

RECHARGE

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Lease sales 'this year': Could Californian floating wind dreams at last be coming true?

CGI rendition of completed Humboldt Port offshore wind renovation.

Photo: Aker Offshore Wind



Turbines spinning over the Pacific deeps may still a decade away, but the government and industry line-up at a recent conference in San Francisco shows no-one in the US needs a wake-up call on what floating wind could mean to the state

By **Tim Ferry**

California has **long been a pulsing light** on the radar screen for the offshore wind sector, with excellent wind resources particularly off its northern coasts offering some 200GW of technical opportunity, a good match on paper for a state with a long track-record of technological innovation and progressive policy-making that has embarked on an **energy transition towards 100% clean power by 2045**. The narrow outer continental shelf running along the Pacific seaboard drops down swiftly to 1,000 metres or more, however, meaning for offshore wind farm only the higher-priced floating platforms will be viable.

“California is well-positioned to lead a transition to a clean energy future,” said Amanda Lefton, director of the Bureau of Ocean Energy Management (BOEM), the federal agency charged with managing energy development on the outer continental shelf, speaking in San Francisco this week. “Floating wind can help us reach areas once thought unattainable, opening up new opportunities.” BOEM has already established two offshore wind energy areas (WEAs) in **Morro Bay** off its central coast with a total of 3GW of capacity and off Humboldt on California’s northern coast with around 1.4GW, with lease sales to be announced “this year”, according to Lefton.

Lefton was joined by representatives of the federal Departments of Energy and Interior, the California Energy Commission (CEC), charged with charting the future direction of California’s energy transition, and other state agencies, along with developers, labour bodies, and environmental groups at the Pacific Offshore Wind Summit.

Last September, **California enacted its new AB 525 law** to spur offshore wind development, directing the CEC to set clear targets by 1 June 2022 for offshore wind in 2030 and 2045. Offshore Wind California, the organiser of the summit, urged targets of at least 3GW by 2030, 10GW by 2040, and 20GW by 2050, in line with the Biden’s administration’s national targets of **30GW by 2030** and 110GW by 2050.

“[This year] is the year to go big and go bold,” said David Hochschild, chair of the CEC, who touted the state’s progress towards its goal of 100% clean electricity by 2040. “Offshore wind is going to be one of the foundational elements of that [transition].”

Establishing concrete, quantifiable goals will be critical for the industry, believes Renewables Consulting Group associate director of its New York office Emily Kuhn. “As we’ve seen with the East Coast, offshore wind targets can drive momentum and allow the industry confidence that there will be a long-term market.”

Studies by the National Renewable Energy Laboratory (NREL) have determined that construction of **10GW of offshore wind plant off California** would generate thousands of jobs, clean power for 3.5m homes, and up to \$20bn in gross domestic product growth by 2050. California’s offshore wind sector will face multiple challenges as it rolls out, including insufficient grid capacity, particularly in its northern reaches.

The waters off Humboldt County have some of the nation’s best wind resources, with speeds averaging over nine metres a second, but the lightly populated region has poor grid transmission links that could constrain future wind development ambitions. State independent systems operator California ISO (Caiso) forecasts that the NREL calculus for a utility-scale floating wind fleet feeding into the grid by 2040 would requiring some **\$8bn in transmission upgrades**, according to its draft 20 Year Transmission Outlook.

California’s notoriously congested ports would be hard-pressed to take on the offshore wind sector, but Humboldt points a potential way forward. The Humboldt Port Authority has already received **\$10.5m from the CEC as seed money for its \$56m grant proposal** to transform the former timber port into the centre of floating wind assembly and staging.

“The ultimate goal is to develop a thriving, world-leading floating wind industry. To get there, we’re urging California to go big and move forward, now,” said Paula Major, vice president, US offshore wind for Mainstream Renewable Power and board chair of OWC.