California Floating Offshore Wind

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California Auction is a Historic Double First

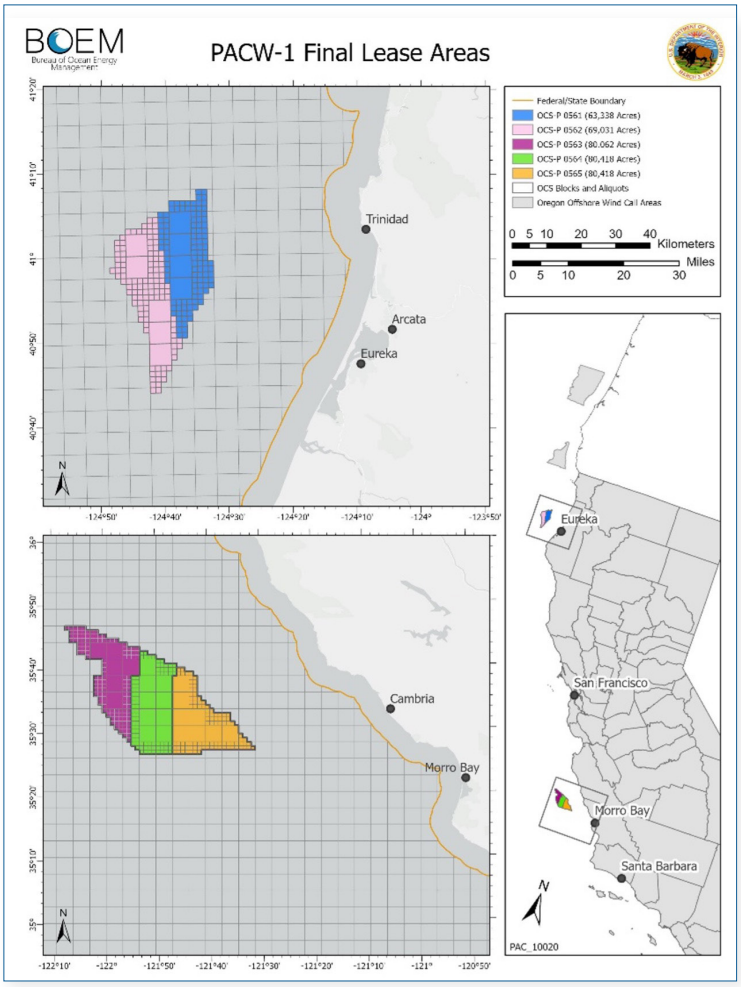
The Dec. 6, 2022 California lease auction, held by the Bureau of Ocean Energy Management (BOEM), is a historic first for two reasons:

1. First U.S. offshore wind auction aimed at development of floating offshore wind turbines
2. First U.S. offshore wind auction on the West Coast.

BOEM will be auctioning off five leases—two off the North Coast near Humboldt County and three off the Central Coast near Morro Bay.

Totaling 373,000 acres, the lease areas can accommodate an estimated 4,500 megawatts (MW) of new floating offshore wind development—enough generation to power 1.5 million homes.

43 companies have qualified to bid in the auction.



Source: BOEM

Lease Auction is Historic Step for California's Decarbonization Mission

A robust buildout of floating offshore wind is needed to achieve its goal of total decarbonization of the electricity sector by 2045. Floating offshore wind can also lower energy costs and increase grid reliability in the face of wildfires and other extreme weather.

These leases are also the first step toward meeting the California Energy Commission's ambitious goal of up to 5,000 MW by 2030 and 25,000 MW by 2045.

Bidding Credits Will Provide Benefits to California Communities

Bidders can qualify for bidding credits allowing discounts of up to 30% off the winning bid in exchange for commitments to:

- Make investments in a domestic floating wind supply chain and/or workforce training;
- Enter into Community Benefit Agreement (CBA) with current users of the lease areas, particularly commercial fishermen; and/or
- Enter into CBAs with affected coastal communities, including tribes.

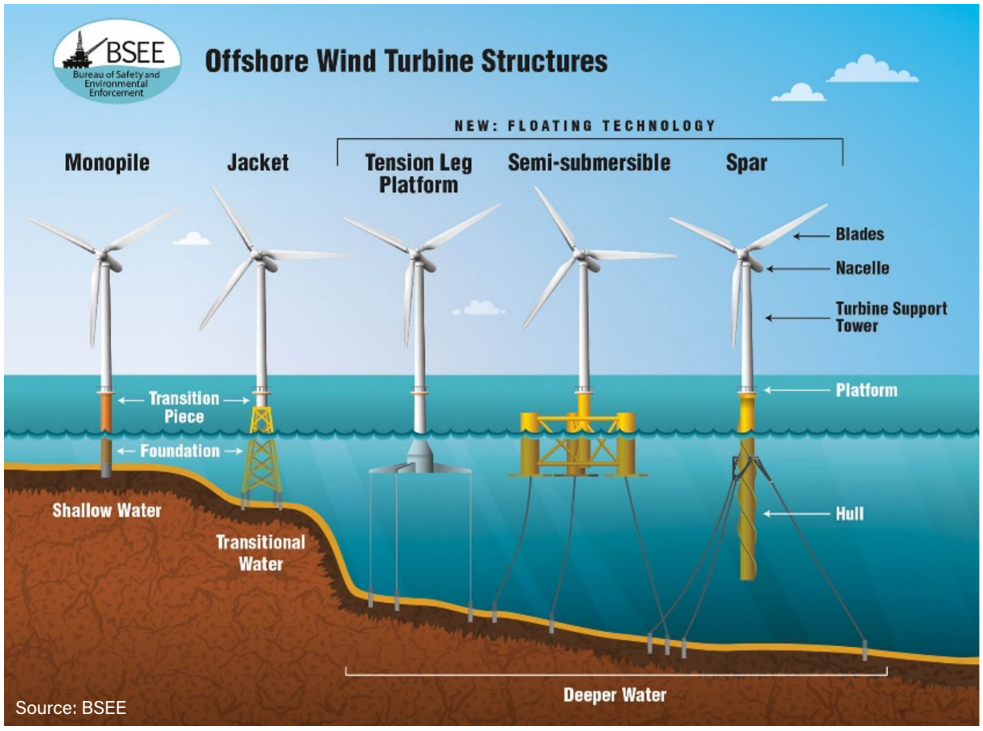
CBAs are binding long term commitments between the offshore wind developer and the affected community to address potential effects of offshore wind development

These credits will mean millions of dollars invested in benefits to communities in California.

Why Floating Offshore Wind?

Floating offshore wind will open new, deeper waters to development. According to the National Renewable Energy Laboratory (NREL), depths of around 60 meters represent the offshore wind cutoff where fixed bottom support structures end and floating substructures begin. As most of the world's usable offshore wind resources exist at depths greater than 60 meters, there is a strong economic incentive to develop floating offshore wind technology that can make capturing these resources cost competitive.

Floating foundations avoid the need for heavy installation vessels. Instead, most of the assembly work can be done in port and towed out to the installation site, leading to quicker installation times. Floating offshore wind will most likely be deployed first in waters off of the West Coast and in the Gulf of Maine.



How Does Floating Offshore Wind Work?

Floating offshore wind platforms are concrete, steel, or hybrid substructures on which a wind turbine is installed. These structures are then stabilized by connecting them to the seabed using mooring cables. Technological advances have begun to optimize floating platforms specifically for wind capture.[1]

When Will Floating Offshore Be Deployed?

Between now and 2030, Bloomberg New Energy Finance (BNEF) forecasts a 54% reduction in floating offshore wind costs, with comparable fixed-bottom and floating costs by 2035.[2] BNEF expects that floating platforms will eventually cost less than fixed-bottom monopiles today – becoming cheaper by 2041.

According to BNEF, the global floating offshore wind market will grow to a cumulative 21 gigawatts (GW) by 2035, from nearly no operational capacity today. U.S. installations are forecasted to begin in 2030. By 2035, the U.S. is expected to be the leader in floating offshore wind installed.

Photo from offshore wind turbines off the coast of Virginia.

What are the Environmental Benefits of Floating Offshore Wind?

Overall, the environmental effects of floating offshore wind are expected to be similar or smaller than fixed-bottom offshore wind. According to BOEM, the effects on benthic species and habitats should be smaller given the lack of significant structures on the seabed.[3] Floating offshore wind may be even more beneficial than fixed-bottom offshore wind in terms of creating artificial reef-life structures. Floating wind is also anticipated to create less ocean noise, as installation of mooring lines requires less pile-driving activity.

1 https://www.nrel.gov/news/program/2020/floating-offshore-wind-rises.html
2 *Tomorrow's Cost of Floating Wind*. BloombergNEF. December 9, 2021.
3 https://www.boem.gov/sites/default/files/documents/environment/Comparison-Environmental-Effects-Different-OWT-Foundations-2021.pdf