

Floating Offshore Wind Research Array

Summary of Fisheries Work Session #2

March 31, 2021

OVERVIEW

The Governor's Energy Office (GEO), in partnership with the Department of Marine Resources (DMR) and the Maine Department of Inland Fisheries and Wildlife (MDIFW), is holding a series of work sessions to inform the State's plans for an offshore wind research array and encourage engagement in the stakeholder process to inform the research lease application to the Bureau of Ocean Energy Management (BOEM). The second fisheries work session included an update on what the State has learned about fishing activity in the research area of interest. Also discussed was potential configuration of the array, and potential research topics. The work session was open to all interested parties.

This summary focuses on the main points covered during the work session. The agenda, presentation slides and recording of the work session are available online:

<https://www.maine.gov/energy/initiatives/offshorewind/researcharray/worksessions>

ATTENDANCE

The work session was attended by approximately eight-five (85) people including the general public, non-government organizations, fishery associations, fishermen, consultants, academics and state and federal agencies. Please note that participating in these sessions does not constitute approval nor endorsement of OSW development in the GOM generally or the Research Array in particular.

OPENING

The facilitator noted that today's workshop will be focused on siting considerations, configuration ideas within the array, wherever it may be, and potential research question. The State presented an overview of what has been learned and advanced to date.

- The area of interest is approximately 770 square miles, and the overview map shows known exclusion zones to development including shipping lanes and Department of Defense (DoD) exclusion zones.
- DMR has relied on publicly available data from its own data base, the Northeast Regional Oceans Portal, the National Marine Fisheries Service, bathymetry and individual interviews and conversations.
- An overlay of available data and interviews allow for identification of areas with high levels of usage and multiple fishing activities where more conflict would occur.
- Recently available bathymetry with a 1-mile resolution shows the bottom around Mistaken Ground and adjacent shipping lanes are not featureless but have various levels of structure. This new data updates data based on soundings from over 100 years ago.
- DMR found that areas of depths less than 90 fathoms tend to have overlapping fishery activity and are more broadly used than areas greater than 90 fathoms because lobstering activity drops off significantly at these deeper depths.

DISCUSSION

Below is a summary of the key themes and topics discussed during the work session. [Many of these questions were answered during the meeting and/or can be found in our FAQs.](#)

Common Themes

Area Siting Questions and Comments

- *Is Jeffreys Ledge closed to most fishing?* It is part of the Western Gulf of Maine Closure. It is a high recreational fishing area, close to shipping lanes, North Atlantic Right Whale activity, and there is commercial lobstering and herring fishing within the GMOC (on and around the Ledge).
- *Is the >90 fathom substrate known?* No, it is not. The recent bathymetric data gave us a much better picture of the contours, but not the substrate.
- *When we see red on the map indicating depths less than 90 fathoms, what should we assume?* Generally, these are conflicted areas used by multiple fisheries.
- *The map with the red showing depth is being used as a proxy for lobstering activity. But are any efforts being taken to determine how many lobstermen fish in the area of interest in general, the times of year they fish there, amount of revenue and volume of lobster from the area?* We have pulled all the data we have, including input from individual fishermen, to determine that the 90-fathom line, though not perfect, is a reasonable proxy for lobstering in the area of concern.
- *Does the shipping lane extend into the area including the 5 nm buffer related to shipping lanes and would that preclude siting in that area?* The State would work with the Coast Guard and pilots to highlight areas of concern in this 5 nm buffer area, but siting is not precluded there.
- *There is a purple area between the TSSs closer to shore that has little fishing on it. Could we use that area for siting?* We are not sure if that area is large enough to accommodate the site and it is also in depths below 90 fathoms which would preclude learning more about deeper siting of floating technologies.
- *How close can you get to the DoD exclusion zone?* There is no buffer to that zone, but published information may be out of date, so the State is conferring with DoD.
- *Why not fixed arrays?* Fixed arrays would take up a smaller footprint and allow fishing to continue. For instance, closer inshore by Platts, is a shallow area that isn't used much by lobsterman. Part of the State's interest is in exploring the floating technology for deeper water and the potential of "home-grown" technology from the University of Maine. Most of the GOM wind resource is in deeper water. The industry standard for fixed bottom turbines is only around 50 to 60 meters or 25 to 30 fathoms give or take.
- *Who will the electricity be sold to?* There will be a Power Purchase Agreement (PPA) from this project to the Maine grid, for 20 + years of the project life span. Thus, there will be an opportunity for R&D and innovation for the state. What we learn could lower costs for future OSW wind projects. The developer will fund some of the research, but those funds would not cover all aspects of the potential research related to the project the State more broadly is interested in.

Configuration Questions and Comments

- *What is the distance between the turbines?* Although this is still an estimate, it is estimate about 1 nm. If larger turbines get much closer, they cause wake effects with one another, affecting power and stability.

- *What is the diameter impact of the anchoring and dynamic cables?* The entire footprint around each turbine is about 800 to 1000 feet in diameter, which is based on an assumption of likely siting in approximately 600' of water.
- *Are there other anchoring systems that are being considered for the array and that use less lines or smaller footprint? What about suction piles?* We are still exploring but current known other anchoring systems are typically used for harder bottom. Suction piles are used in sandy conditions and are not viable for semi-hard bottom or mud. Aventis noted that they do intend to test differing anchoring cable materials such as synthetics and the goal is to minimize bottom coverage.
- *Is there a substation too for this array?* No there is not given its small size and proximity to shore.
- *If you have 16 turbines, mobile and moving, with interconnecting cables - won't the cables be moving and how would you deal with chafing and the like?* The turbines don't really move but about 20 m off center. The technology needs just enough slack in the system but primarily they are stationary.
- *Why 12 turbines versus a smaller number?* The proposal is for up to 12 turbines. We do not know how large the turbines will be (though anticipated range is 10-14 MW). And we do want to learn about interactions with an array including whether fishing may occur in or between the array. So, the number of turbines needs to be sufficient for testing research ideas.
- *What kind of fishing might be possible within the array?* The State and the developer will allow fishing within the array. Part of the intent of this project is to test how and what fishing activity can occur. We don't intend for any gear to be off limits but whether it is possible to fish all gear types within a floating array is still an open question, and of course does not mean that fishermen will decide to fish within it.
- Participants stated concerns about the potential of fishing in the array, including the difficulty of using mobile gear within the footprint of the array and any anchors and cables, and tuna fishing where an angler has no control where a fish goes.

Research Questions

- *Are we including research work related to the transmission cable to land?* There is a requirement to site assess with the transmission. We can go beyond the monitoring aspect and conduct research related to the array cable.
- *You mentioned funding need for research over 20 years or more. That seems like a long time to secure and maintain funding. What are the options that you are looking at for long term funding?* Our plan to create a research consortium based around the value of developing a long-term research strategy. This will include a prioritization for near-term research objectives that will be most important to obtain prior to permitting of future larger scale commercial projects in the Gulf of Maine. The consortium will also focus on longer-term research needs and funding avenues for the overall research strategy.
- Research ideas suggested included:
 - Establishing baseline/historical fishing activity to understand how it may change throughout the process.
 - Studies on warm waters or cold pools? Work is being done in the mid-Atlantic.
 - Impacts of navigation due to the array.
 - Primary and secondary entanglement of marine mammals.
- *What if after research that you find results that indicate negative impact?* That is the purpose of this project— to better inform future development. We will use that information to inform other projects if they are proposed.

Next Steps

The State noted that next steps are to: 1) engage willing fishermen dockside to discuss these issues further as well as attend Zone Meetings wherever possible; 2) further review and gather data where possible; and 3) prepare for a final joint wildlife and fisheries work session in early May with an update on where we have identified as siting locations that avoid conflicts to the greatest extent possible.