Oregon City/County Management Association

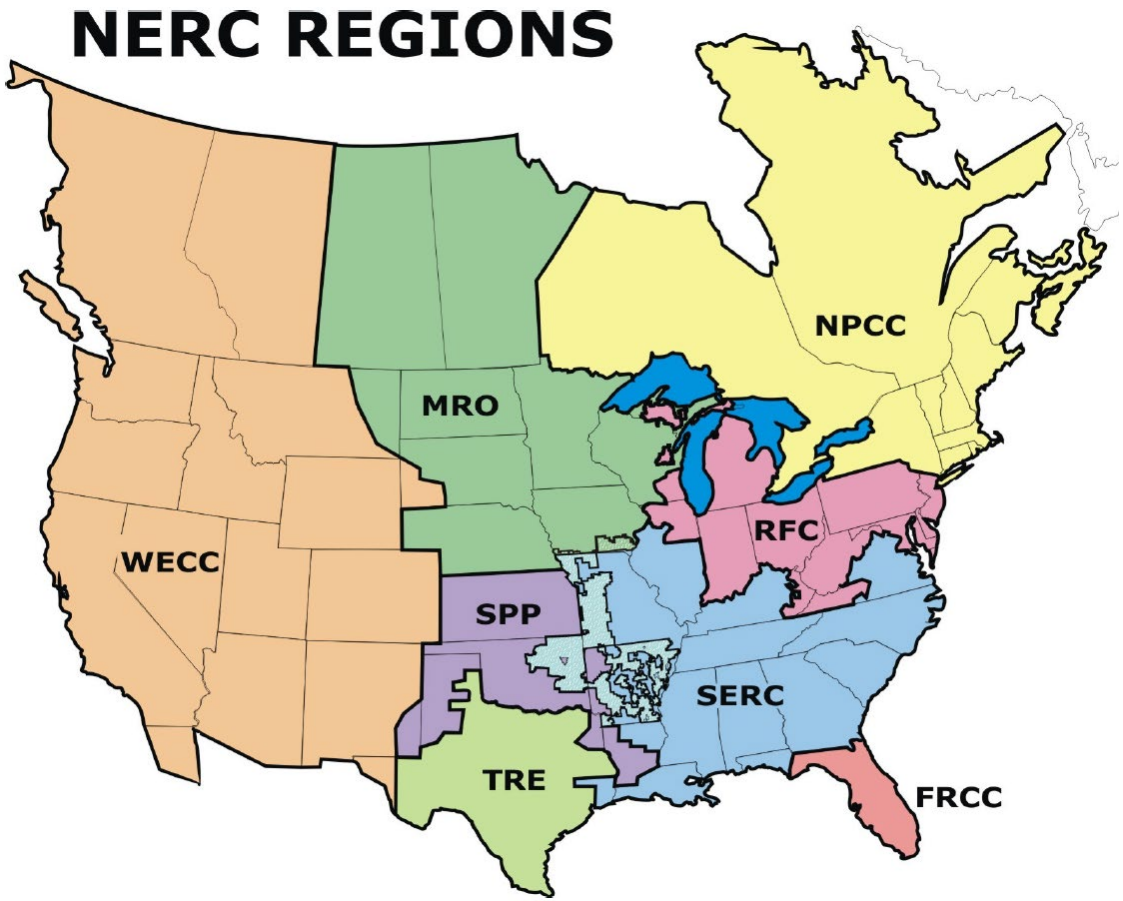
Energy Issues Facing the State

NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

LEVEL SETTING

- “The grid” simplified
- Current Energy Supply
- Why it’s changing
- The “ics”

THE ELECTRIC GRID



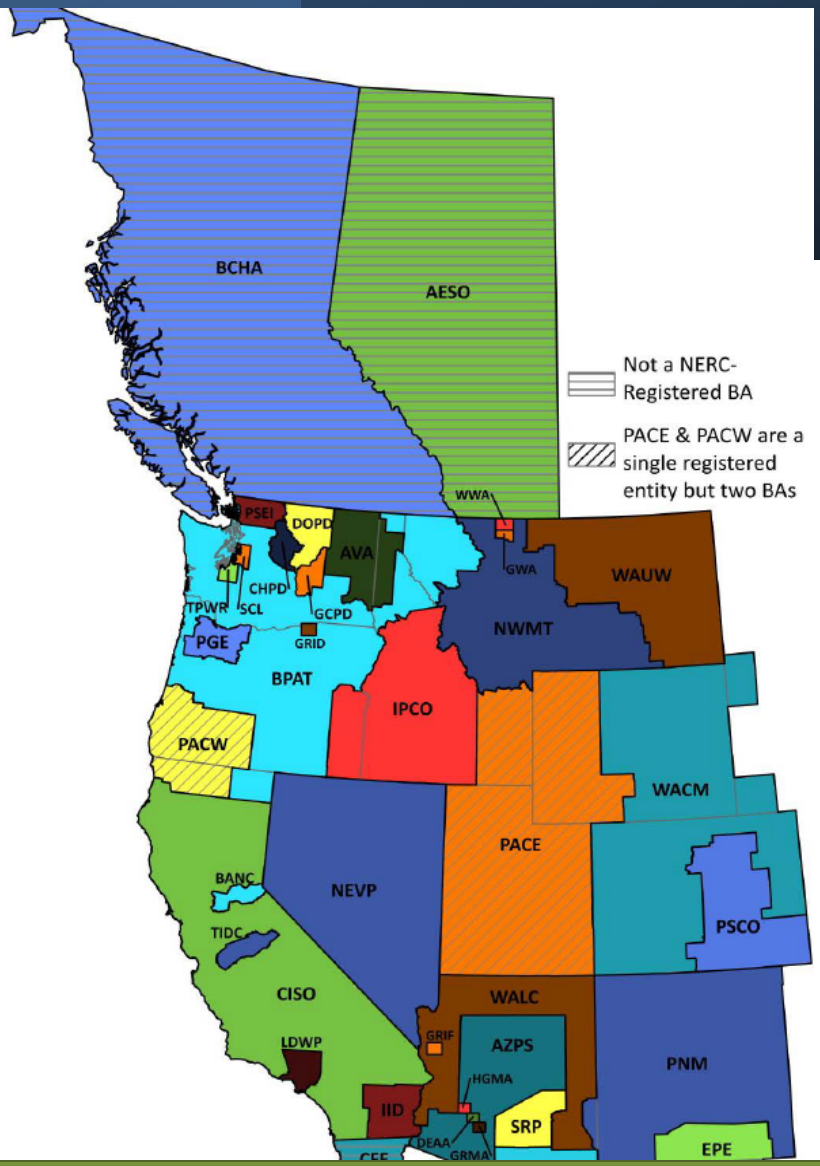
NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

WECC Interconnection

Geographically the largest & most diverse of the eight Regional Entities in NERC.

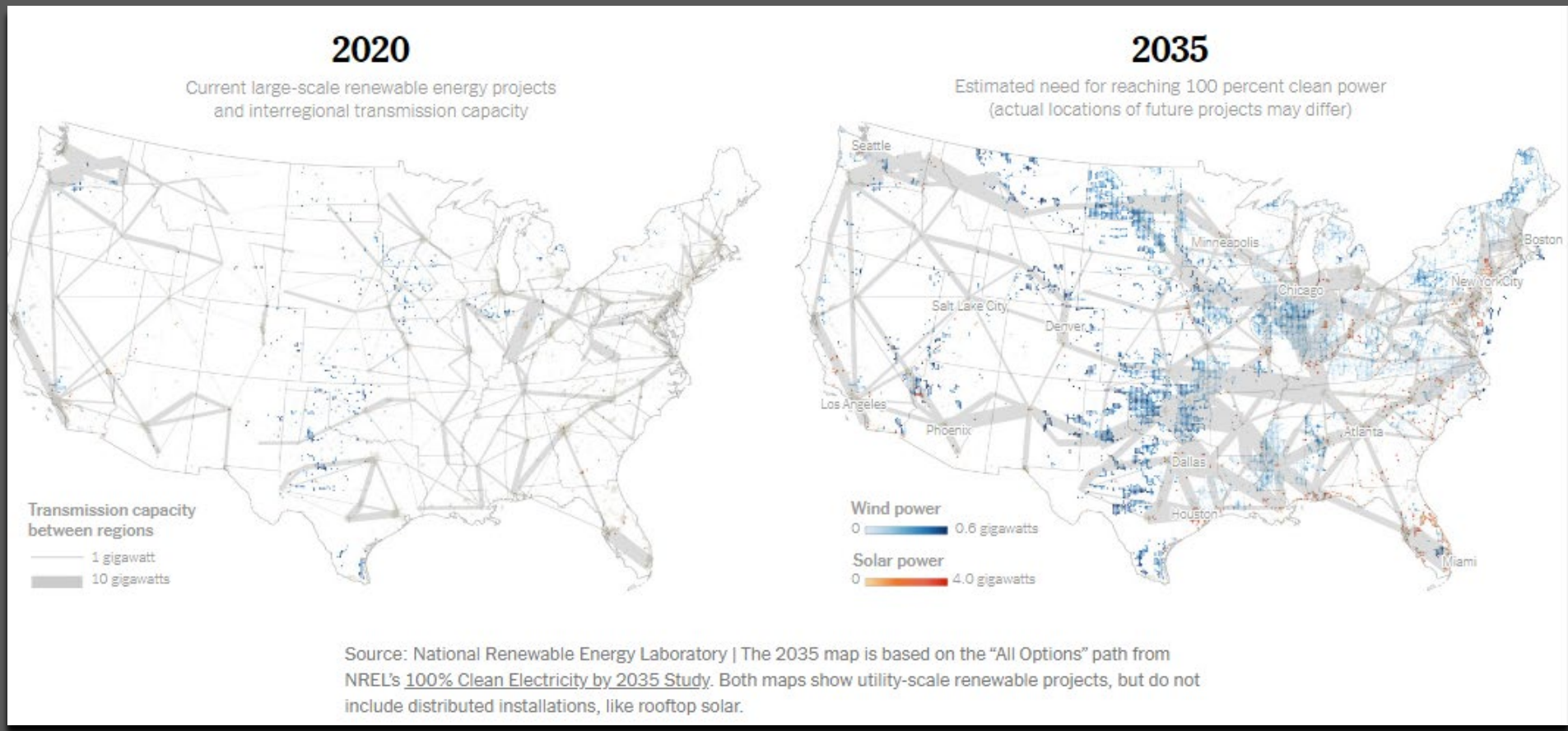
Service territory extends from Canada to Mexico.

- Alberta & British Columbia
- Northern Baja California & Northern Mexico
- All or portions of the 14 Western United States



NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

THE ELECTRIC GRID



Source: National Renewable Energy Laboratory | The 2035 map is based on the "All Options" path from NREL's 100% Clean Electricity by 2035 Study. Both maps show utility-scale renewable projects, but do not include distributed installations, like rooftop solar.

NORTHERN WASCO COUNTY PUD
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Why the U.S. Electric Grid Isn't Ready for the Energy Transition

To start with, there is no single U.S. electric grid.

By Nadja Popovich and Brad Plumer June 12, 2023

The U.S. Has Billions for Wind and Solar Projects. Good Luck Plugging Them In.

An explosion in proposed clean energy ventures has overwhelmed the system for connecting new power sources to homes and businesses.

Feb. 23, 2023

A key part of America's plan to slash carbon emissions:

Plug in buses and trains.

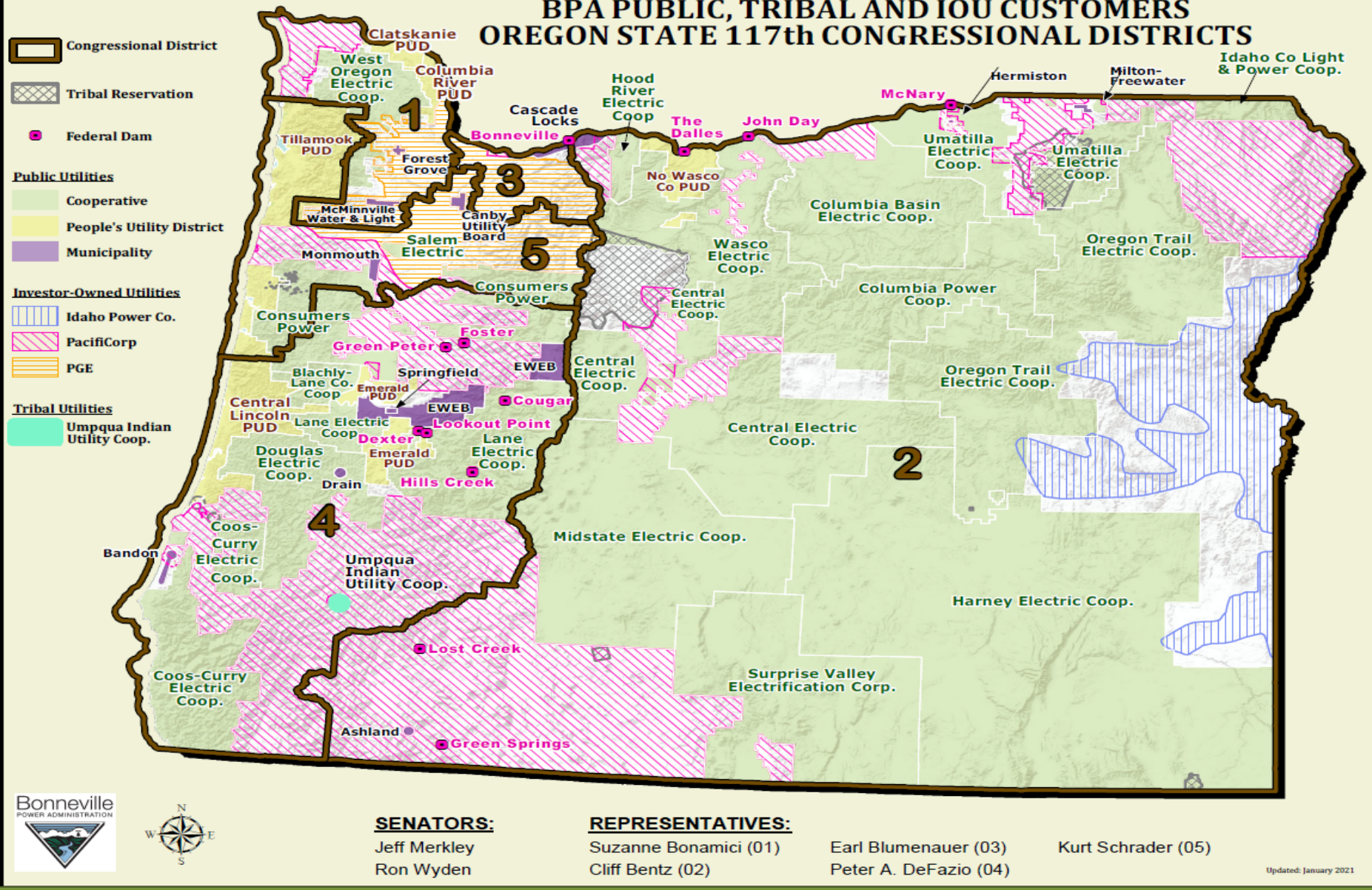
US electric vehicle goals will require up to $127B to install 28M chargers by 2030: NREL

The National Renewable Energy Laboratory expects there will be 30 million to 42 million electric vehicles on U.S. roads in 2030, requiring a rapid infrastructure buildout.

Building & Transportation Electrification

NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

BPA PUBLIC, TRIBAL AND IOU CUSTOMERS
OREGON STATE 117th CONGRESSIONAL DISTRICTS



SENATORS:

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Cliff Bentz (02)
Earl Blumenauer (03)
Peter A. DeFazio (04)
Kurt Schrader (05)

Updated: January 2021

NORTHERN WASCO COUNTY PUD
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2012 Generation	2016 Generation	2020 Generation
6,400 MWh	40,900 MWh	1,077,900 MWh

17% of Oregon's solar generation was exported in 2020.[5]

Oregon has **726** MW of utility-scale solar facilities and **156** MW of net-metered solar installations on homes and businesses.

2012 Generation	2016 Generation	2020 Generation
6.3 Million MWh	7.2 Million MWh	8.8 Million MWh

57% of Oregon's wind generation was exported in 2020.[5]

Oregon has **4,203** MW of wind facilities in operation, with ODOE overseeing even more projects: **194** MW under construction, **421** MW approved but not yet built, and **340** MW under review.[8]

2012 Generation	2016 Generation	2020 Generation
39.4 Million MWh	34.6 Million MWh	31.9 Million MWh

34% of Oregon's hydropower generation was exported in 2020.[1]

In some Oregon utility territories, hydropower provides over **90%** of consumers' electricity.[7]

Oregon's hydropower fluctuates from year-to-year due to changing precipitation and water conditions.

NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

OREGON DEPARTMENT OF ENERGY

THE "ICS"

- Physics (or other Sciences)
- Economics
- Politics

Consider these either the drivers or the impediments…