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Offshore Wind Development Is Coming to the Gulf of Mexico

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The U.S. Department of the Interior's Bureau of Ocean Energy Management ("BOEM") has identified two Wind Energy Areas ("WEAs") in the Gulf of Mexico ("GoM") to develop offshore wind farms. A lease sale is expected later this summer. One 546,000-acre WEA is located south of Galveston, Texas; the other is a 188,000-acre tract off the coast of Lake Charles, Louisiana. According to BOEM, the two WEAs have the potential to power 2.3 million and 799,000 homes, respectively, with clean energy generated by continuously renewable offshore wind.

Offshore wind promises various advantages over onshore wind farms, including stronger, more consistent, and less turbulent winds, and the use of substantially bigger towers and blades than onshore farms, resulting in more efficient and greater power generation; out-of-sight-and-sound facilities; the capacity to service large U.S. coastal populations; and the ability to avoid ecologically sensitive sites ashore. (*See* Onshore vs offshore wind energy: what's the difference?). Moreover, according to some estimates, the GoM possesses the potential to generate almost 510 giga watts ("GW") of offshore wind ("OSW") annually. (*See* The Gulf of Mexico is poised for a wind energy boom. 'The only question is when.'.) Additionally, given the mature oil and gas offshore infrastructure along and off the Gulf Coast states, that infrastructure arguably can and would adapt to build and maintain OSW farms in the GoM.

This article reviews the next steps in the development of wind farms in the GoM, comparing the environments in other parts of the country with those in the Gulf region and describing the obstacles to actual production of offshore wind in the GoM.

Development of GoM wind farms is part of the Biden administration's larger plan to produce 30 GW of offshore wind by 2030, and a new goal of 15 GW of floating offshore wind by 2035. Floating offshore wind is needed for the deeper waters in the Pacific off the coast of California, but shallower waters in the GoM will support the use of fixed platforms similar to those proposed along the Atlantic Coast.

Lease Sale Process

As of July 2022, BOEM has issued a total of 27 commercial offshore wind farm leases and two

records of decisions approving the construction of two major wind farms (Vineyard Wind and South Fork Wind). Most of the proposed sites for large wind farms are located off the Atlantic Seaboard, especially off Massachusetts and the Mid-Atlantic Coast, with others farther south off Virginia and North Carolina. (*See* Lease Map Book July 2022.)

A recent auction covering the New York Bight produced $4.37 billion in sales from six bidders. However, the most recent auction off the coast of California only generated $757 million from five winners.

Major bidders in these auctions include European developers, such as Equinor, Avangrid (part of Iberdrola), and EDF. Oil majors Shell and BP are also participating either directly or as partners in these leases, which last about 30 years. We anticipate major oil companies having a prominent role in GoM wind farms going forward due to their current ownership of oil and gas leases in the same region. Of course, conflicts between oil and gas leases and new OSW leases will have to be resolved through the lease sale and attendant permitting processes, including compliance with the National Environmental Policy Act ("NEPA").

Permitting and Enforcement Changes

After a successful auction, BOEM follows its four-step process for permitting the wind farms, which includes planning and analysis; lease issuance; site assessment; and construction and operations. NEPA is a critical part of this effort. From sale to issuance of a BOEM record of decision ("RoD") takes about two years, after which construction can commence.

We are hopeful that the duration of this process can be compressed due to BOEM's recent announcement of new regulations to streamline the auction and permitting process. The agency anticipates saving developers one billion dollars over the next 20 years with these changes. The changes include increasing survey flexibility; establishing a public Renewable Energy Leasing Schedule; reforming BOEM's auction regulations; tailoring financial assurance requirements and instruments; and improving the project design and installation verification process.

At the same time, because there are a number of offshore wind projects on the horizon, the U.S. Department of the Interior announced that it will transfer enforcement responsibility from BOEM to the Bureau of Safety and Environmental Enforcement ("BSEE"). This will include enforcing operational safety through inspections and investigations; enforcing compliance with all applicable laws and regulations; and overseeing decommissioning activities. Developers will now have to develop new relationships with BSEE to prevent any unforeseen enforcement actions.

BOEM just issued two Draft Environmental Impact Statements for Sunrise Wind (south of Martha's Vineyard) and the Coastal Virginia Offshore Wind ("CVOW") project under development by domestic utility company Dominion Energy off the coast of Virginia. Public meetings were held on January 18, 19, and 23, 2023. We anticipate BOEM following the same process for the wind farms in the GoM.

State Approaches Vary

The adjacent states of Texas and Louisiana have taken different approaches to the development of offshore wind off their coasts. To date, Texas Governor Abbott and his administration have not proposed or supported any legislation for offshore wind whereas Louisiana Governor John Bel Edwards, his administration, and the Louisiana state legislature have passed a new climate action plan setting a 5 GW goal of installed OSW by 2035. (*See* Climate_Action_Plan_FINAL_3.pdf.) State

and local support is critical to the success of an OSW farm because eventually the wind must be brought ashore by underwater cable and added to the state's existing energy system. This is usually done by the sale of energy to state utilities in the form of Power Purchase Agreements ("PPAs").

Anticipated Challenges

Some of the anticipated challenges to bringing offshore wind to Texas and Louisiana include:

Fishing Conflicts

So far, oyster and shrimping interests have expressed serious concerns about OSW farms in the GoM. BOEM has tried to assuage their concerns by eliminating certain lease blocks from the Texas WEA due to shrimping efforts in the area.

The relationship between OSW developers and fishers has proven very difficult in the Northeast. A fishermen's group, the Responsible Offshore Development Alliance ("RODA"), has sued to block BOEM's approval of the Vineyard Wind Farm off the coast of Massachusetts. RODA believes that the wind farm will interfere with its traditional fishing grounds. In November and December 2022, the parties filed respective summary judgment motions in federal court, which remain pending.

Higher Construction, Maintenance, and Repair Costs

Compared to onshore wind farms, offshore facilities are more expensive to construct because of the complex infrastructure needed to support them, including undersea foundations and transmission lines. Additionally, the permitting process to access the adjacent state's utility transmission line grid could take years to achieve, especially with the Midcontinent Independent Service Operator ("MISO") grid that encompasses many more states than Louisiana (Texas is covered primarily by one system, the Electric Reliability Council of Texas). (*See* What's up with MISO, the Midcontinent Independent System Operator? .) Further, sea and wind conditions will make maintaining and repairing the turbines and blades more difficult and expensive. Offshore wind farms are more likely to be corporately owned versus operated by local cooperatives, which means less local investment and support, and higher private investment costs. (*See* Onshore vs offshore wind energy: what's the difference?)

East Coast Wind Farm Advantages

Wind speeds in the GoM (approximately eight meters per second) are on average lower than along the East Coast (around nine to10 meters per second), which could mean less energy generation and capacity. (*See* Gulf of Mexico will benefit from coming wave of US offshore.) Additionally, in the GoM, the physical structures will have to survive the onslaught of Category 4 and 5 hurricanes far more frequently than along the East Coast, which means that the physical structures seemingly must be more robust and resilient. In turn, this is likely to drive up construction, maintenance, and repair costs.

Costs of the Supply Chain

Even in the Northeast, where states and local governments support OSW, everything has not gone smoothly. For example, Avangrid, the prime mover behind Commonwealth Wind, pulled out of Massachusetts' OSW procurement in December 2022, concluding that the project is no longer viable under the contract conditions reached with the Electric Distribution Companies because of historic price increases for global commodities, interest-rate hikes, prolonged inflation, and continued supply-

chain constraints. (*See* Avangrid pulls out of major Mass. offshore wind procurement.) The dispute is ongoing.

Lack of Vessels and Crews

Another critical supply chain issue is the lack of U.S.-flag installation vessels. Only one vessel is currently under construction by Dominion Energy and its partners at the Keppel AmFELS shipyard in Brownsville, Texas. This vessel, named *Charybdis*, will be deployed to work on the Northeast wind farms as demand develops. To date, OSW developers have employed a combination of foreign vessels—for installation of platforms and turbines—and domestic or Jones Act feeder barges and vessels for operations and maintenance. The Jones Act requires that only U.S.-flag ships carry personnel or merchandise between points in the United States. U.S. shipyards are stepping up to build more Jones Act vessels to support the OSW industry, including St. Johns Shipbuilding (constructing six crew transfer vessels), Philly Shipyard (building a subsea rock installation vessel), and Edison Chouest (fabricating a wind farm service operations vessel). (*See* St. Johns Ship Building Begins Construction on Jones Act Crew Transfer Vessels for Offshore Wind Market; ABS to class Jones Act-compliant subsea rock installation vessel; Edison Chouest Offshore Signs Empire Wind SOV Contract.) We only hope the workforce can match the demand.

Avian Impact

What gets lost in the hoopla about wind farms is their damaging impact on migratory birds, which fly through the wind routes where such farms are placed. The Migratory Bird Treaty Act makes it a misdemeanor criminal offense to "take . . . or kill" migratory birds "by any means or in any manner." Robert J. Martin and Rob Ballard, "Reconciling the Migratory Bird Treaty Act with Expanding Wind Energy to Keep Big Wheels Turning and Endangered Bird Flying," 20 *Animal Law Review* 145, 149 (2013). The potential punishment is a $15,000 fine and/or six months in prison for each conviction. *Id*. As a strict-liability statute, intent is irrelevant. *Id*. More than 1,000 bird species are covered by the Act. *Id*. at 148.

By contrast, the Endangered Species Act authorizes the issuance of permits for incidental takings by the U.S. Fish and Wildlife Service ("FWS"), which is also charged with enforcing the Migratory Bird Treaty Act, but the latter Act does not authorize citizen suits, and so enforcement is left up to the FWS, which has not actively prosecuted many cases. *Id*. at 150. Wind farm operators often seek permits from FWS under the Endangered Species Act to allow bird takings, and in the process FWS apparently ignores the requirements of the Migratory Bird Treaty Act. *Id*. at 151.

Another avian protection act, the Bald Eagle and Golden Eagle Protection Act, does not permit incidental takings or impose strict liability and only criminalizes knowing conduct. *Id*.

It is hard to reconcile the application of the Migratory Bird Treaty Act with the annual deaths of an estimated 538,000 to 1.17 million birds (most of which are small songbirds) via wind turbines—mostly onshore—as of 2021. (*See* How Many Birds Are Killed by Wind Turbines?) And the explosive growth and size of wind towers only continues. BOEM believes it has accounted for migratory bird flight paths by avoiding WEAs east of the Mississippi River and within 20 nautical miles of the coastline. Time will tell.

Marine Mammal Protection Act

The Marine Mammal Protection Act prohibits the "taking" of marine mammals in U.S. waters and by

U.S. citizens on the high seas. “Taking” includes both the killing and harassment of marine mammals. Allegations have surfaced that offshore tower surveying activities (by purportedly creating damaging sound and percussive vibrations) are harming whales off the Mid-Atlantic Coast after nine whales have washed ashore since December 2022.

The National Oceanic and Atmospheric Administration and National Marine Fisheries Service’s current position is that “there is no evidence to support speculation that noise resulting from wind development-related site characterization surveys could potentially cause mortality of whales. There are no specific links between recent large whale mortalities and currently ongoing surveys.” (*See* Frequent Questions—Offshore Wind and Whales.) Whether offshore wind surveying activities in the GoM will generate any more damaging vibrations than oil and gas survey activities that have been carried out for decades in the GoM seems unlikely, but certainly marine mammals will be harassed in the process of future sonar surveys. Presumably the permitting process for such surveys will permit this harassment to continue as the price to be paid for moving to renewable energy. The long-term damage to ever-diminishing marine mammal species remains to be seen. At least for one of the most endangered species, BOEM asserts that it has accounted for migratory patterns of right whales by avoiding WEAs off Florida’s west coast.

Benefits

On the positive side, many states see the benefits of OSW development by creating new ports for the support and installation of OSW projects, including turbine manufacturing. The Climate Action Plan adopted by Louisiana projects that 4,470 construction and 150 operations jobs will be created from one offshore wind farm alone. Shipyards in the GoM have also begun to benefit and are starting to construct support, installation, and cable-laying vessels. They also played an important role in building the first offshore wind farm in the United States: the Block Island Wind Farm in Rhode Island state waters. We expect onshore support and manufacturing facilities along the Gulf Coast will also blossom with the advent of OSW construction in the GoM.

Conclusion

Finally, we conclude that, despite the aforementioned challenges and the unintended marine environmental consequences of OSW structures, offshore wind is definitely coming to the GoM, and with it new jobs and continuously replenishing clean energy to both Texas and Louisiana.

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