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Environmental Technical Working Group

A Stakeholder Engagement and Advisory Process to Advance the Environmentally Responsible Development of Offshore Wind Energy for New York State



NYSERDA

9 December 2021

Introductions



CADMUS

- > E-TWG Lead: NYSERDA - 518-862-1090
 - Kate McClellan Press x3110, Kate.McClellanPress@nyserda.ny.gov
 - Gregory Lampman x3372, Gregory.Lampman@nyserda.ny.gov

- > Technical Support: Biodiversity Research Institute (BRI) - 207- 839-7600
 - Kate Williams x108, kate.williams@briwildlife.org
 - Julia Gulka x303, Julia.gulka@briwildlife.org

- > Facilitation Support: CBI and Cadmus
 - Bennett Brooks 212-678-0078, bbrooks@cbi.org
 - Farrah Andersen 703-247-6017, Farrah.Andersen@cadmusgroup.com

Meeting Agenda

- Welcome & Introductions
- E-TWG Moving Forward
 - Mission and role moving forward
 - How to make E-TWG meetings/ process more effective
- Updates
- Wrap Up & Next Steps



Icebreaker



E-TWVG Moving Forward

Mission and Role of the E-TWG

NYSERDA is strategically assessing how the roles of the E-TWG and F-TWG might evolve in the future

- Context for this conversation
- The roles of the groups
- Changes to the mission?
 - Remain both regionally and New York-focused; but regional work in collaboration with the RWSE, govt agencies, etc. – collaborative approaches and contributions to broader efforts
 - NY remains a leader on OSW and environmental issues – even NYB-focused works can inform broader regional conversations
- Environmental Mitigation Plan process
- Language in RFPs

Current E-TWG Mission Statement

The E-TWG serves as a long-term advisory body to the State of New York, providing advice and guidance to help steer the State's efforts to advance offshore wind development in environmentally responsible ways.

Under the direction of New York State and the E-TWG, topically-focused Specialist Committees bring together science-based subject matter expertise to develop collaborative guidelines or other products that inform or advance the environmentally responsible development of offshore wind.

Mission and Role of the E-TWG

What do E-TWG members see as roles of the group moving forward?

What aspects of the E-TWG provide value to members (in pre-pandemic times and now)?



Effective E-TWG Meetings

- Supporting Engagement and Relationship Building
- Representation Across Organizations
- Effective Information Sharing

We will have breakout group discussions on the first two topics



Effective E-TWG Meetings

Proposed Meetings in 2022

- Context (past schedules)
- Need to balance full E-TWG meetings with committee work and workshops
- Ideal scenario for 2022:
 - Spring and fall in-person E-TWG meetings
 - Schedule shorter ad hoc virtual meetings on particular topics as needed
- Given continued uncertainty with COVID, we may need to consider alternatives

Timing	Event	Format
Spring	E-TWG meeting	In-person?
Early summer	Workshop to provide input on regional guidance from RWSE/E-TWG joint workgroup	Virtual
Jul 26-28	State of the Science Workshop	Hybrid
Early fall	Webinar on Phase 1 of site-specific guidance effort from FWS/BOEM/E-TWG committee	Virtual
Fall	E-TWG meeting	In-person?

Effective E-TWG Meetings

Relationship Building

Given uncertainty, how can we best support relationship-building and hold effective meetings in 2022?

- In-person versus virtual meetings
- Smaller hub meetings
- Other ways to engage with other E-TWG members
- Updates via email or other mechanisms

We will be asking you to discuss this in breakout groups shortly



Effective E-TWG Meetings

Representation Across Organizations

- Balance of sectors
- Ensuring consistent representation over time



Effective E-TWG Meetings

Representation Across Organizations

Currently in E-TWG Charter:

- **Advisory members include a single point person** from offshore wind energy developers, technical eNGO organizations with wildlife and offshore wind expertise, and a nonpartisan NGO with a shared perspective. **Observer members** from state and federal agencies provide their expertise and technical input to the group, coordinate with ongoing regulatory processes, as appropriate, and ensure transparency.
- Criteria for E-TWG member selection include **geographic relevance, technical expertise, balanced participation among developer and eNGO advisory members, and transparency and engagement** among observer members.
- Members of the group should be at a **high enough level within their respective organizations to be able to speak confidently for their constituents during meetings**, and have **technical expertise** related to the subject matter of E-TWG activities.
- Numbers of advisory members are balanced between developer and eNGO members.
- NYSERDA and the E-TWG will decide when and whether to add new representatives to the E-TWG, based on the above criteria, and how best to maintain balance and a reasonable group size. All developers with geographically relevant leases, as well as representatives of state agency staff from all states within the geographic scope of the E-TWG, will be invited to participate.

Effective E-TWG Meetings

Representation Across Organizations

- Balance of sectors
 - Representation by developers
- How do we ensure consistent representation over time?
 - Primary and alternate representation

We will be asking you to discuss this in breakout groups shortly



Breakout Group Discussion

20 min

If we are unable to resume fully in-person meetings in 2022, how do we ensure effective meetings?

- Smaller hub meetings in person?
- One-on-one or small group engagement between E-TWG members?
- Updates via email or other mechanisms?

Do we need to rebalance sector representation? If yes, how best to do so?

- Consider developer representation at level of companies, joint ventures, or lease areas?
- Prioritize involvement of developers with geographic relevance to New York procurements?

How do we ensure consistent representation over time?

- Revisit designations of primary and alternate representation for each entity on the E-TWG?
- Have some E-TWG meetings be more limited in attendance while others are open to a broader group?

Effective E-TWG Meetings

Information Sharing

- Encourage informal information exchange
- Expectations/process for sharing draft documents externally
 - From the E-TWG charter: “Draft E-TWG materials, including but not limited to draft meeting agendas, meeting summaries, E-TWG reports, SC charges, and SC reports and other draft products, are to be considered confidential until such time as they are finalized and made public via posting on the E-TWG webpage.”





Conversation
Break

Updates



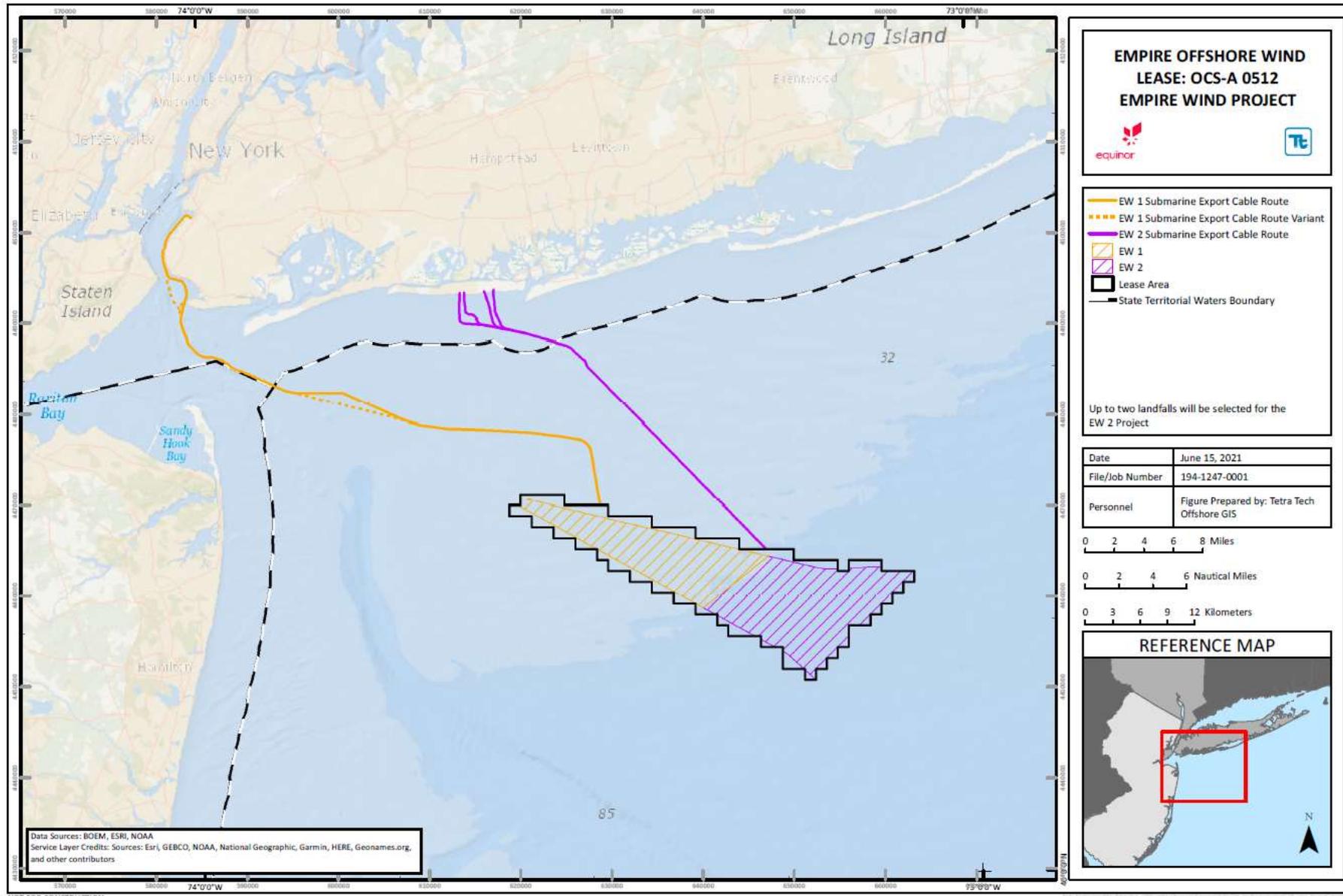
Empire Wind 1

NYSDERDA E-TWG Project Update

09 December 2021



Empire Wind Project Overview



Lease Area OCS-A 0512

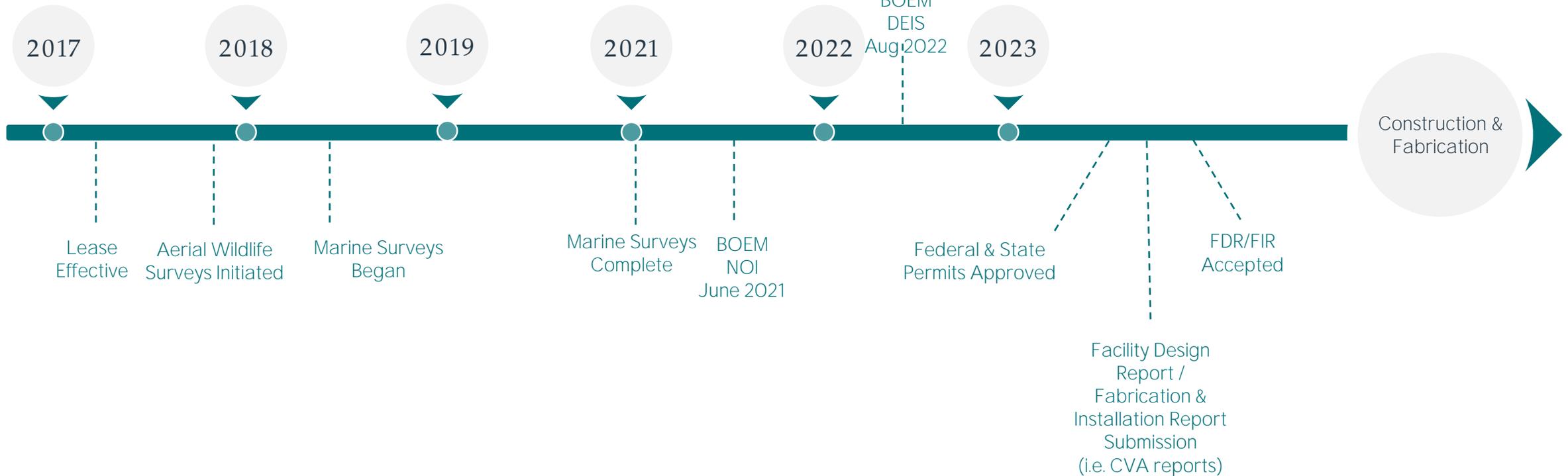
- Located 14 miles from Long Beach, New York and 19.5 miles from Long Branch, New Jersey
- Full build-out of the Lease Area, consisting of Empire Wind 1 (EW 1) and Empire Wind 2 (EW 2)
- EW 1
 - NY RFP Award July 2019
 - 816 MW
 - Two submarine export cables
 - Interconnection into Gowanus, NY
- EW 2
 - NY RFP Award Jan 2021
 - 1,260 MW
 - Three submarine export cables
 - Interconnection into Oceanside, NY

Empire Wind| Schedule

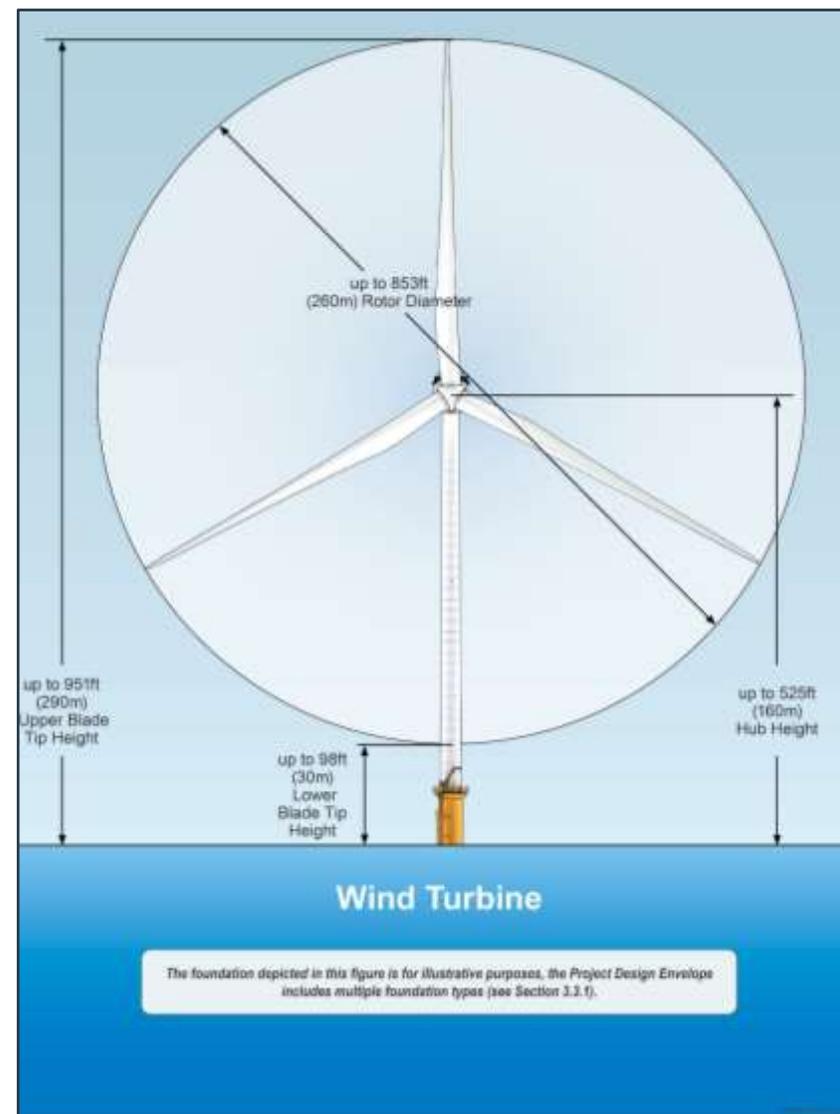
Technical / Engineering Support

Environmental Assessments
Application Development

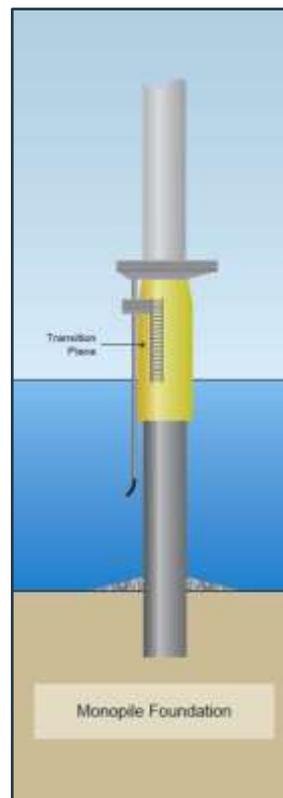
Public Review &
Public Hearings



COP: Wind Turbines, Foundations and Layouts



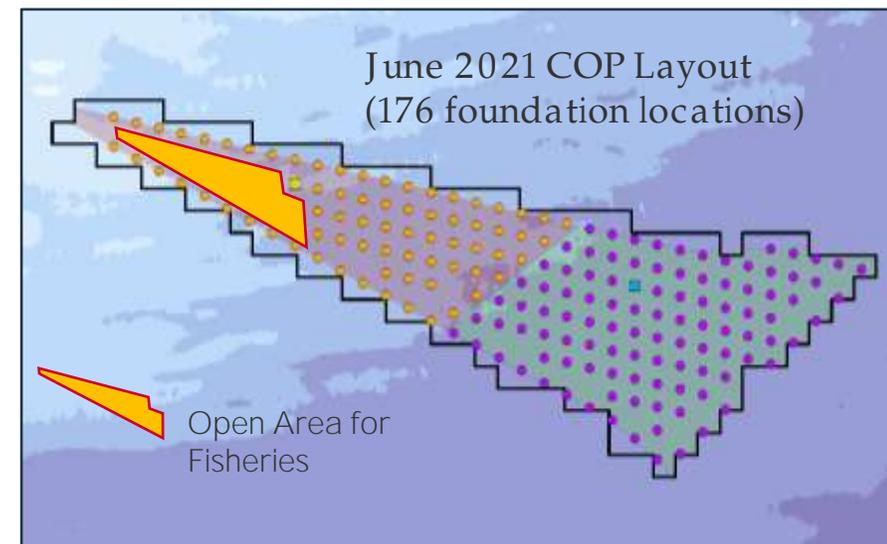
Maximum Dimensions for Wind Turbines



Wind Turbine Foundations

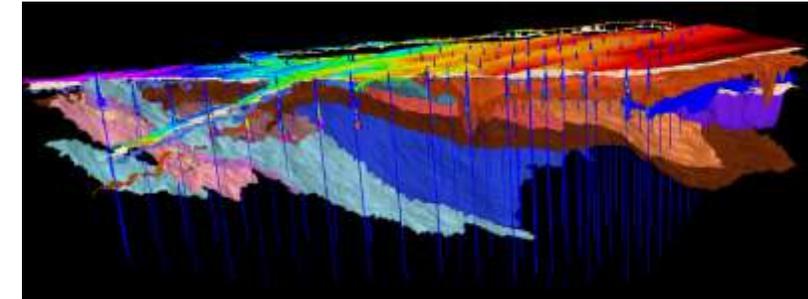


Offshore Substation Foundation



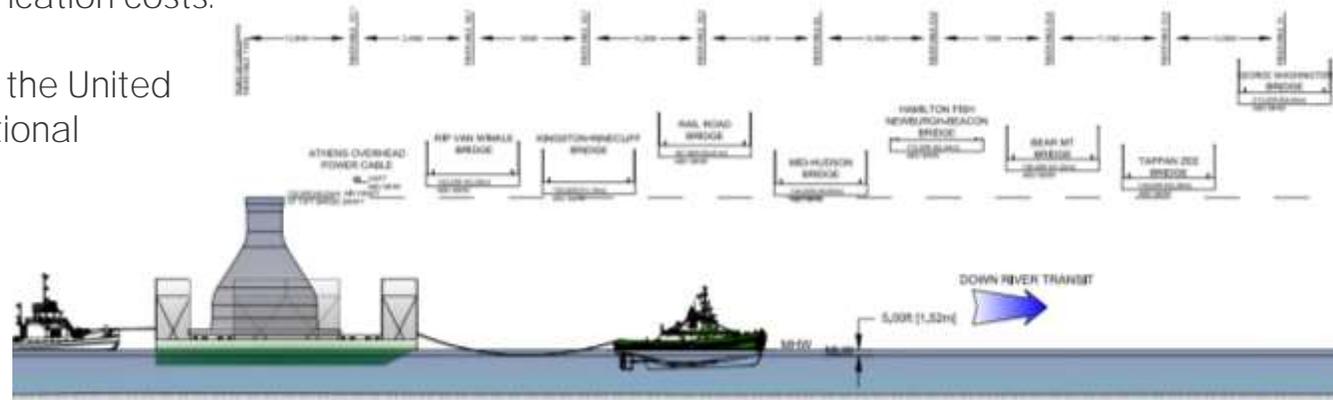
GBS Challenges for Empire Wind

- Following extensive and detailed analysis, GBS foundations have been determined to be infeasible for the Empire Wind Project.
- Detailed G&G surveys (2018-2021) show that certain locations will require seabed preparation to address the presence of unsuitable seabed conditions at variable depths in 30-50% of the foundation locations
- Results in an increased cost to a scale the threatened ability for meeting Purchase Sale Agreement renewable commitments to New York State and contributing to ~25% of state's offshore wind renewable energy goals.
- Economic benefits that Empire must provide to NY will be satisfied through other Project-related activities.
- Construction logistical challenges associated with mobilization from Port of Coeymans (bridge height limitations for deeper water foundations).
 - Howland Hook addressed this issue but resulted in higher fabrication costs.
- Necessitated the establishment of a new fabrication supply chain in the United States; lack of industry interest in GBS foundations introduced additional commercial risk.

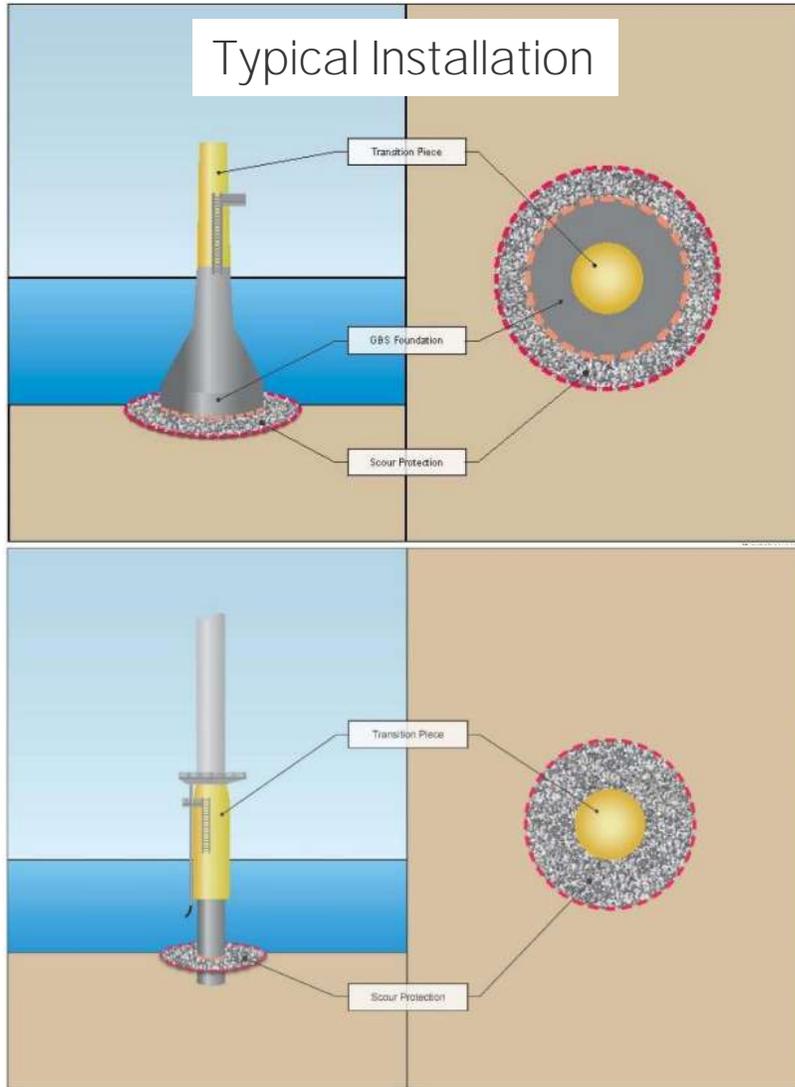


3D- Geomodel and Geotech Sample Locations

Hudson River Transport Air Draft Clearance



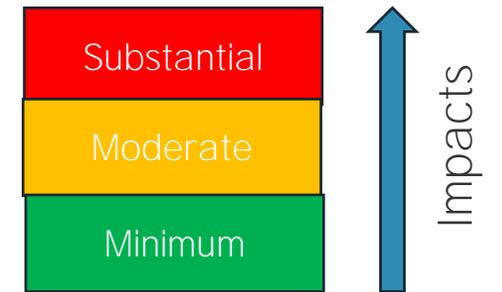
Foundation Type - Environmental Considerations



Comparison

Category	GBS	Monopile
Construction Phase (Short Term)		
Installation time	More	Less
Pile driving noise	None	More
Vessel traffic	More	Less
Air emissions	More	Less
Operations Phase (Long Term)		
Benthic	More	Less

GBS
Ground Improvements



Impact Categories:

- Installation time
- Vessel traffic
- Air emissions
- Benthic habitat

Mitigation proposal for pile driving impacts under preparation.

Monitoring and Mitigation: Pile-Driving



- Equinor has updated modeling presented in the COP to reflect in-water noise impacts based on refined foundation dimensions and number of foundations.
- The Letter of Authorization (public notice anticipated October 2022)
- Equinor will follow standardized mitigations to minimize risk of noise impacts for marine mammals and sea turtles:
 - Seasonal pile driving restrictions over two years
 - Day-time pile driving only (sunrise/sunset restrictions)
 - Use of PAM systems;
 - Ramping up of noise generating activities;
 - Double bubble curtains or equivalent technology to achieve 10 dB reduction or more.
- Equinor is committed in developing additional monitoring and mitigations taking into consideration:
 - Feedback from stakeholders including members of the E-TWG
 - Public comments from BOEM's NOI
 - Establishing an expert panel to establish the plan (Q2 2022).
- The E-TWG will be updated on the development of the plan regularly.



Equinor Wind OCS-A 0512

Laura Morales, Head of Permitting – New York

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NYSERDA Updates

- RFP 4831: Acoustic and Oceanographic Surveys to Support Offshore Wind Development in the New York Bight
- Stakeholder Engagement Guiding Principles
- NYSERDA RFI on Scope of Cable Corridor Analysis
- Sunrise Environmental Mitigation Plan



Written Update Topics

- **E-TWG Priorities:**
 - Improvement of coordination between states
 - Review and synthesis of data to inform stakeholder groups – “Learning from the Experts”, webinar library
 - State of the Science Workshops – next Workshop July 26-28, 2022
 - Guidance for regional monitoring and research
 - Guidance for site-specific pre- and post-construction monitoring
 - Technology advancement for mitigation and monitoring
- **E-TWG 2021 Annual Bulletin**
- **DOE/BOEM Funding Opportunity Announcement**
- **BOEM Offshore Wind Leasing Strategy**
- **Fisheries Compensatory Mitigation**
- **BOEM Request for Information on Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind development**

Additional Updates or Questions?



Wrap Up & Next Steps

Next Steps

- Consider updates to E-TWG Charter based on discussions
- Continue workplan development/review for developing interim guidance for pre- and post-construction assessment of changes in avian habitat use
- Specialist Committee work in 2022:
 - RWSE/E-TWG joint workgroup to develop regional guidance and priorities
 - E-TWG committee to develop site-specific pre- and post-construction guidance for assessing changes in avian habitat use
 - State of the Science Workshop planning committee