

COOS BAY OFFSHORE WIND PORT INFRASTRUCTURE STUDY: EXECUTIVE SUMMARY

As the U.S. advances its development of an American offshore wind industry, a new study finds that the Port of Coos Bay, Oregon is well positioned and meets all the key criteria to move forward with the necessary investments to enable the deployment of gigawatts (GW) of floating offshore wind power in Oregon and more broadly on the West Coast.

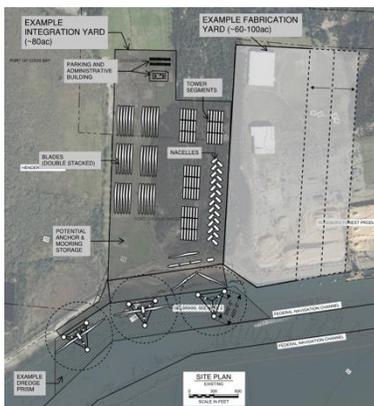
The study, commissioned by Oregon-based floating offshore wind developer TotalEnergies SBE US with support from Business Oregon and conducted by engineering company Mott MacDonald, examined the potential for the Port of Coos Bay for floating wind deployment, given its proximity to the best offshore wind sites in Oregon, and also to the Northern California market.

Initial screening of Oregon port facilities showed that various Oregon ports will likely be utilized for operations and maintenance of offshore wind farms. The Port of Coos Bay, however, is the only deepwater port in Oregon, and one of a limited number on the West Coast, with enough available land for port facility development to deploy large-scale floating offshore wind turbines. The study's detailed analysis of the Port of Coos Bay shows that with targeted investments, it can support this new, high-potential clean energy growth industry for Oregon, including:

- Wind turbine manufacturing
- Foundation fabrication and assembly
- Staging for assembly
- Mounting of turbines to foundations
- Deployment
- Operations and maintenance



Additional investments in the channel and waterfront facilities will be needed to take full advantage of the Port of Coos Bay's potential.



The channel: Channel widening means the Port would be able to support the movement of floating wind foundations between 200-250 ft. wide and of 10-20 megawatt (MW) wind turbines. Offshore wind technology innovation is occurring at a rapid pace and foundations and turbines are becoming larger over time. Additional widening of the channel would be needed to support foundations that are greater than 250 ft wide.

Waterfront facilities: The Port of Coos Bay has ample availability of waterfront facilities, and there are locations that are potentially capable of supporting the assembly and deployment of floating offshore wind turbines. The study identifies the need for the following additional investments: new berth and wharf, storage (yard and wet), and related dredging.

Opportunity and cost: The Port of Coos Bay is well positioned to support offshore wind deployment along the Oregon Coast. Additional investments, estimated by the study to total around \$475 million to enable floating wind, would create a long-term clean energy, jobs and economic asset for Oregon.

BACKGROUND: FLOATING WIND

FLOATING OFFSHORE WIND



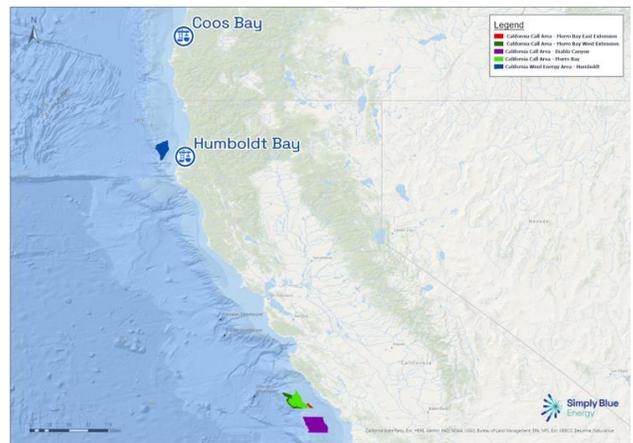
Floating wind technology accesses deepwater sites, like those off the West Coast, where the power potential runs deepest. Floating wind offers significant advantages in higher yield/capacity factors, ease of installation and minimal visual impact.

Globally, the pipeline for floating wind more than tripled in 2020, to 26.5 GW,¹ and floating wind costs are coming down rapidly as global deployments drive standardization and economies of scale. Industry reports project the levelized cost of energy (LCOE) for West Coast floating wind is expected to decline almost 50% by 2032,² averaging \$40/MWh globally by 2050.³

REGIONAL OFFSHORE WIND MARKET

According to the National Renewable Energy Laboratory (NREL), the waters off of Oregon and California have the potential capacity for some 250 GW of offshore wind power.⁴ The medium-term regional market is estimated at **13 GW by 2040**.

In Oregon, the state is studying the feasibility of developing **3 GW of offshore wind by 2030**,⁵ and the Bureau of Ocean Energy Management (BOEM) has proposed three Call Areas with the potential to generate up to **17 GW of offshore wind power**.⁶ California is currently working to determine what targets to pursue for floating wind turbines off its coast in federal waters.⁷ Advocates are calling for a minimum of **3 GW by 2030 and 10 GW by 2040**.



OFFSHORE WIND JOBS AND INVESTMENT

The U.S. has set a **30-GW-by-2030** offshore wind deployment goal. The U.S. Department of Energy reports that developing offshore wind's supply chain and logistics network will increase the skilled labor force and revitalize heavy industry and maritime infrastructure, spur project capital investment of more than **\$12 billion per year through 2030** and support more than **77,000** direct and indirect U.S. jobs.⁸

¹ U.S. Department of Energy: Offshore Wind Market Report – 2021 Edition, August 2021, p.48.

² NREL: The Cost of Floating Offshore Wind Energy in California between 2019 and 2032, November 2020, p.62.

³ DNV: Floating Offshore Wind – The Next Five Years, February 2022, p.7.

⁴ NREL reports on OR and CA offshore wind

⁵ HB 3375

⁶ BOEM, February 25, 2022; *Recharge*: "Flagship 3GW floating wind lease off OR 'by 2024' as US steps-up offshore build," 2/25/22

⁷ AB 525

⁸ U.S. Department of Energy (2022). Offshore Wind Strategies: Regional and national strategies to accelerate and maximize the effectiveness, reliability, and sustainability of U.S. offshore wind energy deployment and operation, p. 28.