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Renewable energy: First ocean areas to be leased off California for floating wind turbines

One of two 9.5 megawatt floating wind turbines deployed at the Kincardine Offshore Wind project off the coast of Aberdeen, Scotland.
(Photo: Offshore Wind California / Principle Power)



Wind farms to be built off Humboldt, Morro Bay coasts, more than 20 miles from land

By **PAUL ROGERS** | progers@bayareanewsgroup.com | Bay Area News Group

Ushering in a new era of renewable energy in the United States — along with debates about how best to balance its environmental benefits and impacts — the Biden Administration on Tuesday is scheduled to auction the rights for private companies to build wind turbines off the California coastline.

Similar lease sales for offshore oil drilling were held in federal waters off Southern California in the 1950s, 60s and 70s before moratoriums and marine sanctuaries blocked new drilling. Tuesday's event will mark the first time in history that ocean areas off America's West Coast have been auctioned to construct wind farms.

The two areas affected are each about 20 miles from Eureka, in Humboldt County, and Morro Bay, in San Luis Obispo County, extending to about 35 miles offshore. They total about 373,000 acres — a footprint larger than the city of Los Angeles.

Altogether, they are expected to host about 300 to 450 turbines with the potential to generate 4,500 megawatts of electricity, according to the Department of Interior. That's enough to power 1.5 million California homes.

"For years we have been extracting a limited resource — oil — with all sorts of impacts and burning it, and moving it around with tankers and oil spills," said Gary Griggs, a Distinguished Professor of Earth and Planetary Sciences at UC Santa Cruz.

"Now we have something that is renewable, clean and sustainable. It's always going to be there. This is a huge change, in my view. What we do in California reverberates across the country."

Unlike most offshore wind farms in Europe and other parts of the world, the turbines will be floating, rather than built into the sea floor. The area where they will be constructed is so far offshore in the Pacific Ocean that the water is more than 1,000 feet deep. The towers will be obscured from the beach by fog, weather patterns and the curvature of the Earth, supporters say.

"They won't be visible most of the time and if they are, they will be very small in the distance, like toothpicks," said Adam Stern, executive director of Offshore Wind California, an industry group based in Menlo Park.

Altogether, 43 companies have been cleared to bid on the leases. A similar wind lease sale in February off the coasts of New York and New Jersey generated \$4.3 billion.

Major challenges remain. The winning bidders still will need to secure permits and approvals from the Coastal Commission, Coast Guard and other agencies, which Stern said could take four to five years. Construction after that will take an estimated two to three years, with the first power flowing by about 2030.

Environmental groups have supported offshore wind power generally, but say they are waiting for detailed environmental studies to come out on each project to reduce any impacts to whales, sea birds or other wildlife.

A 9.5 megawatt floating wind turbine for Scotland's Kincardine Offshore Wind project at its assembly dock in the Netherlands.
(Photo: Offshore Wind California / Principle Power)



“This is good news in a lot of ways,” said Irene Gutierrez, a senior attorney with the Natural Resources Defense Council in San Francisco. “Offshore wind is a key part of the energy mix we need going forward to fight climate change. But we need to make sure it is responsibly developed.”

There are already 215 offshore wind farms operating around the world. Most are in China, the United Kingdom, Germany, the Netherlands and Scandinavia. Another 48 are under construction.

The turbines can be 600 feet tall, with massive blades. The electricity they generate is bought to shore through underwater power cables, and connected to the power grid in coastal areas.

Tuesday’s lease sale will be held in Washington D.C., at the Department of Interior’s Bureau of Ocean Energy Management. It comes after at least seven years of debate, study and discussion by private companies, federal and state agencies, environmental groups and fishing interests.

President Biden, along with Gov. Gavin Newsom and both of California’s U.S. senators, Dianne Feinstein and Alex Padilla, support building offshore wind farms off California’s coast.

Newsom has said offshore wind is a key part of California hitting its goal of 100% carbon-free electricity by 2045. California’s goal is up to 5,000 megawatts by 2030.

“Developing offshore wind is a critical part of California’s clean energy future,” Feinstein and Padilla said in a joint statement in October, when the lease sale date was first announced, “and if designed with the needs of local communities in mind, can address climate change while minimizing harm to our natural resources. These lease sales are a major milestone in our energy transition.”

Six years ago, the first U.S. wind farm, a small one generating just 30 megawatts, opened off Block Island, Rhode Island. Another wind farm is planned off Cape Cod. Several states, including New York, New Jersey, Connecticut, Maryland, Massachusetts and Virginia, already have set targets committing to offshore wind power.

Labor unions have been strong supporters.

“There are going to be tens of thousands of construction jobs from this on the West Coast, from the supply chain to manufacturing,” said Jeff Hunerlach, district representative of the Operating Engineers Local #3 in Eureka. “These are great union jobs with pensions, and medical benefits and apprenticeships.”

Meanwhile, fishing groups have raised concerns about whether ocean turbines would reduce available areas for commercial fishing. They worry about the cables that will anchor the turbines to the ocean bottom.

“We’re basically banned from the areas where they are,” said Glenn Spain, executive director of the Pacific Coast Federation of Fishermen’s Associations in San Francisco. “The cables could entangle our gear. We’ve been more or less ignored. They need to be built in a fishery friendly way.”

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