MA Fisheries Working Group on Offshore Wind

December 10, 2021. 10:00 am – 12:30 pm

MEETING SUMMARY

Lisa Engler opened the meeting and welcomed attendees.

Fisheries Compensatory Mitigation Framework update

Brain Hooker, BOEM

On November 23, 2021, BOEM published an RFI to inform development of draft guidance on avoiding, minimizing and compensating for impacts from offshore wind energy projects to commercial and recreational fisheries. The information will support BOEM's NEPA review. With this guidance, the offshore wind industry will apply methods and process that will minimize inconsistencies among projects in mitigating impacts and provide greater equity across fishermen regardless of homeport. This guidance development is timely as several projects will be beginning their environmental review in Spring 2022 and this will be incorporated in analysis of DEIS. This guidance development does not preclude future statutory authorization.

BOEM considers "mitigation" to encompass the full suite of activities to avoid, minimize, and compensate for adverse impacts (e.g., conflict with gear, increased transit times, displacement of fishing grounds, etc.). The mitigation hierarchy is at the core of BOEM's report on Fishing Best Management Practices (BMPs) published in July 2014 to address concerns. It identified five BMP areas:

- Fisheries communication and outreach (guidance issued in 2015, modified in 2020) – fishery liaison and mitigation process
- Project siting, design, navigation, and access
- Safety
- Environmental monitoring
- Financial compensation

Guidance can:

- Recommend fisheries mitigation processes
- Recommend methodology to determine sufficiency of funds to compensate fishing communities for negative economic impacts from offshore wind activities approved by BOEM.
- Propose measures that could result in fair, equitable, and predictable methodologies used by developers for mitigating impacts.
- Enforce compliance with contributions proposed by the lessee that were part of the approved COP or other appropriate plan approval, regardless of said contributions being required by a state or not.

Guidance cannot:

- Create a central fund. BOEM lacks legal authority to create/oversee a central funding mechanism for compensatory mitigation, and cannot require contributions to a particular compensation fund, absent a previous commitment or obligation for the lessee to do so

- Administer funds.
- Require regional mitigation. BOEM cannot require a lessee to mitigate for regional impacts as part of a COP approval, unless BOEM's environmental impact analysis demonstrates the regional impacts of the specific project.

Feedback is solicited for: general approach; project siting, design, navigation, and access; safety measures; environmental monitoring plan (to document when a change has occurred in how fisheries operate e.g., displacement issue). There are various biological monitoring requirements during pre-construction and additional efforts by other entities e.g., ROSA; data and methodology for determining the compensation. Comment period closes January 7, 2022. https://www.regulations.gov/docket/BOEM-2021-0083. More information can be found at: https://www.boem.gov/renewable-energy/fishing-industry-communicationand-engagement. BOEM already held meetings and more coming up.

Q: If it can be demonstrated that a particular type of scour pad would be more beneficial to fisheries, can BOEM require developer to choose one type of scour over another? A: BOEM can but there are additional considerations such as the cost and availability of a product especially if there is a more environmentally friendly product on the market.

Q: If a particular mitigation strategy e.g., seeding clams, can be applied outside the OSW area, is this acceptable as mitigation? A: BOEM welcomes innovative ideas – other ways to mitigate effects besides compensation.

A participant observed that a specific developer can state they will not have an impact. But what about the regional scale? The fishing industry needs BOEM to make sure that there is a unified approach established, otherwise it will be difficult for fishermen to address on a case-by-case basis.

A participant recommended that guidance should include who will be responsible for ensuring that the guidance is followed, who will have the burden of proof (whether an impact has occurred), and who will pay for the work. A: There will be a claims process in place and environmental monitoring will provide information on whether an impact has occurred. BOEM has the ability and mechanisms to request mitigation as required in a regulation. BOEM oversees monitoring the facility. NMFS will watch how fishery performance may change. BOEM and NMFS will coordinate on determination on whether an impact has occurred.

Q: A participant strongly recommended there should be a regional fiduciary mechanism established to guide the fishing industry on the process (a 30-year process). A: Language can be added to describe options, example by setting up a regional fiduciary. The actual fiduciary mechanisms will not be part of the BOEM guidance.

In response to concerns about whether there will be retroactive compensation for fishermen from NY who fish these waters but who were not involved in the MA and RI task force and in federal review process, BOEM explained that there is a mechanism in place for compensating an impact that was not considered or properly mitigated. However, there is no threshold established and it may be challenging to understand how to compensate retroactively.

This guidance will not change the CZM process but provide direction to lessees.

Lisa encouraged folks to attend workshops next week. https://www.boem.gov/renewable-energy/request-information-reducing-or-avoiding-impacts-offshore-wind-energy-fisheries

Fishing Industry Updates

Beth Casoni (MLA): MLA will not be having annual meeting 2022 due to the pandemic. Postponed to 2023. Also, developers get more involved in their projects as constructions start. 8 mins for updates is not enough time to have more details and possibly split between to meetings.

Lisa invited the group to communicate ideas on agenda items, what they would like to hear about.

ACTION: CZM will create a contact list of developers.

Ron Smolowitz (Technical Advisor to Fisheries Survival Fund) (Refer to slides): The Nantucket Light Ship (NLS) area is divided into several components. The scallop fishery was permitted in 2018-2020 in this area. A typical trip on a 342-ft. boat lands >6 million lbs of scallops. There is high density of scallops in this area (125 sq.mi.) -more than observed for 40 yrs. Other areas (NLS west) opened in 2018 but resource did not last very long. Scallops (36 million lbs expected) = $1B to economy from MA to NC.

Little is known about scallop recruitment. The scallop industry has been transplanting scallops from deep areas where they do not grow very well to the small triangle (closed to allow growth). In 2020 transplanted scallops had 24-mm shell, by 2021 they had grown to 110-m shell. Scallops in the harvest area grew by 2%, while those transplanted grew 17%. Meat count was 17 in the transplanted area, 36 count in the deeper zone. This seems to indicate that transplanting scallops is a viable action and may mitigate some impacts of OSW especially with sedentary organisms. There is currently no research funding for sustaining food availability. Research fund should include this as a fundable project.

Fred Mattera: Due to concerns about loss of gear, interactions between survey vessels towing or turning off AIS at night, short notices meetings, and several fishermen being older and not tech savvy, a new waterfront app is being developed and beta tested. This will be an important tool for industry to use and developers and fishermen are encouraged to populate with real time activities to avoid interaction at sea.

ACTION: Share app with group when available.

Offshore Wind Developer Updates

Vineyard Wind (Crista Bank & Caela Howard)

Changes in ownership Vineyard Wind, previously owned by Avangrid Renewables and CIP. Going forward VW1 will be co-owned by Avangrid and CIP. Lease area 501 South, renamed lease area 534, is now owned by Avangrid Renewables (Fishery Liaison Caela Howard) while lease area 532 is owned by CIP (Fishery Liaison Crista Bank).

Lease area 534 has been renamed New England Wind (includes Park City Wind and Commonwealth Wind). The COP is submitted in two phases. Phase 1 – Park City Wind - 800 MW to CT with 50-62 turbines (13-16 MW). Phase 2 – Commonwealth Wind - 1200-1500 MW with 64-79 turbines (13-19 MW) and up to 3 electrical service platforms. No purchase agreement in place yet.

Cable corridor options included as contingency plans. The preferred option is for cables to all go through Muskeget Channel (west of VW1 cables). Phase 2 - two locations proposed for a reactive compensation station have been removed as they were deemed unnecessary. As part of phase 2 option, the gravity-based foundation option removed was removed. Addition of new cable alternatives (11/27/21) triggered new public comment period through 12/22/21. Onshore construction has started, combined with some work directly off the beach. Offshore construction will start in late spring 2022 with cable installation.

Equinor (Elizabeth Marchetti)

Beacon Wind proposes 157 turbines generating 2GW. Elizabeth provided an update of ongoing survey work (refer to slides). Aerial wildlife surveys started in December 2019, marine G&G surveys ongoing along the cable route as well as inside and outside the lease area. Two metocean buoys were deployed together with current meters and LIDAR measurements in November 2021.

Mayflower Wind (Joel Southall)

Joel provided an update on the Mayflower Wind project in lease area 521. There will be two points of interconnection, Falmouth, and Brayton Pt. (Somerset). NOI was issued on November 1, 2021, and scoping meetings with BOEM took place in November. Surveys on the water have slowed down this fall. Website with notifications of planned work is updated regularly for mariners and other users. Port Hours meetings scheduled for January - New Bedford (1/6/22), Pt. Judith (1/7/22). Developer has not yet committed to a total number of turbines and MW capacity to allow for flexibility and changes in technology.

Ørsted (Chris Sarro)

Chris Sarro provided updates for all three northeast Ørsted projects: South Fork, Revolution Wind, and Sunrise Wind, including the permitting process, monitoring and fisheries surveys. Surveys are ongoing in lease areas as well as in proposed cable corridors. Surveys will continue into 2022.

Q: What is acoustic monitoring showing and how do you plan on vetting and deconflicting those areas with fishing in those areas, in advance. Does this apply to both federal and state waters? It is important to avoid conflicts in squid trawling areas to avoid gear losses. A: Will provide a POC to respond to questions.

Sunrise Wind - Offshore Converter Station Cooling System

Mike Evans, Ørsted

Mike Evans gave a presentation about the water-cooling system being developed for Sunrise Wind (SW) transmission. SW export cable from lease area 487 to Long Island is about 100 mi long which limits AC transmission. DC provides a more efficient design and reduces infrastructure needs. The process requires cooling water, with a maximum intake of 8.1 MGD, average 4 MGD. This entails

discharging heated effluent (90°F). A water-cooling system is the most suitable process. 8 MGD is a relatively small amount when compared to onshore powerplants of comparable size (SW 1100 MW).

Increased water volume and flow rate are correlated with potential biological effects. Protective elements have been integrated into the cooling water intake design (CWIS) to minimize flow and volume. Intake pipes sit 10m off seafloor to avoid impacts to benthic habitat. Seawater lift pumps will control flow rate to minimize zone of entrainment of eggs and larvae while maintaining intake velocity to <0.5 ft/s to eliminate impingement of juvenile/adult fish. Discharge sits at 12m below sea surface to minimize the mixing zone.

Preliminary results:

- Intake at 10m = $40m^3$ zone of intake, within 5m of pipe
- Discharge 1 degree change about 25m from discharge point
- Intake zone of influence within 50m of intake and 25m of discharge. Within footprint of structure itself

Assessment of zooplankton: Using MARMAP (1977-1987) and EcoMon (1995-2017) ichthyoplankton density data, sorted by geographical area and species with designated EFH, the following preliminary results were obtained:

- 16 species assessed
- Forage species most susceptible (Atlantic herring, Atlantic mackerel, hake)
- Benthic species less susceptible (yellowtail and summer flounder, cod)
- Entrainment rates highest May through December
- Number of ichthyoplankton are minimal relative to species fecundity and total amounts of eggs/larvae present (<0.1%)

This information will be submitted to EPA as part of the COP. Draft EPA permit will be available for public comment late spring/early summer. The project COP has been updated to 1122 MW (down from 1300 MW) and 102 (down from 122) turbines.

A participant expressed concern about the impact of water intake and discharge. Studies showing increasing ambient water temperatures, and this may exacerbate the situation the decline of lobsters in southern New England. Mike explained that alternative scenarios were considered for the EIS but Given volume of water needed this is the best system. Plume is 25m – when water temperature goes from 90°F to background sea temperature. Plume will also depend on season. Maximum zone of mixing (at 8MGD withdrawal scenario) and at slack tide conditions will have the biggest impact.

Since the area is EFH, some participants expressed concern about potential impacts to fragile habitat especially with 90°F water discharge. Studies by WHOI on surface effects of warm core rings have documented impacts of temperature increase on crabs and lobsters, their survival and migration. There was concern that these data (see presentation) are based on modeling and there may be more damage and mortality of eggs and larvae than anticipated.

Kevin Stokesbury pointed out that MassCEC funded two-year study showed this area had one of the highest lobster larval concentrations and is also where fish as well as invertebrates aggregate. He asked whether there will be monitoring in the field and recommended incorporating larger oceanographic models (e.g., FVCOM) that could consider all the WTGs proposed.

Mike explained that monitoring required by EPA will likely include temperature, flows and other physical parameters in addition to biological parameters, as part of permit conditions.

Lisa suggested continuing the conversation offline. A follow-up meeting topic could be the monitoring plans developed with EPA.

Pilot Regional Fisheries Studies: HMS Tagging Study

Brian Gervelis, INSPIRE Environmental

This project is one of the pilot regional fisheries studies funded by RIDEM, BOEM and MassCEC. Inspire partnered with NEAq. 2020-2021 to look at potential impacts of OSW and collected baseline data on HMS in southern New England (SNE). This project is part of background work with Vineyard Wind to survey which areas and species are most important to recreational fishermen. The area includes designated EFH for 14 species of HMS, feeding and migratory corridors in SNE. There is less information on mating and pupping areas within these areas. SNE supports recreational fishing for HMS >7000 permitted vessels in 2020. Tagging acoustic transmitters and receivers placed offshore pick up signals and identify and track organisms. 15 receivers were spread in hotspots for recreational fishing.

Long-term goals are to monitor presence, persistence, and movements of HMS during phases of OSW development, and assess potential impacts on HMS. In the short-term the goal is to collect baseline data on usage of areas around OSW and SNE and illustrate use of acoustic telemetry for monitoring HMS responses to OSW in space and time. 15 receivers were deployed around hotspots within OSW area. Tagged DMF priority species including bluefin, blue shark, and shortfin mako inside and outside WEA (presence, persistence etc.) and monitor fish behavior to establish baseline metrics. Deployed >60 species tags and monitored from June/July to December. Collected receivers in December 2021. Data are still being analyzed but preliminary results showing a number of individuals at each station (see slides) indicate that in 2020 sharks were most abundant in the OSW area, while bluefin tuna (BFT) were more abundant in 2021.

Detected 23 individuals tagged as part of work with Equinor and Mayflower. 188 individual animals including a couple of turtles detected in 2021. Fish from 2020 moved east into Cocks Ledge, a few BFT in WEA, several detections in WEA in late summer.

Continuing to collect data over the next several years may be able to establish patterns. Continue to build time series baseline data for recreational fishing, expanding the array from 15 receivers to almost 100 as surveys for Beacon Wind, Mayflower Wind, Ørsted, and Vineyard Wind, are included. Also planning to add tags on marlin and thresher shark (to the east). Survey will continue into post-construction period for some of the OSW projects (through 2026). Continue to collect information from outside arrays and establishing data sharing policies and BPs with other researchers doing similar work.

Q: Where were the buoys placed in the water column and how did you keep them from conflicting with trawl gear? Was USCG notified since anchored things must go through a process for approval? A: Notices to mariners on locations were issued as well as updates they move. These are not permanent structures; the receivers are at about 4-5 ft off the bottom. There is not surface gear and no large structures. The receivers were deployed in hard bottom where trawling does not happen (two lost in 2021). Locating in hard bottom areas is challenging because some hotspot areas in soft bottom. We were not aware that we required a USCG permit.

Brian indicated that a report will be prepared over the next month based on these data and will be made available in a few months.

Participants were enthusiastic about this study and encouraged its application in other places. They agreed that including additional species such as marlin was important. Some suggested adding mahi mahi which tends to aggregate near structures, as well as inshore fisheries species (e.g., false albacore, kingfish, Atlantic bonito, etc.) because these species drive a strong recreational fishing and tourism industry. Brian explained that, if possible, additional species will be tagged. One challenge is that some of these inshore species are relatively short-lived compared to the longevity of the tag batteries, so some work must be done to identify the best way to do this.

Other Announcements/Updates/Next Meeting

Lisa wrapped up the meeting by thanking attendees. The next meeting will be in March.

The meeting adjourned at 12:45 PM.