

Environmental Technical Working Group (E-TWG) Sunrise Wind Mitigation Plan Meeting Summary

Wednesday, November 20, 2019 from 10:00am to 1:00pm
NYC Seminar and Conference Center, 71 E 23rd St, New York City

Under the New York State Public Service Commission's procurement process, contracts for offshore wind development necessarily entail Mitigation Plans to address the interests of ocean users such as commercial and recreational fishing and environmental stakeholders. On November 20, 2019, Mitigation Plans for Sunrise Wind (Ørsted and Eversource) developments were presented to non-developer members of NYSERDA's E-TWG. Mitigation plans were made available to E-TWG members digitally prior to the meeting. This document outlines the key discussion points during the Sunrise Wind session as well as input provided to NYSERDA via email following the meeting. Comments are summarized without attribution to specific individuals. Meeting attendees are referred to interchangeably in the summary as "stakeholders" and "E-TWG members." The session's discussion goals included:

- Initiate an ongoing conversation with E-TWG members and the developer about its project;
- Learn about and gain a detailed understanding of the project's mitigation approaches;
- Share initial advice, comments, and considerations with the project team; and
- Identify issues for further discussion or to bring back to the full E-TWG.

This summary is organized to align with the structure of the meeting agenda (Appendix A). Finally, note that this summary is focused on the meeting's discussion topics and takeaways. Full developer presentations are not summarized here. Mitigation plans and presentations from Sunrise Wind are available [here](#).

Environmental Mitigation Plan Meeting of November 20, 2019

Attendance: In addition to three presenting developer representatives, there were seven E-TWG members in attendance in the room, as well as four NYSERDA staff. Seven E-TWG members also participated remotely via web/conference call. One staff member each from the Biodiversity Research Institute (BRI), the Consensus Building Institute (CBI), and The Cadmus Group were also present to provide technical, facilitation, and logistics support.

Welcome & Introductions

NYSERDA shared that it is seeking input from stakeholders to inform its process and next steps regarding both Sunrise and Empire Wind site-specific topics as well as spatially agnostic topics that connect to future projects as well as other parallel efforts. Slides with further detail on NYSERDA's introductory comments are available on the E-TWG website.

As part of NYSERDA's contractual requirements, offshore wind developers must consult with relevant state agencies around fishing, wildlife, and the environment and participate in the Technical Working Groups. The developers will evolve their mitigation plans over the course of their projects, make publicly

available environmental data collected during site assessments, and implement lighting controls to minimize nighttime visibility.

This meeting was not intended to generate consensus, but instead to gather comments and questions on the mitigation plans. Developer mitigation plans will likely be updated two to three times a year based on milestones, state and federal guidance, and TWG input. Slides with further detail on NYSERDA's introductory comments are available on the E-TWG website.

The Agenda for the meeting and "Rules of the Road" for the discussion were outlined by the facilitator and are available in the Appendix.

General Comments on Environmental Mitigation Plans

This section summarizes feedback from stakeholders that applies to both mitigation plans and/or in several places throughout the mitigation plans.

Transparency and Communication

- **Decision-making Processes:** Stakeholders expressed interest in learning more and getting more transparency about what led developers to make different decisions in their project development process so that process can be seen by stakeholders and commented on.
 - **Risk Management Frameworks and Tools:** Stakeholders would like to see future discussions on risk management framework/tools and how these decisions are made.
- **Communication:** Recommended the development of a communications document or summary that frames what the project is doing in addition to the baseline requirements for a mitigation plan. The document would break down project information into a digestible format (1) requirements, (2) industry best management practices (BMPs), and (3) what they are doing above and beyond what is required. This was noted as being helpful for broader audiences. A couple of specific suggested included:
 - **Webinars:** Webinars were discussed as valuable for sharing information with a broader audience beyond the E-TWG since stakeholders are pressed for time and are asked to digest a lot of information.
 - **Post-Construction Monitoring Workshop:** In the longer-term, the E-TWG will consider a post-construction monitoring workshop, potentially from a regional approach.

Detail and Specificity

- **Construction Monitoring:** Stakeholders would like to see more detail on monitoring during construction in the plan.
- **Developer's Assumptions:** It was recommended that a third column be added to tables in Section 4 to capture developer's baseline assumptions. Without this, the table otherwise seems to blend mitigation measure with developer assumptions.
- **Intentionality:** Stakeholder would like developers to speak to the intentionality of its commitment to provide greater specificity where more detail in the mitigation plan is not yet possible.
- **Similar Projects:** The plan should bring in more lessons from other projects and places.

Stakeholder comments received after the meeting

- NY should consider making the NRDC/Vineyard Wind right whale agreement standard. Or, NYSERDA should strongly suggest developers look at and consider that agreement.
- NYSERDA should require making PSO sightings for every phase of development, including decommissioning, available to the state (if not publicly) as soon as possible. The activity should be described, and the sightings listed. For example, we receive a spread sheet of sightings within a month or two after a maintenance cruise is done.

Next Steps

- **Meeting summaries** and presentations from both mitigation plan meetings will be available on the E-TWG website.
- **Mitigation Plan Updates:** Developers will be asked to red-line changes they make to the plan to show how they respond to stakeholder feedback. The E-TWG will also discuss how the mitigation plan review and update process can continue moving forward (e.g. update two-three times a year based on major milestones).
- **Future Mitigation Plans:** NYSERDA will also undertake a broader assessment of mitigation plans to understand how they can be standardized, including across states.

Sunrise Wind Mitigation Plan

The sections that follow provide key takeaways discussion associated with each section of the mitigation plan for Sunrise Wind.

Environmental Mitigation Plan Summary

Introduction

Ørsted staff provided a brief introductory presentation covering some of the company's history as an offshore wind developer, including other past and current projects. They then provided an introduction the Sunrise Wind project plans, which is a partnership with Eversource. The project is in a Massachusetts and Rhode Island offshore wind area more than 30 miles east of Montauk, NY. The project is expected to include 110 wind turbines. Export cables will extend from the project west to Long Island with an interconnection point at Brookhaven. The project is anticipated to begin production in 2024.

Ørsted is working to engage stakeholders throughout the process and to minimize the project's environmental impact via siting avoidance, design and minimization, communication, and research support. The company stated its commitment to third party research, standardize its data, hire a science coordinator, and evolve its data sharing approach over time.

Section 1: Philosophy and Principles

- **Additional Plans to Reference:**
 - Plans referenced in Section 1 should include the [NYS Ocean Action Plan](#) and the [NYS monthly aerial survey](#).

- There is significant sturgeon acoustic monitoring occurring (e.g. migration in and out of estuarine water) that would relate to state cable permitting. The data only extends to state limits, but could still be helpful to federal waters.
- The [New York Bight Whale Monitoring Program](#) could also provide useful data for reference.
- NYSDEC held a Sea Turtle Workshop and a final report will soon be available on sea turtle monitoring for the NY Bight.

Section 2: Communications and Collaboration

Section 3: Supporting Other Research

- **Proprietary Data:** The group had a discussion on what developer data is to be considered proprietary.
 - Ørsted shared that geophysical and technical data (initially before foundations are in place) and wind data are proprietary; biological data will likely be made available. Whether data can be shared will depend on what organization is requesting the data and for what it plans to use the data; the requesting organization would need to justify why the data will not be commercially sensitive to share. That said, as a principle, Ørsted will try to share everything they can. Ørsted summarized:
 - Deep ground data can be shared after a project is operational.
 - Not able to share wind data.
 - Surface bathometric data may be sharable.
 - Care needs to be taken in sharing data on commercially sensitive fishing information and archeological resources.
- **Standardization:** Stakeholders requested that Ørsted collaborate with existing efforts to ensure that its data is standardized (e.g. follow NOAA standards). Ørsted noted a need for alignment of state and federal data standards to avoid conflict. BOEM recommended holding these conversations early and often.
- **Financial Commitment to 3rd Party Research:** Stakeholders asked for more information on Section 3.5 in terms of the type of research anticipated.
 - Ørsted said it can share more after their research contracts are signed, but it will focus regionally and include passive acoustic research and ecosystem modeling and avoid duplicating any existing efforts.
- **Research Hypotheses:** Stakeholders recommended that developers form hypotheses about the questions they are trying to understand with monitoring to ensure the right data is being used and that the measurement is impactful. Establishing a control region may also make sense.
 - Ørsted noted there is a challenge of isolating the impacts of offshore wind vs. other causal factors in the ocean environment.
 - Research goals can be understanding impacts and also how an intervention can be used to mitigate impacts (e.g. pre- and post-construction monitoring should build into an adaptive management framework).
- **Future Priority:** Pre- and post-construction monitoring was prioritized for future E-TWG discussion and potentially could be the focus of future workshops on the topic.
- **Results Sharing:** Stakeholders noted they wanted to hear more about research results (e.g. akin to a Deepwater Wind workshop held a few years ago). Ørsted said it could hold a

workshop now to share results from its Block Island site. This could be linked to NYSERDA's upcoming State of the Science Workshop.

Section 4: Proposed Mitigation of Impacts to Marine Mammals and Sea Turtles

- **Noise Mitigation Measures (F-15 and F-16):** There is significant discussion of underwater noise impacts in the plan, but without much detail. Stakeholders requested that Ørsted expand its list of underwater noise impacts and mitigation measures and show what it is doing beyond the standard requirements, as well as what is working and what is not working.
 - Ørsted can provide a future webinar on this topic.
 - Stakeholders are interested in learning about findings from the South Fork project.
- **Time Restrictions:** E-TWG members recommended that Ørsted consider time area restrictions for right whale habitat, especially if pile driving during spring months.
- **Passive Acoustic Monitoring (PAM):** It was noted that if regulators do not require PAM for underwater noise impacts monitoring, Ørsted should still pursue this.
- **Seasonal and Dynamic Measurement:** E-TWG members wanted to see seasonal and dynamic measurement made mandatory rather than voluntary (e.g. a written commitment to review data every year). They generally requested that Ørsted be open and flexible on points like this.
 - Also want to find real-time data solutions for mitigating ship strike.
 - Need for ecological and predictive monitoring was noted.
 - In the short-term, Ørsted should make dynamic management areas already in use as protected as possible once identified.
- **4.3 More Detail:** Stakeholders recommended that Section 4.3 have more elaboration and details on lighting approaches, pile driving, and ship strikes.
 - Ørsted noted they will develop project-specific protected species approaches after the COP. They are also open to adding more intentionality in the plan where details are not yet available.
 - Much data in the plan is historical, rather than relying on current visual siting data or passive acoustic monitoring baselines.
- **Feedback from stakeholders on this section received after the meeting**
 - Should cite "Summary Report: Best Management Practices Workshop for Atlantic Offshore Wind Facilities and Marine Protected Species" by BOEM 2018.
 - An example of needing more information: Saying "BOEM studies" or "NOAA studies" without listing what those studies are and the exact datasets is useless.
 - Many studies they list don't cover the lease area. "Relying on" NYSERDA's aerial They're missing a lot of information, including a 2019 document titled "A Framework for Studying the Effects of Offshore Wind Development on Marine Mammals and Turtles". CRESLI data on the NYS Gateway would be worth looking at.
 - survey doesn't seem appropriate. How will they apply that information?
 - They need to add fin whales and North Atlantic right whales to their list of species most likely to show up in the area.
 - 4.1.1 This looks pretty good overall. However, they should include some reference on the impacts of noise and hearing ranges for marine mammals and sea turtles. There is information on this available from NOAA and in the literature that they should reference.

- 4.1.3 Site specific surveys for marine mammals and sea turtles are needed. While current surveys (NYSERDA and DEC) will be helpful, more data is needed. Ideally, these would be monthly aerial surveys, conducted for at least two years. But, if that is not possible seasonal surveys for least two years would be an option. Passive acoustic monitoring in these specific sites is suggested to augment the observations of marine mammals by aerial surveys (again for a minimum of two years).
- 4.2 They state that, of the all marine mammals and sea turtle species likely to occur in the WEA, they are most concerned about the 5 endangered species of whales. However, the 4 species of sea turtles should also be of high concern since they are all endangered (and Kemp's ridley are critically endangered). In addition, their comment that Kemp's ridleys are so rarely sighted that they are unlikely to be found near or offshore is based on old information and is not correct. They are most likely to occur in nearshore waters surrounding the lease areas in the summer and fall.
 - Their perspective on Kemp's ridley turtles should be reconsidered. They're unlikely, yes, but we had one nest on Long Island last summer. There are a couple being treated for cold stunning right now. The "unlikely" situations regarding marine mammals and sea turtles need to have more weight. Using more recent studies (i.e. CETAP isn't going to benefit them in any way) will help with this.
- 4.3 Potential impacts
 - Mitigation of the impacts of underwater noise on marine mammals and sea turtles during construction, and installation needs more detail. Also, the impacts of noise during operation and decommissioning need to be considered. They say they will develop project-specific protected species mitigation and monitoring plans. However, they should at least add that they are considering impacts during all phases of the project in this document.
 - There is nothing about vessel strike of sea turtles which should be included.
 - There is nothing about the impacts of EMF and possible disturbance to marine mammals and sea turtles and/or their prey resource. They should consider burial depth, monitoring of the cable for the life of project and surface cable protection when/if needed. This should be considered for Phase 3.
 - Underwater noise impacts: "Committed to noise attenuation technologies to reduce sound from pile driving of foundations..." - - - what technologies? What underwater acoustic assessment? Where's the Project-specific protected species mitigation and monitoring plan?
 - Ship strikes: "Adhere to NOAA Fisheries Operational Guidelines when in sight of marine mammals, unless doing so would compromise human or environmental health and safety and/or the integrity of the Project." - - - what constitutes a compromise? How do you define a compromise in the integrity of the Project? What does non-adherence look like – how much of a threat increase will there be?
- 4.3 Monitor for impacts
 - This is very vague. They are not really agreeing to do anything in particular here, other than saying they will consider what to do using an iterative process that will involve input from agencies and stakeholders. They do mention some specifics including real-time acoustic buoys, but don't say

they to definitely use them. They just say they will evaluate them but are basically agreeing to nothing specific.

- 4.4.1 Pre/Post Monitoring: What study topics? What methodologies? What is their definition of “sufficient baseline data”? Need is needed.

Section 5: Proposed Mitigation of Impacts to Birds and Bats

- **Nocturnal Migrants:** Stakeholders noted that nocturnal migrants were not mentioned and should be in the plan, specifically land and song birds.
- **Gaps in Plan Data and Monitoring:** E-TWG members shared that Section 5 also mentions certain species and data available, but the section on current and planned monitoring does not connect to all of those species – this gap should be addressed.
- **Displacement:** The plan mentions a loss of onshore habitat in a few places, but not the impacts of displacement. Stakeholders requested that Ørsted expand the plan section on the impacts of displacement and how Ørsted would respond to it.
- **Post-Construction Monitoring:** E-TWG members would like to see more language on and commitment to addressing post-construction monitoring and Best Management Practices in this area. They recognize this is still in development, but want to see a commitment to monitor and demonstrate no impacts, and if there are impacts, how Ørsted will respond.
 - Ørsted noted they will need E-TWG member feedback and assistance in this area since it is challenging and hard to know how many projects to monitor. Can be difficult to prove, disprove, or understand impacts on birds, particularly with collisions. Ørsted has a nanotag program on Block Island; stakeholders voiced interest in expanding this program.
- **Tree Bats:** E-TWG members noted that the tree bat section (F-21) felt rushed and wanted to better understand how plan assumptions were determined and what kind of measures will be taken to avoid collision.
 - There is an opportunity for cooperative research with fishermen or a citizen science project to look at bats and other species (e.g. acoustic detector on buoys, documenting bats that ride on fishermen boats, etc.).
- **Onshore Monitoring:** Stakeholders asked if specific study areas have been identified.
 - Ørsted shared they will likely focus on landfall areas.
- **Feedback from stakeholders on this section received after the meeting**
 - 5.1.1 Proper citations are needed. The vaguely referenced studies listed here are not sufficient and need more detail.
 - 5.1.2 boat-based study is describing what? Why is it only 5 months? Was it monthly, at least? What is a "relevant" lease area?
 - 5.1.2-5.1.3
 - More specifics needed for data collected and planning to be collected. What kind of surveys? When? How often? What about rafting waterfowl along cable route? Above and beyond BOEM guidance would be much preferred.
 - List of migratory species strangely worded (i.e. “tube nosed species” should be petrels and shearwaters). Pre-construction bat survey should be for offshore areas as well as “onshore areas of the project”.
 - Literature review This needs to be more specific. This review should have already happened in the “available information section” in the preceding section and to be able to specifically address how data gaps will be filled.

- 5.3 Other collision mitigation needs to be considered. Missing many options for adjusting monitoring and operations.
 - The specificity applied to bats here is good. Need to see the same specificity for birds.
- 5.4.1 This entire section is a repetition of "information" stated above. Pick one spot to include it, don't repeat. Also, see all comments above on the lack of specificity.
- 5.5 This is necessary information. Fine that it's not settled but need to propose ideas. Particularly need to state how will know when mitigation strategies are insufficient. Identification of potential impacts can be done now and plans for monitoring whether those impacts are in fact occurring need to be in place.

Section 6: Proposed Mitigation of Impacts to Fish, Invertebrates, and their Habitats

- **Mobile Fish:** Stakeholders noted that the table in this section makes assumptions about mobile fish expected to vacate the offshore wind area, but there is not necessarily evidence to support this. It should not be included unless there are scientific studies to support the claim.
- **Language Shift:** E-TWG members recommended against characterizing the desirability of fish and fish habitat changes in the plan, since it is not clear what is desirable in ecosystem terms.
- **RI Study Requirements:** This section of the plan references Rhode Island study requirements in several cases; it would be helpful to add those in once they are known from the South Fork project to bolster those references in the plan.
- **Localized Noise During Operational Phase:** Stakeholders want to see this part of the plan cover benthic and groundfish impacts.
- **Feedback from stakeholders on this section received after the meeting**
 - 6.1.1 While the major data sources seem to be identified, they are cited in a very vague way which suggests the developer has not spent much if any time looking them. For ex. NYSERDA and/or NYSDEC studies on "marine wildlife" is listed rather than any actual surveys. SoMAS work done by Dunton, Frisk and others on Atlantic sturgeon is not mentioned. They do at least try to least species that may be in the area, although they just group them into demersal and pelagic which is making a basic distinction.
 - 6.1.2 Missing some ongoing data collection ex. NMFS groundfish surveys.
 - 6.1.3 Vague
 - 6.2 List looks initial and may need to be revisited
 - Time of Year Restrictions: should be included as a possible mitigation method for Atlantic sturgeon and possibly other species
 - Pre/Post Monitoring: Okay for water quality and sediment, but vague in terms of other monitoring, only referencing the iterative process with input from stakeholders and agencies. Should say that they will avoid sensitive areas and calculate potential extent of habitat loss. They say instead that they will seek input on locating "foundations and cable routes in the least impactful manner that is practicable". This is weak language and we question how much if any effort will be put into that. Also, there is nothing about calculating potential extent of habitat loss.

- Benthic survey data: good data for benthic organisms in the sediment, but it is NOT effective for mobile macroinvertebrates such as lobsters and crabs. Traps are best survey technique for them, but trawl surveys also sample them fairly-well.

Sections 7 and 8: Project Decommissioning and Additional Considerations

- **European Wind Farm Decommissioning:** E-TWG members felt this section was thin and would like to see more content built-out as European wind farms are de-commissioned.
- **Oil Spills:** Stakeholders requested adding discussion on the potential for catastrophic oil spills in New York Harbor related to radar distortion from wind farms.
 - Ørsted noted that an oil spill response plan will be part of the COP process.
 - Ørsted's Marine Affairs team is also working on the impacts of radar distortion. BOEM participates in a Wind Turbine Radar Interference Mitigation Working Group that is also looking at collision risk alongside other federal agencies.
- **Webinar:** Ørsted will host a webinar on noise monitoring in Q1 of next year, likely for a broader audience as part of NYSERDA's offshore wind webinar series. Further information will be shared separately with E-TWG members via email.
- **BOEM:** Will follow-up to share more information on the Wind Turbine Radar Interference Mitigation Working Group when available. Further information will be shared separately with E-TWG members via email.

Appendix A: Agenda

- 10:00** **Welcome and Introductions**
- 10:10** **Overview of the Day, Goals and Ground Rules, *Facilitator***
- 10:20** **Brief Overview of Procurement Process, Authorities and Jurisdictions, and Process from here, *NYSERDA***
- 10:30** **Overview of the Project, Sunrise Project Team**
- 10:45** **Present each major section**
- Project Team presents key points of each section
 - E-TWG ask questions, provides advice and considerations
 - Facilitator summarizes key points at end of each
- 11:30** ***Brief Break***
- 11:40** **Continue Review and Discussion of Sections**
- 12:45** **Summary and Next Steps**
- Facilitator summarizes discussions
 - NYSERDA reviews next steps
- 1:00** **Adjourn and Lunch for E-TWG**

Appendix B: Rules of the Road for TWG-Project Dialogue

This is the first, but by no means the last, dialogue between the E-TWG and specific project teams. Unlike the typical E-TWG meeting, where discussions focus on key issues across projects, these discussions are meant to be project specific. Thus, to set expectations and parameters about project specific dialogue, the following rules of the road are suggested.

- Only non-developer E-TWG members will attend (but for each project team)
- A meeting summary without attribution will be developed from the dialogue and made available to all E-TWG members and posted on the E-TWG website
- This is a common forum to learn together about project details and to provide individual advice and comment to projects. The E-TWG is not expected to develop collective advice to the projects.
- The project teams are not required to agree with nor act on the advice or comment of E-TWG members, but are expected to take it seriously, consider the merits, act when possible, and explain why key advice was not taken
- The project teams should understand that while these meetings are not public there is no guarantee of confidentiality and the meeting summary will be made public. Thus, project teams should be mindful when / if they choose to share proprietary data.

- The dialogue with individual project developers is expected to be on-going and no one single meeting is intended to serve as the sole forum or time for dialogue
- Through individual project discussions, the E-TWG may identify common themes and issues that need to be discussed across projects and these may be brought to future E-TWG meetings where all members, including developers, are present