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New Lease Areas, Record–Breaking \$4.37B Lease Sale Showcase Big Bet on the U.S. Offshore Wind Sector — What Comes Next?

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On April 27, 2022, the Bureau of Ocean Energy Management ("BOEM") announced the first step in defining up to eight additional areas for possible future offshore wind development, totaling more than 5 million acres – two off the coast of Oregon, and six off the Central Atlantic Coast. These areas will be included in two separate Calls for Information and Nominations to be published in the Federal Register today, April 29, 2022. This announcement follows the record-breaking \$4.37 billion sale of six offshore wind leases off the coasts of New York and New Jersey at the end of February 2022, which is expected to produce up to seven gigawatts of wind energy, or enough to power nearly 2 million homes.

The continued government momentum and investment enthusiasm signals a high interest level in a sector that has grown rapidly over the last 10 years in the U.S. In the coming years, we expect that additional offshore wind leases will become available, more of the early projects will start construction, and owners of projects that have been initiated more recently will need to assemble and retain skilled teams with multifaceted expertise to navigate development challenges previewed in this *Alert*.

Government Policy Goals and Support: An Initial Step on the Path Toward Development

The Biden administration has highlighted offshore wind energy projects as one key component to accelerate and achieve its climate targets: 100% carbon pollution-free electricity by 2035 and net zero carbon emissions economy-wide by 2050.¹

The administration has further announced the goal of deploying 30 gigawatts of offshore wind power by 2030 – enough to power more than 10 million homes – while eight East Coast states have individually set goals or mandates totaling 39 gigawatts of capacity by 2040. Meeting the "30 gigawatts by 2030" target is expected to trigger an estimated \$12 billion per year in capital investments on the East and West Coasts. The Biden administration is also prioritizing accelerated development of offshore wind resources through proposed funding. The administration's proposed FY 2023 budget calls for increasing the budget for BOEM by approximately 15% over FY 2022, in part to help facilitate increased leasing and construction of offshore wind facilities. Following the successful New York/New Jersey lease sale in February, BOEM announced that it is also preparing for an auction this spring for more than 100,000 acres off the coast of the Carolinas that could lead to the development of approximately 1.3 gigawatts of offshore wind power. In addition, BOEM has released draft Environmental Assessments for the Humboldt and Morro Bay Wind Energy Areas off the coast of California and is preparing an Environmental Assessment regarding future planned offshore leases in the Gulf of Mexico. Overall, as part of this endeavor, BOEM has announced its plan to advance potentially up to seven new offshore wind lease sales and complete the review of at least 16 Construction and Operation Plans by 2025.

The U.S. Department of Energy also published an Offshore Wind Energy Strategies report in January 2022 highlighting the following policy and technology initiatives to realize domestic offshore wind potential:

- 1. Increasing demand for offshore wind energy and growing the domestic supply chain at lower cost by considering expansion of federal incentives related to offshore energy;
- 2. Reducing offshore wind energy costs through technology innovation and adaptations that enable industry growth and provide affordable electricity throughout the country;
- 3. Improving siting and regulatory processes by increasing transparency and predictability, auctioning new lease areas, understanding development impacts, expanding stakeholder engagement and facilitating ocean co-use;
- 4. Investing in supply chain development, including customized offshore wind ports and vessels to establish a logistics network and attract further investment; and
- 5. Planning efficient and reliable grid integration to deliver offshore wind energy at scale.

Challenges Presented by the Development Process

While there is significant support from the federal government and many projects in the pipeline, the BOEM lease sales are but an initial step for any specific project. After purchasing a lease, key project development tasks include: (a) securing offtake contracts; (b) developing a tax credit qualification strategy; (c) obtaining necessary permits and environmental approvals; (d) arranging for interconnection to the grid; and (e) finalizing arrangements for equipment supply and installation.

(a) Offtake Contracts

A long-term offtake contract and its associated contracted revenue stream are the lifeblood of an offshore wind or other privately-owned electric generation asset. To date, U.S. offshore wind projects generally have vied for offtake contracts made available in Requests for Proposals ("RFPs") issued under state-mandated programs. States that have awarded contracts over the last five years include Massachusetts, Rhode Island, Connecticut, New York, New Jersey and Maryland. Each state's program varies in terms of offered contractual structures and bid evaluation criteria. Additional state-level RFPs are expected to be issued in 2022 or early 2023.²

Price can be expected to be a primary factor in bid competitiveness, with potential bid prices ultimately a function of a number of factors, including: anticipated project development and capital costs; the anticipated cost of capital, including anticipated interest rates and required equity returns; the anticipated development and construction schedule; anticipated project production estimates based on site-specific resource characteristics and the anticipated turbine technology; and projections of other uncontracted project revenue streams. Local economic development – including port improvements, local content requirements and workforce development initiatives – is also an increasingly important part of RFP evaluation criteria.

(b) Tax Credit Qualification Strategy

One critical "revenue stream" that is unique to the U.S. offshore wind market relates to the federal tax incentives available for renewable energy projects. In particular, federal production tax credits or investment tax credits are available to owners of offshore wind energy projects. We generally expect offshore wind projects to elect to claim the investment tax credit, given a special extension of the investment tax credit for offshore wind projects that does not apply to the production tax credit. The amount of investment tax credits potentially available to a project owner depends on when the project starts construction for tax purposes, which generally reflects the date when physical work of a significant nature has begun on the projects that begin construction

by the end of 2025 generally will qualify for a one-time investment tax credit, in the year when the project is placed in service, equal to 30% of certain eligible project costs. Once construction begins, offshore wind projects generally will have 10 years to be placed in service without having to demonstrate continuous efforts to complete the project.

The ability of project owners to efficiently utilize these federal tax credits, whether directly or via a tax equity financing transaction, will be a central factor in determining project competitiveness and its ultimate economic success. The strategy for tax credit qualification is expected to be a critical part of project development, including in advance of offtake bid submissions.

(c) Permitting Approvals and Environmental Considerations

Market participants also will need to address complex permitting requirements in the project development process, with ultimate project success influenced by the ability of project teams to secure permits within the budget and timeline assumed in offtake contract bids. For example, offshore wind projects are subject to permitting, review and consultations with several agencies at federal, state, local, tribal and regional levels, all with the opportunity for public review and comment and the ability of stakeholders to bring citizen suits challenging agency decisions. The National Environmental Policy Act ("NEPA") requires federal agencies to evaluate the "adverse environmental effects"³ of proposed actions. For offshore wind development, BOEM prepares an initial NEPA analysis of proposed offshore wind lease sales and then must complete supplemental NEPA analysis to analyze the impacts of proposed wind farms prior to construction.

The environmental review of offshore wind facilities will need to address a number of localized environmental impacts, including the potential for bird collisions, disruption of migratory patterns, and hearing loss or even death on the part of fish and marine mammals because of construction noise. BOEM's review of planned offshore wind facilities has emphasized potential impacts on coastal and marine habitats, as well as specific impacts to marine mammals and sea turtles.⁴ Potential impacts to commercial fishing and other ocean uses are also a central focus of the permitting process, with independently administered mitigation funds established in certain instances.

In addition to BOEM, a project may require approvals by multiple other federal agencies, including the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Army Corps of Engineers, the U.S. Coast Guard, the Federal Energy

Regulatory Commission ("FERC") and the Federal Aviation Administration, in addition to state and local agency approvals.

Project developers can use a number of regulatory and procedural tools to navigate this complex permitting process. This includes BOEM's "project design envelope" approach to permitting, which allows a developer to present (and agencies to analyze and approve) a range of siting and construction scenarios, with the goal of minimizing the need for future NEPA reviews. Offshore wind developers may also be eligible for permitting coordination by the Federal Permitting Improvement Steering Council and the development of a coordinated federal permitting schedule under Title 41 of the FAST Act. Most importantly, developers should evaluate and apply best practices for multi-agency permitting to ensure an efficient and coordinated process and the development of an administrative record that can withstand legal challenge.

This is especially important because local opposition to project development and attendant legal battles remain a concern, as groups of fishermen and residents have filed lawsuits citing concerns related to habitats, endangered species and contamination, as well as alleged disruption to residential life, tourism and aesthetic considerations.

While some market participants and observers have noted considerable complexity and a lack of predictability in the U.S. permitting process, the first two Construction and Operations Plans for offshore wind projects were approved by BOEM in 2021, for the Vineyard Wind 1 and South Fork projects. These two projects have demonstrated paths to successful permitting for this asset class in the U.S. Successful projects will need to assemble highly skilled development teams to navigate permitting requirements and stakeholder engagement.

(d) Grid Interconnection

Another critical part of the development process relates to grid interconnection. A path to timely grid interconnection at the required capacity in the relevant organized electric market will be a part of RFP evaluation criteria for offtake contracts. Anticipated interconnection costs – including required network upgrades – have the potential to be a significant factor in the competitiveness of particular projects. There also may be physical constraints that limit paths to connect offshore wind projects via subsea cables to the bulk power system on the mainland. Numerous interconnection requests for offshore wind projects already have been filed under the open-access tariffs of ISO-New England, New York ISO and PJM Interconnection, L.L.C. ("PJM") and are at various stages of study. Like a project's permitting process, the grid

interconnection process can be expected to take years of engagement with the relevant RTO/ISO and transmission system owners.

To date, interconnection has been pursued largely on a project-specific basis by individual project developers. However, regulators increasingly are considering and implementing approaches to centralized planning and cost-sharing for shared transmission infrastructure to deliver electricity generated by offshore wind projects. Project developers should expect to have to participate in these centralized processes and to plan their projects accordingly.

As an example, FERC recently approved an innovative State Agreement Approach ("SAA") Agreement between PJM and the New Jersey Board of Public Utilities ("NJ BPU"), which sets forth a supplementary transmission planning and cost allocation mechanism that will allocate certain transmission costs to New Jersey residents as well as other future users of the transmission projects.⁵

As background, in January 2020, the state of New Jersey formally set forth its state public policy to expand transmission to accommodate the buildout of 7.5 gigawatts of offshore wind generation by 2035. Subsequently, NJ BPU issued an order requesting that PJM open a competitive proposal window to solicit transmission proposals to facilitate this state public policy goal. PJM's competitive proposal window was open from April 15, 2021, through September 17, 2021, and it is now reviewing those project proposals. Concurrently, NJ BPU is separately conducting competitive solicitations to procure 7.5 gigawatts of offshore wind generation via offtake contracts consistent with its state public policy goal.⁶

The SAA Agreement, which PJM filed with FERC on January 27, 2022, sets forth the payment and planning processes for the planned transmission. Under the SAA Agreement, PJM will recommend certain transmission project proposals that were submitted in the competitive proposal window, and NJ BPU will decide whether to sponsor one or more of PJM's recommended projects. If NJ BPU decides to sponsor any projects, the costs of those projects will be allocated to New Jersey customers. The SAA Agreement allows NJ BPU to assign the transmission capability of its sponsored projects to offshore wind generators or other public policy resources chosen by NJ BPU.⁷ This capability, if not assigned within two years of the last date in the solicitation schedule set forth in the SAA Agreement, will be released for use by entities other than the NJ BPU-designated generators. Any user of an SAA project capacity other than an NJ BPU-designated generator will be allocated a *pro rata* share of the total costs of the project, depending on a cost allocation methodology to be determined in a future filing with FERC.⁸

(e) Equipment Supply and Installation

A final critical part of the development process relates to the arrangements for equipment supply and installation. These arrangements form the bulk of project costs and have an obvious impact on the offtake prices that can be bid into RFPs and associated economic competitiveness of a project. In practice, costs often are not contractually fixed until very close to the start of construction, exposing projects in development to price risks based on steel and other commodity prices, the availability of production slots at manufacturing facilities and other factors. Equipment selection also will dictate anticipated project performance and define important inputs for permit applications.

Installation arrangements for an offshore project inevitably also require securing access to vessel charters and port infrastructure and developing viable means and methods for equipment installation that comply with the Jones Act and other U.S. cabotage laws. While there is considerable experience with managing equipment supply and installation among participants in European offshore wind markets, direct installation experience in the U.S. is limited and will need to be further developed as the number of projects entering into construction increase. Vessel availability is expected to be a potentially constraining factor as numerous projects attempt to pursue offshore construction simultaneously.

For some U.S. locations where deeper waters prevent the use of fixed foundation technology – such as on the West Coast or far from shore on the East Coast – equipment supply and installation arrangements will need to implement floating foundation technology. This class of technology is developing quickly, but developers of deep-water projects will need to make equipment supply and installation decisions where there is no industry consensus at present on floating foundation design.

Next Steps

For government targets to be achieved in the years ahead, we can expect to see project owners assembling teams and organizing and deploying capital – often in joint ventures – to pursue significant project development activity in the U.S. offshore wind sector. For the early movers that began this process as long as a decade ago, with luck they will see their projects raise construction financing, begin construction and start operations, perhaps with opportunities to bring in new market participants and recycle capital along the way. We also see interesting ancillary opportunities in a growing sector, for example in port infrastructure improvements, vessel construction and independent transmission, among others.

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1. https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-bidenadministration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/; https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-presidentbiden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-andsecuring-u-s-leadership-on-clean-energy-technologies/ e^{2}

2. https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations/2022-Solicitation; https://governor.ri.gov/press-releases/governor-mckee-announces-plans-new-600-mwprocurement-offshore-wind; nj.gov/bpu/newsroom/2022/approved/20220228.html.↔

3. 42 U.S.C. § 4332(2)(C)(ii).↩

4. https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Final-Record-of-Decision-Vineyard-Wind-1.pdf; https://www.boem.gov/sites/default/files/documents/renewable-energy/stateactivities/Record%20of%20Decision%20South%20Fork_0.pdf

5. PJM Interconnection, L.L.C., 179 FERC ¶ 61,024 (2022).↩

6. See id. at PP 3-5. ↔

7. See id. at PP 7-9. ↩

8. See id. at PP 10, 13. ↔

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 10 February 2025 - 14 February 2025 Speaking Engagement Oxford Private Equity Programme

- 04 February 2025 Speaking Engagement Private Funds CFO Network New York Forum
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