

HB 3375 Planning for Floating Offshore Wind

Context, Overview & Testimony in Support

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Oregon State Senate, Committee on Energy & Environment

Thank you for your service:
Chair Sen. Beyer, Vice-Chair Sen. Findley
Members Sen. Robinson, Sen. Dembrow, Sen. Taylor

May 13, 2021

OCEAN

Oregon Coast Energy Alliance Network

The Oregon Coast Energy Alliance Network is a cross-cultural community-based organization with the mission to explore the opportunities and challenges of floating offshore wind and other advanced energy technologies.

OCEAN is a 501c3 non-profit formed in 2020 on the south coast of Oregon.

OCEAN's Board of Director seats are designed to represent a diversity of coastal stakeholder interests including;

Tribes, Labor, Fishing Communities, Maritime Commerce, Resilience, Manufacturing, Sustainable Development, Ports, Elected, Ecologic Conservation, Economic, Workforce & Supply Chain Development, Labor, Public, Investment, Climate Action, Recreation, Education, Housing & Social Equity

Education



OCEAN supports an informed and engaged coastal citizenry making decisions about our own energy, economic and cultural futures.

Oregonenergyalliance.org

Special thanks to Rep. Brock Smith for following OCEAN's inquiry, supporting and elevating our efforts & his collaborative Sponsorship of HB-3375.



Pacific Ocean Energy Trust (POET)

Committed to the responsible development of marine renewable energy in the Pacific Region.

Special thanks to POET and the POET Industry Advisory Group for investing resources to champion this Offshore Wind planning legislation.

POET is an OR 501c3 that evolved from a state agency:

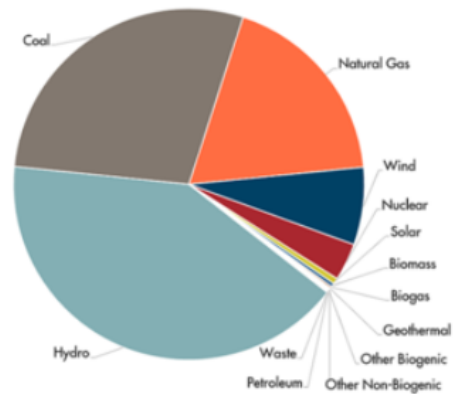
OWET RESEARCH



OWET funds research intended to reduce barriers to getting ocean energy projects into the water.

Oregon is an Energy Importer

Electricity



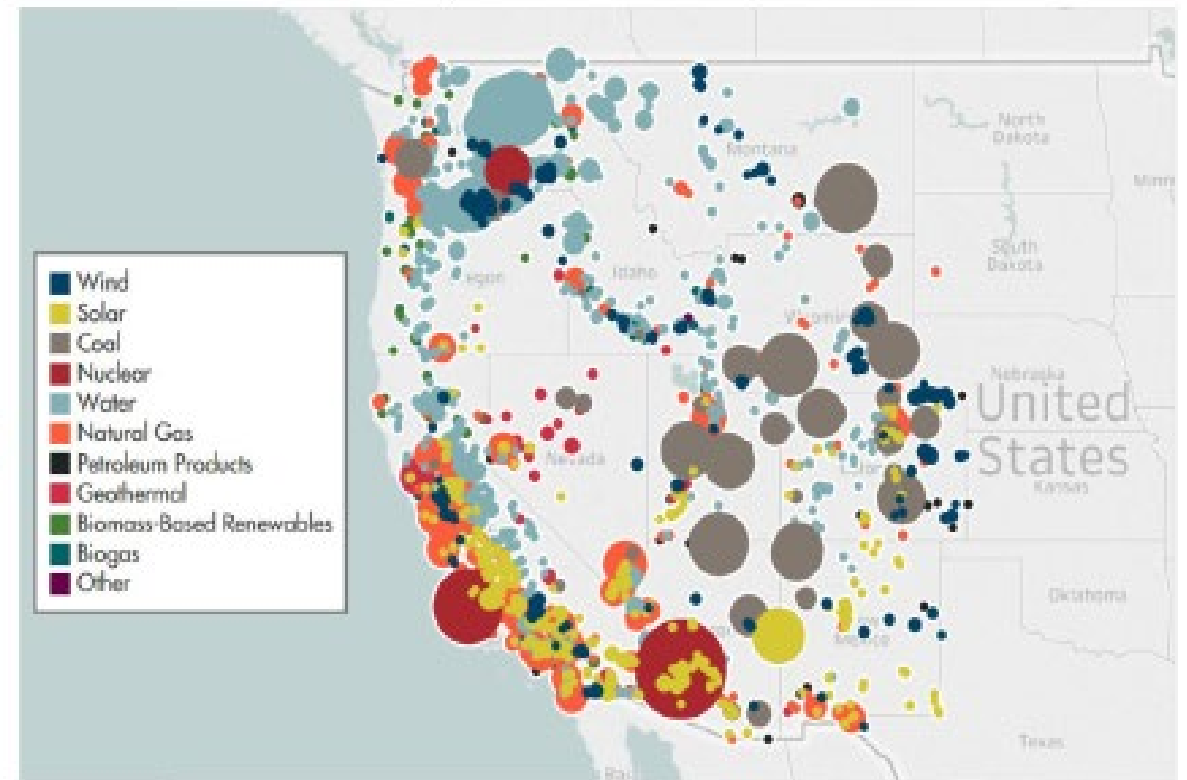
41.1% Hydropower
28.4% Coal
18.5% Natural Gas
7.1% Wind
3.4% Nuclear
.54% Solar
.33% Biomass
.16% Biogas
.12% Geothermal

Where Oregon's Electricity Comes From



Electric Generation Sources in the Western Electric Coordinating Council Region

Average 2014-2016 Net Generation in MWh by Hour

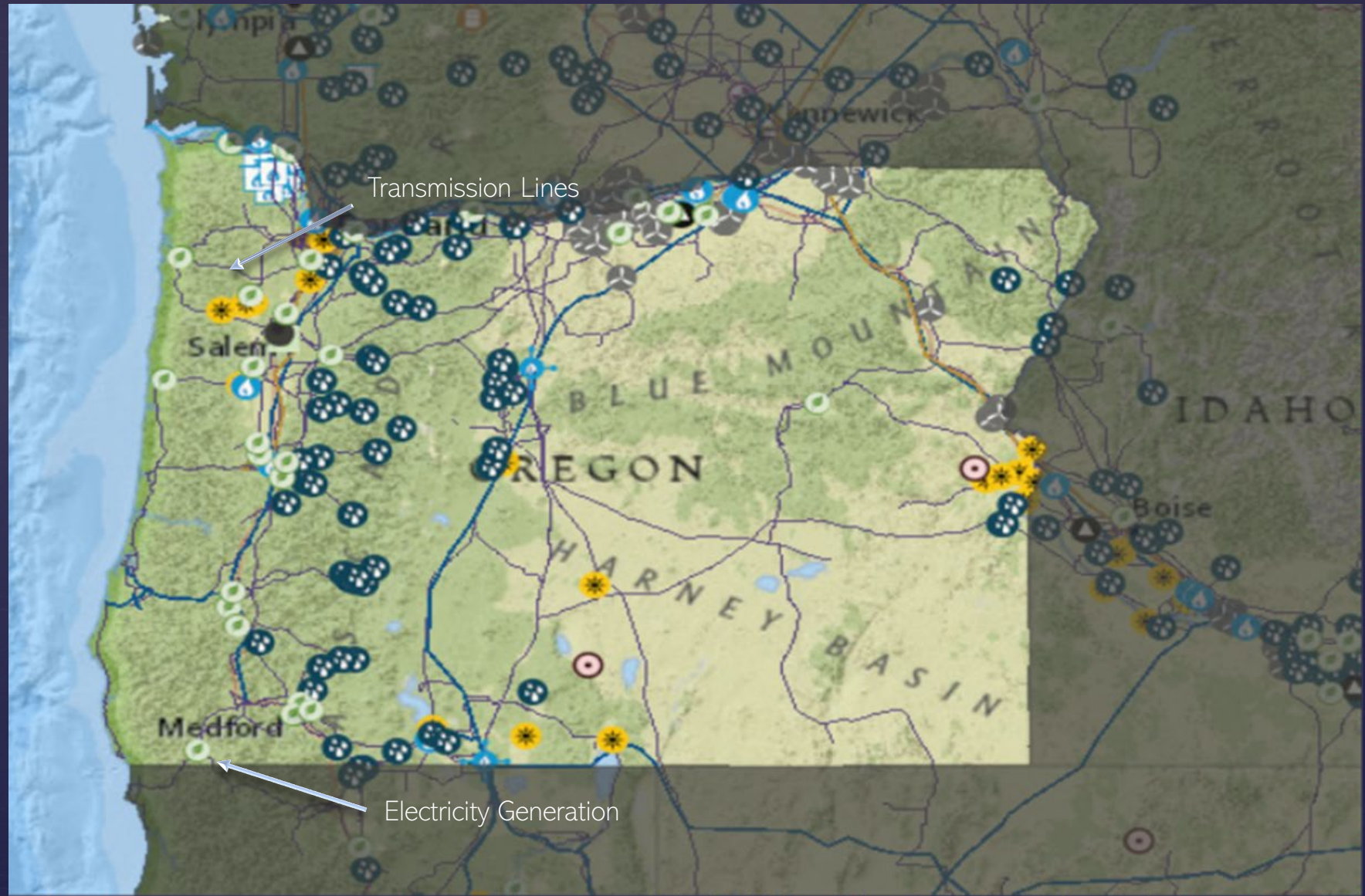


almost half of which is from non-renewable generation capacity

Oregon's Coastal Communities rely on Imported Energy to meet our most basic needs

via
Constrained Transmission Lines

through
Catastrophe Prone Routes



Oregon Coastal Communities are Being Hit First and Hardest by Climate Change



Oregon's Coastal Communities will be without energy for 3-6 months (or longer if the I-5 Corridor populations are heavily impacted) after a Cascadia 9.0 event

Bureau of Ocean Energy Management (BOEM)

Manages the development of the U.S. Outer Continental Shelf energy and mineral resources

U.S. DEPARTMENT OF THE INTERIOR

Search the site...

BOEM
Bureau of Ocean Energy Management

OPERATING STATUS CONTACT US EMPLOYMENT CORONAVIRUS UPDATES

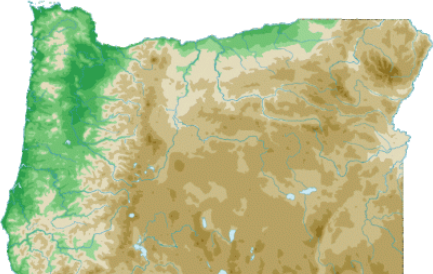
ABOUT BOEM REGIONS NEWSROOM OIL & GAS ENERGY RENEWABLE ENERGY ENVIRONMENT MARINE MINERALS

HOME

Oregon Activities

What's New?

- May 12-13, 2021 – Oregon Offshore Wind Energy Planning Public Webinars
- May 6, 2021 – BOEM and the State of Oregon Host Virtual Informational Meetings on Offshore Wind Energy Planning
- March 11, 2021 - OROWindMap Introductory Webinar
- February 16, 2021 – BOEM Issues Lease to Oregon State University for the PacWave South Project, the First Wave Energy Research Project in Federal Waters Offshore the U.S. West Coast.
- January 19, 2021 – BOEM issued a Finding of No Significant Impact and offered a Marine Hydrokinetic Research Lease to Oregon State University for the PacWave South Project
- November 17, 2020 - Oregon Offshore Wind Mapping Tool (OROWindMap)
- June 4, 2020 - BOEM Oregon Intergovernmental Renewable Energy Task Force webinar
- May 13, 2020 - Understanding Potential Effects of West Coast Offshore Renewable Energy Development on Marine Mammals. Presenter: Desray Reeb, Marine Biologist, BOEM.
- An Introduction to Floating Offshore Wind webinar hosted by the National Renewable Energy Laboratory (NREL) on February 26, 2020.
- March 11, 2020 - West Coast Science Exchange Webinar Series: Understanding the Potential Effects of Offshore Wind Development to Fishes, Essential Fish Habitat and Fisheries | Presenter: Donna Schroeder, Marine Ecologist, BOEM
- December 9, 2019 - Invitation for Stakeholder Input & Study Ideas for BOEM-Funded Research in Pacific OCS (offshore California, Oregon, Washington, Hawaii) FISCAL YEAR 2021
- September 27, 2019 - Intergovernmental Renewable Energy Task Force Meeting

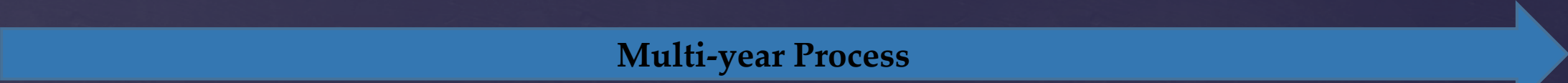


Projects

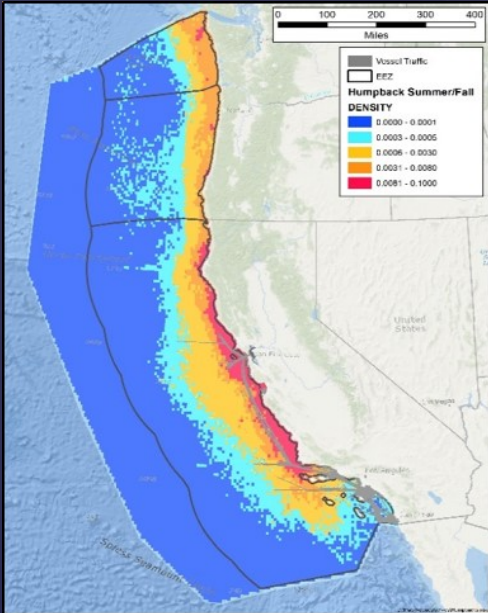
- PacWave South Project (formerly known as the Pacific Marine Energy Center - South Energy Test Site (PMEC-SETS) Project
- WindFloat Pacific - Offshore Wind Pilot Project - BOEM is no longer processing this lease request.

OROWindMap

OCS Renewable Energy Authorization Process



Planning & Analysis



Leasing



Site Assessment

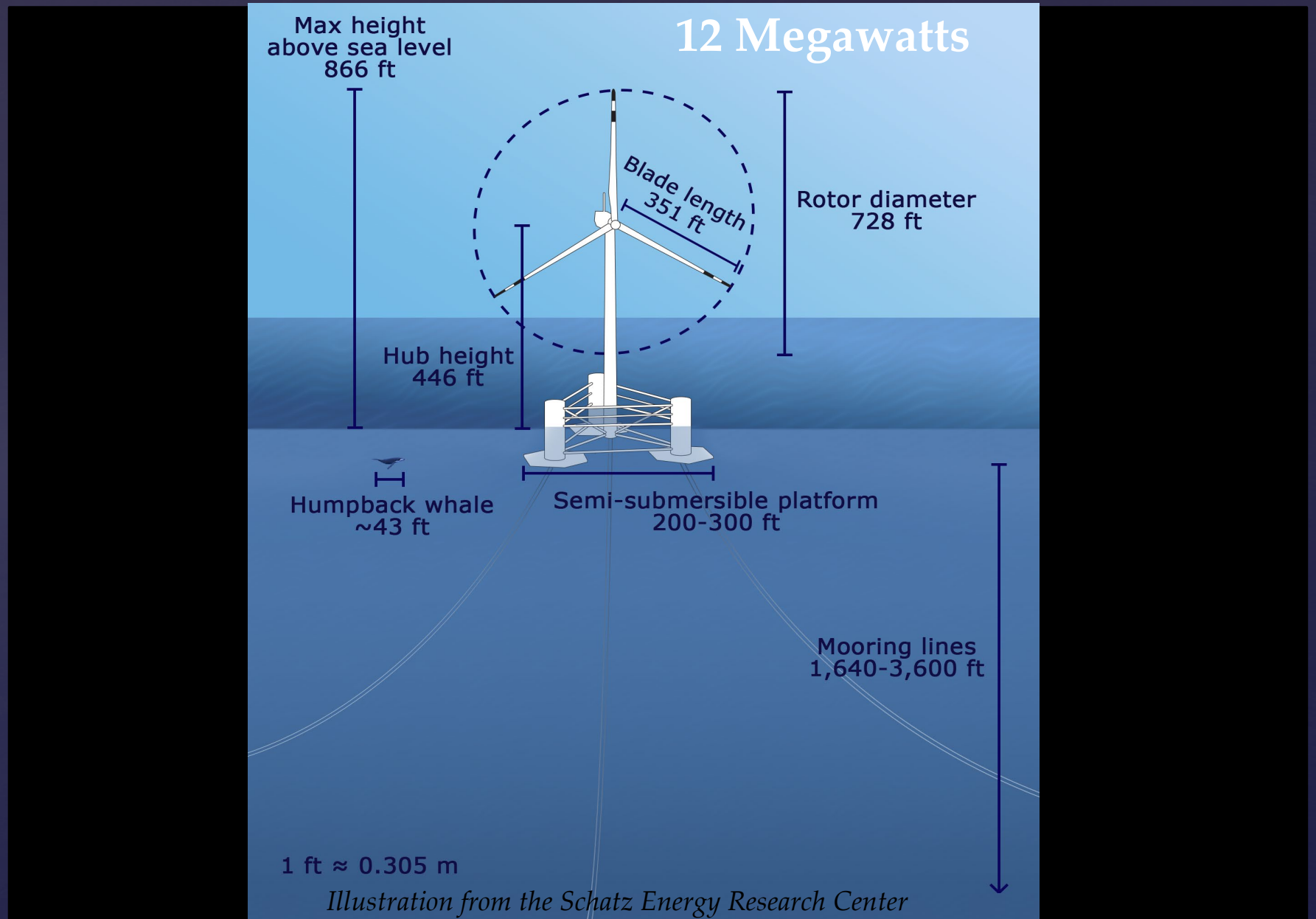


Construction & Operations

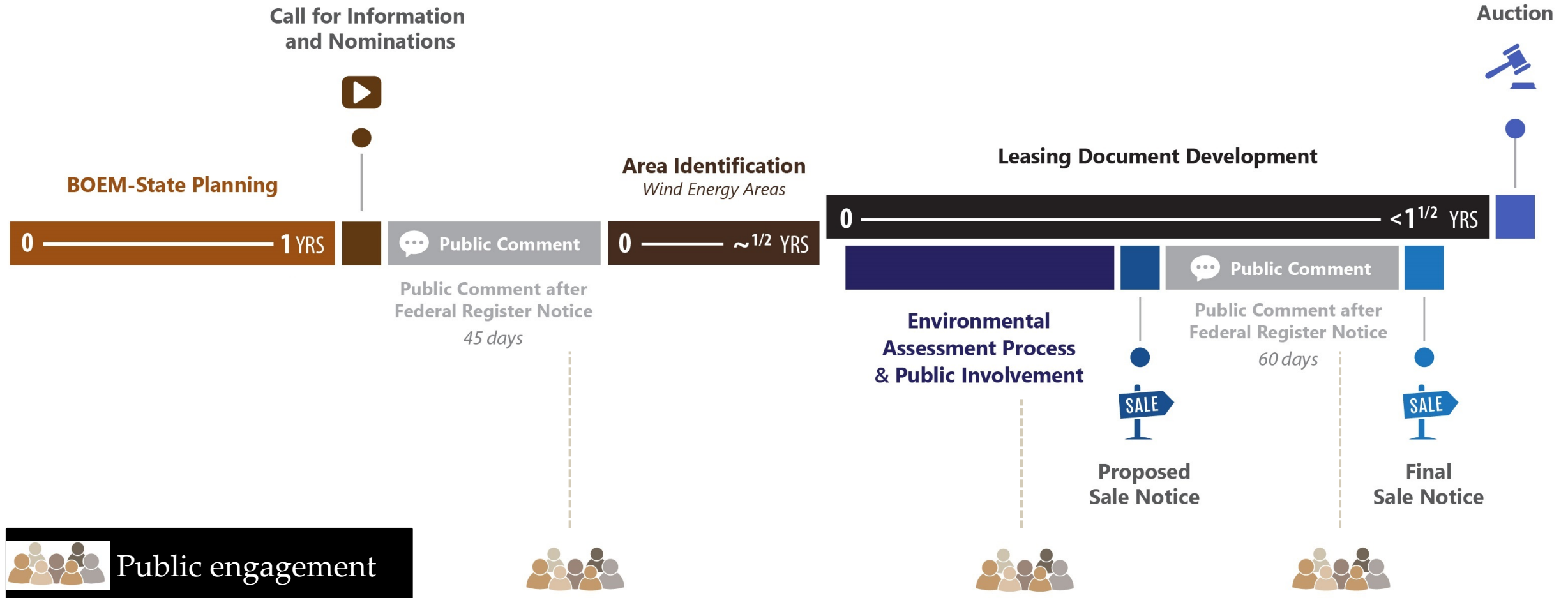


BOEM's Oregon Task Force is identifying Wind Energy Areas, potentially suitable for Floating Offshore Wind (FOW) Turbine deployment.

FOW can operate deep waters and be located to minimize conflicts with shipping, fishing & viewsheds.

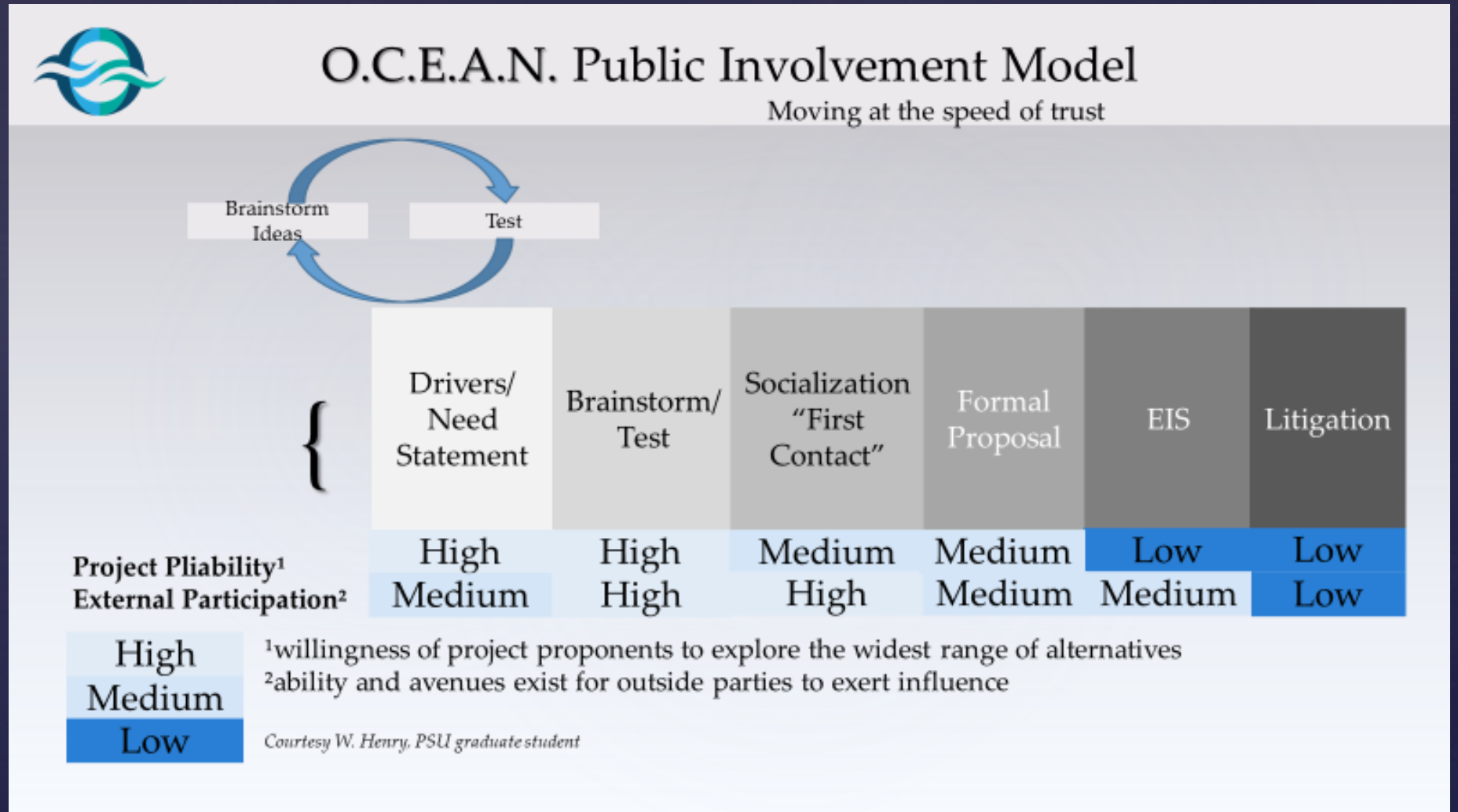


Oregon Planning and Public Input Opportunities Prior to a Lease Auction



*A lease provides the lessee the right to submit a Site Assessment Plan (SAP) and a Construction and Operations Plan (COP) for technical and environmental review and approval. A lease does not, by itself, authorize any activity within the leased area.

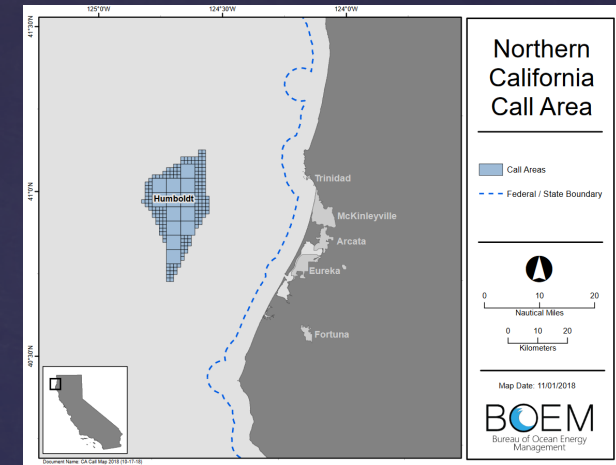
OCEAN seeks to *compliment* the Federal leasing process with State Centric project shaping in the early development, pre-design phase



Opportunity: S. Oregon and N. California Coasts access world class wind resource
 California is ahead of Oregon in the process but facing Beneficial Use and Transmission barriers

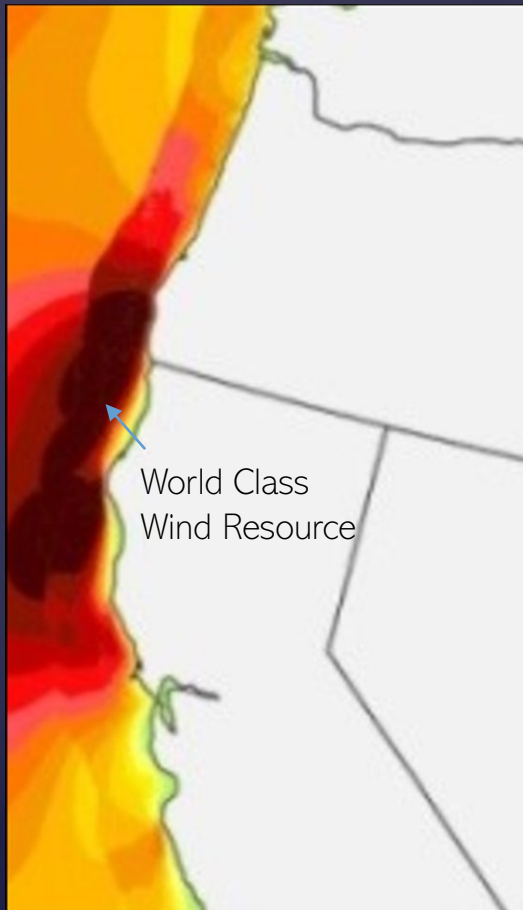
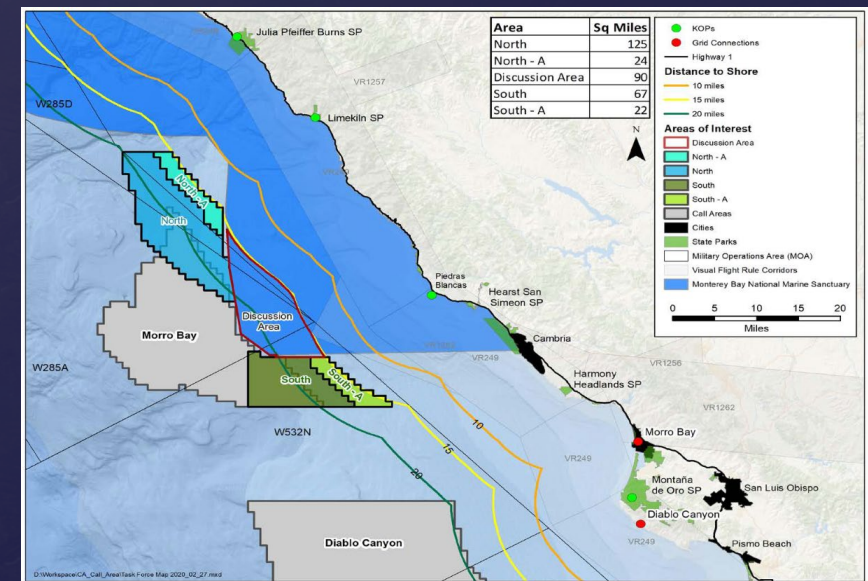
Northern California Call Area:

- Limited transmission network capacity
- Electrically isolated from market



Central California Call Area:

- Close to Market
- Beneficial Use Conflicts:
 - Department of Defense,
 - Marine Sanctuary
 - Commercial Fisheries

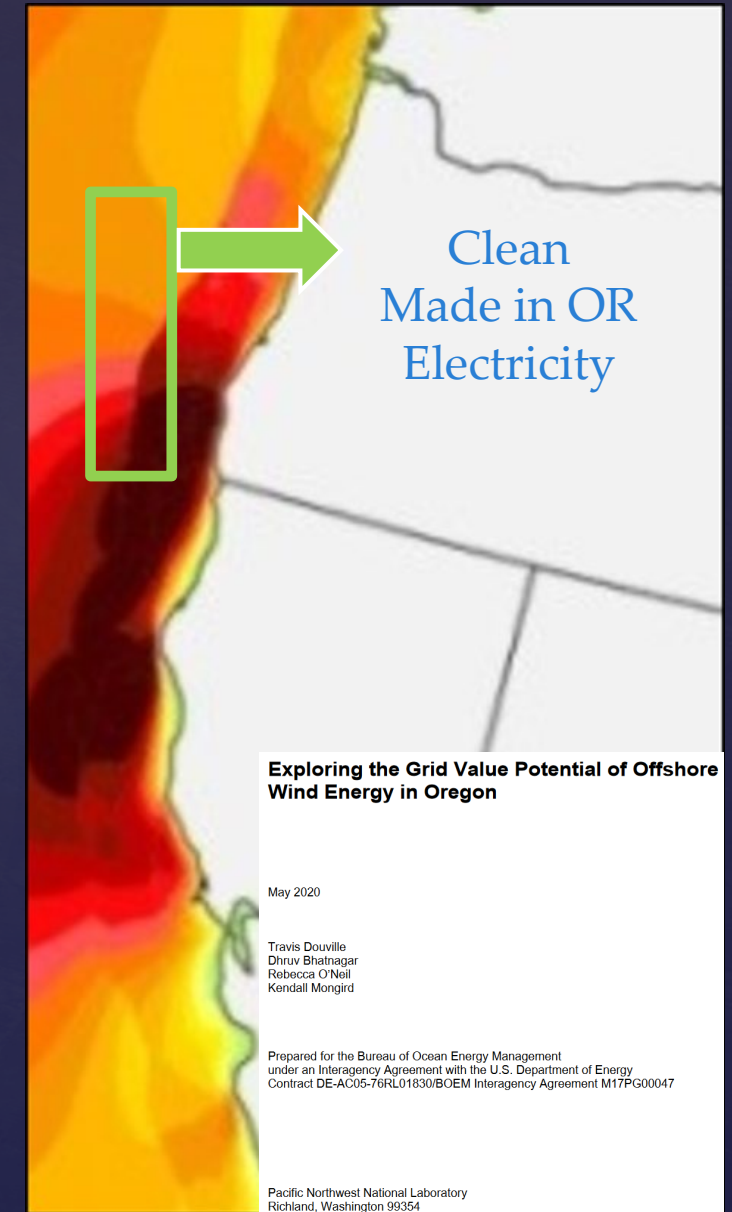


Opportunity:

Oregon's Existing Transmission can Accommodate 2-3 GW of floating wind electricity

“Over 2 gigawatts of offshore wind can be carried by current transmission to
strengthen coastal grids,
allow for additional renewable energy integration from the east,
and reduce power flows into Oregon
without exporting significant power. “

<https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-analysis/BOEM-2020-026.pdf>

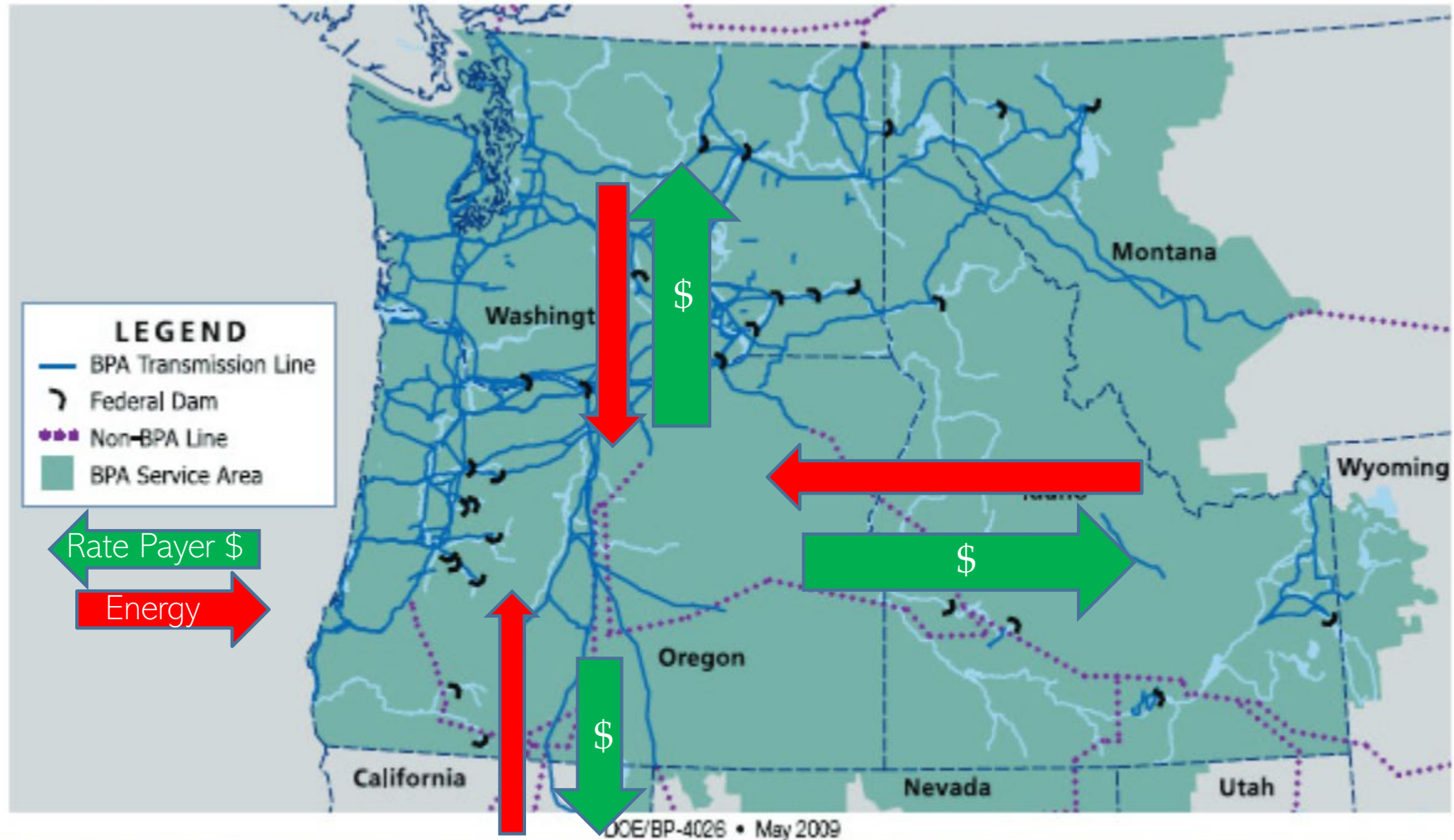


Oregon in today's regional energy market:

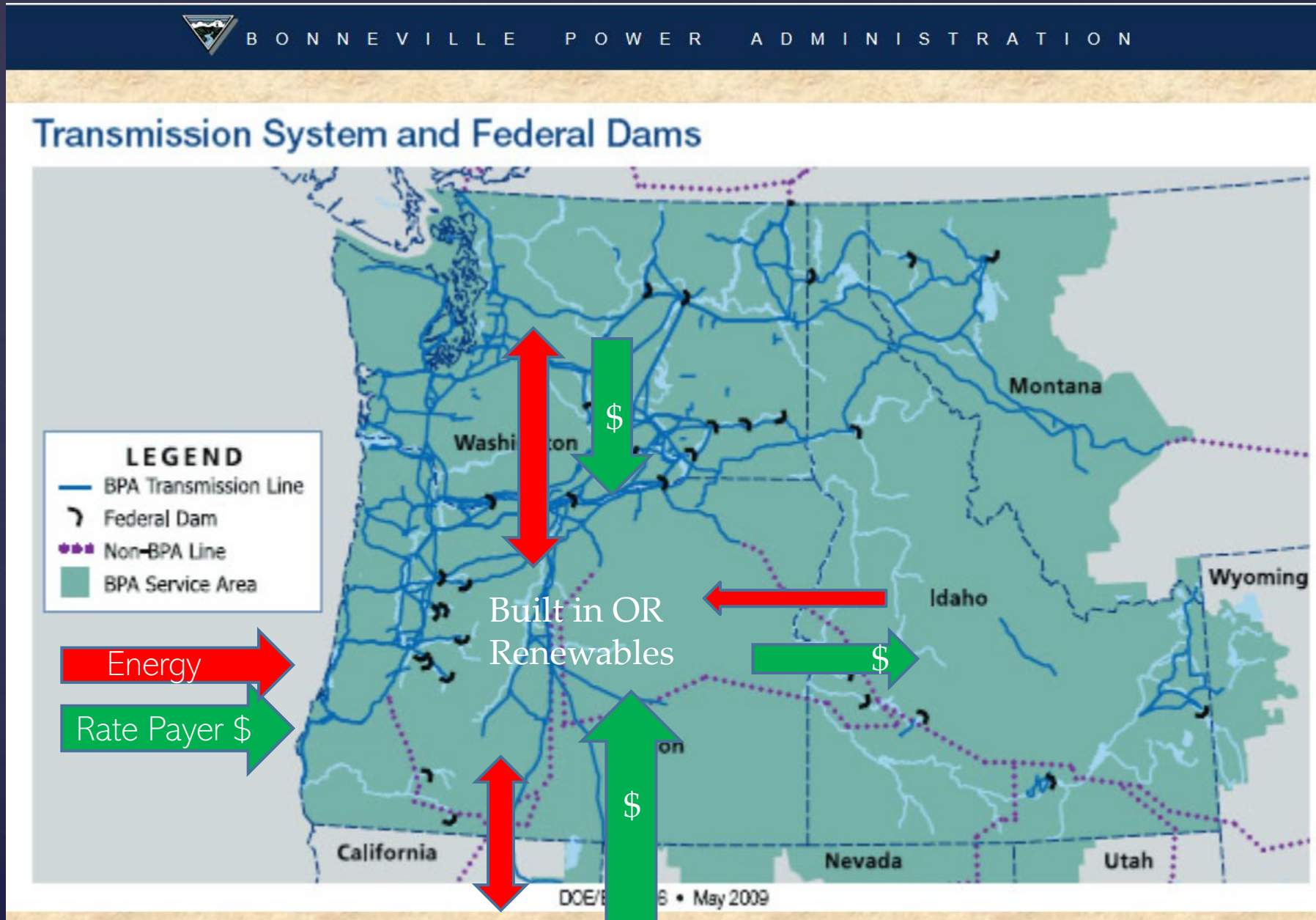


B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

Transmission System and Federal Dams



Oregon's OSW opportunity for tomorrow's regional energy market:



Opportunity:
Oregon's OSW resource offers complimentary contributions
to Pacific Northwest Resource Adequacy



Summary

OSW complements regional clean energy sources

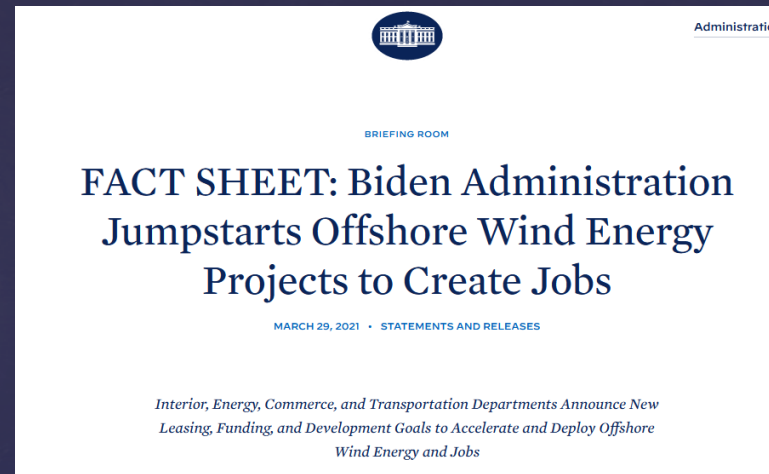
- Consistency of OSW speeds in late summer may benefit constrained hydropower
- OSW could help hydropower balance Gorge wind (and vice versa)
- OSW shows moderate complementarity with solar in winter when loads peak
- OSW indicates similar generation ramp rates to northwest “terrestrial” wind, smoother than WY wind

OSW naturally complements loads better than Northwest onshore wind

- Load complementarity is on par with solar in the winter, particularly for northern OSW locations
- Modest complementarity in the spring and summer
- OSW is largely uncorrelated with loads in the fall

Opportunity: Federal Support for OSW Development

2020 Stimulus Bill creates stand alone OSW Investment Tax Credit:
30% for any projects where construction begins before 2026
(spending 5% of the total cost of project) and is not subject to any phase down.



- Investing in American infrastructure to strengthen the domestic supply chain and deploy offshore wind energy
 - Supporting critical research and development and data-sharing
 - Build next generation industries in distressed communities

Biden American Jobs Plan:

- Advance ambitious wind energy projects to create good-paying, union jobs

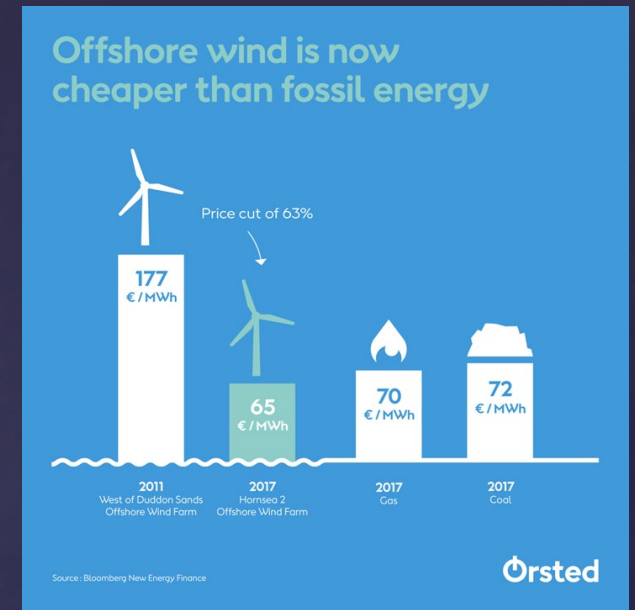
Opportunity:

Voluntary, existing & emerging energy off-taker markets +

Federal investment tax credit +

technological advancements =

Floating Offshore Wind on track to be affordable for Oregonians
in time for West coast development

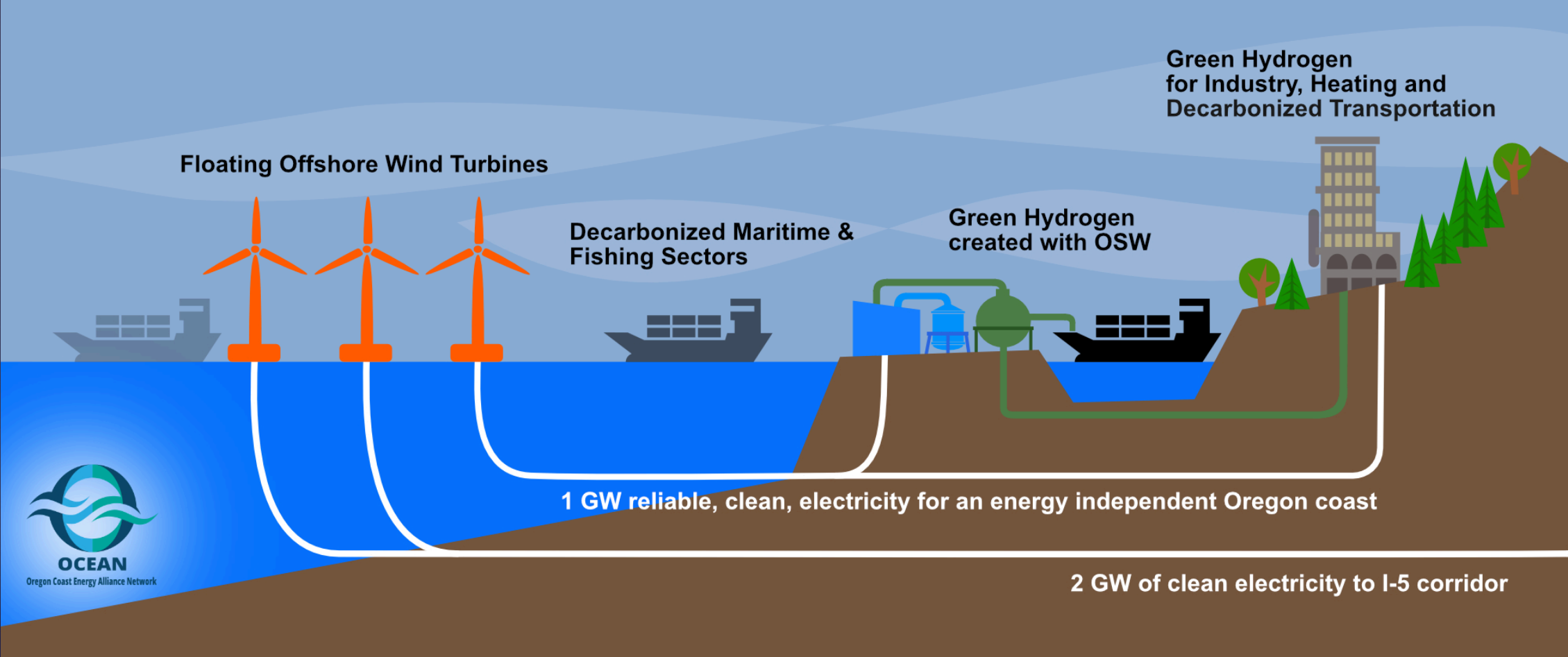


Opportunity:

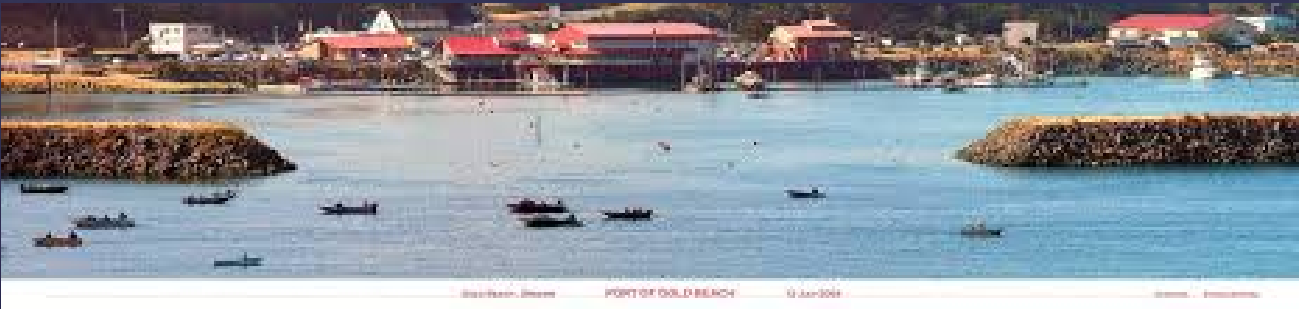
Surplus Floating OSW, *when used to generate clean Renewable Hydrogen*,

supports the decarbonization of the transportation and maritime sectors and

poises Oregon for greater energy independence and clean economic diversity



Opportunity: Oregon Southern Ports are Poised to Contemplate Supply, Assembly and/or Service of Pacific Ocean OSW



3 GW of OSW development would infuse \$9 - \$21 Billion Dollars into Oregon's economy

Potential Barriers to Oregon OSW Development:

Compatibility with other
Beneficial Users:

- Fishers
- Shippers
- Wildlife
- Cultural



Long term High Voltage Deep Sea
transmission to California market

Potential Barriers to Oregon OSW Development:

Energy Sector Planning Processes
(*If* not inclusive of the Oregon OSW opportunity)

Clean Energy Road Maps

Resource Adequacy

Transmission Planning

Decarbonization Strategies (Electricity and Fuels)

Coastal Infrastructure Investments

Power and Conservation Planning

Energy Security & Resilience Mitigation Strategies



Legislative Lineage:

HB 3375 (introduced): Comprehensive state task force *Heavy Fiscal, Long Implementation*

- Enumerates opportunities and challenges from a state centric perspective

3375-1: Narrows scope to ODOE *Nominal Fiscal, Rapid Implementation*

- Specifies removal of equipment & materials from Ocean after use
- Gathers Feedback from State Stakeholders on Benefits and Challenges
- Coincides 3 by 30 scenario with state and regional Capacity (re)Valuation, Resource Adequacy & Transmission Planning.

3375-2 (engrossed): Specifies US Dept. of Defense as a “to consult” agency

HB 3375

Establishes a “goal of this state to plan for the development of up to 3 GW of floating offshore wind energy projects within the federal waters off the Oregon coast by 2030...in a manner that will maximize benefits to this state while minimizing conflicts between floating offshore wind energy, the ocean ecosystem and ocean users.”

The bill directs Oregon’s Department of Energy to:

1. Conduct a literature review on the benefits and challenges of integrating up to 3 GW of offshore wind into Oregon’s electric grid by 2030.
2. Consult with other state, regional and national entities to gather input on the effects, including benefits and challenges, of integrating up to 3 GW of offshore wind on reliability, state renewable energy goals, jobs, equity, and resilience.
3. Hold public meetings with interested stakeholders to provide summary findings and to gather feedback on the benefits and challenges of integrating up to 3GW of offshore wind.
4. Provide a summary of key findings, including opportunities for future study and engagement, to Oregon’s Legislative Body by September 2022.

HB 3375

Recognizes the benefits of **planning for the benefit of Oregonians** (rate payers, fishers, tribes, labor & ecosystems).

Acknowledges the active role of DLCD in facilitating coexistence with other Ocean users.

Identifies the values of **Oregon stakeholder inclusion in early planning**.

Signals **immediate Federal and Private investment in Oregon** renewable energy, supply chain and workforce development.

Poises Oregon for responsible, beneficial **participation in a clean western energy market**.

Provides Legislators with a timely update on Oregon's OSW opportunity to inform next steps.

A night landscape featuring a starry sky with the Milky Way galaxy visible. The foreground shows a rocky coastline with dark silhouettes of trees and rocks. The water in the foreground is illuminated with a bright blue bioluminescent glow. The overall scene is dark and atmospheric.

OCEAN Supports HB 3375

Thank *You*