

BOEM

Bureau of Ocean Energy
Management

Empire Wind Public Scoping Meeting Commercial lease OCS-A-0512

June 30, 2021



Agenda

- **BOEM Opening Remarks**
- **Zoom Platform and Ground Rules**
- **Presentations**
 - State of New York
 - Environmental Review Process
 - Overview of Empire Wind Project
 - Background on Leasing Process and History
- **Break**
- **Public Comments**
- **Break**
- **Question and Answer Session**
- **BOEM Closing Remarks**

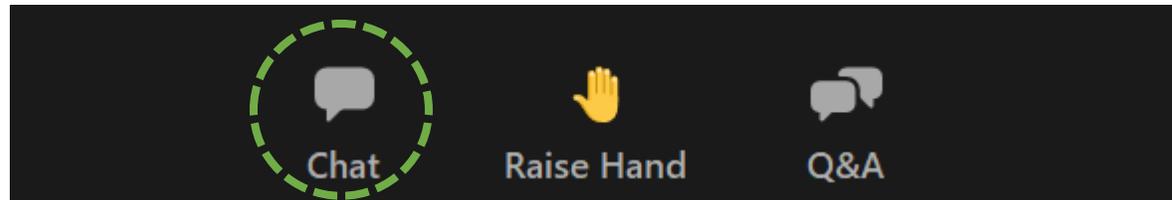
BOEM Opening Remarks

Jim Bennett



Zoom Platform

- **If you need help with Zoom platform:**
 - Use chat feature at bottom of screen
 - Send email to empirewind@icf.com
- **To call in to meeting:**
 - Phone number: 888-788-0099
 - Meeting ID: 830 7798 1969
 - Password: 25188250
- **Please close all apps and programs and limit other streaming or downloads**
- **All participants are on mute until the formal comment period**

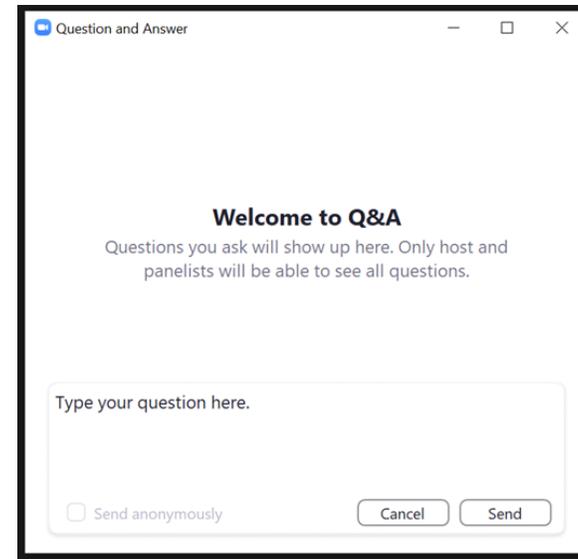
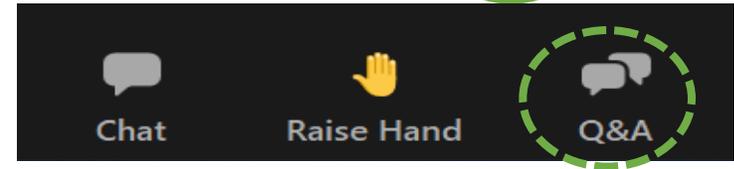
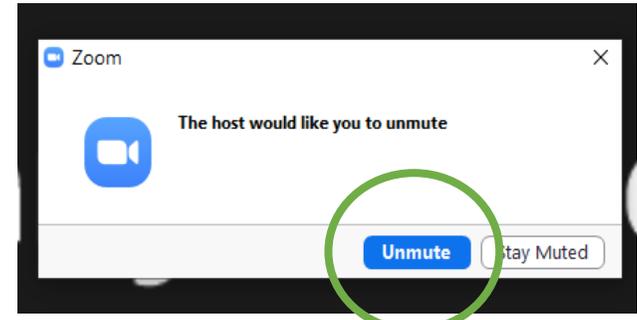


Media Contact

- **Media representatives, please contact:**
 - Stephen Boutwell
 - Email: Stephen.Boutwell@boem.gov

Ground Rules

- **Public comment period will follow the presentations**
 - People who pre-registered to comment will go first
 - If you did not pre-register but would like to comment, you can 'raise your hand' to be called on
- **Question and Answer session**
 - If you have a question for BOEM, type it in the Q&A box at the bottom of your screen
 - Questions can be typed in throughout the meeting until the question and answer session starts
- **This meeting is being recorded and will be transcribed**





**Office of Planning
and Development**

Coastal Consistency Reviews

Laura McLean

Coastal Energy Review Specialist

Laura.McLean@dos.ny.gov

An Office of New York Department of State

July 16, 2021

The Coastal Zone Management Act of 1972



CZMA § 307 (16 U.S.C. § 1456)

*Federal actions, in or outside the coastal zone, that **affect any land or water use or natural resource** of a state's coastal zone must be consistent with the **enforceable policies** of the state Coastal Management programs.*

The core idea is reverse federalism

- Certain federal actions cannot be undertaken without being found consistent with Coastal Programs' enforceable coastal policies:
 - Direct (ACOE dredging)
 - **Federal permitting (permit issuance)**
 - Funding to a state or local gov't (HUD funding)
 - **Outer Continental Shelf plans (oil & gas, renewables)**
- NY uses federal consistency review as one mechanism to implement its Coastal Management Plan

New York Coastal Management Program

- Incorporates multiple state laws into **enforceable** policy statements
 - Address broad categories, e.g., development, energy, fish/wildlife, and recreation.
 - A project must be consistent with all applicable policies
- Defines a geography including special management areas
 - State can reach beyond coastal area if demonstrated effects



Of Significance for Offshore Wind:

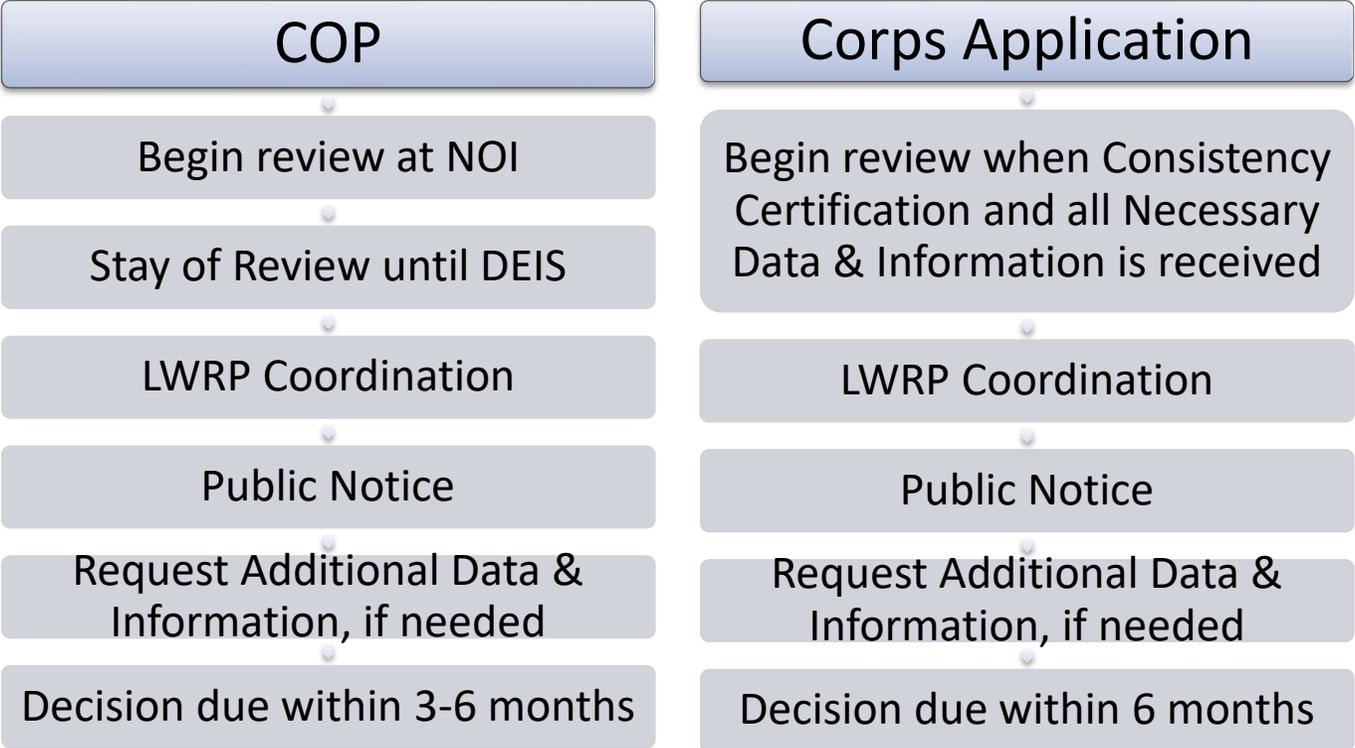
Coastal Policy 29:

The **development of offshore uses and resources**, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as **commercial and recreational fishing** and **maritime commerce**, and the **ecological functions of habitats** important to New York.

Special Management Areas:

- Local Waterfront Revitalization Programs (LWRPs)
- Significant Coastal Fish and Wildlife Habitats
- Scenic Areas of Statewide Significance
- Long Island Sound Coastal Management Program

Consistency Review Process



Types of Consistency Review Decisions

- Concurrence
 - Concur with Applicant's consistency certification
 - Concur with agreed upon modifications
 - Concur with conditions required for consistency
- Objections
 - If Applicant refuses conditions
 - If information is not sufficient
 - Specific to one or more federal permit activities described in the COP
 - Encouraged to identify alternatives that are consistent

For additional information:

<https://dos.ny.gov/coastal-management>

<https://dos.ny.gov/public-notice>

<https://dos.ny.gov/state-register> - to receive email alerts of DOS notices

Mapping available on the New York State Geographic Information Gateway –
“The DOS Gateway” <https://on.ny.gov/2Um9jAi>

Other resources: <https://coast.noaa.gov/czm/consistency/>
<https://portal.midatlanticocean.org/>
<https://waterfrontnavigator.nyc/>

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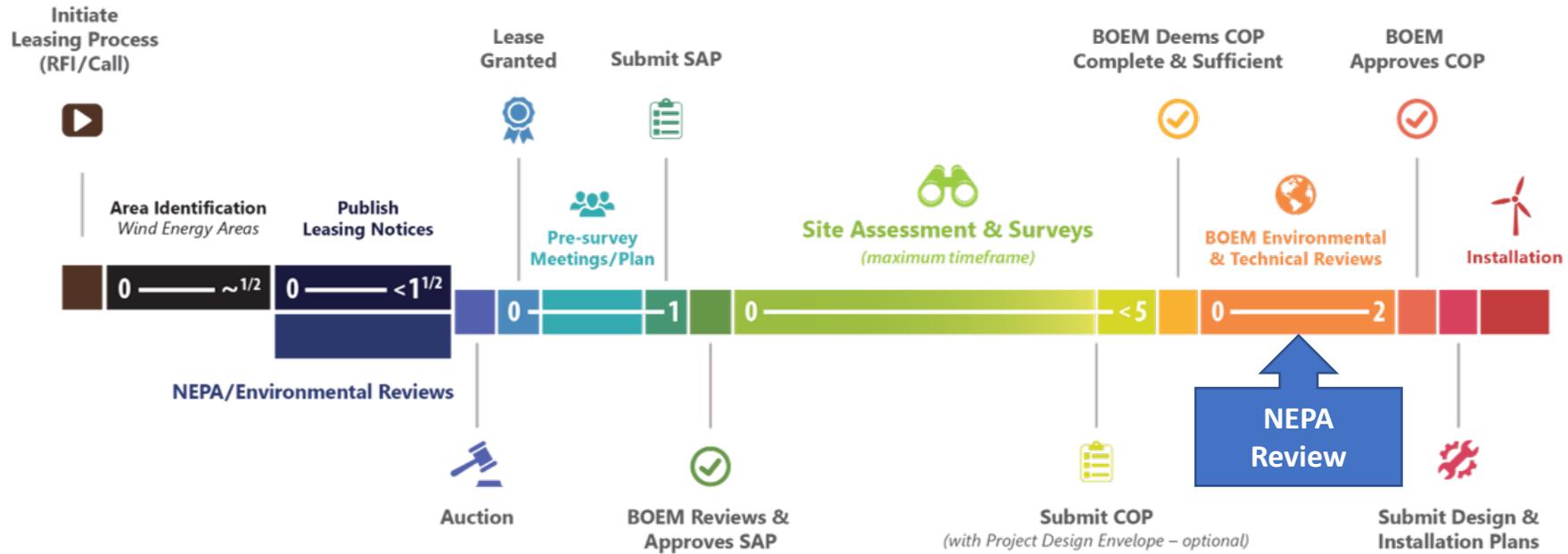
Empire Wind
Construction & Operations Plan

Environmental Review Process

Brandi Sangunett,
Environmental Protection Specialist



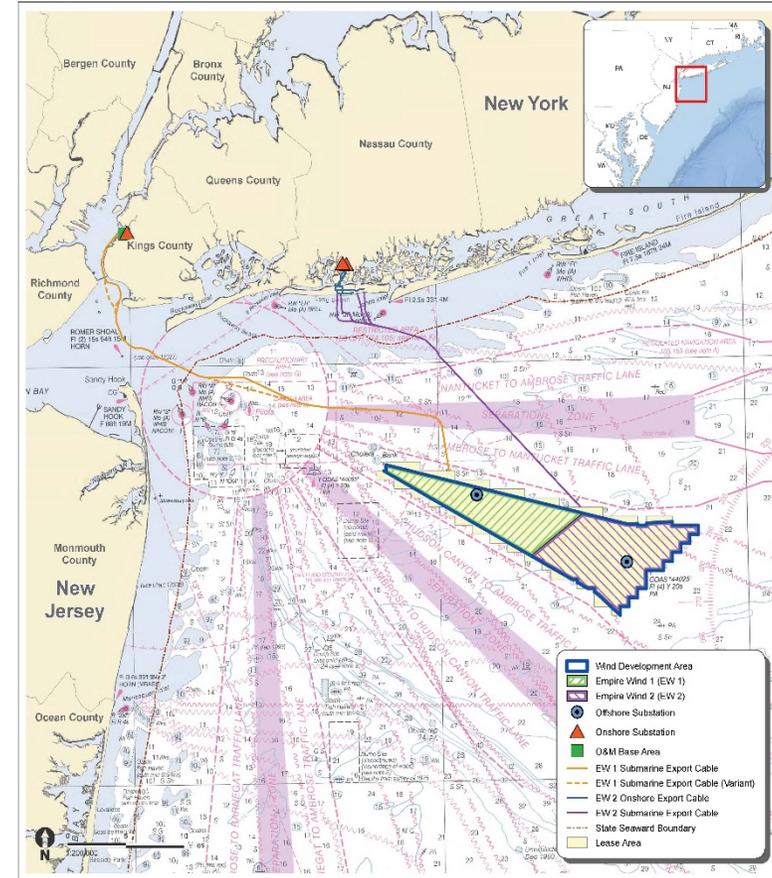
Leasing and Development Process



Empire Wind Construction and Operations Plan (COP)

- Empire Wind Offshore LLC submitted their COP on **January 10, 2020**
- Most recent COP update received on **June 14, 2021**
- COP is currently available at: www.boem.gov/empire-wind
- BOEM can approve, disapprove, or approve with modifications
 - Will happen after environmental impact statement (EIS) is complete and will be documented by the Record of Decision (ROD)

Empire Wind Project Area



National Environmental Policy Act (NEPA)

NEPA is a procedural law requiring Federal agencies to assess the environmental effects of their proposed action(s), and reasonable alternatives, prior to making decisions.

Major Actions/Decision Points

- Lease Issuance (Survey Work)
- Plan Approval (Site Assessment, Construction & Operation, or General Activities)
- Decommissioning Activities

Environmental Review and Approval Process for COP



Notice of Intent to Prepare an Environmental Impact Statement

Published in the *Federal Register* on June 24, 2021

- 86-FR-33351 (<https://www.federalregister.gov/documents/2021/06/24/2021-13408/notice-of-intent-to-prepare-an-environmental-impact-statement-for-empire-offshore-wind-llcs-proposed>)

Starts the EIS process

30-day public comment period, ending July 26, 2021

- Regulations.gov search under Docket No. BOEM-2021-0038

Public Comment on NOI

- **Very Important element of NEPA**
- **Local expertise and perspective help guide environmental analysis and results in more informed decisions**
- **Types of information BOEM is looking for:**
 - Significant issues to be analyzed in EIS
 - Identification of sources of information to include in the EIS
 - Gaps in data and information needs
 - Reasonable alternatives
 - Comments due **July 26, 2021**

Scoping Meetings

Three virtual public scoping meetings:

- Wednesday, June 30, 2021 - 5:00 PM EDT
- Thursday, July 8, 2021 - 5:00 PM EDT
- Tuesday, July 13, 2021 - 1:00 PM EDT

Virtual Meeting Room:

<https://www.boem.gov/Empire-Wind-Scoping-Virtual-Meetings>

- Fact Sheets
- Project Posters
- Meeting Information
- How to Comment





At this meeting!

“Raise your hand” in the Zoom meeting

In writing:

Program Manager
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road (VAM-OREP)
Sterling, VA 20166

Online at *www.regulations.gov*

Enter **BOEM-2021-0038**; click “search.” Use the “Comment” button on the left side of the screen



What's in an EIS?

Proposed Action

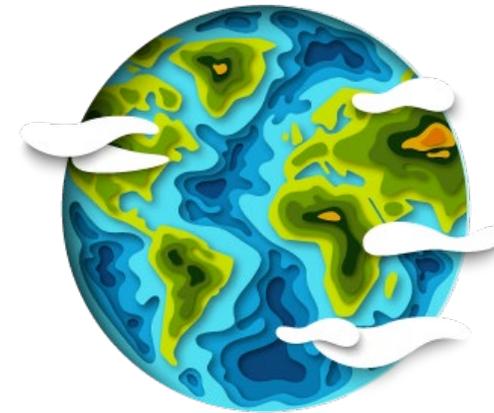
- Action being analyzed

Alternatives

- Provide reasonable alternatives which may reduce or eliminate impacts. At a minimum, proposed action and no action alternative.

Effects

- The description of the affected environment in the EIS will include reasonably foreseeable environmental trends and planned actions other than the Project
- Effects include beneficial and adverse



Environmental and Socioeconomic Resources

Biological

- Marine Mammals
- Sea Turtles
- Fish and Essential Fish Habitat (EFH)
- Coastal Habitats
- Benthic Resources
- Avian and Bat Species



Physical

- Air Quality
- Water Quality

Socioeconomic

- Aesthetics and Visual Resources
- Commercial and Recreational Fishing
- Cultural Resources
- Military Uses
- Environmental Justice
- Land Use and Coastal Infrastructure
- Tourism and Recreation
- Demographics and Employment

Environmental Review of COP

Design Envelope

- Maximum impacting parameters for each resource
- Avoids pausing or restarting environmental review due to project changes
- Reduces or eliminates the need for subsequent environmental reviews as project is refined/revised after approval
- Revisions outside of the design envelope would require additional environmental review and consultations

Environmental Review to run concurrent with consultations

- **Section 106 of the National Historic Preservation Act (NHPA)**
- **Coastal Zone Management Act**
- **Endangered Species Act**
- **Marine Mammal Protection Act**
- **Magnuson-Stevens Fishery Conservation and Management Act**

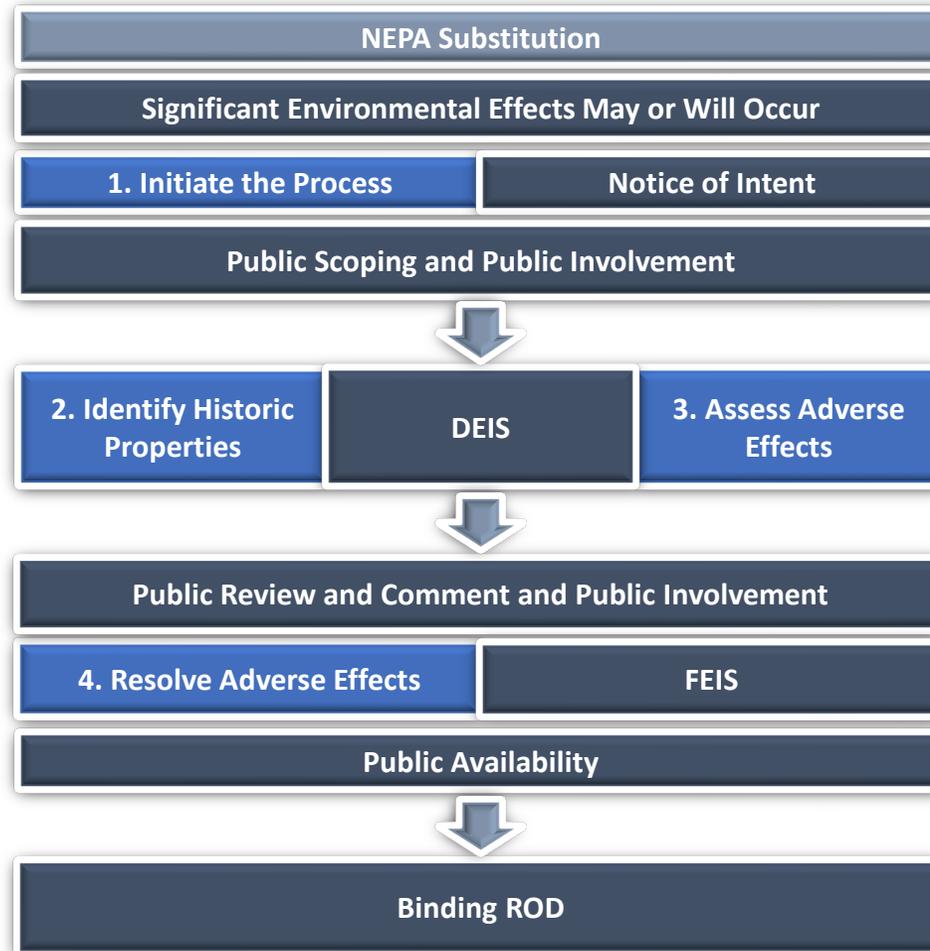


NEPA Substitution for NHPA Section 106 Review

BOEM is implementing NEPA Substitution for Section 106 Review mainly due to lessons learned from the earliest COP consultations and reflection of stakeholder needs:

- BOEM needs an efficient, streamlined approach that better integrates NHPA and NEPA reviews both thematically, and in terms of schedule;
- Lessees need clearer expectations of the timeline for environmental review, and costs of mitigations;
- Consulting parties and stakeholders need earlier and more direct input into the selection of alternatives and mitigation measures; and
- Tribes need greater focus on government-to-government consultation.

NEPA Substitution for NHPA Section 106 Review



Use of NEPA Process for NHPA Section 106 Review

Through this process, BOEM is now seeking comment and input regarding:

- Identification of historic properties and/or potential effects to historic properties from activities associated with approval of the Empire Wind COP;
- Reasonable alternatives (e.g., size, geographic, or other restrictions on construction and siting of facilities and activities); and
- Potential mitigation measures to be analyzed in the EIS, include ways to avoid, minimize, or otherwise treat and resolve adverse effects on historic properties.

EIS Schedule

- Summer 2022
Publish Draft EIS – (45-day public comment period)
- Spring 2023
Publish Final EIS
- Summer 2023
Conclude consultations and publish Record of Decision

BOEM Environmental Studies Program

- **Extensive environmental studies program**
- **Funds and manages scientific research to inform decision-making processes and fill data gaps**
- **Snapshot of relevant studies:**
 - Atlantic Fish Telemetry: Monitoring Endangered Atlantic Sturgeon and Commercial Finfish Habitat Use Offshore New York (https://espis.boem.gov/final%20reports/BOEM_2019-074.pdf)
 - Comprehensive Seafloor Substrate Mapping and Model Validation in the New York Bight (https://espis.boem.gov/final%20reports/BOEM_2019-069.pdf)

Snapshot of relevant studies:

- Real-time Opportunity for Development Environmental Observations (RODEO)
(www.boem.gov/RODEO)
- Atlantic Offshore Wind Energy Development: Values and Implication for Recreation and Tourism
(<https://epis.boem.gov/final%20reports/5662.pdf>)

Visit our website: www.boem.gov/Renewable-Energy-Environmental-Studies



Empire Wind Offshore Wind Project

Empire Wind Project Overview

BOEM EIS Scoping Meetings

- 6/30/2021
- 7/08/2021
- 7/13/2021

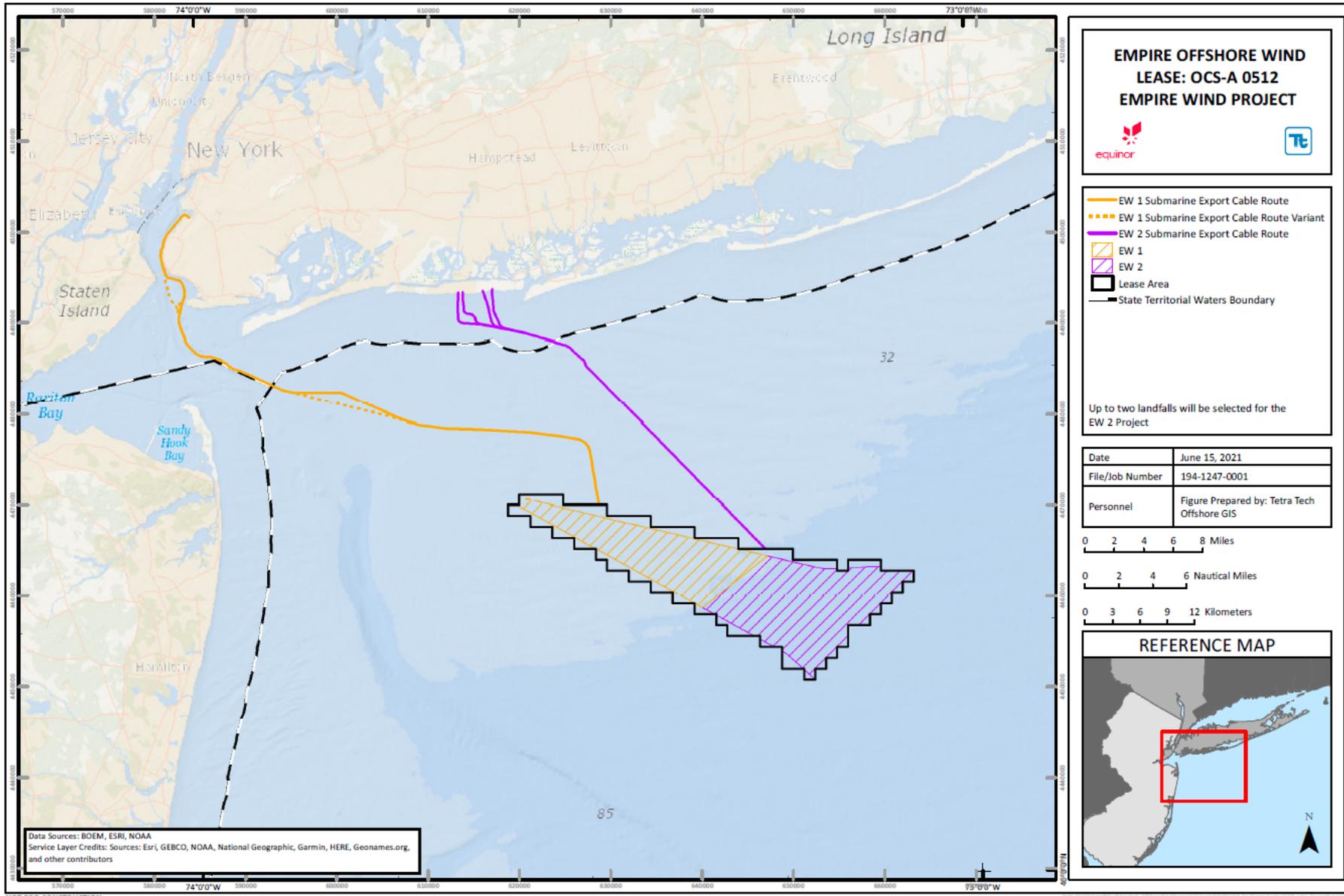


Empire Wind

- Empire Offshore Wind LLC (Empire) is a joint venture between Equinor Offshore Wind US LLC and BP Wind Energy North America Inc.
- Lease OCS-A 0512 was awarded by BOEM on April 1, 2017.
- More than 2 GW of energy to be provided to New York through success of the Offshore Renewal Energy Credit (OREC) solicitations in 2018 and 2020.
- First power expected by approximately 2025.
- Supports NY goals for 9 GW of offshore renewable energy by 2035.



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



Volume 1:

- Executive Summary
- Project Design Development
- Project Description

Volume 2:

2a. Physical Resources

- Physical and Oceanographic Conditions
- Water Quality
- Air Quality
- Acoustics (In-Air & Underwater)

2b. Biological Resources

- Terrestrial Vegetation and Wildlife
- Wetlands and Waterbodies
- Avian Species
- Bat Species
- Benthic Resources, Finfish, Invertebrates, Essential Fish Habitat
- Marine Mammals
- Sea Turtles

2c. Cultural Resources

- Marine Archaeological Resources
- Terrestrial Archaeological Resources
- Historic Properties

2d. Visual Resources

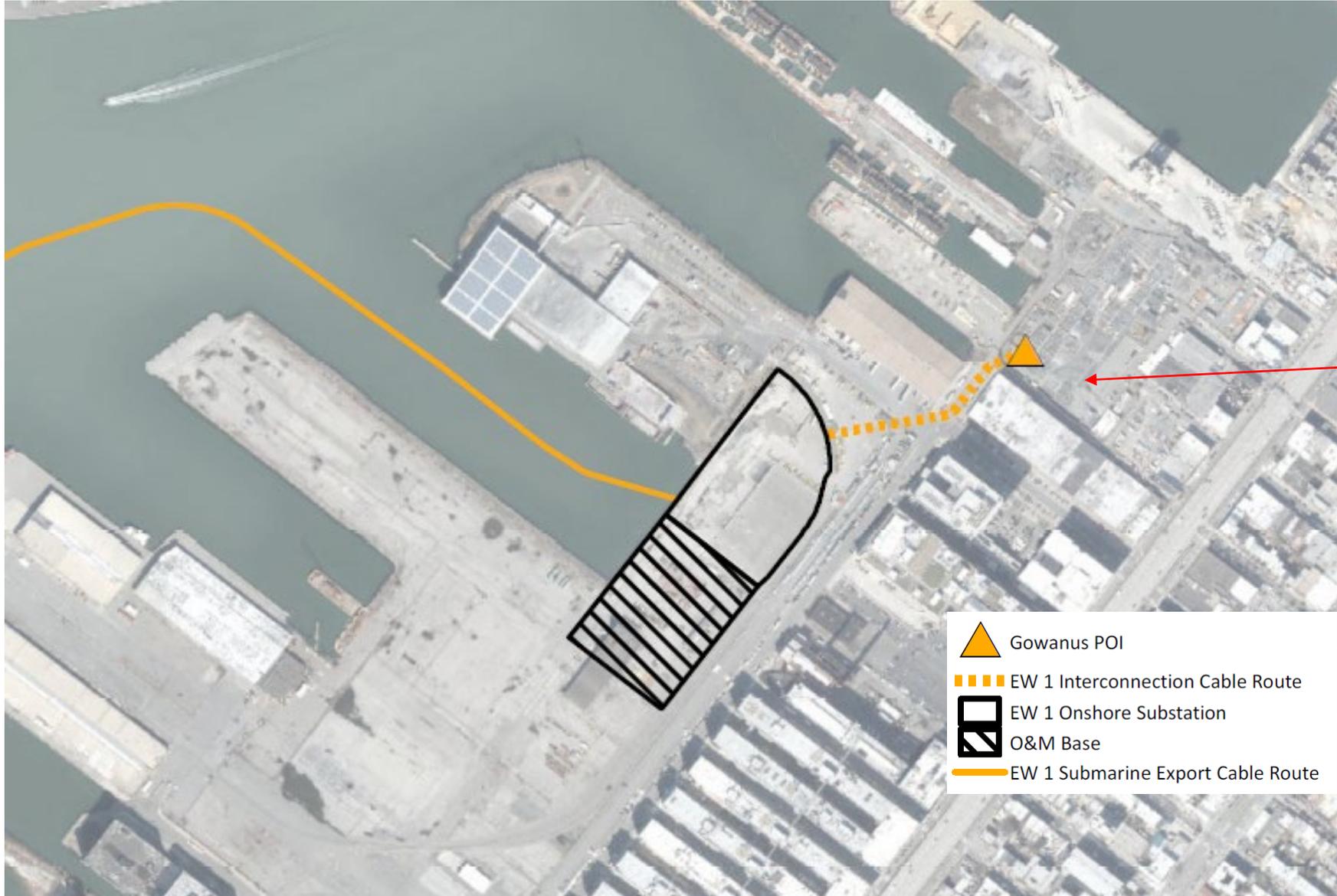
2e. Human Resources and the Built Environment

- Population, Economy, Employment, and Housing and Property Values
- Land Use and Zoning
- Recreation and Tourism
- Environmental Justice
- Land Transportation and Traffic
- Aviation
- Marine Transportation and Navigation
- Commercial and Recreational Fishing
- Department of Defense and OCS National Security Maritime Uses
- Marine Energy and Infrastructure
- Other Coastal and Marine Uses
- Public Health and Safety

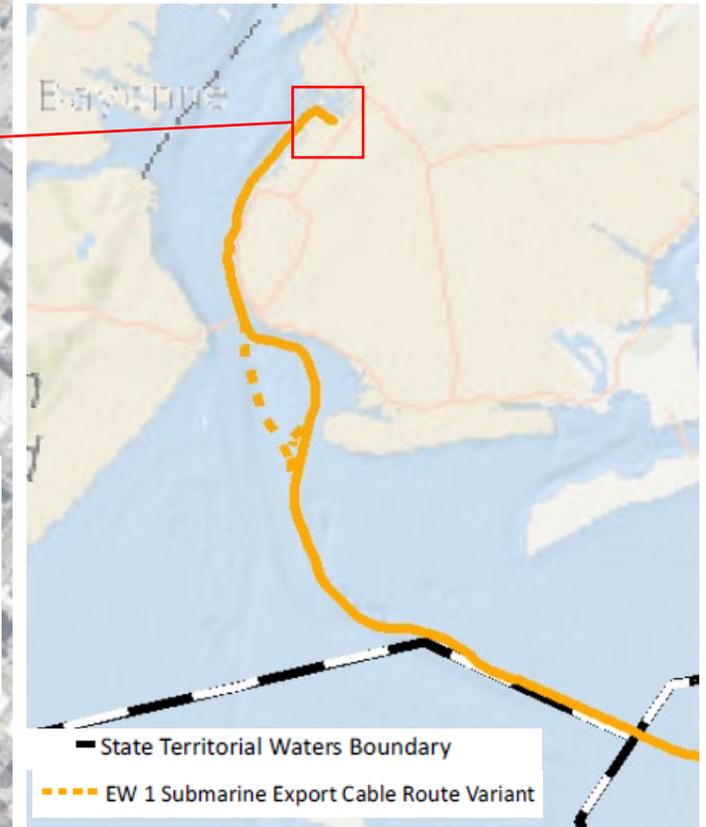
Volume 3:

Technical appendices

Empire Wind 1 (EW 1) – Onshore Facilities



- Submarine export cables make landfall at the South Brooklyn Marine Terminal (SBMT)
- Onshore substation and Operations & Maintenance (O&M) Base will also be located at SBMT
- Interconnection cable route to Gowanus Point of Interconnection



Empire Wind 2 (EW 2) – Onshore Facilities

- Up to two export cable landfall locations to site three cables in Long Beach, NY: multiple locations under consideration
- Up to two onshore export cable routes to site three cables to the onshore substation; multiple options under consideration
- Onshore substation in Oceanside, NY; two locations under consideration
- Interconnection cable route to Oceanside Point of Interconnection



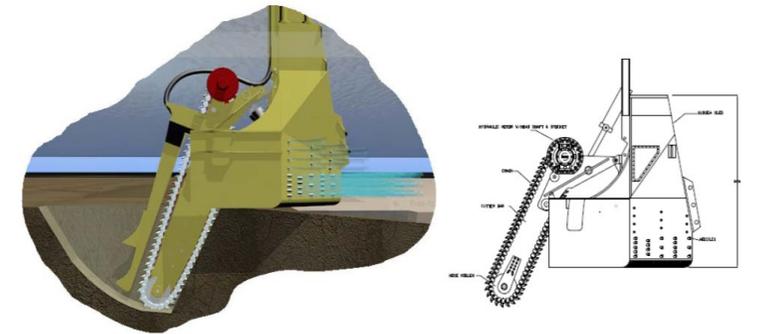
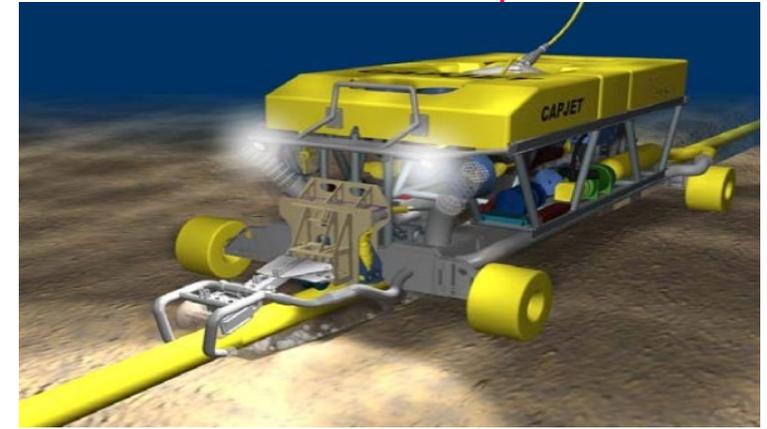
Submarine Export Cable & Interarray Cables

Installation Methods:

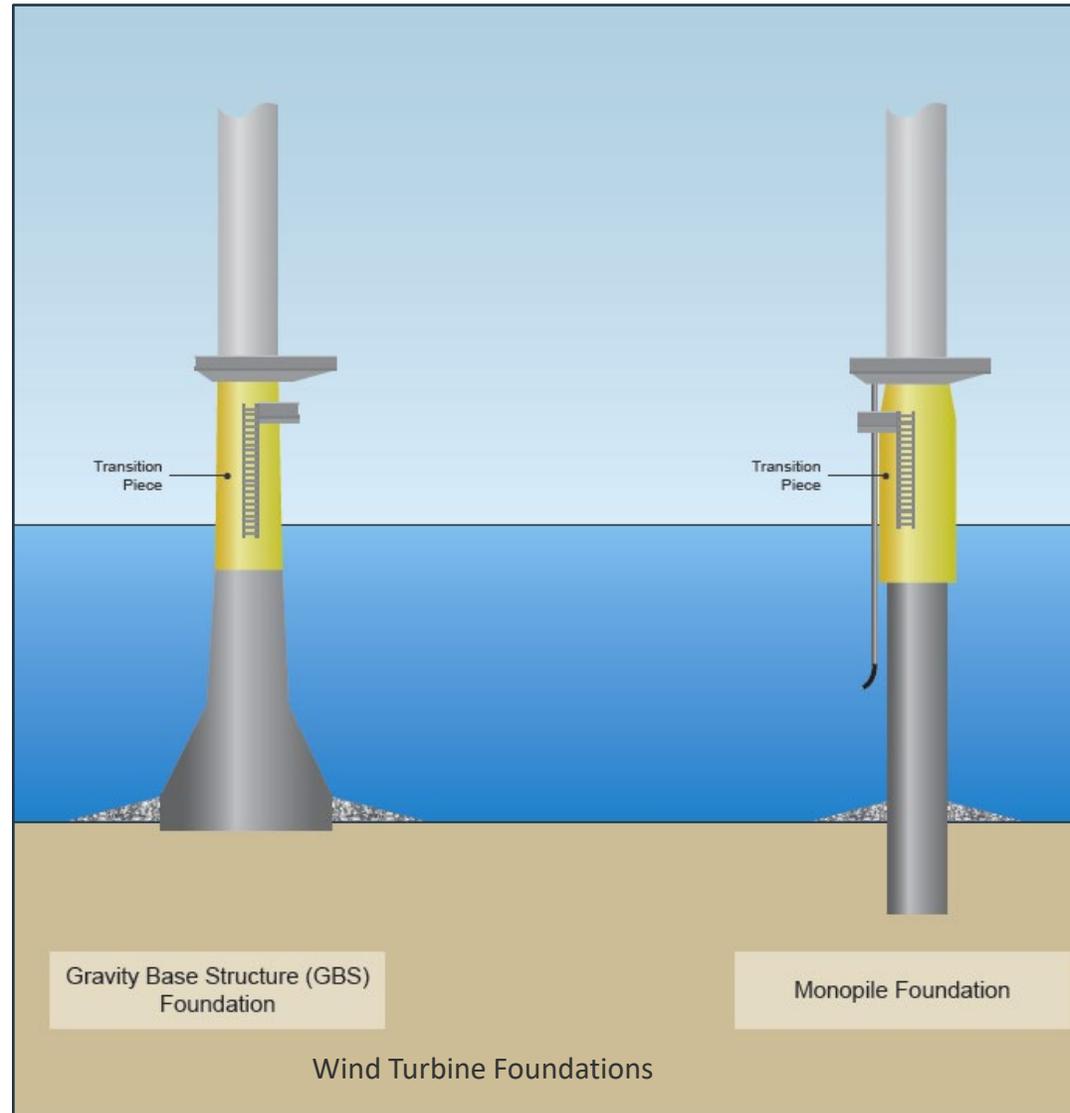
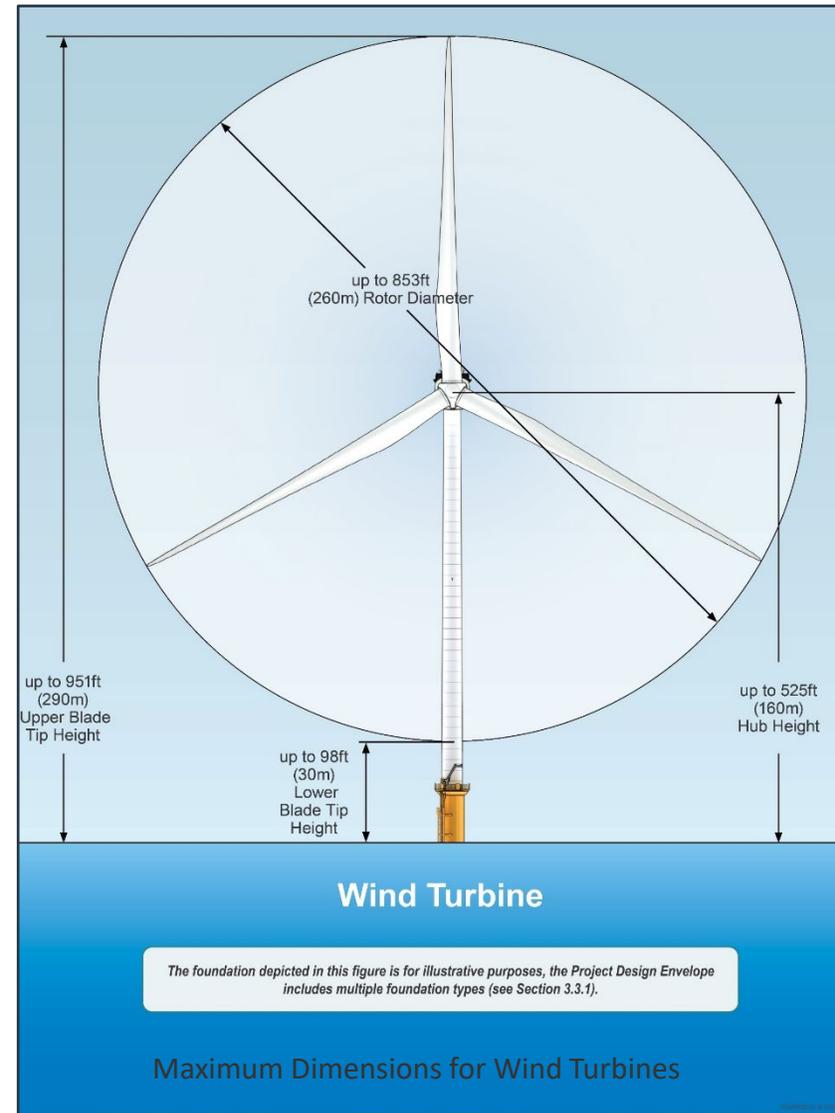
- Pre-lay:
 - Grapnel (debris removal)
 - Pre-sweeping w/ suction hopper dredge or mass flow excavator (MFE)
 - Pre-trenching
 - Dredging at landfall & other areas
- Cable Lay & Burial:
 - Plowing
 - Jetting
 - Trenching (cutting)

Target Burial Depths:

- 15 ft below current or future authorized depth or existing depth within federally maintained areas (channels and anchorages) (whichever is deeper)
- 6 ft along the entire submarine export routes and interarray cables outside of federally maintained areas

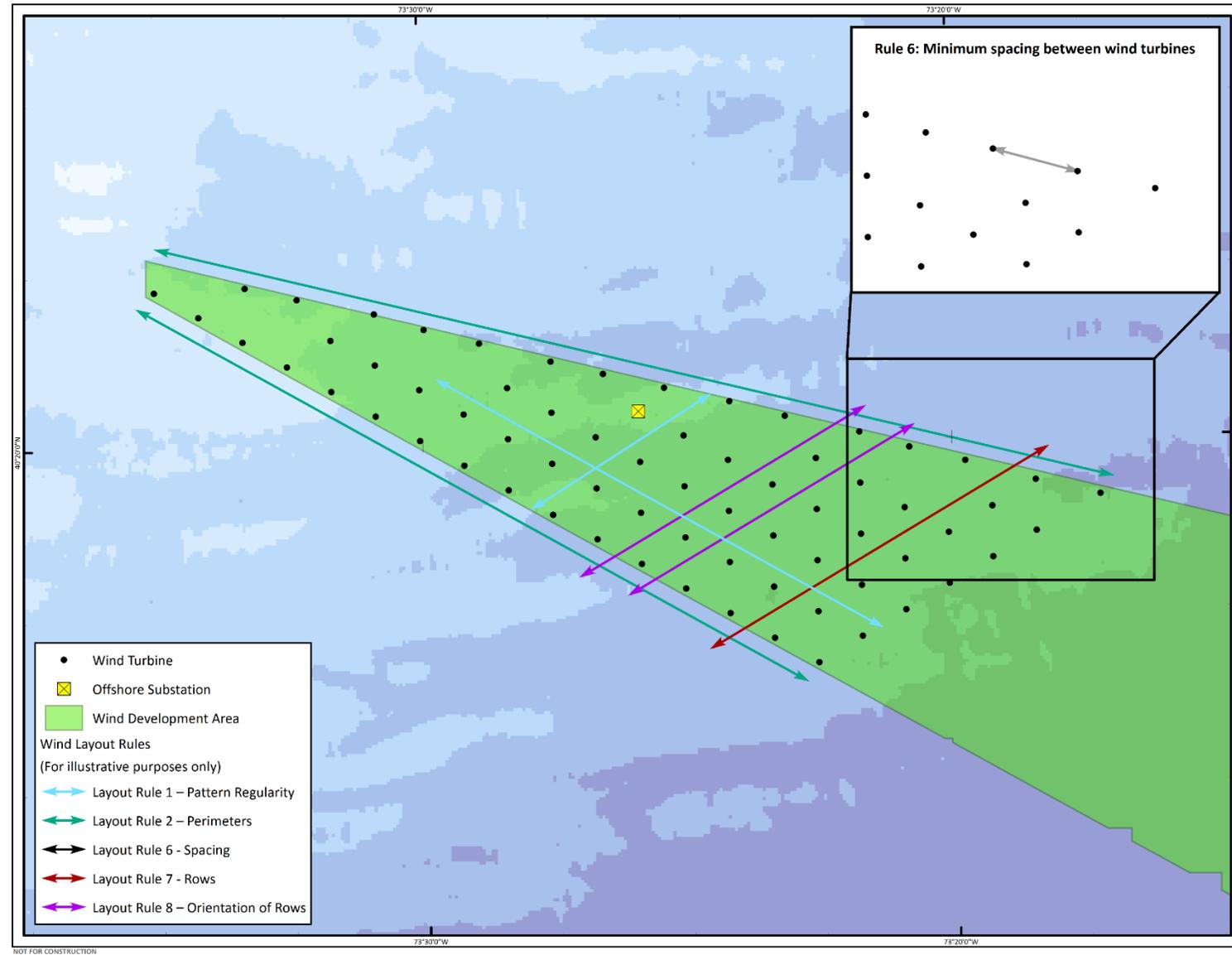


Wind Turbines, Offshore Substations, and Foundations

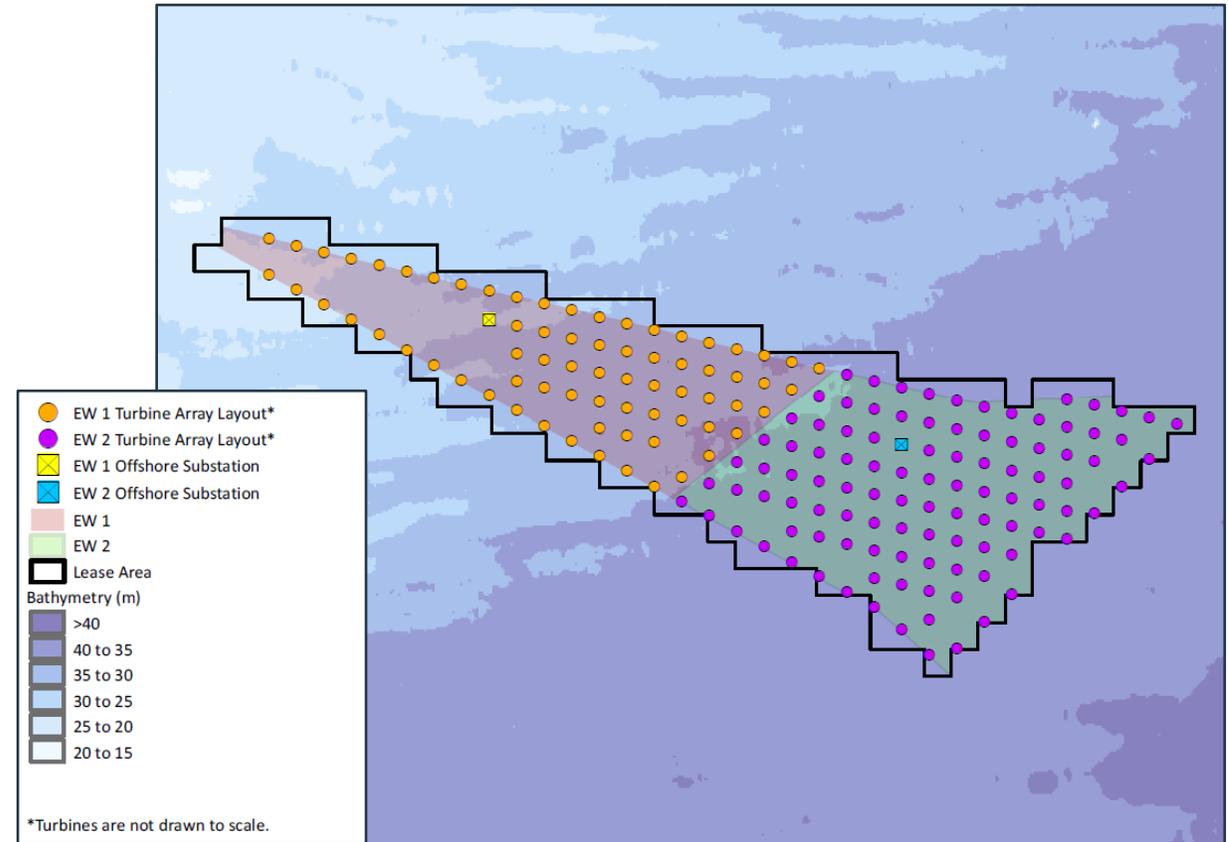
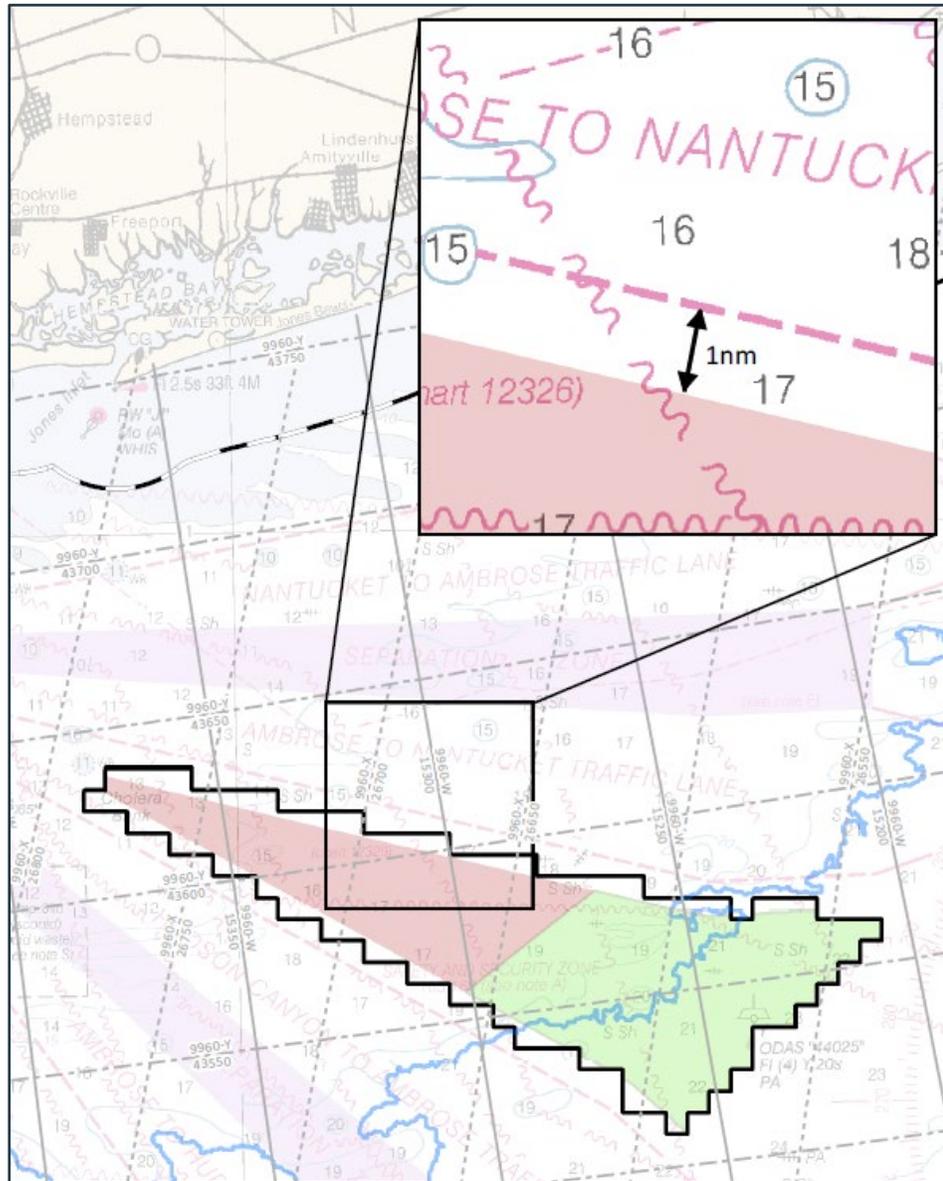


Layouts and Use of Layout Rules

- Developed through consultation with fisheries, maritime stakeholders & previous experiences
- Voluntarily applied to the Project
- Designed to provide flexibility on timing and design of final layouts, but within known and assessed limits
- Rules reduce navigational risk and facilitate continued access to traditional fishing grounds
- Safety: developed to ensure effective Search & Rescue (SAR) operations
- Used in development of the Navigational Safety Risk Assessment (NSRA; Appendix DD of the COP)
- Nine rules; adopted as part of the Project Design Envelope evaluated in the Construction and Operations Plan



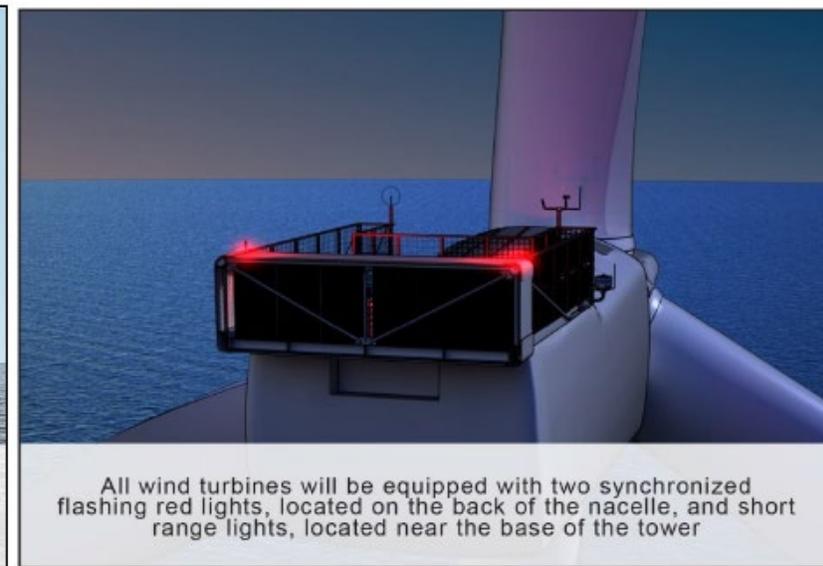
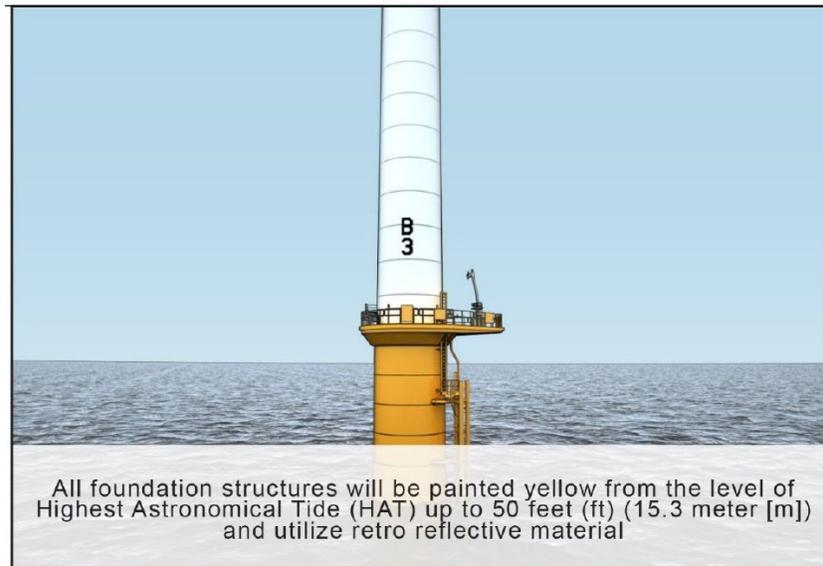
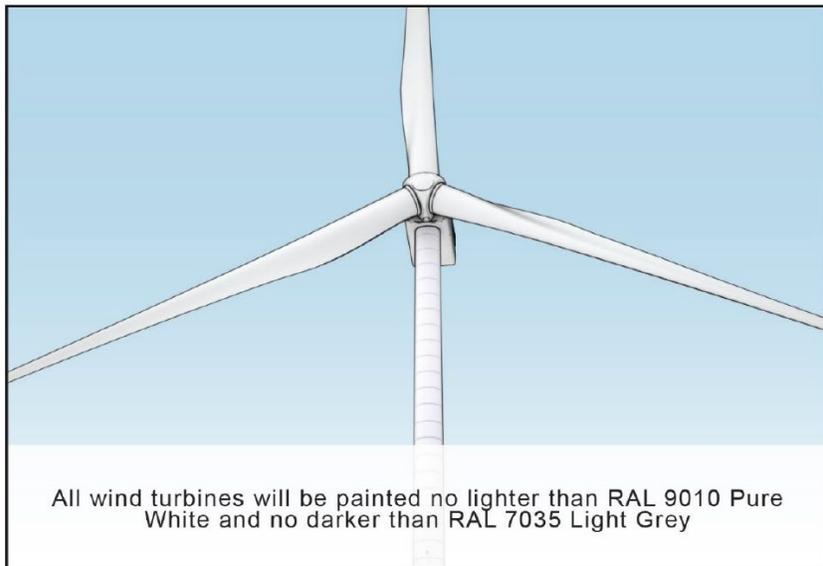
Layout Analyzed in the COP



- Wind Farm Development Area will maintain a 1 nautical mile buffer from Traffic Separation Scheme traffic lanes
- Up to 174 wind turbine foundation locations for EW 1 and EW 2
- 2 offshore substation foundation locations
- Implementation of Layout Rules

Marking and Lighting

- Wind turbines and offshore substations will be lit and marked in accordance with FAA, BOEM, and USCG guidelines and requirements for aviation and navigation obstruction lighting:
 - FAA Advisory Circular 70/7460-1L;
 - BOEM’s Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development (2021);
 - USCG First District LNM 44/20 OSW Lighting and Marking Guidance; and
 - *International Association of Marine Aids (IALA) to Navigation and Lighthouse Authorities Recommendation O-139 on The Marking of Man-Made Offshore Structures (IALA 2013)*



Near-Term Update

- Volumes II and Appendices are currently being updated to reflect the refined PDE. These will be provided to BOEM in early July 2021.

Empire Wind Construction and Operations Plan

Volume I - Project Information (June 2021)

Note: Volume 2 and the appendices contain information and analysis based on the April 2021 COP submission. Equinor has subsequently refined their PDE in June 2021 and is currently updating Volume 2 and the appendices to incorporate this refined PDE. This includes:

- The reduction in the number of foundations, from 242 to 176;
- The incorporation of a layout for 176 foundation locations;
- The removal of the minimum sized wind turbine; and
- The removal of the piled jacket foundation as an option to support wind turbines.

Future Planned Filings

- In addition, the following appendices and associated resource chapters are being updated in accordance with an agreed upon schedule with BOEM, as follows:
 - Appendix H Marine Site Investigation Report (MSIR) – February 2021
 - Appendix K Air Emissions Calculations and Methodology - August 2021
 - Appendix T Benthic Resources Characterization Reports - September 2021
 - Appendix U Essential Fish Habitat (EFH) Assessment - September 2021
 - Appendix X Marine Archeological Resources Assessment (MARA) - September 2021
 - Appendix Z Analysis of Visual Effects on Historic Properties (AVEHP) - September 2021
 - Appendix AA Visual Impact Assessment (VIA)- September 2021
 - Appendix DD Navigational Safety Risk Assessment (NSRA)- September 2021
 - Appendix GG (NEW) Animal Movement Modeling- November 2021
- The July 2021 submittal of will reflect the on-going update of these sections.

Empire Wind OCS-A 0512

Laura Morales, NY Permitting Lead

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Planning and Leasing Overview

OCS-A 0512

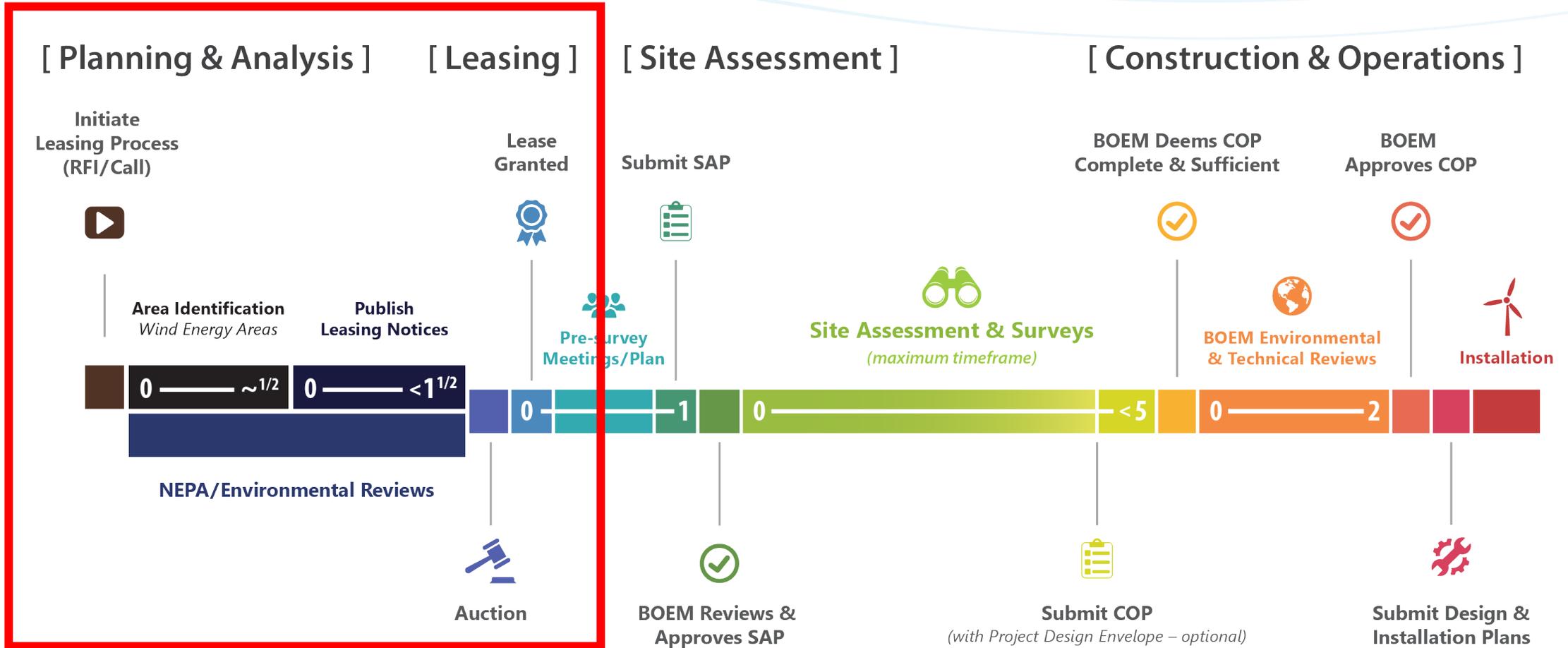
Luke Feinberg
Office of Renewable Energy Programs

Empire Wind Public Scoping Meetings

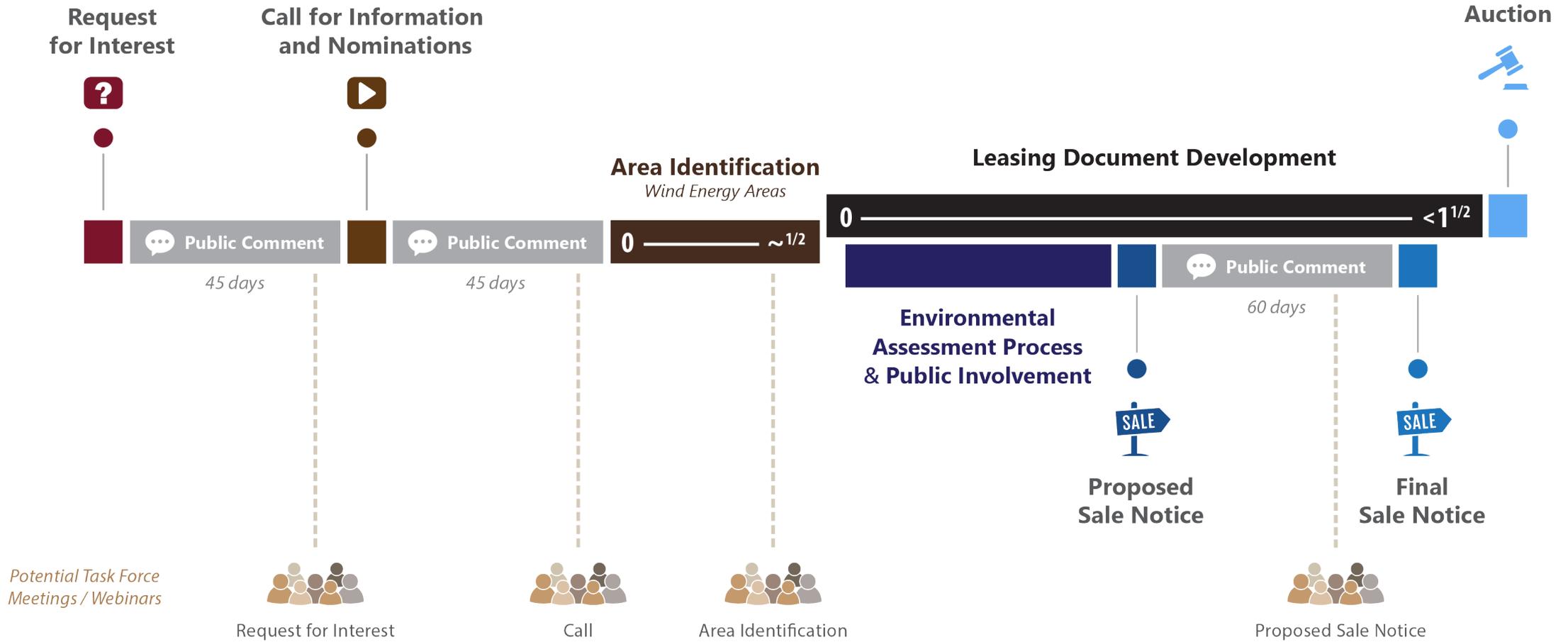
June 30, 2021



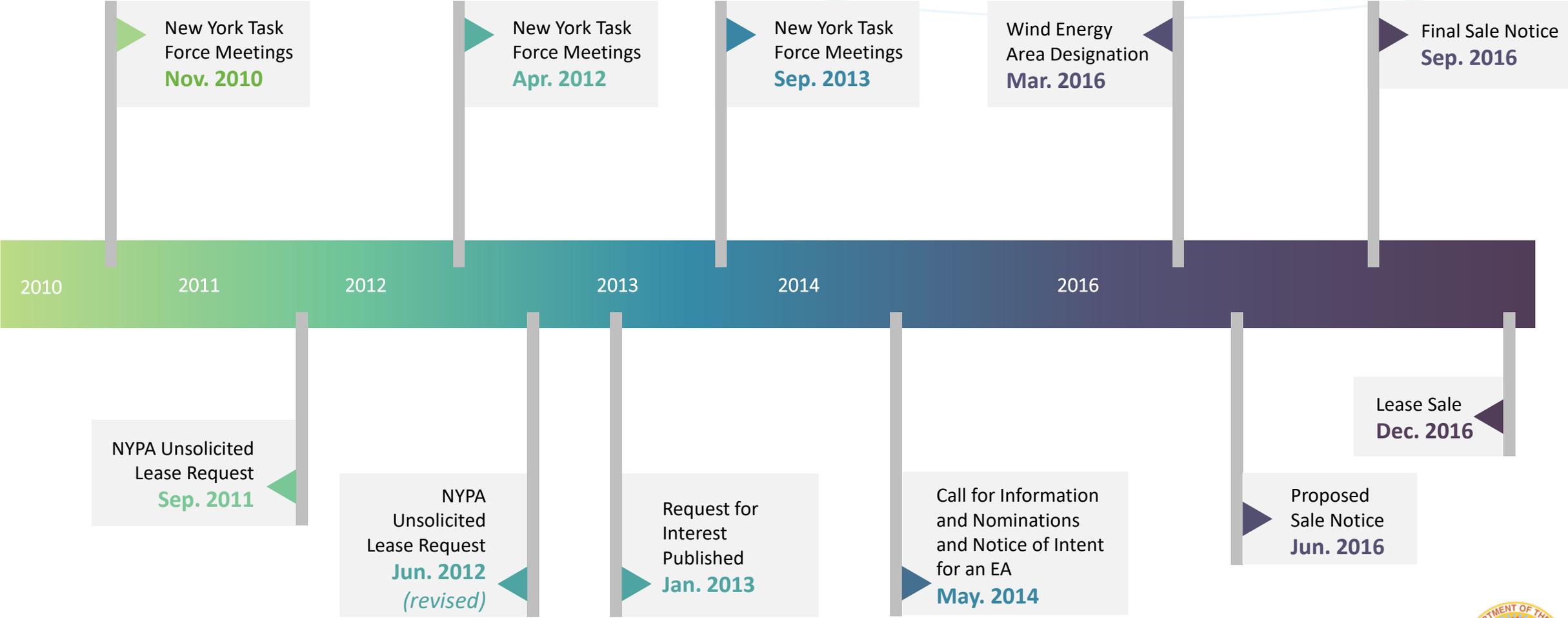
Renewable Energy Process



Request for Interest to Lease Sale

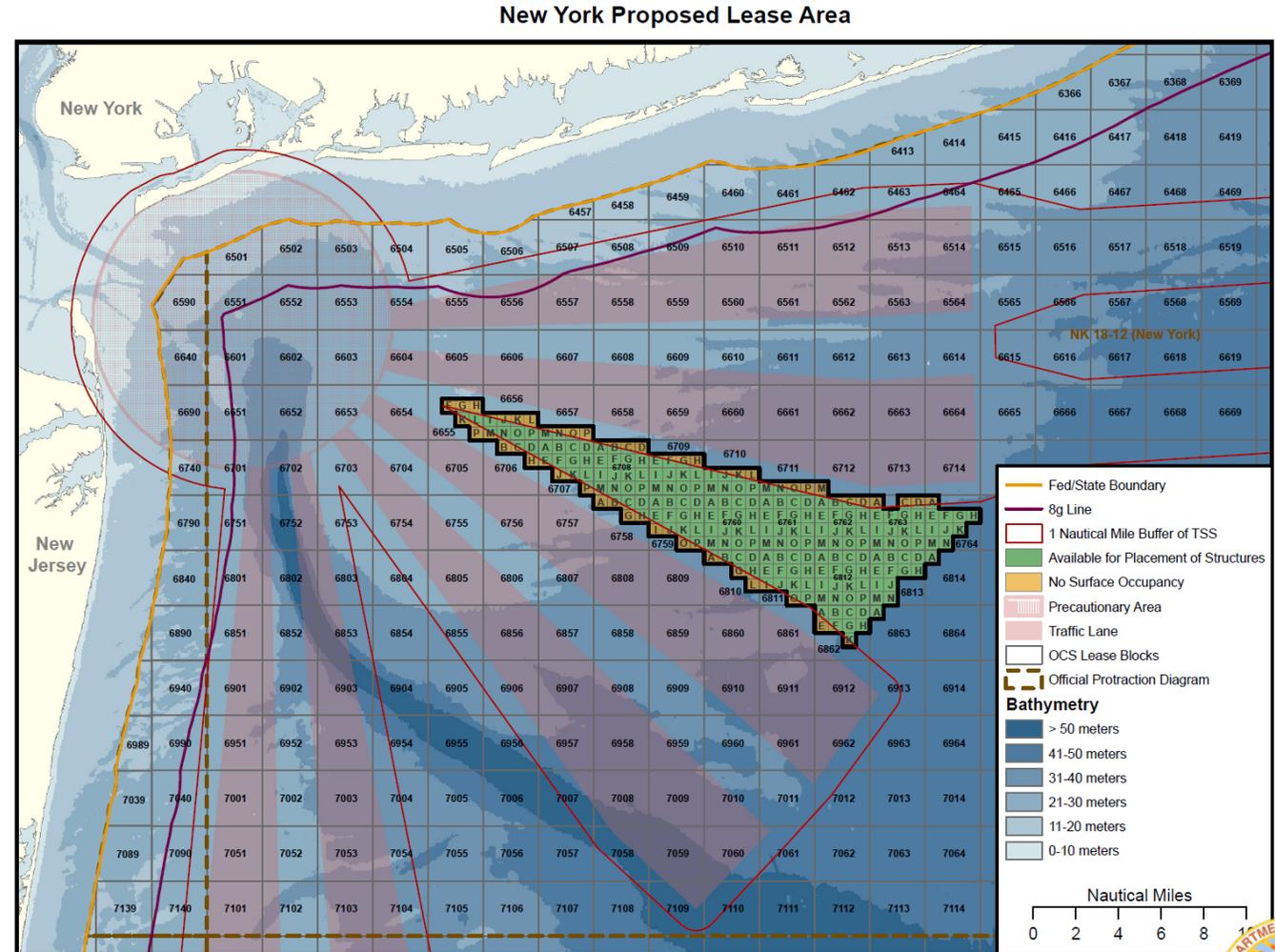


OCS-A 0512: Timeline Highlights



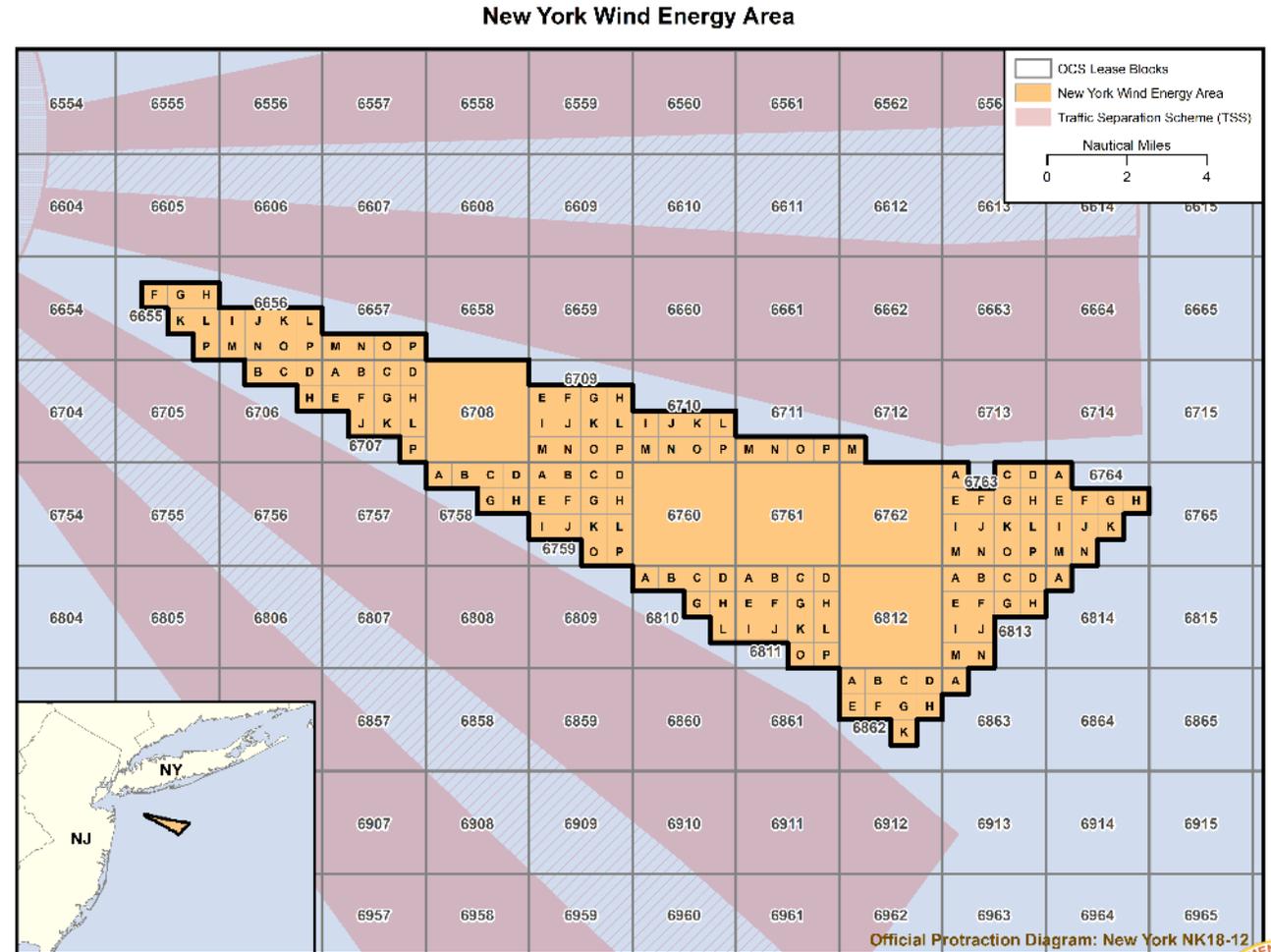
OCS-A 0512: NYPA Unsolicited Lease Request & RFI

- **New York Power Authority (NYPA) Unsolicited Lease Request**
 - Sept. 2011, June 2012 (revised)
 - Up to 194, 3.6 MW turbines
- **Request For Interest (RFI)**
 - January 2013
 - Key Issues; Navigational Safety, Commercial Fisheries, Visual Impacts
 - Competitive interest determined, competitive sale process



OCS-A 0512: Leasing Process

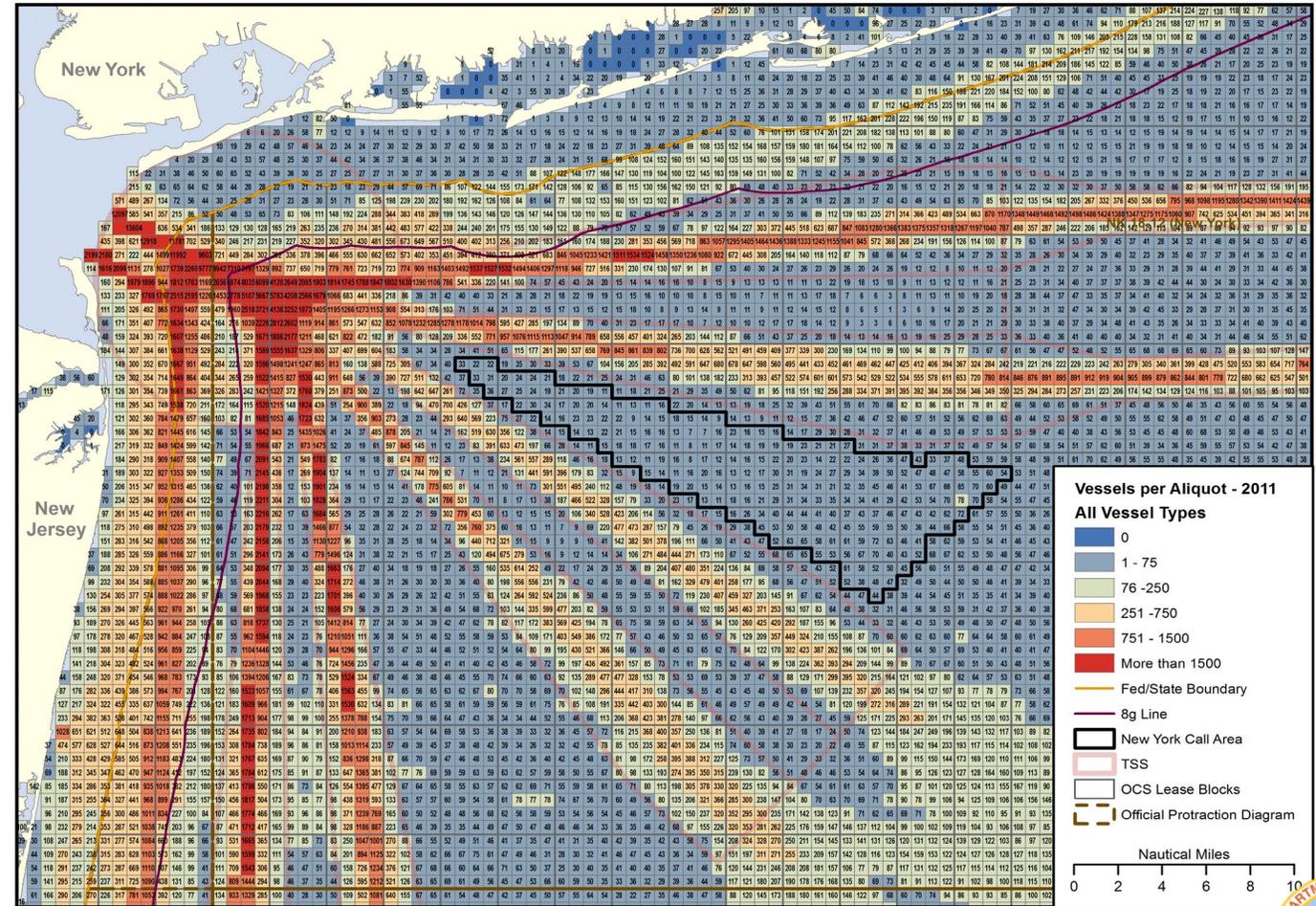
- **Call for Information and Nominations**
 - May 2014
 - 29 comments and 3 nominations
- **Wind Energy Area Designation**
 - March 2016
 - Same as Call Area
- **Environmental Assessment**
 - June 2016
 - Site characterization & site assessment



OCS-A 0512: Navigational Safety

- Analysis of vessels per aliquot over a year
- Similar traffic patterns across years
- Low number of vessels traverse the area
- Concern of setback from potential lease area

AIS Vessel Traffic - All Vessels - 2011



Vessels per Aliquot - 2011
All Vessel Types

- 0
- 1 - 75
- 76 - 250
- 251 - 750
- 751 - 1500
- More than 1500

— Fed/State Boundary
 — 8g Line
 — New York Call Area
 — TSS
 — OCS Lease Blocks
 — Official Protraction Diagram

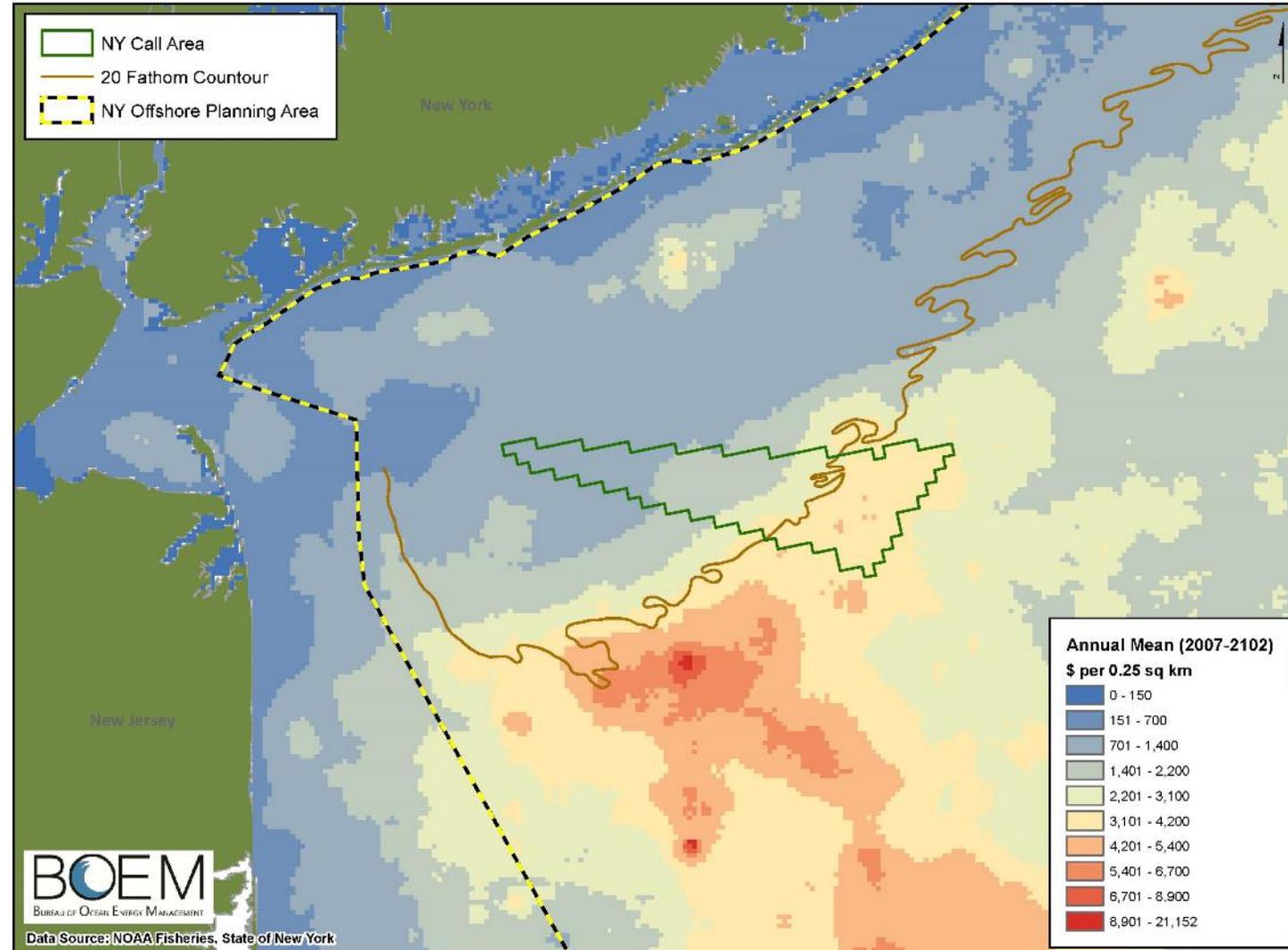
Nautical Miles
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OCS-A 0512: Fisheries Communication

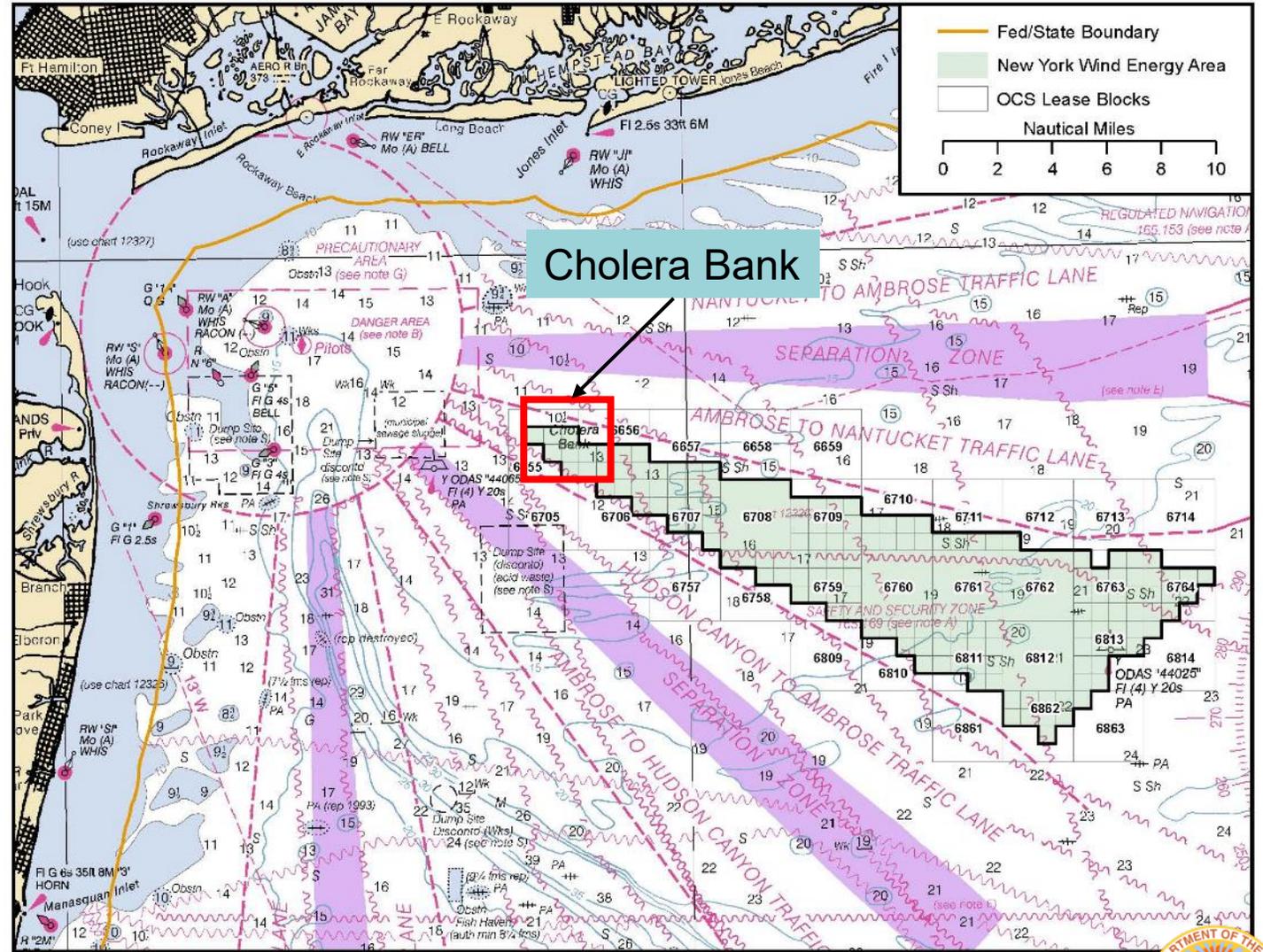
- Use of the area as a fishery was identified as a priority for consideration in any future construction plans
- Communication between a future lessee and the commercial fishing industry critical to potential coexistence

Commercial Fishing Revenue - Federally Managed Permits: Annual Mean (2007-2012)



OCS-A 0512: Proposed Sale Notice

- Published in June 2016
- 81,130 acres
- Ascending Bid Auction Format



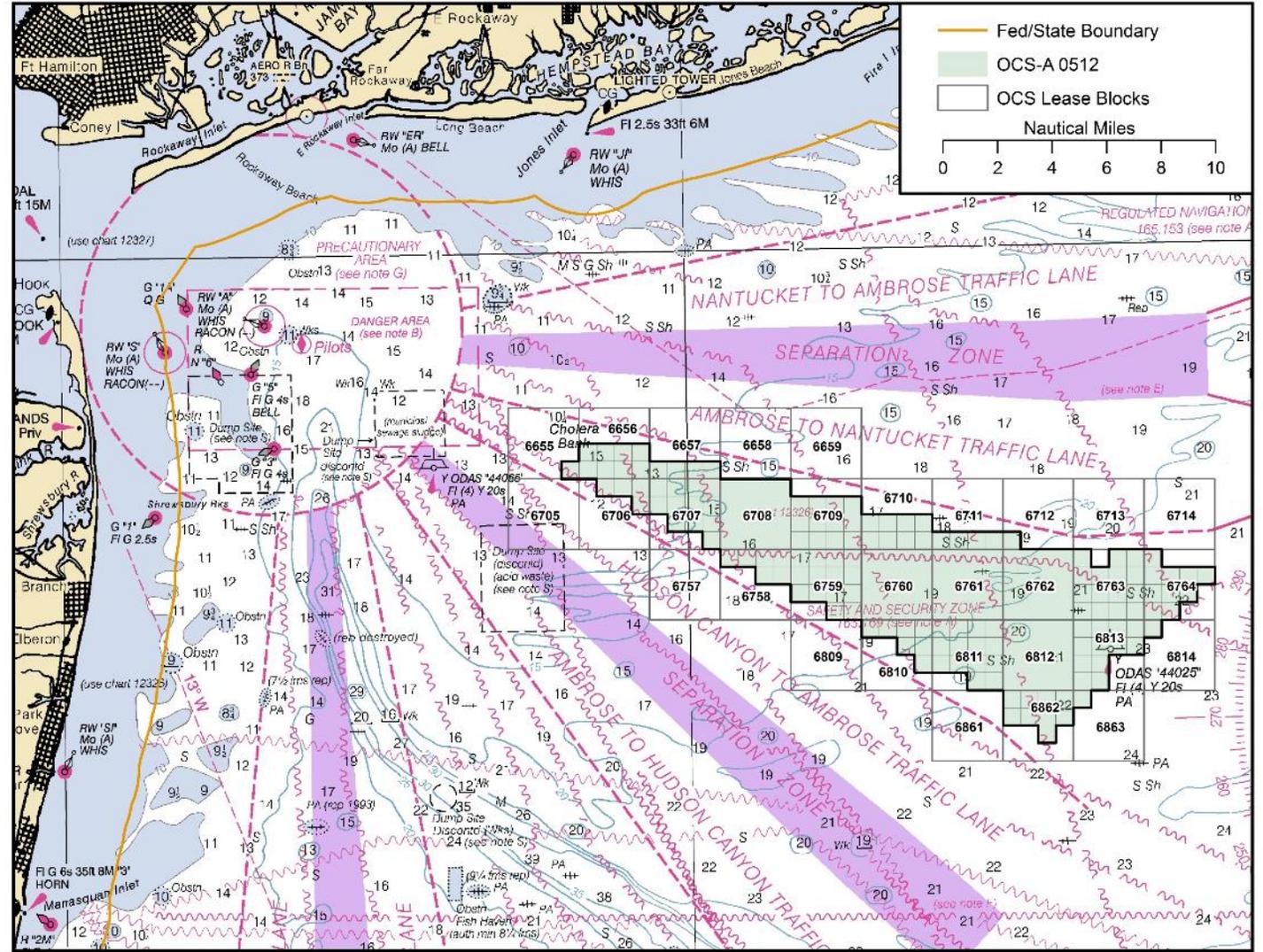
OCS-A 0512: Final Sale Notice

- **Published in October 2016**

- five aliquots which were removed in response to comments received from NMFS in response to the EA
 - 79,350 acre lease area
- One nautical mile setback from TSS, potential for future navigation, fisheries and visual mitigation measures
- Fisheries Communication Plan and Fisheries Liaison

- **Multiple Factor Bidding Format**

- 10% bidding credit for 'government authority'



Map ID: ERB-2016-1035

OCS-A 0512: Auction

- **Highest grossing and longest auction to date**

- 6 participants
- 33 rounds
- \$42,469,725 high bid



Bids Received for Lease Sale ATLW-6 Offshore New York
December 15-16, 2016

Round	Bidder Name	Bid Type	Asking Price	Bid Credit	Cash Bid
1	Avangrid Renewables, LLC	Live	\$158,700		\$158,700
	DONG Energy Wind Power (U.S.) Inc.	Live	\$158,700		\$158,700
	Innogy US Renewable Projects LLC	Live	\$158,700		\$158,700
	New York State Energy Research and Development Authority	Live	\$158,700	\$15,870	\$142,830
	Statoil Wind US LLC	Live	\$158,700		\$158,700
	wpd offshore Alpha LLC	Live	\$158,700		\$158,700



33	Avangrid Renewables, LLC				
	DONG Energy Wind Power (U.S.) Inc.				
	Innogy US Renewable Projects LLC				
	New York State Energy Research and Development Authority	Exit	\$40,000,042	\$4,000,004	\$36,000,038
	Statoil Wind US LLC	Live	\$42,469,725		\$42,469,725
wpd offshore Alpha LLC					

Empire Wind Construction and Operations Plan (COP)

- Empire Wind submitted their revised COP in April 2021, updated PDE in June 2021
- COP is currently available at: www.boem.gov/empire-wind
- BOEM can approve, disapprove, or approve with conditions
 - Will happen after environmental impact statement (EIS) is complete and will be documented by the Record of Decision (ROD)

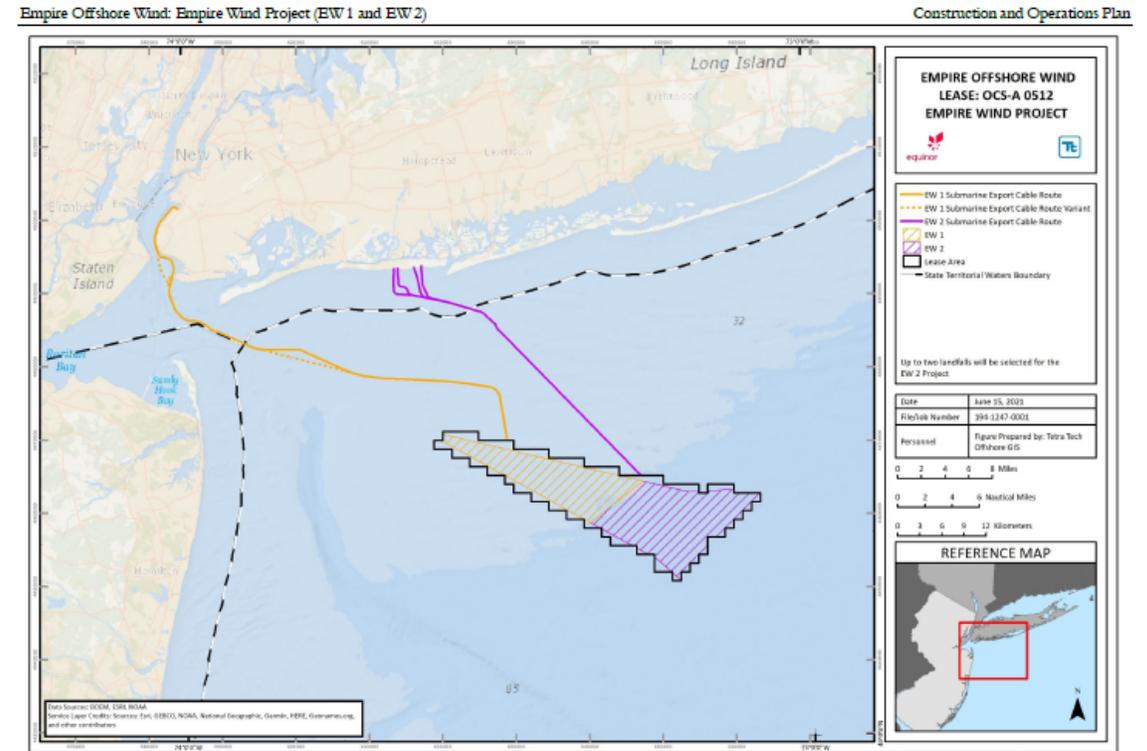


Figure ES-1 Project Overview (Lease Area and Submarine Export Cable Routes)

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luke.feinberg@boem.gov | (571) 474-7616

BREAK – 5 minutes



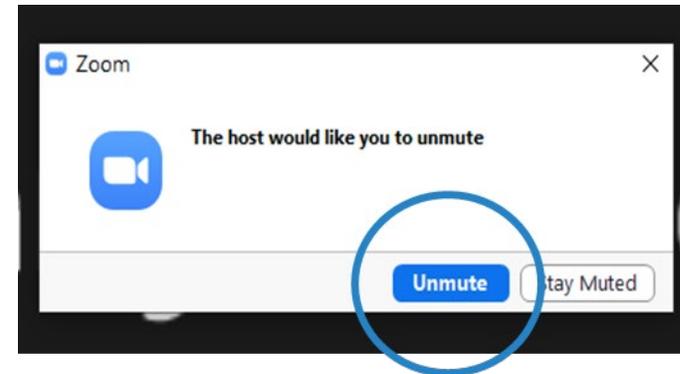
PUBLIC COMMENTS



Slide

Public Comments

- **People who pre-registered to comment will go first**
- **If you did not pre-register but would like to comment, you can 'raise your hand' to be called on**
 - If you are on the phone, use *9 to raise your hand
- **When called upon, you will receive a prompt to unmute**
 - If you are on the phone, unmute and mute your phone using *6



04:59

BREAK – 5 minutes



QUESTION AND ANSWER SESSION



Slide

BOEM Closing Remarks Michelle Morin



The background of the entire image is an underwater photograph of sand dunes. The dunes are illuminated from above, creating a rhythmic pattern of light and shadow across the sand's surface. The water is a clear, vibrant blue, and the overall scene is serene and natural.

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