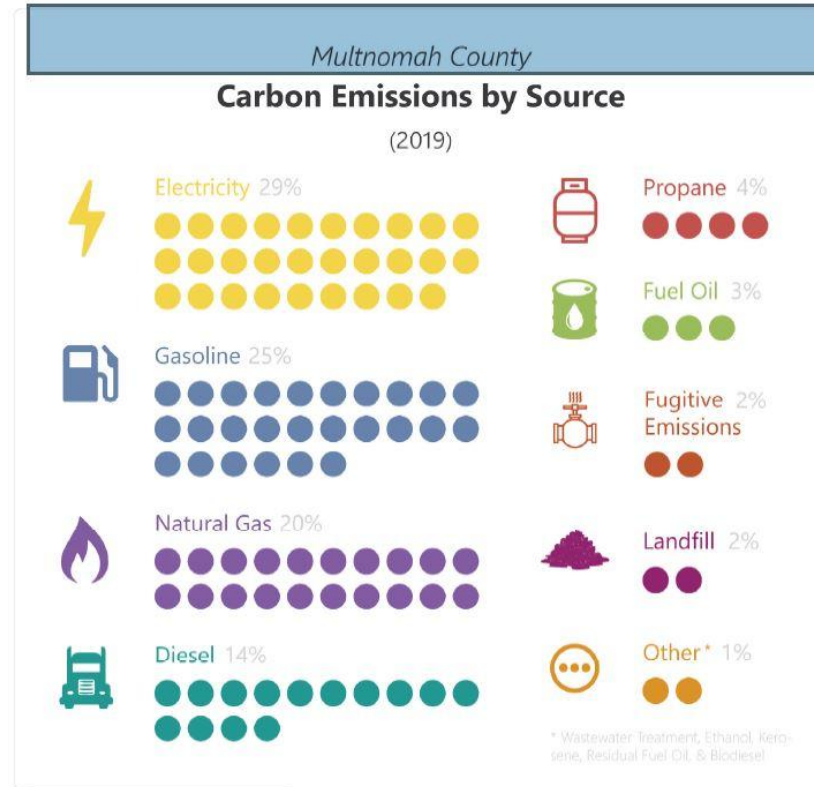


We are seeing the impacts

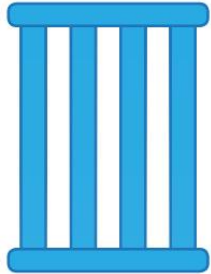


Latest IPCC report: On a path to likely exceed 1.5°C during 21st century (based on COP 26 2030 commitments)

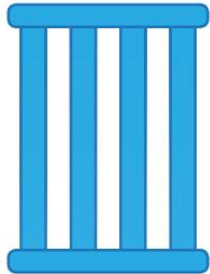
At a local level: Emissions



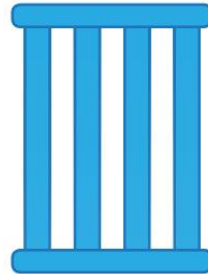
The Four Pillars



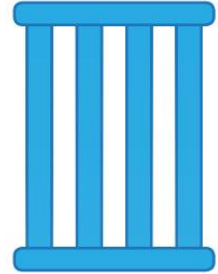
**JUST
TRANSITION**



EFFICIENCY



ELECTRIFICATION



**UTILITY
DECARBONIZATION**

At a local level: Our energy utility service



Check your utility's electricity mix [here](#)

PGE



Explore

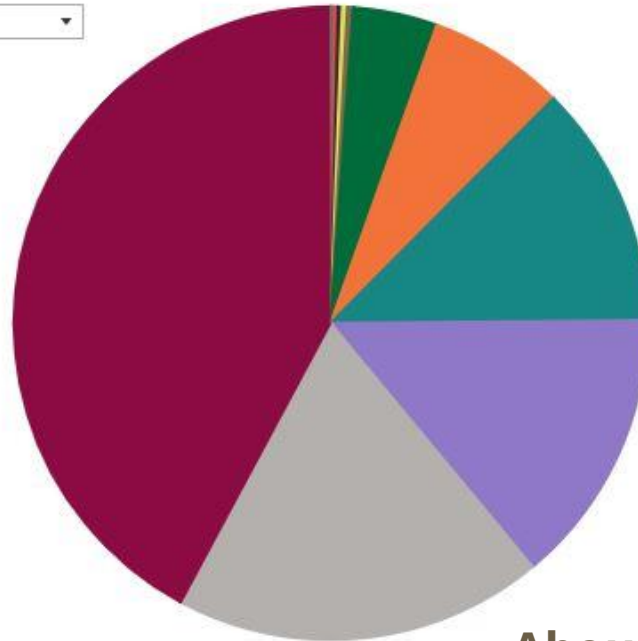
Electric Utility List

Portland General Electric

Resource

- Nuclear
- Petroleum
- Other Biogenic
- Waste
- Biogas
- Solar
- Biomass
- BPA Supplied^
- Wind
- Hydro
- Market Purchases*
- Coal
- Natural Gas

Resource Breakdown for 2019



Reported Total Thousand
MWh

18,132

Resource Mix Percentage

Nuclear	0.00%
Petroleum	0.08%
Other Biogenic	0.13%
Waste	0.16%
Biogas	0.21%
Solar	0.26%
Biomass	0.30%
BPA Supplied^	4.31%
Wind	6.99%
Hydro	12.41%
Market Purchases*	14.12%
Coal	18.86%
Natural Gas	42.16%
Grand Total	100.00%

About 61% fossil fuel



Pacific Power



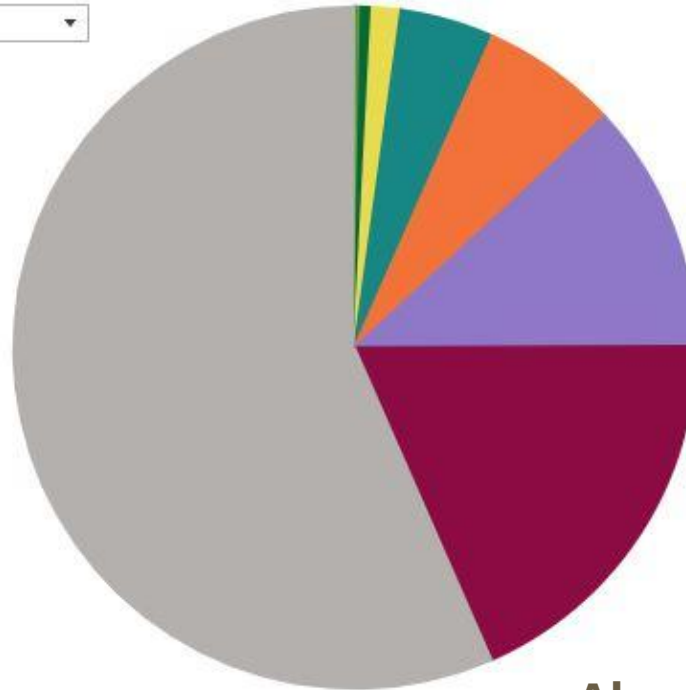
Electric Utility List

Pacific Power/PacifiCorp

Resource

- Other Non-Biogenic
- Biomass
- Petroleum
- Geothermal
- BPA Supplied^
- Solar
- Hydro
- Wind
- Market Purchases*
- Natural Gas
- Coal

Resource Breakdown for 2019



Reported Total Thousand MWh

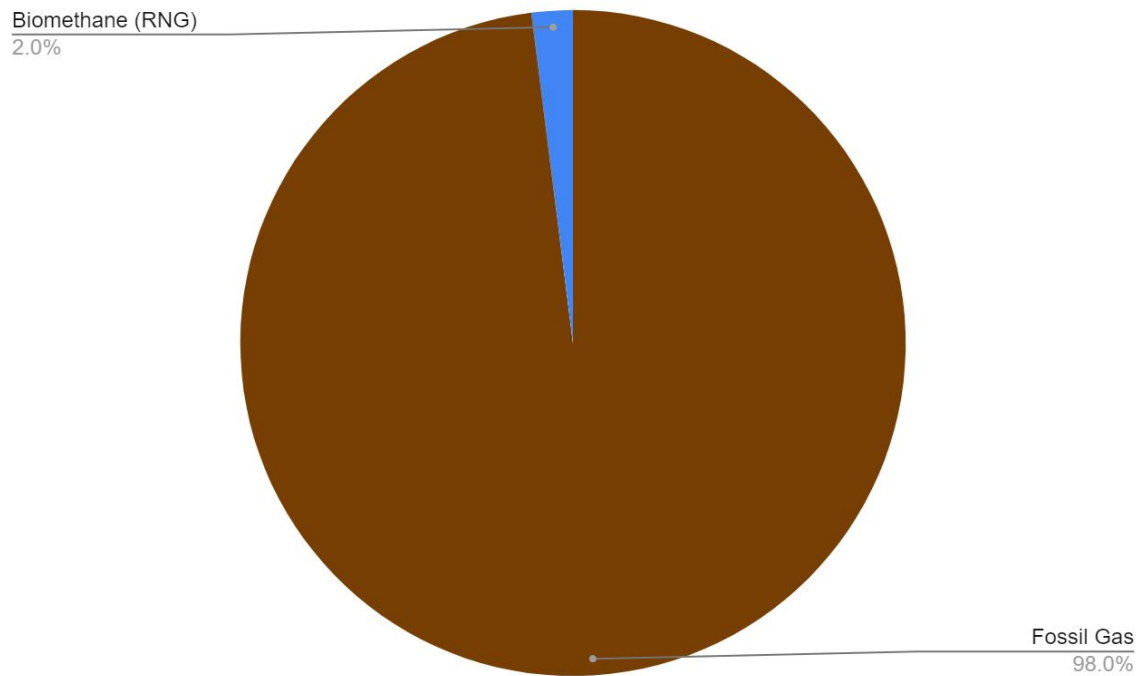
14,344

Resource Mix Percentage

Other Non-Biogenic	0.00%
Biomass	0.04%
Petroleum	0.05%
Geothermal	0.22%
BPA Supplied^	0.51%
Solar	1.35%
Hydro	4.45%
Wind	6.49%
Market Purchases*	11.82%
Natural Gas	18.49%
Coal	56.57%
Grand Total	100.00%

About 75% fossil fuel

NW Natural



Multnomah County's clean energy goals



At a local level: Energy burden

MULTNOMAH COUNTY

November 1, 2020



COUNTY SEAT: PORTLAND

Area (square miles): **435**

Population (2018): **790,670**

Black, Indigenous, and People of Color Population Share: **30%**

Households: **321,968**

Regional Typical Annual Household Income: **\$60,286**

POVERTY & ENERGY BURDEN

Energy Burdened* Households: **24%**

Federal Poverty Level (family of three): **\$21,720**

200% Federal Poverty Level: **\$43,440**

Annual Energy Burden Gap**: **\$541**



At a local level: Energy injustice

TABLE 3: ETHNIC AND RACIAL DEMOGRAPHIC INTERVIEWS

	All Solar
Latinx	4.8%
Asian	3.0%
Black or African American	2.1%
White	89.2%
Native Hawaiian or other Pacific Islander	0.3%
American Indian or Alaskan Native	0.6%
More than one race	0.0%

nature
sustainability

ANALYSIS

<https://doi.org/10.1038/s41893-018-0204-z>

Disparities in rooftop photovoltaics deployment in the United States by race and ethnicity

Deborah A. Sunter ^{1,2,3,4*}, Sergio Castellanos ^{3,4,5,6*} and Daniel M. Kammen ^{3,4,7}

The rooftop solar industry in the United States has experienced dramatic growth—roughly 50% per year since 2012, along with steadily falling prices. Although the opportunities this affords for clean, reliable power are transformative, the benefits might not accrue to all individuals and communities. Combining the location of existing and potential sites for rooftop photovoltaics (PV) from Google's Project Sunroof and demographic information from the American Community Survey, the relative adoption of rooftop PV is compared across census tracts grouped by racial and ethnic majority. **Black- and Hispanic-majority census tracts show on average significantly less rooftop PV installed.** This disparity is often attributed to racial and ethnic differences in household income and home ownership. In this study, significant racial disparity remains even after we account for these differences. For the same median household income, black- and Hispanic-majority census tracts have installed less rooftop PV compared with no majority tracts by 69 and 30%, respectively, while white-majority census tracts have installed 21% more. When correcting for home ownership, black- and Hispanic-majority census tracts have installed less rooftop PV compared with no majority tracts by 61 and 45%, respectively, while white-majority census tracts have installed 37% more. The social dispersion effect is also considered. This Analysis reveals the racial and ethnic injustice in rooftop solar participation.

Multnomah County's Energy Justice Goals



How do we get there?

Multnomah County's Clean Energy Goals



100% of electricity needs by
2035

100% of energy needs by
2050

Multnomah County's Clean and Just Energy Goals



2% via community-based RE

Including low-income residents in social, economic, and environmental benefits

Prioritize recruitment of women and BIPOC communities in clean energy workforce

Partnership with OR tribes and native communities, communities of color, low-income communities to address environmental, economic, social inequities

Environmental Justice Resolution



Environmental justice (EJ) is the equal protection from and equitable distribution of environmental health hazards, burdens, *and benefits*.

Office of Sustainability to apply EJ lens in all relevant areas of our work.

How do we get there?

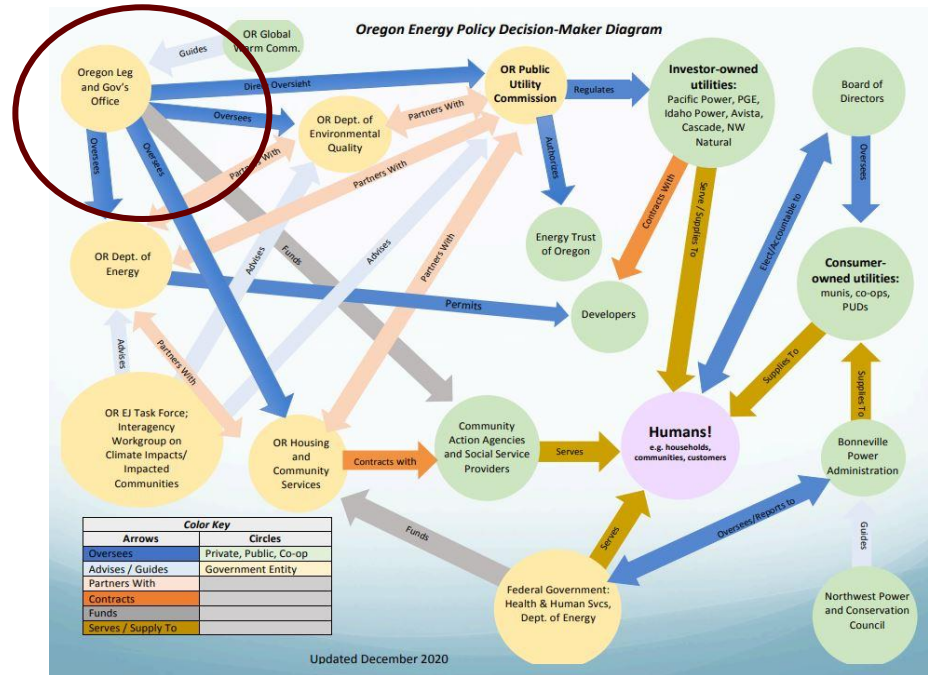


Federal policy

State policy

Local policy

State energy policy: The legislature



Credit: Heather Moline and Patty Rincon (NW Energy Coalition)

Who decides? It is complicated

Oregon Energy Policy: Electricity



2035: 100% of community-wide electricity needs with renewable energy

- Coal to Clean: 45% renewables
- 100% Clean Energy for All: 90% below baseline emissions*.

*Average annual GHG emissions for 2010-2012. Pacific Power, PGE, providers for large industrial/commercial customers

Oregon Energy Policy: Electricity



2050: 100% of community-wide energy needs with renewable energy

- Coal to Clean: 50% renewables
- 100% Clean Energy for All: 100% below baseline emissions level by 2040

Local governments can create programs.

Oregon Energy Policy: Energy Justice



- Justice is central to HB 2021 - possible due to EJ leadership
- Minimizing burden on EJ communities, and maximizing benefits to Oregon communities
- Engagement of EJ communities as utilities implement
- Grant program for community energy projects

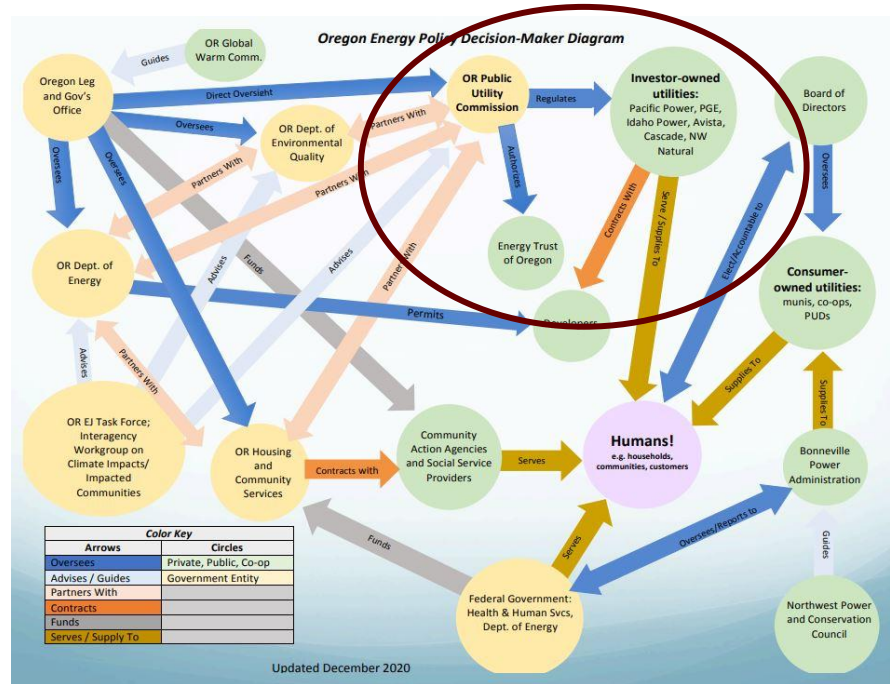
Oregon Energy Policy: Energy Justice

HB 2475 gives the PUC the authority to consider “differential energy burdens on low-income customers and other economic, social equity or environmental justice factors that affect affordability for certain classes of utility customers”



Procedural equity - funding for PUC participation

Agencies implement those laws



Who decides? It is complicated

Policy implementation: The Utilities

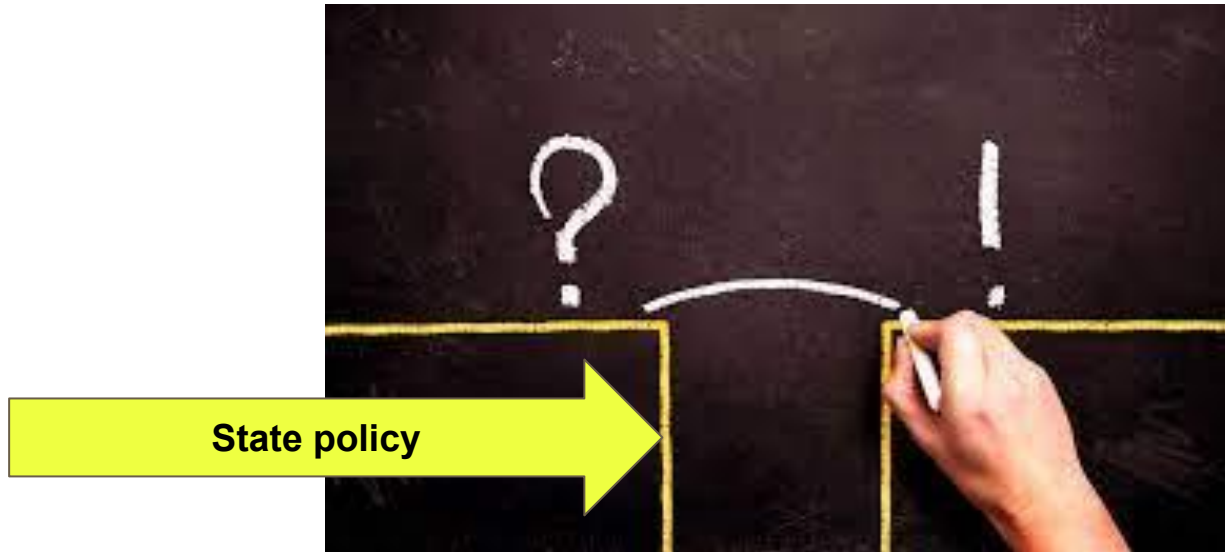


Check your utility's electricity mix [here](#)

Stakeholder processes

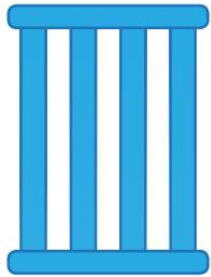


Multnomah County's Energy Justice Goals

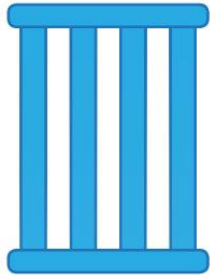


How do we get there?

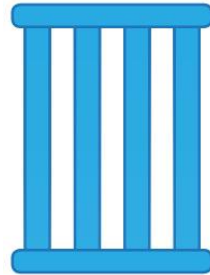
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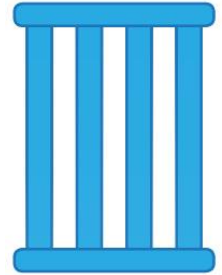
**JUST
TRANSITION**



EFFICIENCY

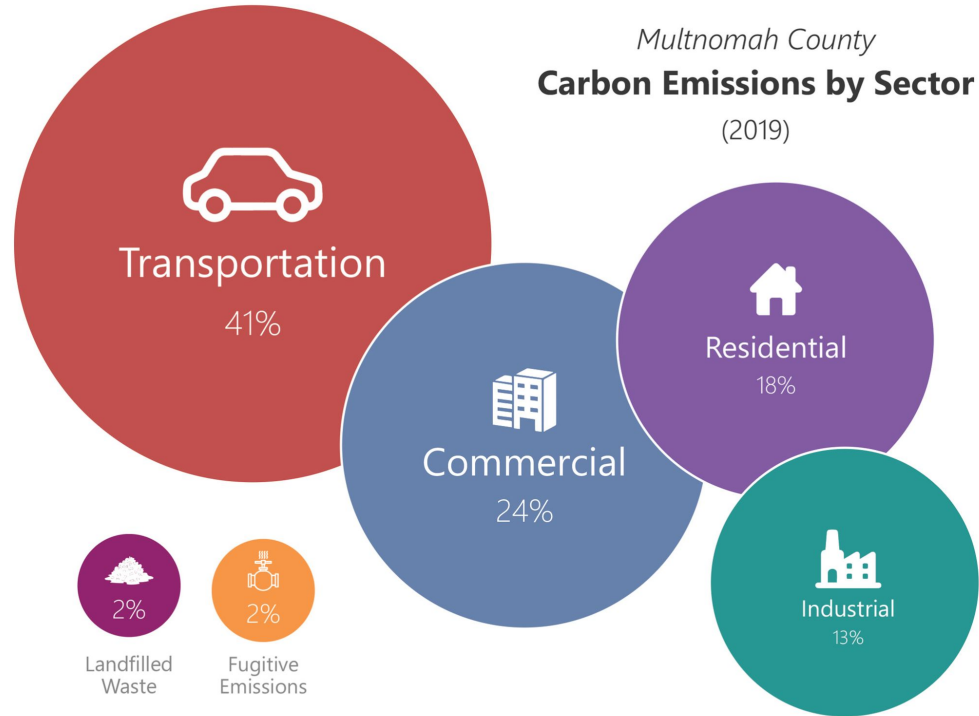


ELECTRIFICATION

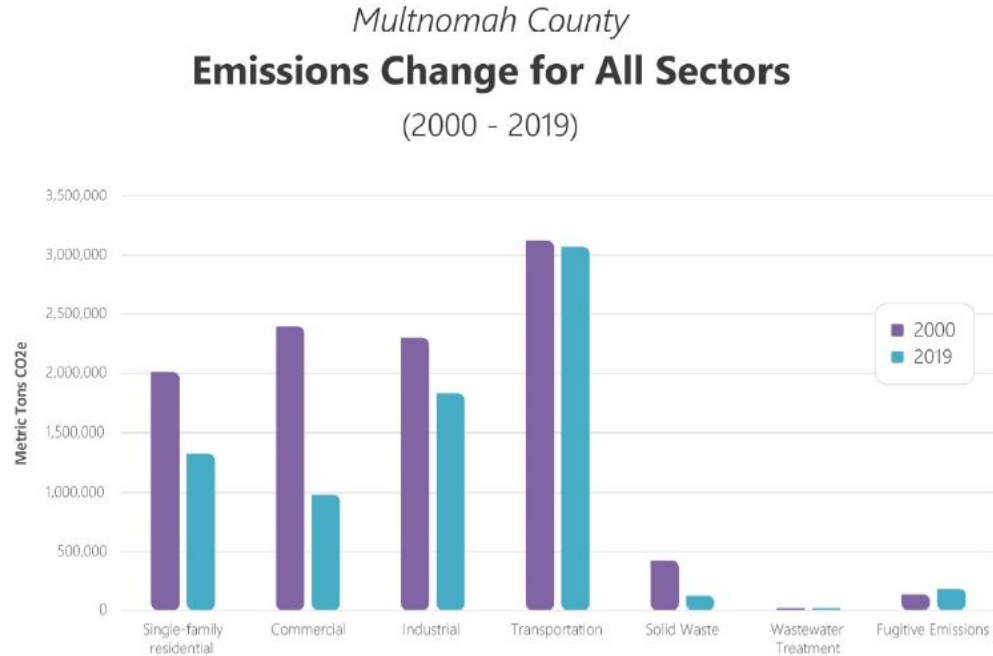


**UTILITY
DECARBONIZATION**

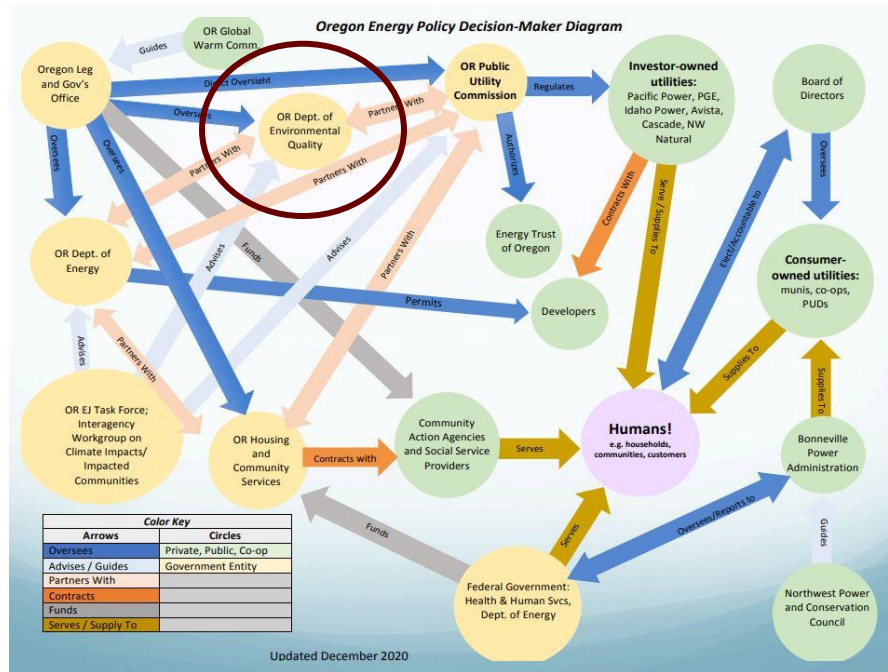
Decarbonization: Other Sectors



Decarbonization: Other Sectors



How do we get there? State energy policy



Credit: Heather Moline and Patty Rincon (NW Energy Coalition)

Who decides? It is complicated

Oregon Energy Policy: Clean Fuels Program

All about 'carbon intensity'

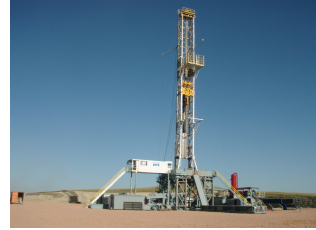


10% by 2025



25% by 2035

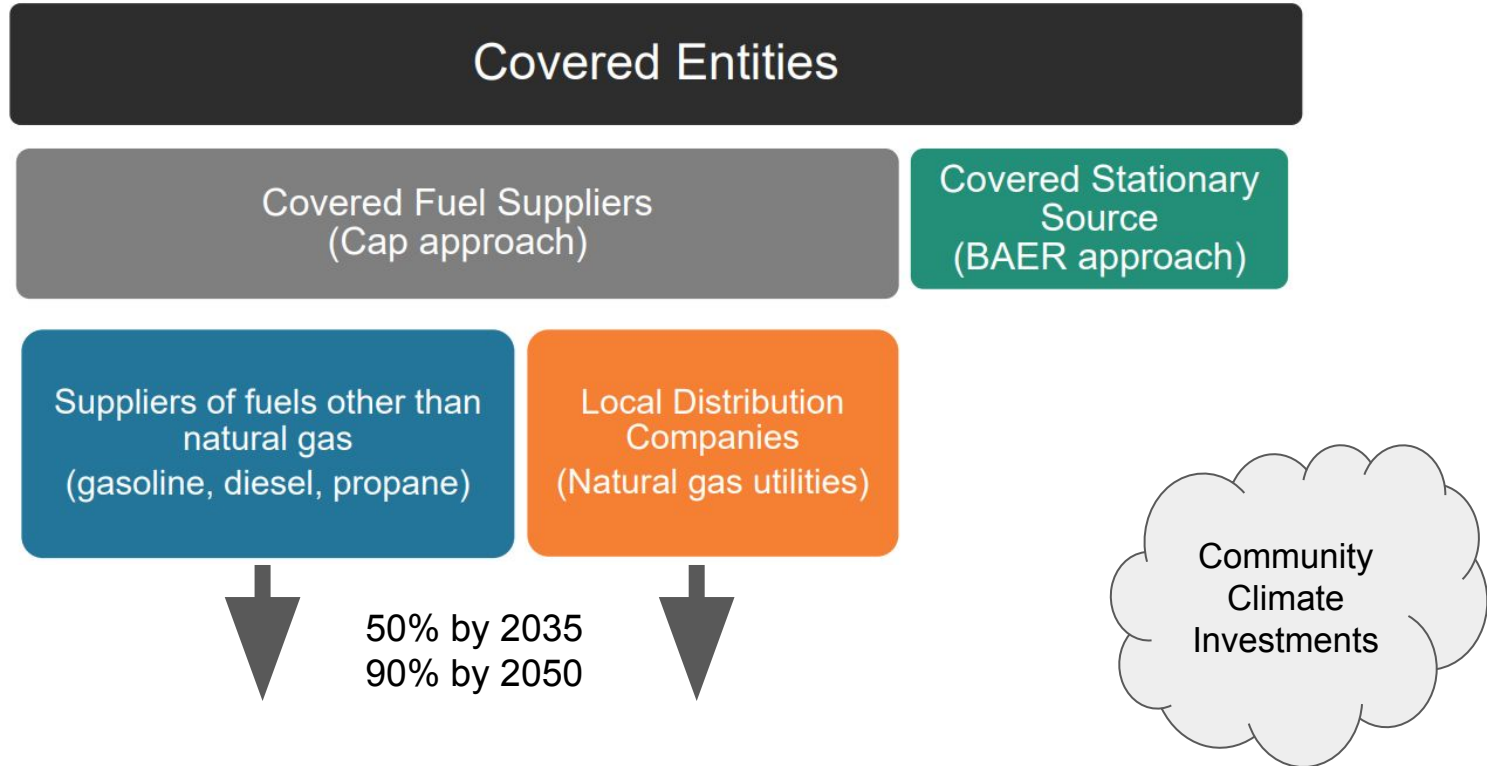
To move from



To



Oregon Energy Policy: Climate Protection Program



Environmental Justice: Co-pollutants



Energy Efficiency



Electrification & 'Smart' Grid



Resilience

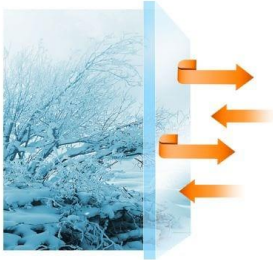


What can you do?



Use less energy

“the greenest electron is the one not used”



WARM IN THE WINTER
Heat-reflecting technology helps keep



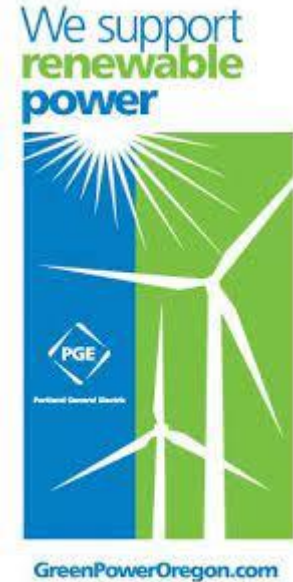
COOL IN THE SUMMER
Sun blocking technology helps keep you




EnergyTrust
of Oregon

Green your power

Voluntary renewables programs



Green your power

Community solar



1

Project Managers build and operate community solar projects.

2

Customers subscribe through a Project Manager to a portion of a community solar project.

3

Solar electricity from the project goes to the utility grid.

4

Every month, participants receive a credit on their utility bill for the electricity produced by their project.

Green your power

Make your own power



Flex your power

Organize and advocate



Questions?

