Energy Musings

Insights into the Energy Industry

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Energy Musings *contains articles and analyses dealing with important issues and developments within the energy industry, including historical perspective, with potentially significant implications for executives planning their companies' future.*

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The Unlevel Offshore Regulatory Playing Field

Offshore wind has been adopted as the high-value way for America to cut its carbon emissions and stop climate change. The Biden-Harris administration has established a goal of installing 30 GW of offshore wind generating capacity by 2030. This goal has motivated offshore energy regulators to move aggressively to approve new wind projects. They have gone from impartial regulators to offshore wind cheerleaders. As they administer the regulatory process, they often ignore the laws and rules that should be governing the offshore wind program. Those laws and rules govern offshore oil and gas. Why are oil and gas treated differently than offshore wind?

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The Unlevel Offshore Regulatory Playing Field

"As part of the Biden-Harris administration's goal of deploying 30 gigawatts of offshore wind energy capacity by 2030, the Bureau of Ocean Energy Management (BOEM) today announced it will initiate the environmental review of a proposed 2,430-megawatt wind energy project offshore Massachusetts." That was the opening line of BOEM's June 29th press release announcing the publication of its Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Construction and Operations Plan (COP) submitted by the wind project's developer, Beacon Wind, LLC. One more offshore wind (OSW) project is moving forward.

The announcement signaled the opening of the review process for Beacon Wind, whose highlights were described in the press release:

- *"Construction and operation of two wind energy facilities (Beacon Wind 1 and Beacon Wind 2) offshore Massachusetts with a total capacity of at least 2,430 megawatts of clean, renewable wind energy, which could power over 850,000 homes each year.*

- *"Installation of up to 155 turbines, up to two offshore substation platforms, and up to two offshore export cables, which are planned to make landfall in Astoria, New York, and Waterford, Connecticut."*

Those 155 wind turbines represent roughly 5% of the total expected to be approved by BOEM in support of the Biden-Harris administration's OSW program. The program calls for building 30 gigawatts (GW) of offshore wind generating capacity by 2030. This will require 3,000 offshore wind turbines pounded into the seabed between Massachusetts and Virginia over the next seven years. Their approvals are being *"streamlined"* by BOEM, and that sea of turbines will be bolstered by another 5,000 turbines thereafter. Critics have described Biden's OSW program as the *"industrialization"* of the Atlantic Ocean, suggesting it will dramatically change our offshore waters with the possibility of creating multiple environmental issues and potentially putting a meaningful portion of our fishing industry out of business.

Exhibit 1. Rhode Island's Block Island Wind Farm

Source: delmarvanow.com

Harvesting the resources of America's coast has been ongoing since natives first waded into the waters in search of fish and shell food. This began America's fishing and whaling industries. The latter started when natives on Nantucket began hauling stranded whales onto the beach. When whales stopped washing ashore, natives and early settlers went offshore in crude boats to catch and drag whales to the beach for their meat and whale oils. From these small boats, the industry expanded to ocean-going whaling ships as sailors began hunting whales up and down the coasts of North and South America. Eventually, those ships began scouring the Pacific Ocean in search of whales on journeys lasting 2-3 years. Saving the whales only began at the time of the Civil War with the discovery of crude oil.

Offshore Energy History

The domestic crude oil industry commenced in Pennsylvania and Ohio in 1859. At about the same time, drillers discovered oil in California, Texas, and Oklahoma before booming around the turn of the century. Initial offshore oil discoveries came in the late 1880s from drilling rigs mounted at the end of piers extended into Pacific coastal waters off Southern California. It wasn't until 1937 that the first offshore well was drilled in the Gulf of Mexico (GOM) from a fixed wooden platform (named: Creole) in 12 feet of water, less than a mile from the coast. Drilling was done during daylight hours as the crews spent their nights onshore.

The first GOM well drilled "out of sight of land" was completed in 15 feet of water approximately 11 miles off Louisiana's coast in 1947. The well was drilled from a moveable drilling rig that housed its crew allowing 24-hour drilling activity. This well marked the birth of the offshore petroleum industry. The success of this well kicked off a significant exploration phase for the GOM. By 1949, 11 fields and 44 exploratory wells were operating. As the offshore oil industry grew, thoughts turned to regulation. The history of the industry's early regulation is covered on the BOEM website under "OCS Lands Act History." It states:

"As the industry continued to evolve through the 1950s, oil production became the second-largest revenue generator for the country, after income taxes. The U.S. government passed the U.S. Submerged Lands Act in 1953, which set the federal government's title and ownership of submerged lands at three miles from a state's coastline. The OCSLA [Outer Continental Shelf Lands Act] *was also passed which provided for federal jurisdiction over submerged lands of the OCS and authorized the Secretary of the Interior to lease those lands for mineral development. After the Santa Barbara Oil Spill in 1969, Congress passed several acts which spurred the development of oil spill regulation and research. They included the National Environmental Policy Act, which mandates a detailed environmental review before any major or controversial federal action, the Clean Air Act, which regulates the emission of air pollutants from industrial activities, and the Coastal Zone Management Act, which requires state review of federal action that would affect land and water use of the coastal zone. In 1977, the Clean Water Act passed. The Act regulates the discharge of pollutants into surface waters."*

Five years after the Clean Water Act, Congress passed the Federal Oil & Gas Royalty Management Act. That law mandated the protection of the environment and conservation of federal lands during the building of oil and gas facilities. To handle the mineral leasing of submerged OCS lands and to provide supervision of offshore operations after lease issuance, the Minerals Management Service (MMS) was created in 1982 within the Department of the Interior. Following the March 2010 Deepwater Horizon oil spill, the MMS was perceived to have had conflicts of interest and poor regulatory oversight. Two months later, MMS was renamed the

Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). Later that year, MMS was dissolved and BOEMRE was split into three organizations – BOEM, the Bureau of Safety and Environmental Enforcement (BSEE), and the Office of Natural Resources Revenue. BOEM was assigned the primary responsibility for overseeing U.S. offshore oil and gas program.

BOEM is also responsible for offshore renewable energy development in Federal waters. The Energy Policy Act of 2005 authorized the development of the Outer Continental Shelf Renewable Energy Program. The regulatory framework establishes a process for environmental review of proposed offshore wind projects. Each project is to be reviewed under the National Environmental Policy Act (NEPA) as well as after consultations with the National Marine Fisheries Service and the U. S. Fish and Wildlife Service under the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act. Projects must also be reviewed under Section 106 of the National Historic Preservation Act.

Both the offshore oil and gas and renewable energy industries operate under the supervision of BOEM and are governed by NEPA. The U.S. offshore oil and gas industry operates under a National Program while the offshore wind program is more informal. Per the OCSLA, BOEM prepares and maintains a five-year oil and gas lease sale schedule specifying the size, timing, and location of each sale. The governing national program's development process considers the exploration and development of offshore oil and gas resources in the nation's four OCS regions and 26 planning areas covering the entire Atlantic, Gulf, Pacific, and Alaskan coasts.

But the offshore wind industry has no National Program or specific lease sale schedule. Rather, BOEM consults with the adjacent state or states and the various stakeholders from federal, state, local, and tribal governments to identify offshore areas appearing appropriate for offshore wind development. Then BOEM publishes a notice asking for information and nominations to determine industry interest. It also seeks to gain knowledge about site conditions, resource potential, and alternative uses of the area.

The offshore wind leasing process is much less formal than that for the offshore oil and gas industry. It also enables offshore wind developers to have greater input into the process than oil and gas companies have in their process.

Offshore Leasing

The process for acquiring offshore leases is different between oil and gas and offshore wind. Oil and gas companies compete in a sealed bidding process with leases awarded to the highest bidder. That bid is subject to a separate evaluation process by BOEM to ensure the bid meets its *"fair market value."* Winning bids can be rejected for failing to reach that value.

The offshore oil and gas leasing program was radically altered in 1982 in response to falling GOM oil and gas production. That year, the Interior Department allowed area-wide leasing. Oil and gas companies could bid on and acquire a lease anywhere within the geographically defined area for a sale. The Gulf of Mexico is segmented into Western, Central, and Easter regions covering all the federal offshore acreage. Before adopting area-wide leasing, offshore blocks had to be nominated by at least two companies to be included in a sale. This was the government's effort to ensure competitive bids, although there was no requirement that the nominating companies bid for the leases. Sometimes leases only attracted a single bid.

Area-wide leasing kicked off a huge wave of acreage acquisition by oil and gas companies that stimulated sharply higher GOM drilling until low oil prices in the mid-1980s curtailed activity. Area-wide leasing marked the most significant expansion of the global offshore drilling industry, which contributed to significant growth in domestic oil and gas output. Area-wide leasing allowed companies to test unique exploration theories of where and how petroleum resources were deposited throughout the Gulf of Mexico. These tests often opened entirely new areas to oil and gas production.

Offshore wind lease sales are conducted via a secure online bidding system operated by a third-party contractor to BOEM. In most cases, BOEM uses the simultaneous ascending clock auction format that is intended to provide an opportunity for price discovery. That discovery begins with BOEM setting an initial asking price, which increases incrementally in each round of bidding depending on the number of bidders. A bidder remains in the auction as long as its bid meets BOEM's asking price. Bidders not willing to continue bidding can submit an exit bid. When a lone bidder is willing to meet or exceed BOEM's price it wins the lease. If no bidder is willing to meet BOEM's asking price, the winner of the lease is the bidder who submitted the highest price bid in the previous auction round or an exit bid from the round if it is higher.

Some environmentalists have criticized BOEM's approach to lease auctions. Although BOEM secures its estimate of the highest value for the offshore leases, once a lease is acquired, the developer is granted monopoly pricing power in its negotiations for a power purchase agreement. In the agreement to sell its power to an adjacent state's utility, the company is forced to comply with state clean energy mandates that require the purchase of a certain amount of clean/offshore energy. Therefore, high lease prices can easily be passed along to ratepayers in the form of higher electricity prices.

Those critics point to the New York Bight lease sale in February 2022 as an example of this monopoly pricing power problem. Extraordinarily high lease bids were paid and the six wind farms will be sending their power into a very constrained area for accessing the New York State power grid. This spiderweb of transmission cables to shore will create logistical challenges for developers, further raising their construction costs and boosting ratepayer electricity prices. But the state will be happy because its clean energy mandate is being met. However, the process does nothing to alleviate the cost issues associated with part-time wind energy.

The six Bight leases cover 488,000 acres and received $4.37 billion in winning bids. That is nearly $9,000 per acre. The last OSW sale was in December 2018 and involved three leases and 32 bid rounds extending over two days. The winners bid $405.1 million for 390,000 acres south of Martha's Vineyard that were estimated to contain upwards of 4.1 GW of potential wind-generating capacity. The winners offered $1,038 per acre in high bids. The bids equate to a cost of $99 per megawatt (MW) of capacity.

CleanTechnica.com slobbered all over the Bight sale results, writing *"the Interior Department called last week's auction 'the nation's highest-grossing competitive offshore energy lease sale in history, including oil and gas lease sales.'"* That should be a warning to ratepayers to hold on to their wallets. CleanTechnica.com pointed to the six leases holding potentially 7 GW of wind-generating capacity with a base case of 5.6 GW. Doing the math shows how expensive this power will be. The lease bids equate to a cost of $780/MW for the base case or $624/MW for the high case. That is 6-8 times the cost per MW paid for the Massachusetts leases.

The critics of BOEM's lease sale process would rather see a separation of power generation from transmission. In their ideal structure, there would be an offshore gathering system that would transmit the power to the onshore grid, limiting the number of cables coming ashore. Such systems have been proposed. For offshore wind developers, transmission cables can be an additional source of income adding to the project's profitability even after the additional cost to install them. Moreover, the coastal states, supported by the federal government's new green energy stimulus legislation, demand offshore wind developers invest in developing ports, assembly facilities, and labor forces for renewable energy projects in the states. That is part of the game each state is playing to become the *"center of the offshore wind industry"* and haul in money from developers and the federal government. Guess who bears the cost of the wind developers' *"investments,"* – the ratepayers.

Other issues for offshore wind transmission are the electrification of the cables which require it to be buried deeply to shield fish and ocean mammals from possible harm from leaking power. Environmentalists want the cables buried deeper than OSW developers. However, that would add to their expense and may be impossible by the character of the seabed, forcing alternative routes to shore. But possibly a more important issue is the substations needed to enable OSW farms to convert the AC power generated by the wind turbines to DC to facilitate transmission to shore where it is then converted back to AC power before being inserted into the grid. The substation equipment must be cooled which is done by using seawater. That water is then dumped back into the ocean. How much warming of the waters this causes and the possible environmental damage it might create need to be considered.

Purpose and Need

Another difference between the oil and gas and offshore wind leasing programs is the absence of an appropriate "Purpose and Need" statement required under NEPA for the latter. This point was highlighted in recent public comments on BOEM's NOI for the proposed Beacon Wind EIS by the Responsible Offshore Development Alliance (RODA).

RODA pointed out that NEPA's purpose is *"to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation."* RODA goes on to quote from the existing 2017-2022 oil and gas 5-year lease program, but a similar purpose statement is found in the draft 2023-2028 plan. It states: *"The Secretary must identify a schedule of lease sales that balances the potentials for environmental damage, discovery of oil and gas, and adverse impact on the coastal zone (43 U.S.C. § 1344(a)(3))."* That statement guides BOEM's analysis of energy demand and future energy needs forecast under different scenarios.

However, such a purpose statement does not exist in the BOEM plan for OSW. RODA says that such a statement would *"lead BOEM to prioritize OCSLA and NEPA's focus on environmental safeguards and eliminating damage to the environment. It would not be based on achieving states' OSW goals or the profit goals of a utility company determined outside of the NEPA process, as those would predispose the outcome of environmental review. The NEPA environmental analysis should inform OSW planning and decision making, not the inverse."*

RODA goes on to point out that legal history shows it is not proper to *"draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private [OSW developer]*

objectives." Such a statement would dictate the outcome of a proposed project rather than having the process examine the project along with alternatives including doing nothing.

There is no question the climate activists within the policy planning groups at the White House and in the various governmental agencies want offshore wind to be the preferred solution for climate change, regardless of the potential environmental, social, and economic costs that would be exposed if OSW projects were subject to critical examinations including cost/benefit analyses. These agency regulators have become cheerleaders as shown by the language and tone of their press releases. Oil and gas activities are subject to such an economic cost/benefit analysis while OSW projects are not. Why?

Increasingly, we see executive and bureaucratic actions undertaken to win political favor rather than solve real-world problems. This is not a plea to tilt the OSW approval process in the opposite direction, but rather that the process should be fair rather than one manipulated to guarantee the "proper" outcome. That means a level regulatory playing field.

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