



Welcome to the Vineyard Wind South Scoping Meeting

Project information and posters:

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

For technical support, contact Poppy Milliken:
poppy.milliken@erm.com



Welcome & Meeting Process

Liz Valsamidis, Facilitator
Environmental Resources Management



Note: *The audio for this meeting is being recorded and will be shared on the project website following the meeting.*



Scoping Meeting Agenda

- **Welcome and Meeting Process**
- **Presentations and Remarks**
 1. Leasing Process – Emily Hildreth, BOEM
 2. Project Overview – Maria Hartnett, Vineyard Wind LLC
 3. NEPA Process – Kelly Hammerle, BOEM
 4. Connecticut Remarks – Victoria Hackett and Lauren Savidge
 5. Massachusetts Remarks – Lisa Engler and Bruce Carlisle
- **Public Comment Listening Session**
- **Question & Answer Session**
- **BOEM Next Steps and Meeting Close**

Welcome & Opening Remarks

**James Bennett,
BOEM**

Program Manager for the Renewable Energy Program



Virtual Meeting Reminders and Guidelines

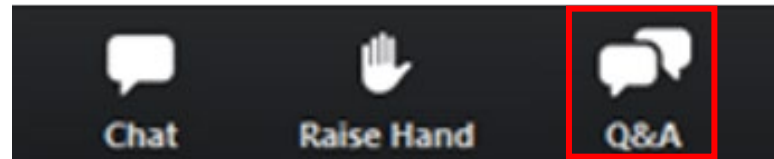
- **Tech support: Poppy Milliken at poppy.milliken@erm.com**
- **Meeting URLs:**
 - Monday, July 19 at 5:30 pm EDT:
https://zoom.us/webinar/register/WN_xixsBx34RlufXLzBU65OKA
 - Friday, July 23 at 1:00 pm EDT
https://zoom.us/webinar/register/WN_g82MgbBkSbSxnU2v-YbjJw
 - Monday, July 26 at 5:30 pm EDT
https://zoom.us/webinar/register/WN_aWz3iJFGRHi3tAXfvx7g8w
- **Participants are muted until the comment session begins**
- **You may need to close other programs for a smoother virtual meeting experience**
- **Please direct any media inquiries to Stephen Boutwell at 703-787-1531 or stephen.boutwell@boem.gov**



Have a Clarifying Question?

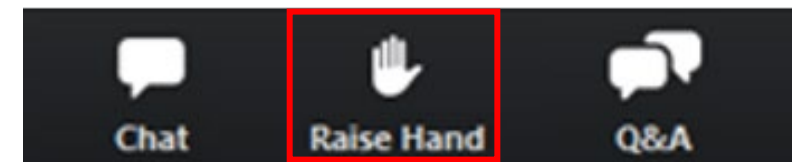
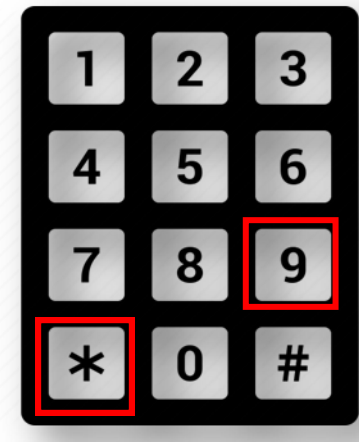
Questions and Answers

- Questions? Click the Q&A icon at the bottom of the screen to send it to BOEM
- New questions are accepted through the end of the Public Comment Listening session of this meeting
- Questions and answers will be shared during the Q&A session



Order of Public Comments

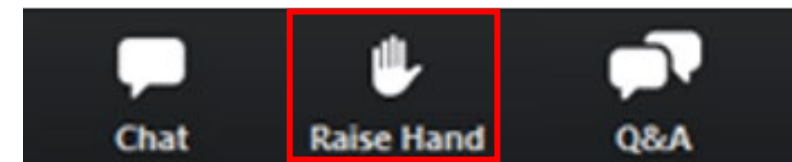
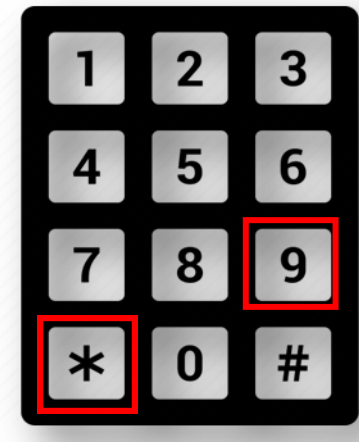
- Names of the next 5 people to comment in the chat will be posted so you can see when it's your turn.
- Those who registered in advance to comment will be addressed first. The Facilitator will call on them in the order they registered.
- Once those comments are completed, others will be invited to comment.
- Commenters will be called on by the Facilitator in the order they raised their hands.








Public Comment Process

How to Comment

- Use the “raise hand” button in Zoom during the listening session (*9 for phone-only participants).
- When called upon, the Facilitator will invite you to unmute your line.
- Please state and spell your name when you begin
- Please limit comments to 5 minutes. Testimony longer than 5 minutes may be submitted in writing.



Purpose of this Scoping Meeting

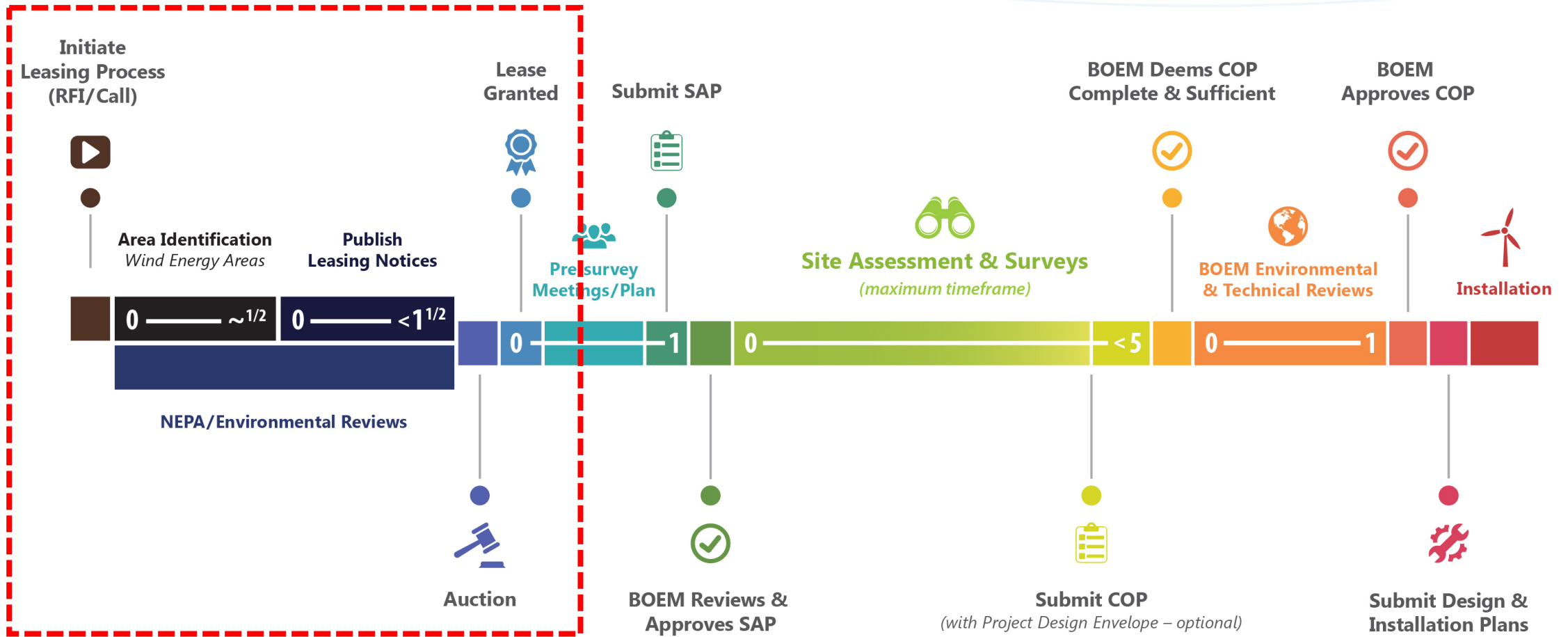
-  **Provide an understanding of the proposed project**
-  **Share the location of information available for public review**
-  **Explain NEPA substitution for the National Historic Preservation Act (NHPA) Section 106 process**
-  **Solicit public comments**
-  **Answer questions submitted during the meeting**

Leasing Process History for Massachusetts: OCS-A 0501 and OCS-A 0534

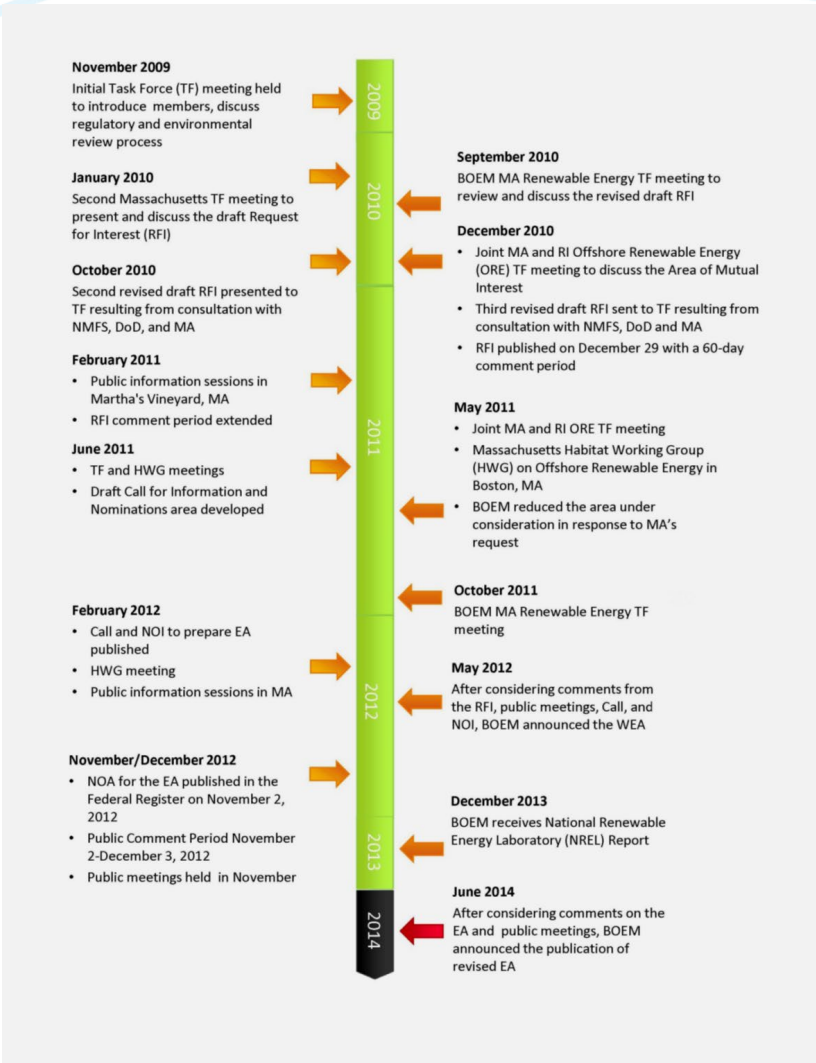
Emily Hildreth
BOEM Project Coordinator



Planning and Leasing Process



Stakeholder Outreach in Massachusetts



○ 13 Task Force Meetings

- First meeting November 2009

○ 20 Public Meetings

- Informational, Environmental Assessment meetings

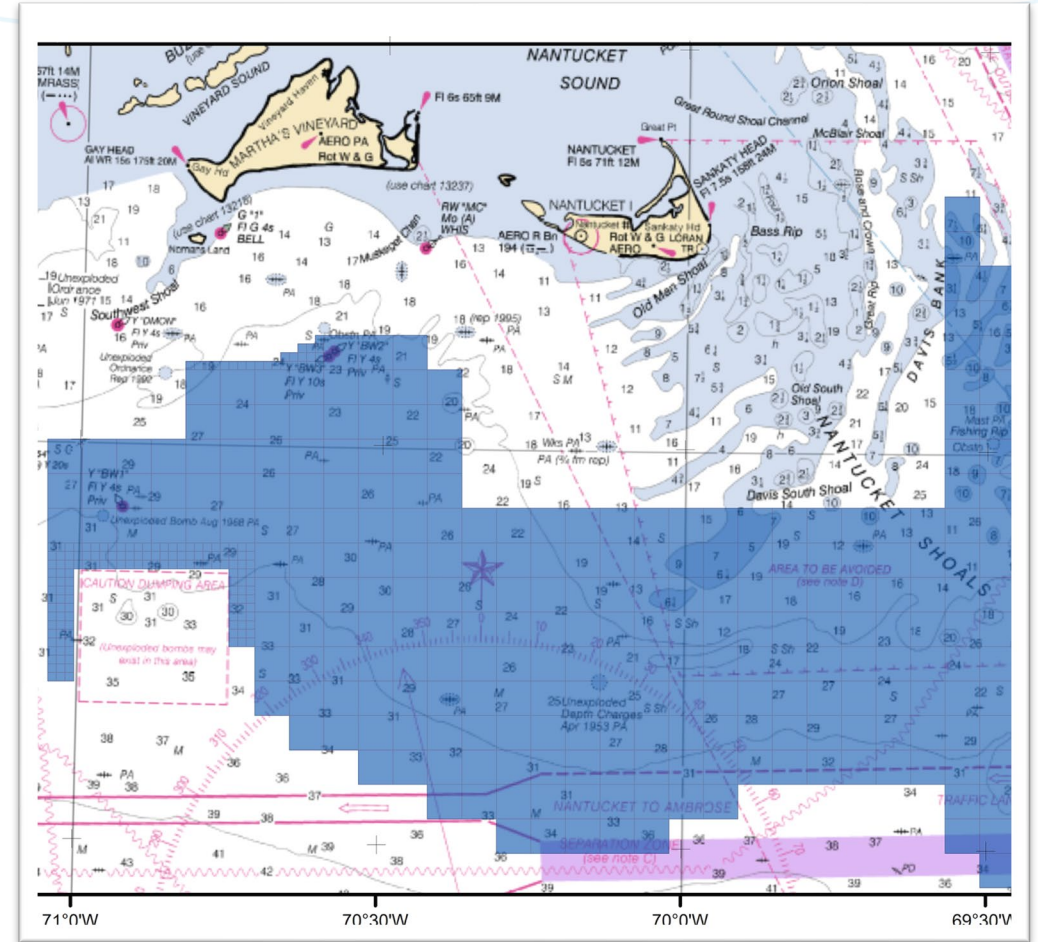
○ Engagement with Stakeholder Groups

- Stakeholder engagement from first Task Force to Final Environmental Assessment (Left)

○ Last Task Force: April 24, 2018

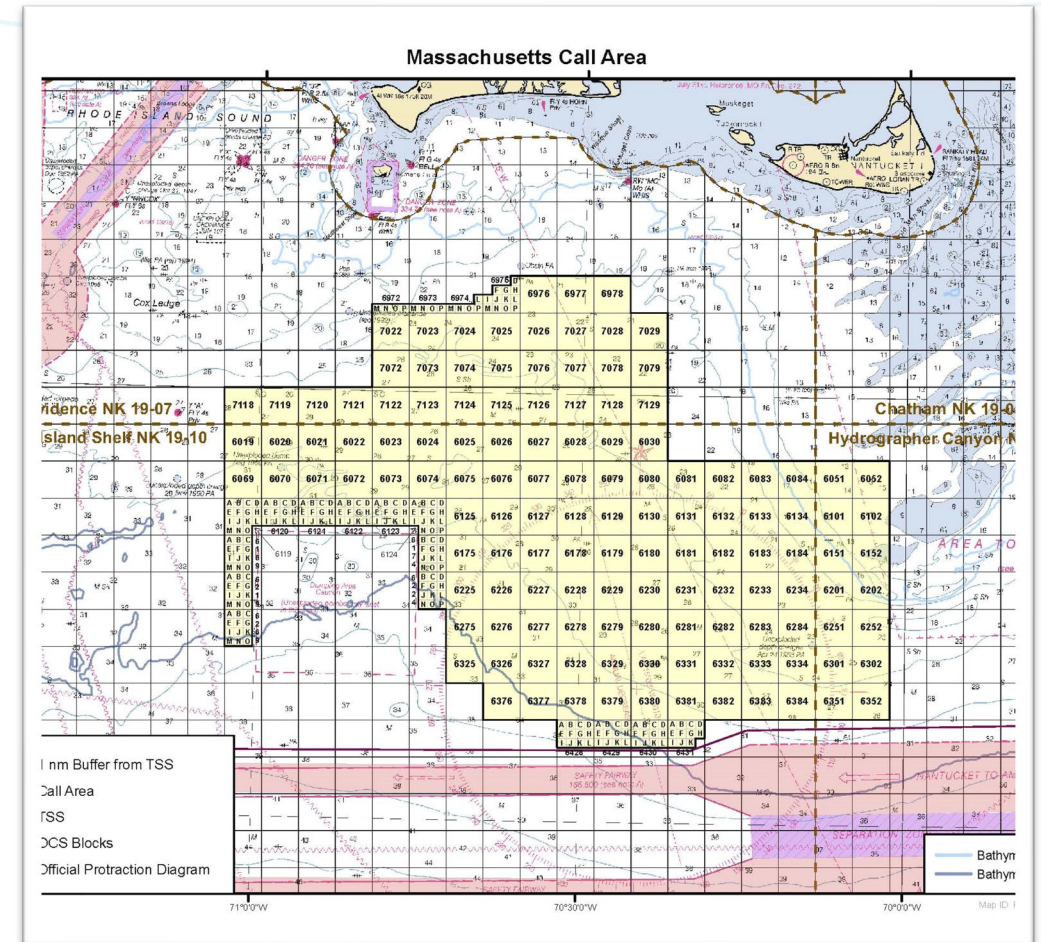
2010-2011: Massachusetts Request for Interest

- Request for Interest
 - Commercial interest
 - Public comments
 - Task Force meetings
- Areas eliminated from map:
 - Shipping/navigation
 - Fishing areas
 - Habitat for protected species

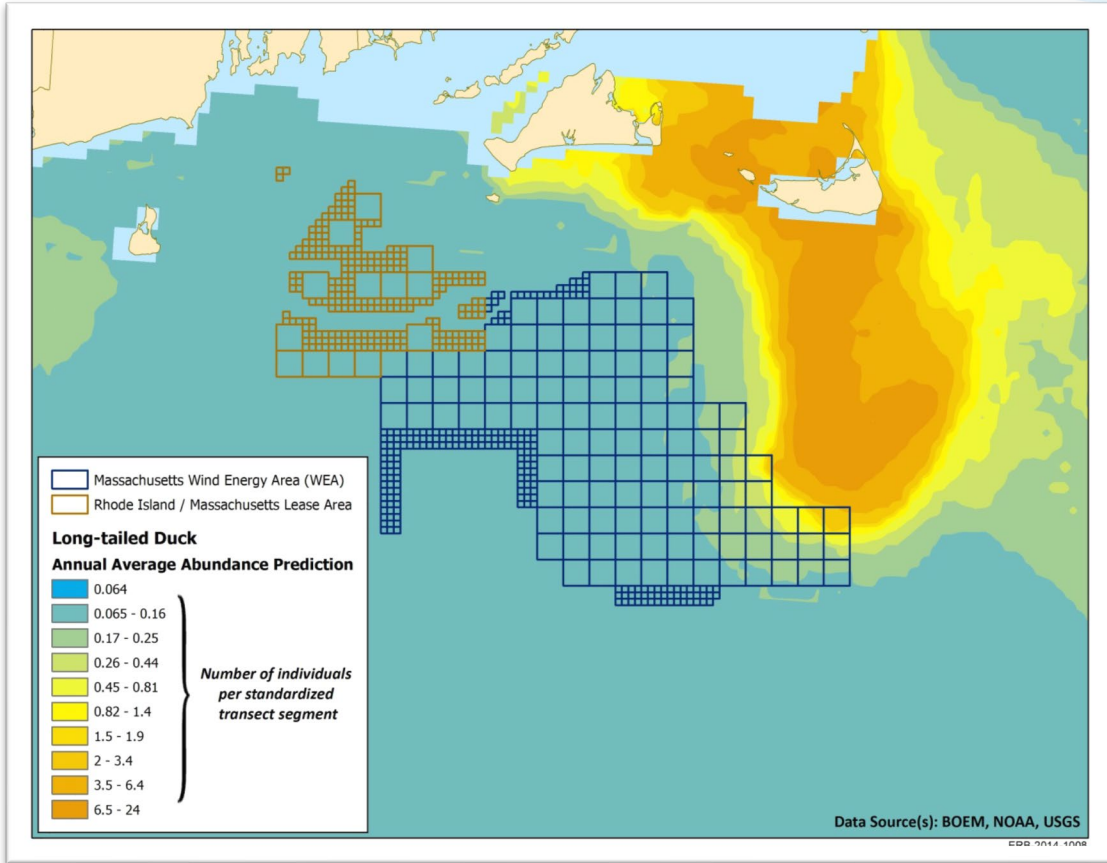


2012: Massachusetts Call Area

- **2012: Notice of Availability of Environmental Assessment**
 - Limited to site assessment activities
 - Public comments
- **2012: Massachusetts Call for Information and Nominations Area (Right)**
 - Public Comments
 - Industry nominations



2014: Revised Environmental Assessment



Source: Kinlan et al., 2014

Figure 4-4. Predicted annual distribution and relative abundance of Long-tailed Ducks per 15-minute ship survey equivalent transect segment at 10 knots

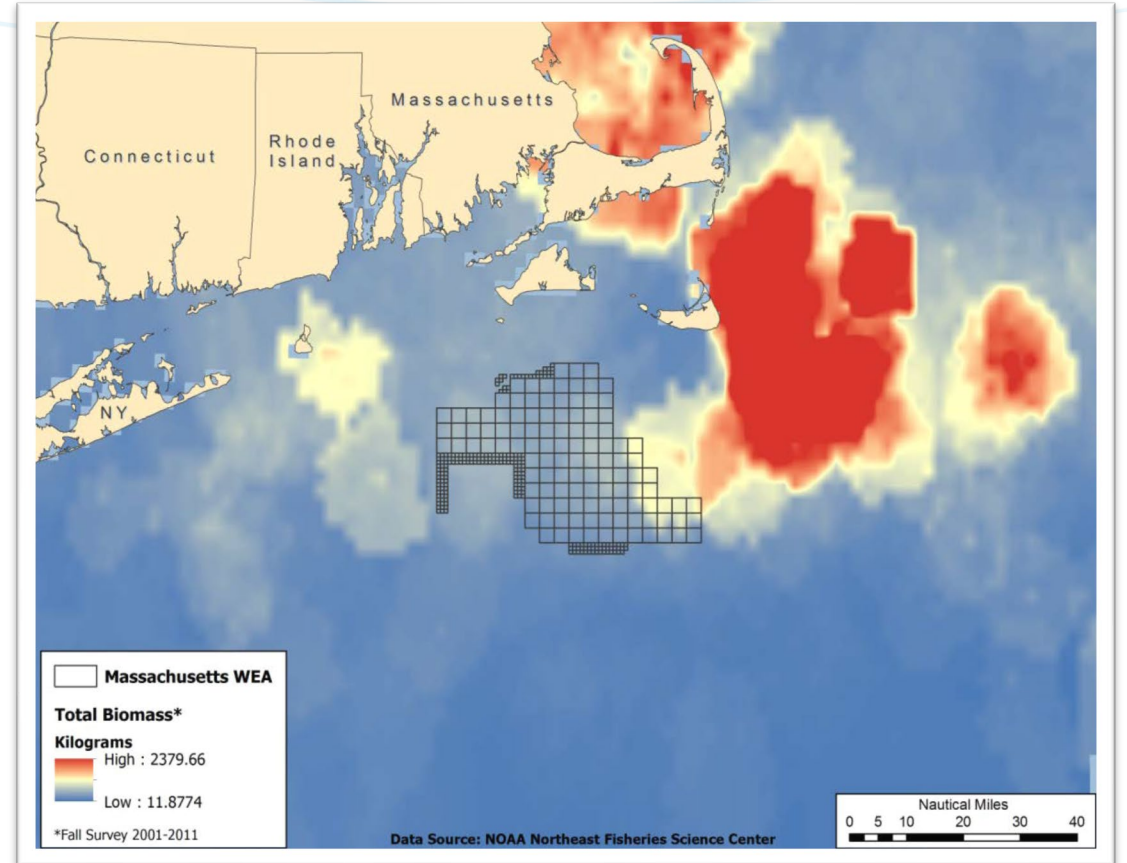
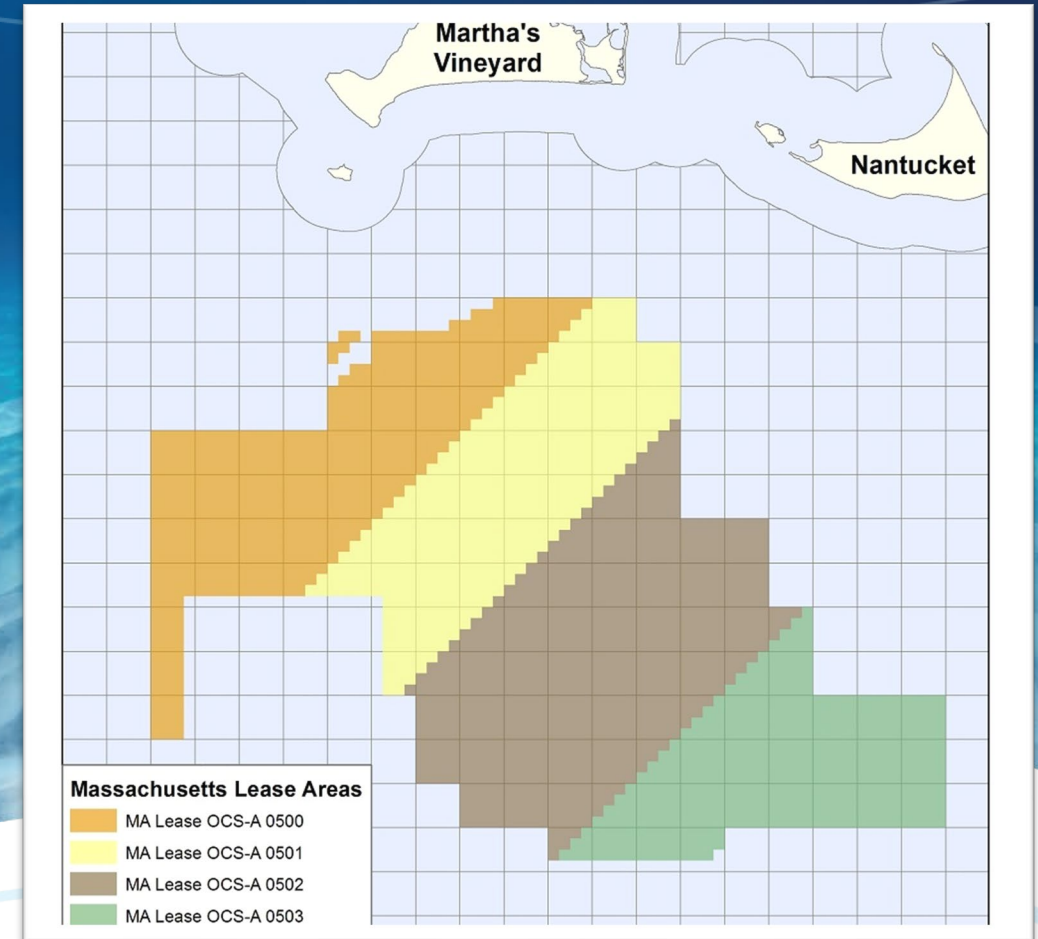


Figure 4-7. Total biomass (kg) of fish caught during the NEFSC Autumn Bottom Trawl Survey (2001-2011)

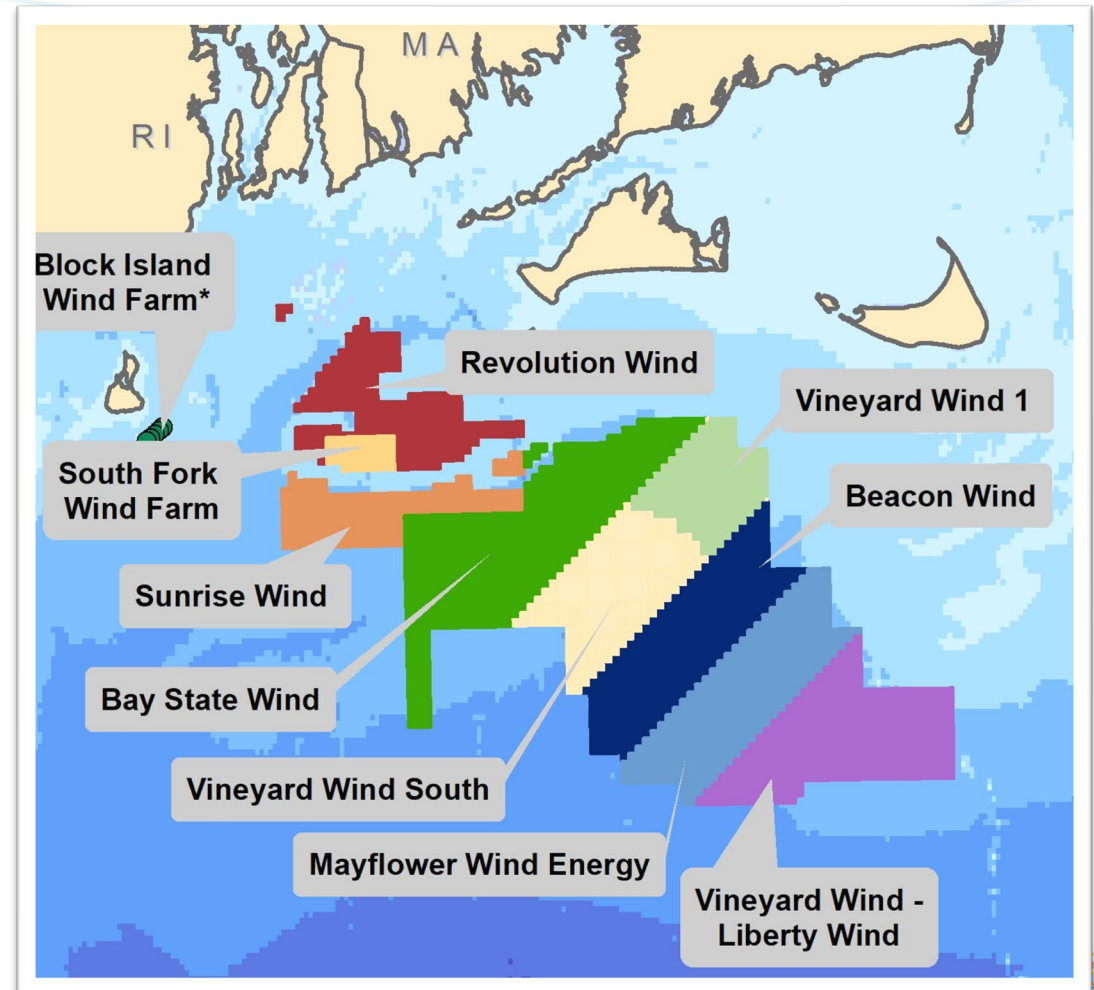
2013 and 2014: Final Massachusetts WEA and Lease Delineation

- 2013: National Renewable Energy Laboratory Report
 - Recommended delineation of leases
- 2014: Wind Energy Area (WEA)
 - Shown with delineated lease areas

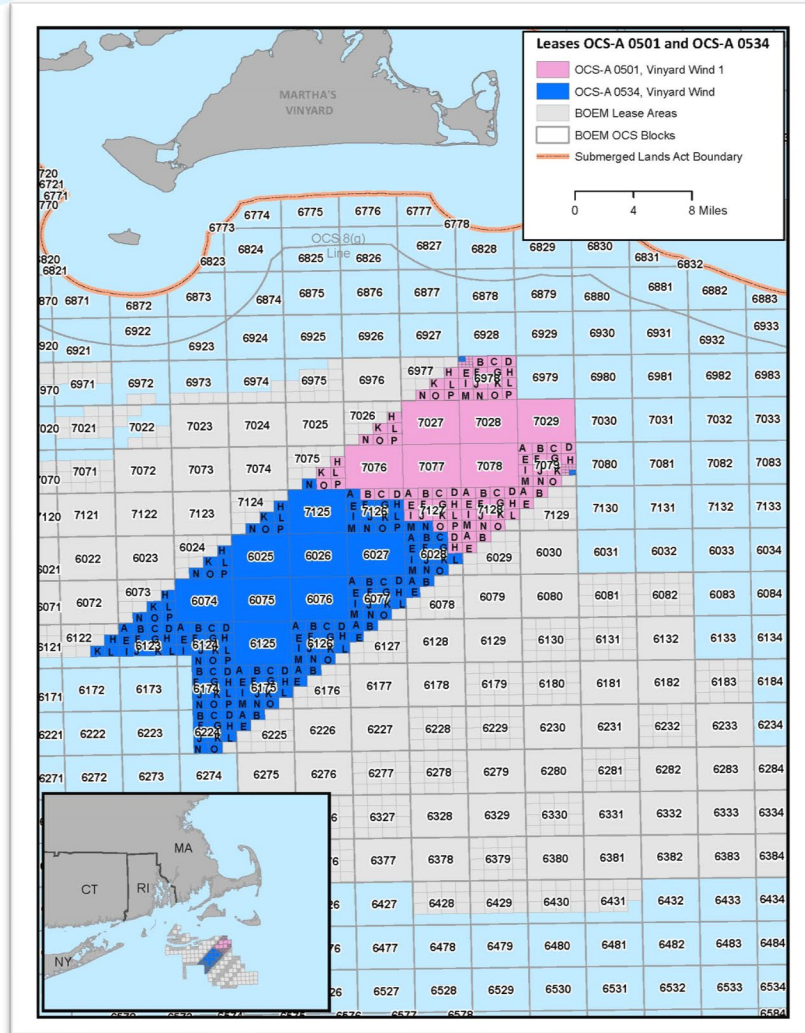


2016-Present: Lease OCS-A 0501 and OCS-A 0534

- **Site Assessment Activities**
 - 2016-Present Geotechnical and Geophysical Surveys
 - 2018 Site Assessment Plan Approved
- **Vineyard Wind 1 Construction & Operations Plan**
 - OCS-A 0501 (Northeast area in light green)
 - Submitted December 2017
 - Final EIS and Record of Decision (ROD) spring 2021
 - Approved July 2021



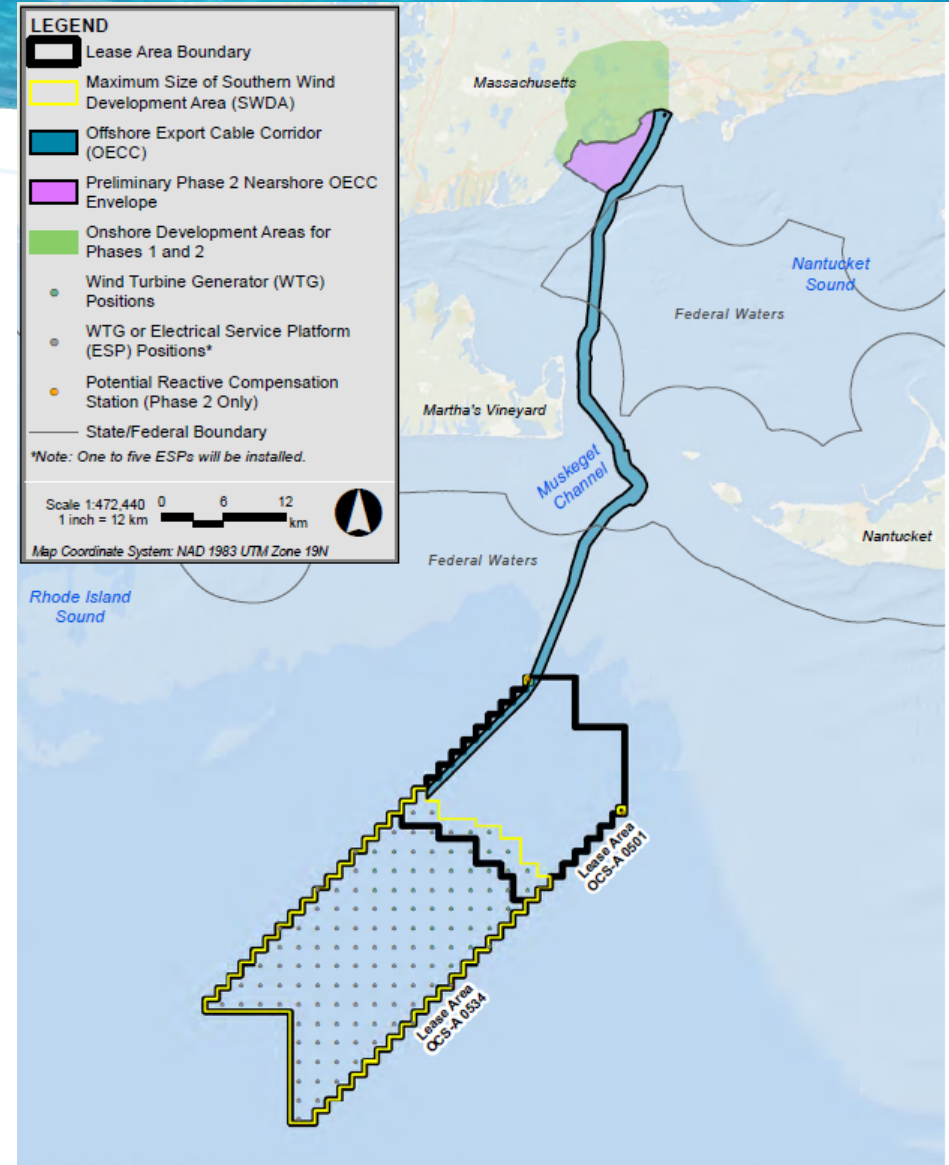
2016-Present: Lease OCS-A 0501 and OCS-A 0534



- **June 2021: Assignment of OCS-A 0501 and Designation of OCS-A 0534**
 - BOEM approved the assignment of 65,296 acres of Lease OCS-A 0501 from Vineyard Wind, LLC to Vineyard Wind 1, LLC.
 - The assigned lease (pink) continues to be designated Lease OCS-A 0501.
 - Vineyard Wind, LLC retained the remaining 101,590 acres which are designated Lease OCS-A 0534 (blue)
- **Vineyard Wind is proposing development of the blue areas**
 - OCS-A 0534 (plus optional row of turbines in southwest area of OCS-A 0501)

Vineyard Wind South Construction and Operations Plan (COP)

- Two phases: Park City Wind; Phase Two
- Updated COP submissions received May and June 2021
- COP is currently available at: www.boem.gov/Vineyard-Wind-South
- 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)



BOEM

Bureau of Ocean Energy
Management

BOEM.gov



Emily Hildreth | Emily.hildreth@boem.gov | 571-491-7505

For more information on the Vineyard Wind South Project,
visit: www.boem.gov/Vineyard-Wind-South

Vineyard Wind South Project Overview

**Maria Hartnett,
Vineyard Wind LLC**





VINEYARD WIND

Vineyard Wind South Overview for Public Scoping Meetings

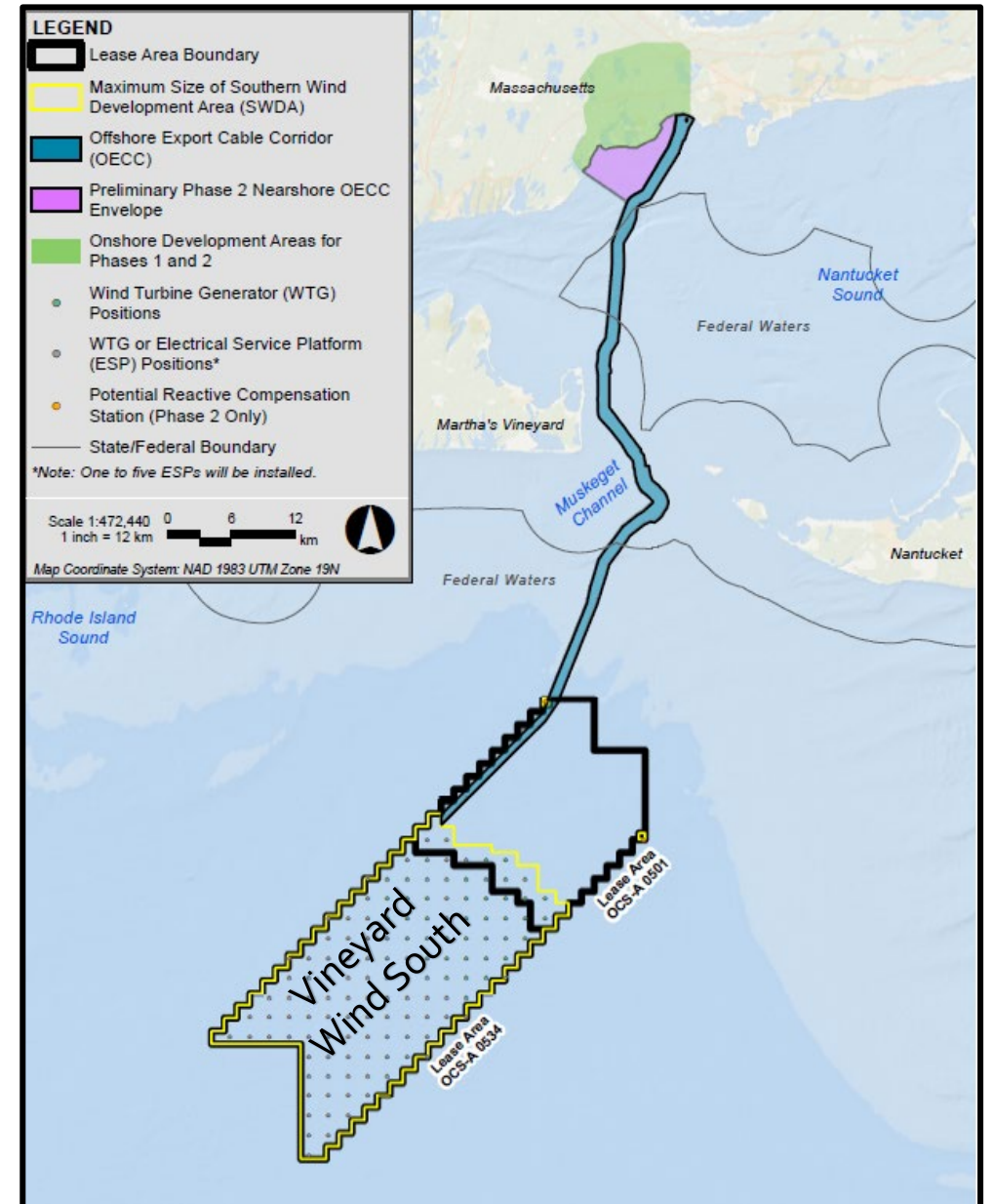
July 19, 2021

July 23, 2021

July 26, 2021

Proposed Development - Overview

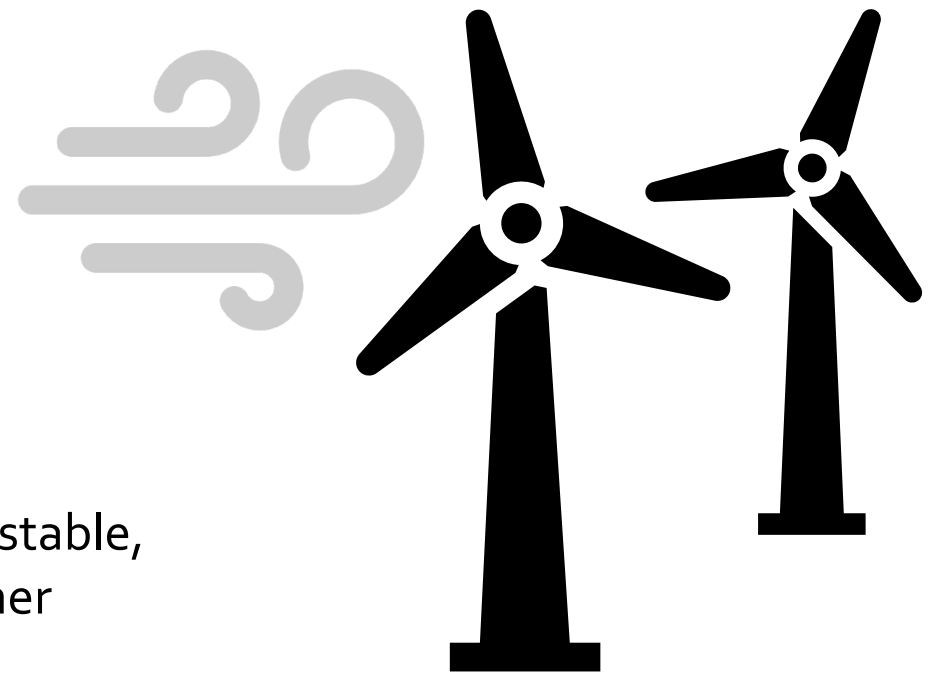
- The purpose of Vineyard Wind South is to generate 2,004–2,304 megawatts (MW) of commercially sustainable offshore wind energy to meet the need for clean, renewable energy in the Northeastern United States
- Vineyard Wind South includes offshore renewable wind energy facilities in Lease Area OCS-A 0534, along with associated offshore and onshore cabling, onshore substations, and onshore operations and maintenance facilities
- Two Phases with a maximum of 130 wind turbine generator and electrical service platform positions
- Three to five new offshore export cables within the Offshore Export Cable Corridor
- Landfall sites and grid interconnection in the Town of Barnstable
- Vineyard Wind South facilities are in federal and Massachusetts state waters





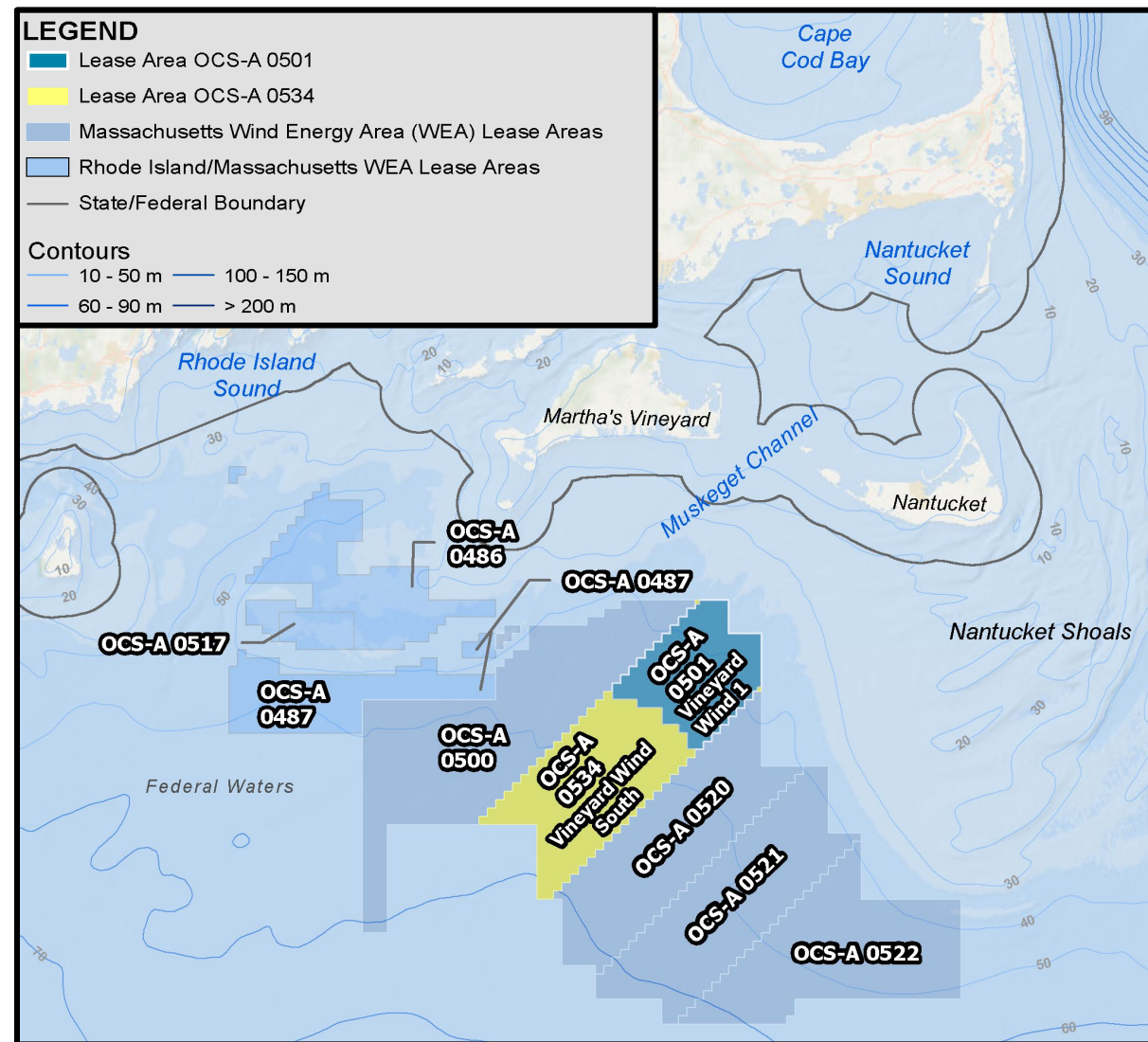
Vineyard Wind South Benefits

- **Air Quality Benefits:** 2,004-2,304 MW of zero-carbon electric power delivered to the ISO New England electric grid (Phases 1 & 2)
 - Electricity generated by the wind turbine generators will displace electricity from fossil fuel power plants, reducing regional carbon dioxide equivalent (CO₂e) emissions by ~3.95 million tons per year
 - Equivalent to taking 780,000 cars off the road
- **Job Creation:**
 - Pre-construction & construction: At least 1,834 direct full-time equivalent (FTE) job years & 1,173 indirect and induced jobs (Phases 1 & 2)
 - Operations: At least 5,130 direct FTE job years & 6,570 indirect and induced FTE job years (Phases 1 & 2), assuming a 30-year operational life
- **Community Benefits:** Host Community Agreement with Barnstable, Community Benefits Agreement with Vineyard Power, and other community, workforce, and environmental initiatives



Vineyard Wind South Location

- Vineyard Wind South is located in the federally-designated Massachusetts Wind Energy Area, within Lease Area OCS-A 0534, immediately southwest of Vineyard Wind 1
 - Southern Wind Development Area (shown in yellow) is 411–453 km² (101,560–111,939 acres)
 - Just over 32 km (20 miles) from the southwest corner of Martha’s Vineyard
 - Approximately 38 km (24 miles) from Nantucket.



Proposed Development - Phases

- Vineyard Wind South includes two Phases
- Each Phase has its own Project Design Envelope (i.e. a reasonable range of potential project design parameters)

Phase 1 (Park City Wind)

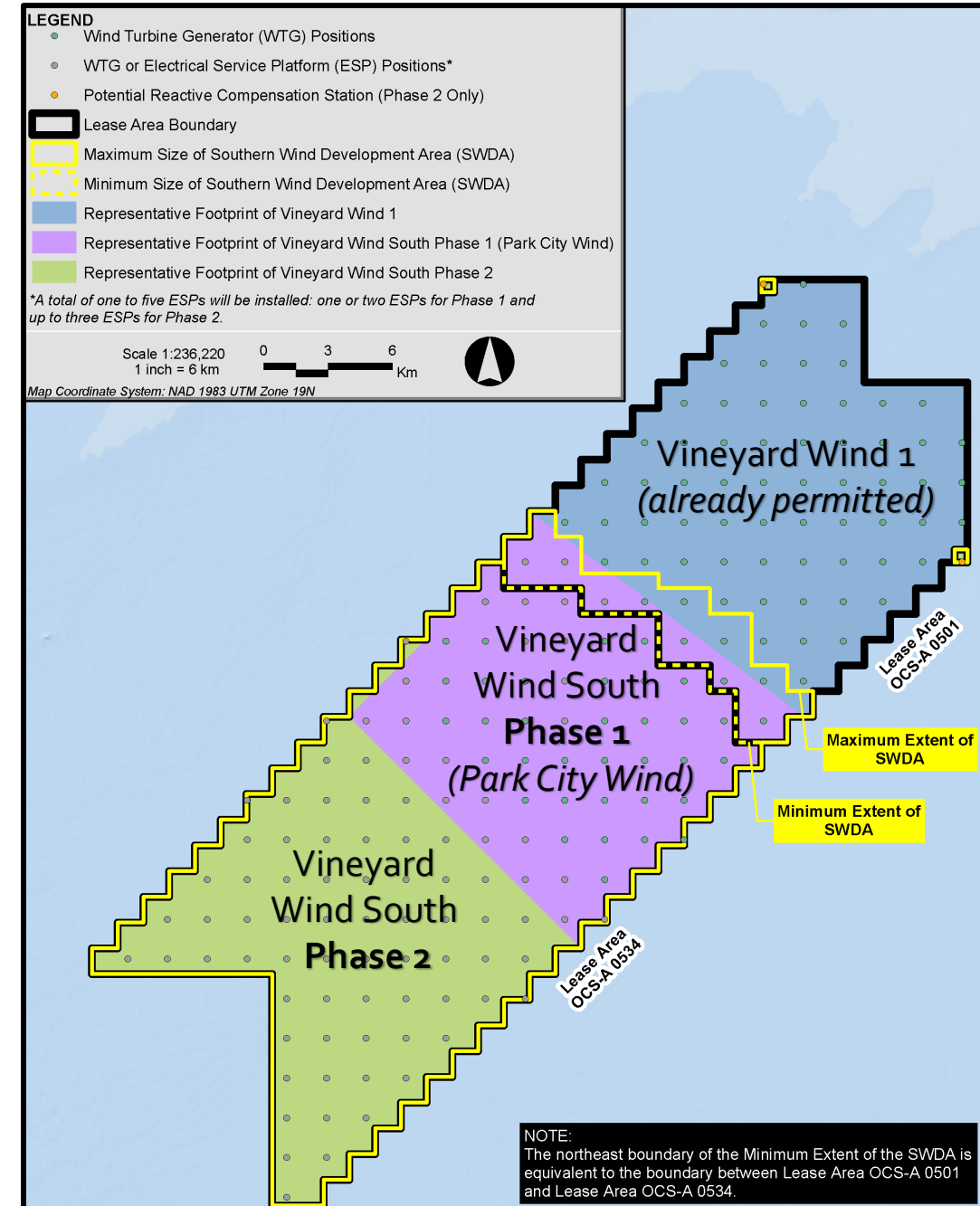
- Located immediately southwest of Vineyard Wind 1
- Existing 804 MW Power Purchase Agreements with Connecticut
- 13 to 16 MW wind turbine generators
- Includes 50–62 wind turbine generators and one or two electrical service platforms
- Construction expected 2023–2025

Phase 2

- Located in remainder of Southern Wind Development Area
- 1,200–1,500 MW (not yet sold)
- 13 to 19 MW wind turbine generators
- Includes 64–79 wind turbine generator/electrical service platform positions; up to 3 positions occupied by electrical service platforms
- Includes 2 potential positions for a reactive compensation station; only one will be installed

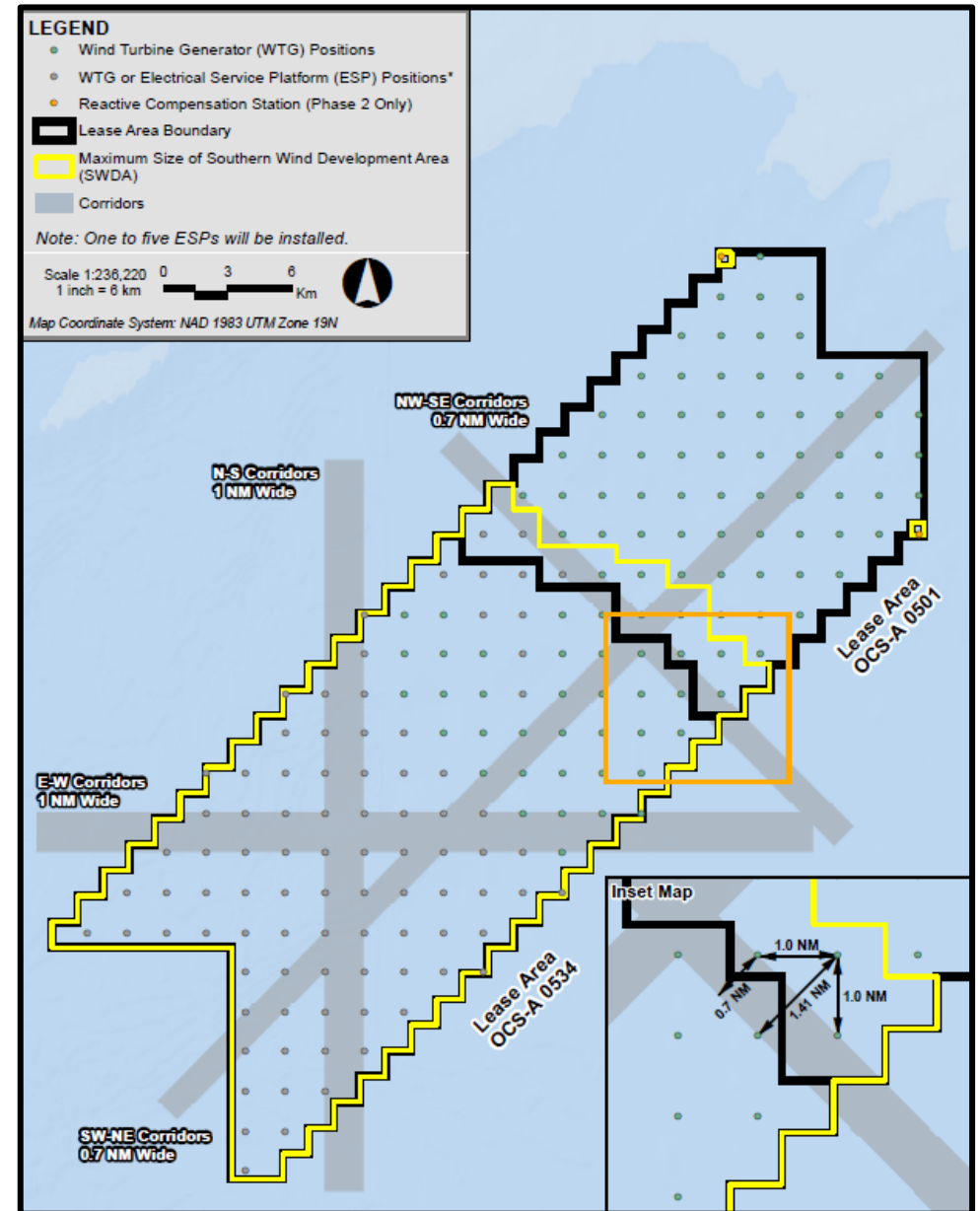
The Construction and Operations Plan analyzes the maximum impacts for each Phase

Representative Project

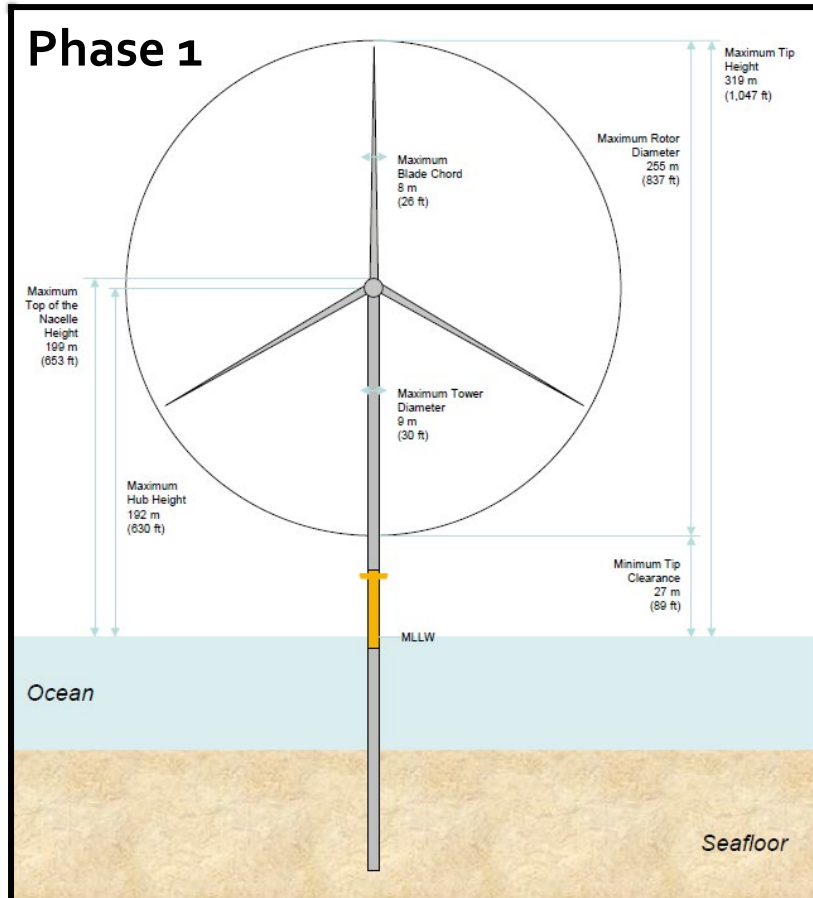


Proposed Development - Layout

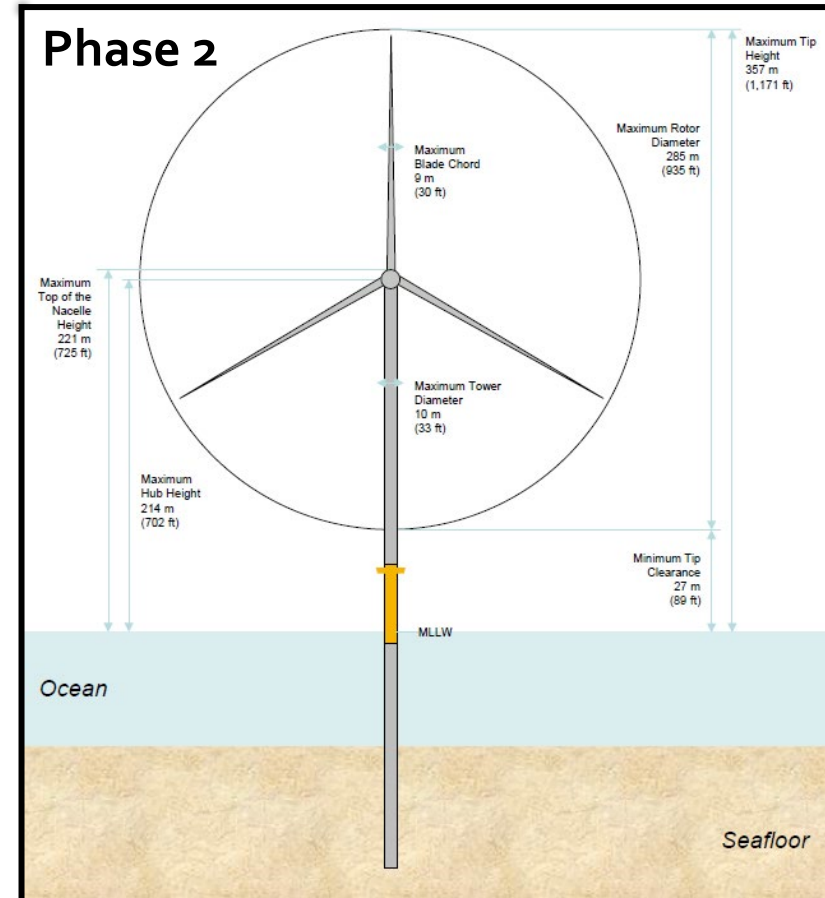
- Wind turbine generators and electrical service platforms oriented in east-west, north-south grid pattern, consistent with the orientation throughout the Massachusetts and Rhode Island/Massachusetts Wind Energy Areas
- One nautical mile spacing between wind turbine generators/electrical service platform positions



Proposed Development – Wind Turbine Generators



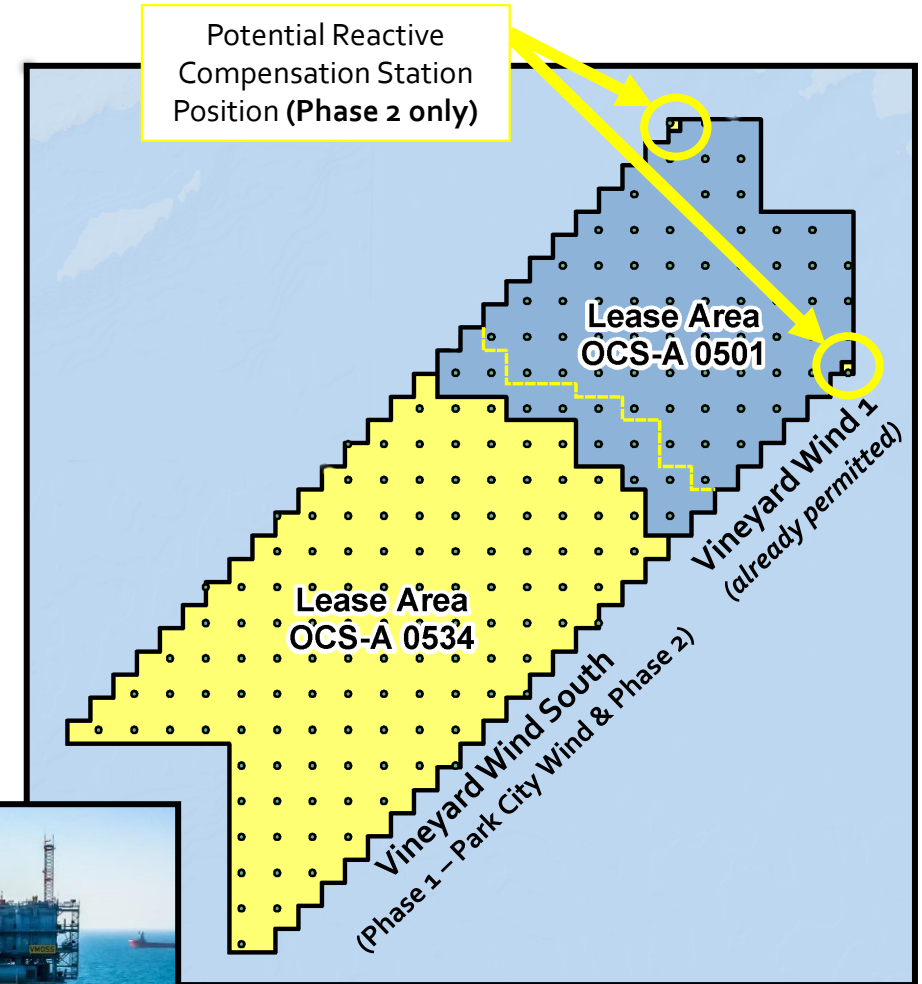
WTG Parameter	Envelope
WTG Capacity	13-16 MW
Maximum Tip Height	319 m (1,047 ft) MLLW
Maximum Rotor Diameter	255 m (837 ft)



WTG Parameter	Envelope
WTG Capacity	13-19 MW
Maximum Tip Height	357 m (1,171 ft) MLLW
Maximum Rotor Diameter	285 m (935 ft)

Proposed Development – Electrical Service Platforms

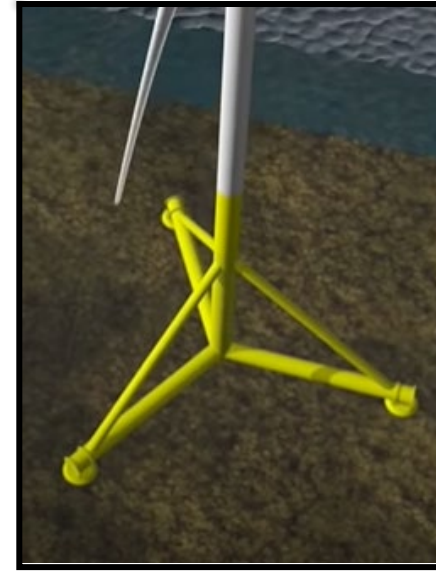
- Vineyard Wind South includes 1–5 electrical service platforms
 - Phase 1 includes 1–2 electrical service platforms
 - Phase 2 includes up to 3 electrical service platforms
- Phase 2 includes a potential reactive compensation station located at one of two potential grid locations
 - A reactive compensation station is similar to a booster station and is used for longer high voltage alternating current (HVAC) cables
 - Reactive compensation station positions are located approximately 23 km (15 miles) from Martha’s Vineyard and 27 km (17 miles) from Nantucket



Proposed Development – Foundations

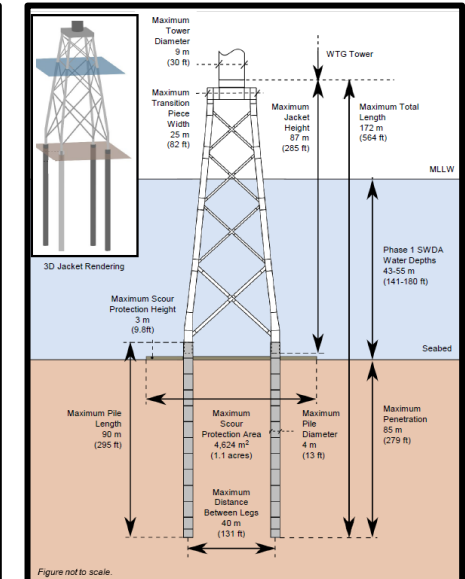
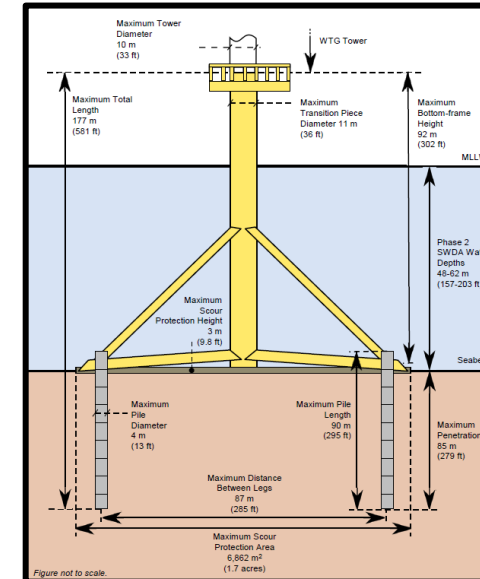
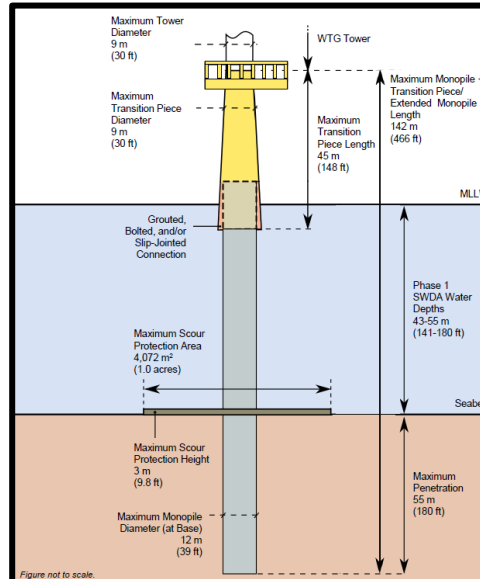
Wind Turbine Generator Foundations (Phases 1 and 2):

- Monopiles
 - Phase 1: up to 12 m (39 ft) diameter
 - Phase 2: up to 13 m (43 ft) diameter
- Jackets (with piles or suction buckets)
- Bottom-frame foundations (Phase 2 only - with piles, gravity pads, or suction buckets)



Electrical Service Platform Foundations (Phases 1 and 2):

- Monopiles
 - Phase 1: up to 12 m (39 ft) diameter
 - Phase 2: up to 13 m (43 ft) diameter
- Jackets (Phase 1 – piled jackets; Phase 2 – piled jackets or suction buckets)



Scour Protection

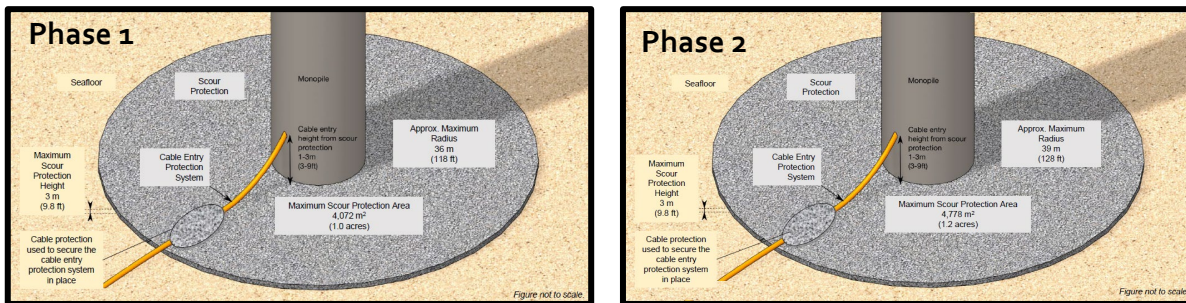
Scour protection (rocks) will likely be used for monopile foundations and may or may not be used for jackets and bottom-frame foundations

Wind Turbine Generator Foundations (Phases 1 and 2):

- Monopiles or jackets: max. area of 4,072–6,369 m² (1.0–1.6 acres)
- Phase 1 monopile: max. radius of 36 meters (118 feet)
- Phase 2 monopile: max. radius of 39 meters (128 feet)
- Bottom-frame foundations (Phase 2 only): max. area of 6,862–9,754 m² (1.7–2.4 acres)

Electrical Service Platform Foundations (Phases 1 and 2):

- Max. area of 4,072–21,316 m² (1.0–5.3 acres)



Cable Protection

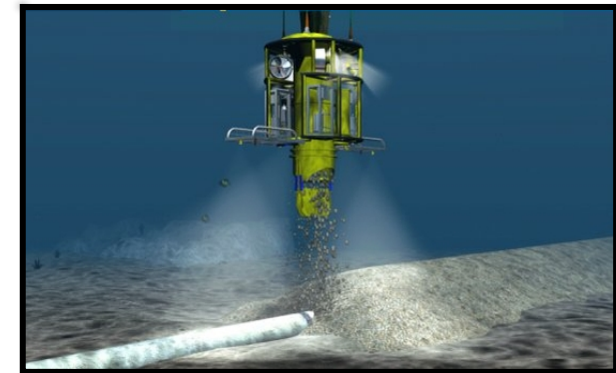
Cable protection methods:

- Rock placement
- Gabion rock bags
- Concrete mattresses (with or without fronds)
- Half-shell pipes or similar

Cable protection conservative estimates:

- Up to 7% of cables in the Offshore Export Cable Corridor could require cable protection
- Up to 2% of cables in the Southern Wind Development Area could require cable protection

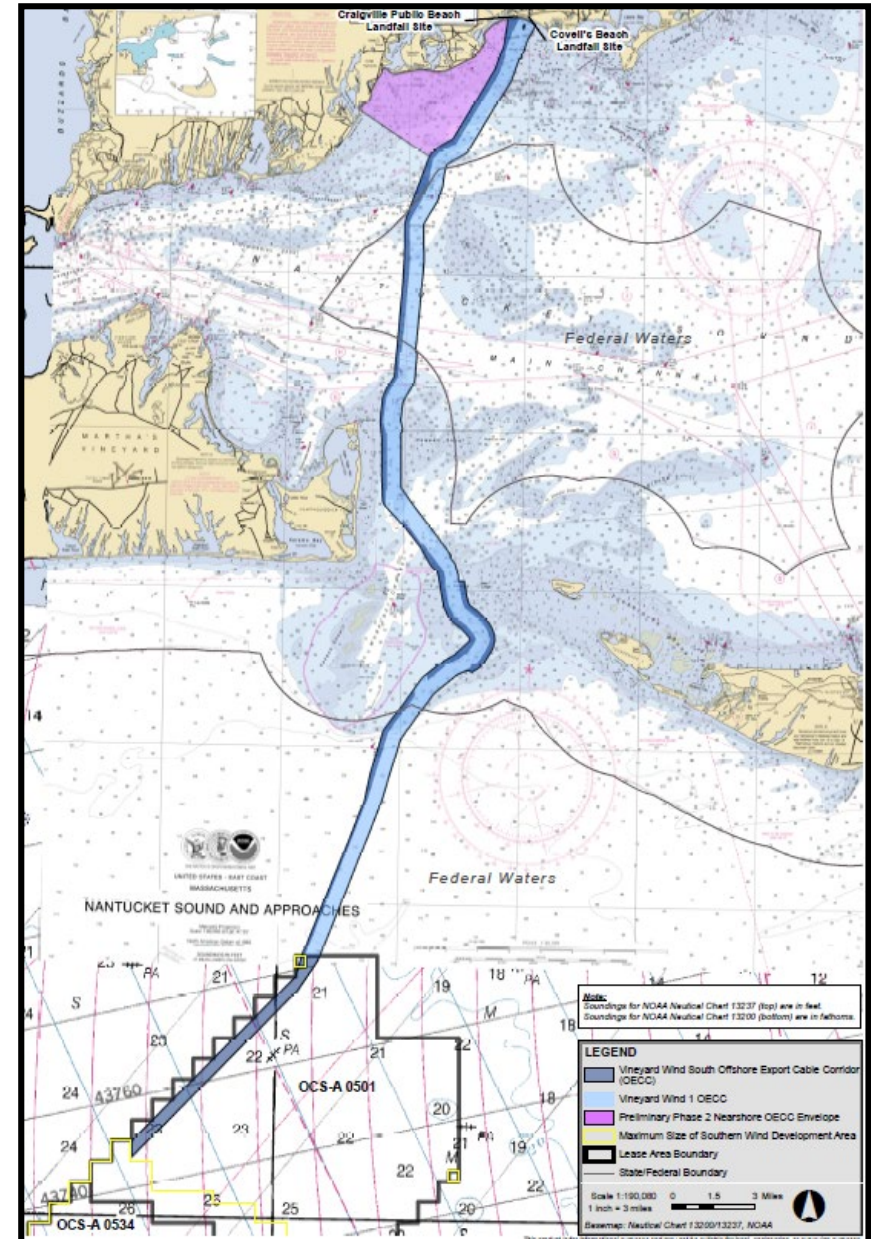
Vineyard Wind will work to minimize cable protection



Max. Area of Scour and Cable Protection (Phases 1 and 2): **~0.3% of Southern Wind Development Area**

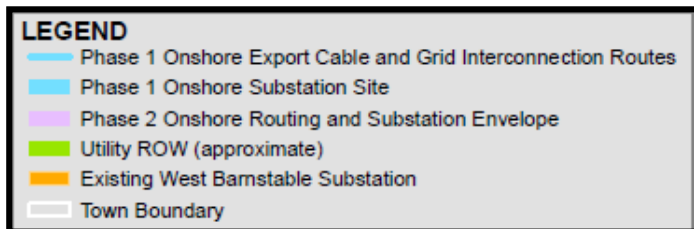
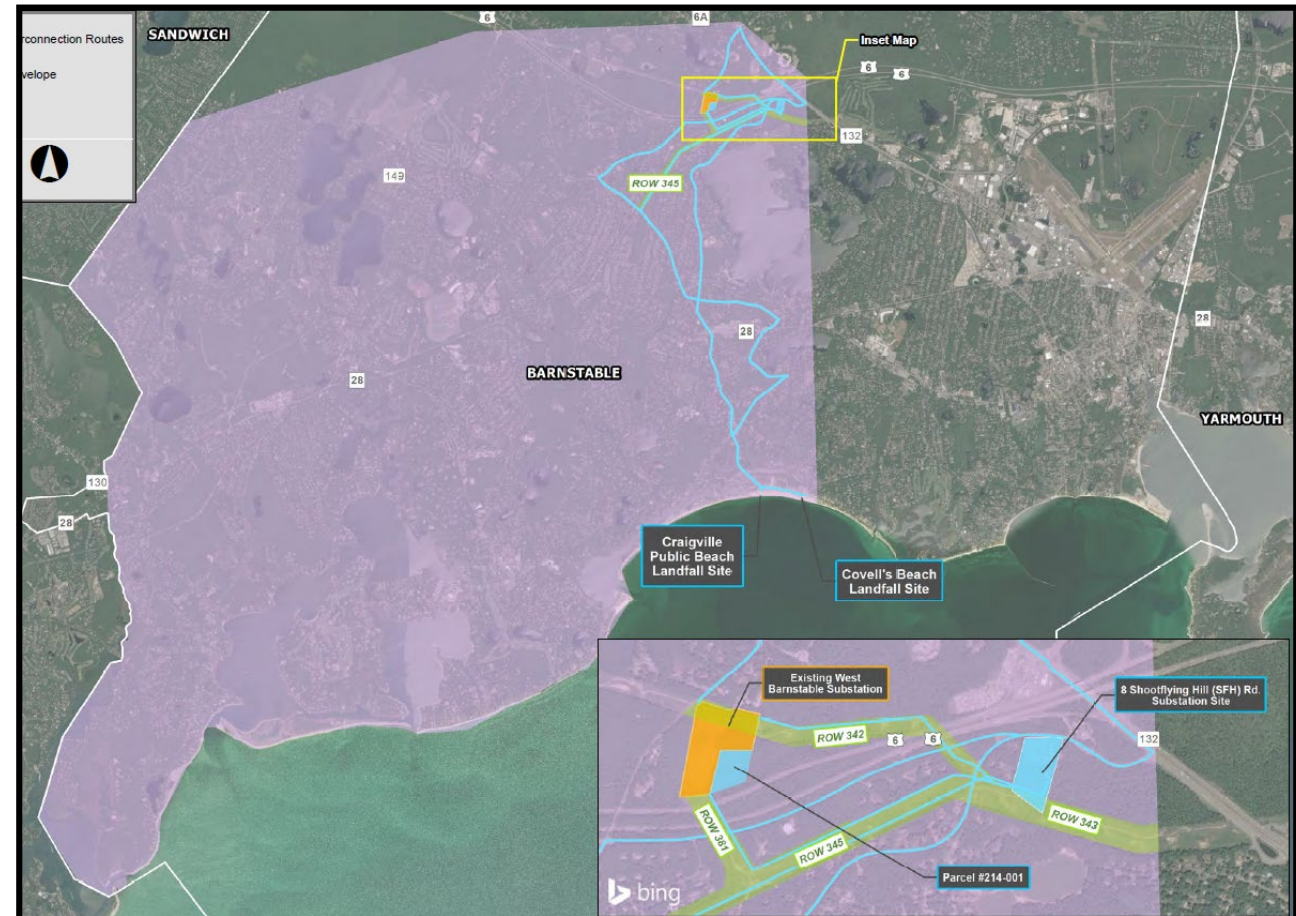
Offshore Export Cable Corridor

- Offshore Export Cable Corridor extends from the Southern Wind Development Area boundary, through Muskeget Channel, to the Town of Barnstable
- Offshore Export Cable Corridor is largely the same as the Vineyard Wind 1 project
 - Widened to the west along entire corridor and to the east in portions of Muskeget Channel
 - Width of 950–1,550 m (3,100–5,100 ft)
- Vineyard Wind South will install 3–5 cables in the Offshore Export Cable Corridor
 - Two Phase 1 cables to be located to the west of Vineyard Wind 1 cables
 - One to three Phase 2 cables to be located to the west of Phase 1 cables
- Phase 1 cables will be high voltage alternating current (HVAC)
- Phase 2 cables will include either 2–3 HVAC cables or one high voltage direct current (HVDC) cable
 - If HVAC cables are used, one reactive compensation station may be installed



Onshore Export Cable and Grid Interconnection Routes

- Phase 1 (Park City Wind) landfall site will be at either Craigville Public Beach (preferred) or Covell's Beach in Barnstable, MA
- Phase 2 landfall site(s) will be in Barnstable, specific location(s) to be provided in Fall 2021
- Phase 1 and Phase 2 grid interconnection at the West Barnstable Substation
- Routes are primarily underground, within public roadway layouts or utility rights-of-way

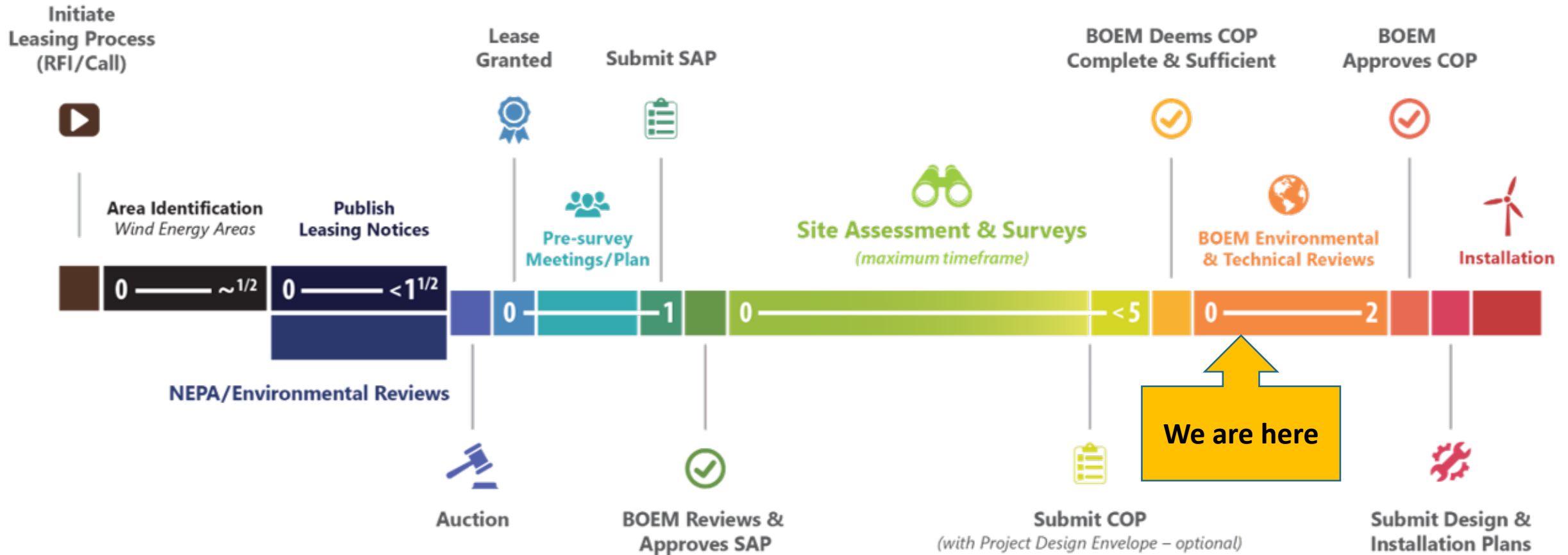


The National Environmental Policy Act (NEPA) Process

Kelly Hammerle,
BOEM NEPA Coordinator for Vineyard Wind South



Leasing and Development Process

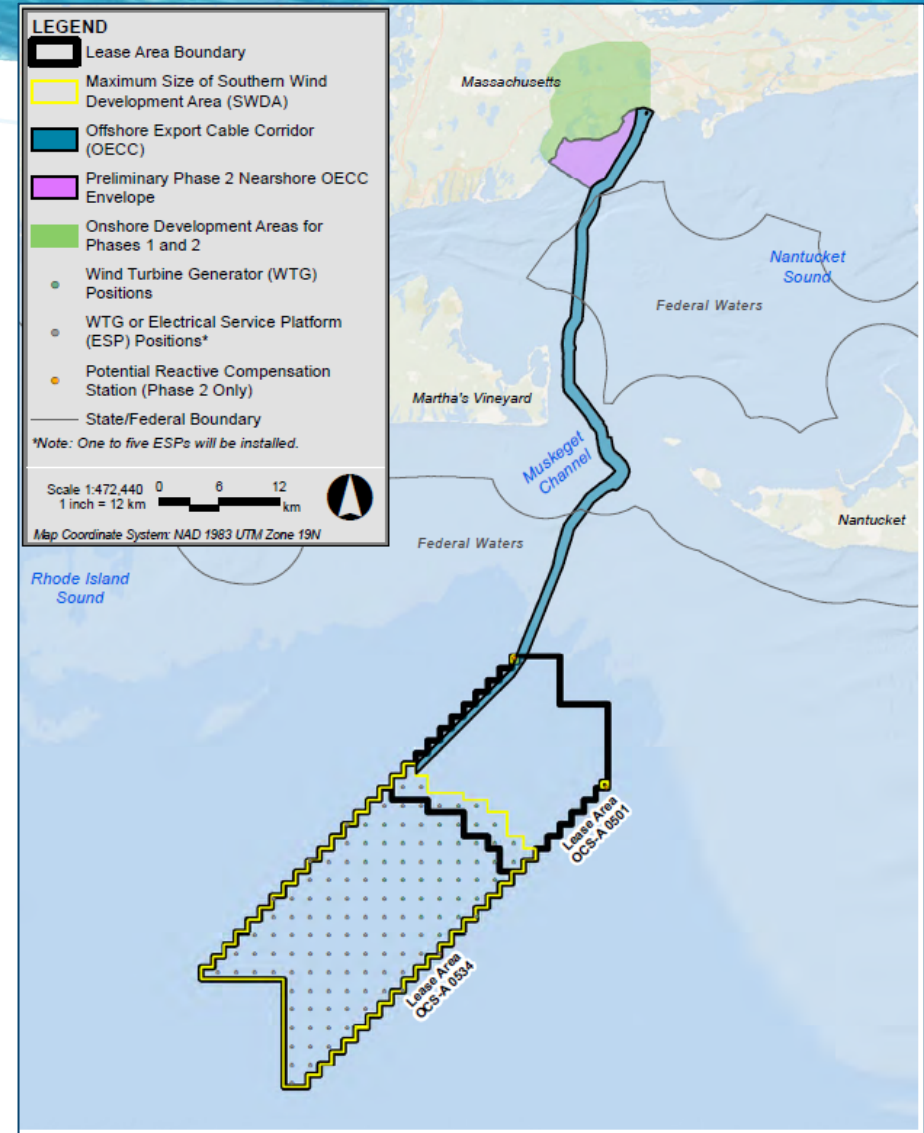


Vineyard Wind South Construction and Operations Plan (COP)

- July 2020: Initial COP submitted
- May 2021: Revised COP
- September 2021: Additional COP updates
- Available at

www.boem.gov/vineyard-wind-south

- BOEM approves, disapproves, or approves with modifications
 - After Environmental Impact Statement (EIS) is complete
 - Documented by the Record of Decision (ROD)



National Environmental Policy Act (NEPA)

Procedural law requiring Federal agencies to assess environmental effects of proposed action(s) and reasonable alternatives prior to making decisions.

The NEPA process is often referred to as environmental review.

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 (NOI) to Prepare an EIS

Published in the *Federal Register* on June 30, 2021



<https://www.regulations.gov/docket/BOEM-2021-0047>



Docket Number: BOEM-2021-0047



Starts the EIS process



Initiates 30-day public comment period, ending **July 30, 2021**

Public Comments on the NOI

- Very important element of NEPA
- Local expertise and perspective guide environmental analysis = more informed decisions



Types of information BOEM is looking for:

- Significant **issues** to be analyzed in the EIS
- **Sources** of information to include in the EIS
- Data **gaps** and information needs
- Reasonable **alternatives**

<https://www.regulations.gov/docket/BOEM-2021-0047>

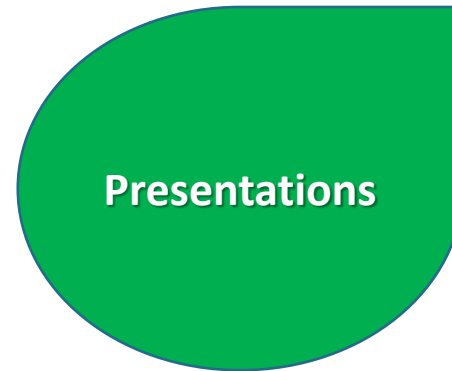
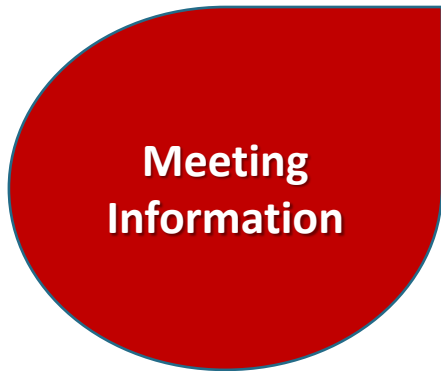
Virtual Public Scoping Meetings

Live Virtual Meetings

Monday, July 19, 2021	5:30 pm ET
Friday, July 23, 2021	1:00 pm ET
Monday, July 26, 2021	5:30 pm ET

Virtual Meeting Room

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



Meeting Posters

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

1. Vineyard Wind South Overview
2. Project Area
3. Outer Continental Shelf (OCS) Lease Areas
4. Leasing Process
5. How to Comment
6. Sea Turtle and Marine Mammal Sightings
7. Electromagnetic Fields and Marine Life
8. Impact Distances from Piledriving Sounds
9. Impact of Underwater Sound on Protected Species
10. Project Design Envelope Phase 1
11. Project Design Envelope Phase 2
12. Project Construction
13. Regional Fisheries
14. Commercial Fisheries
15. Fisheries Landings
16. National Historic Preservation Act (NHPA)
17. Avian Sensitivity
18. NEPA Substitution for Section 106 Consulting Party Guide



How to Comment



<https://www.regulations.gov/docket/BOEM-2021-0047>



At this meeting

“Raise your hand” in the Zoom meeting during the listening session portion

Through the mail

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-2021-0047; click “search.” Use the “Comment Now!” button on the right side of the screen

What's in an EIS?

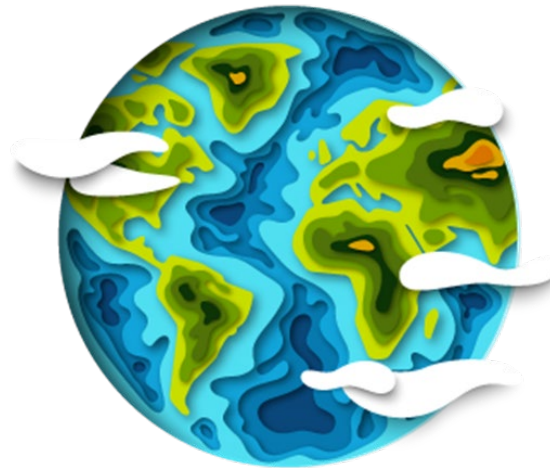
Presents a proposed Federal action's **impacts analysis** on the environment

Proposed Action

Action being analyzed

Alternatives

Reasonable alternatives that could reduce or eliminate impacts. At a minimum, proposed action and no action alternative.



Effects

Beneficial and adverse effects

Affected environment description includes reasonably foreseeable environmental trends and planned actions other than the Project.

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 Construction and Operations Plan

- 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
- Additional environmental review and consultations required for revisions outside the design envelope

Project Design Envelope



Concurrent Environmental Review & Consultations



Section 106, National
Historic Preservation Act
(NHPA)



Magnussen-Stevens Fishery
Conservation Act



Endangered Species Act (ESA)



Marine Mammal Protection Act
(MMPA)

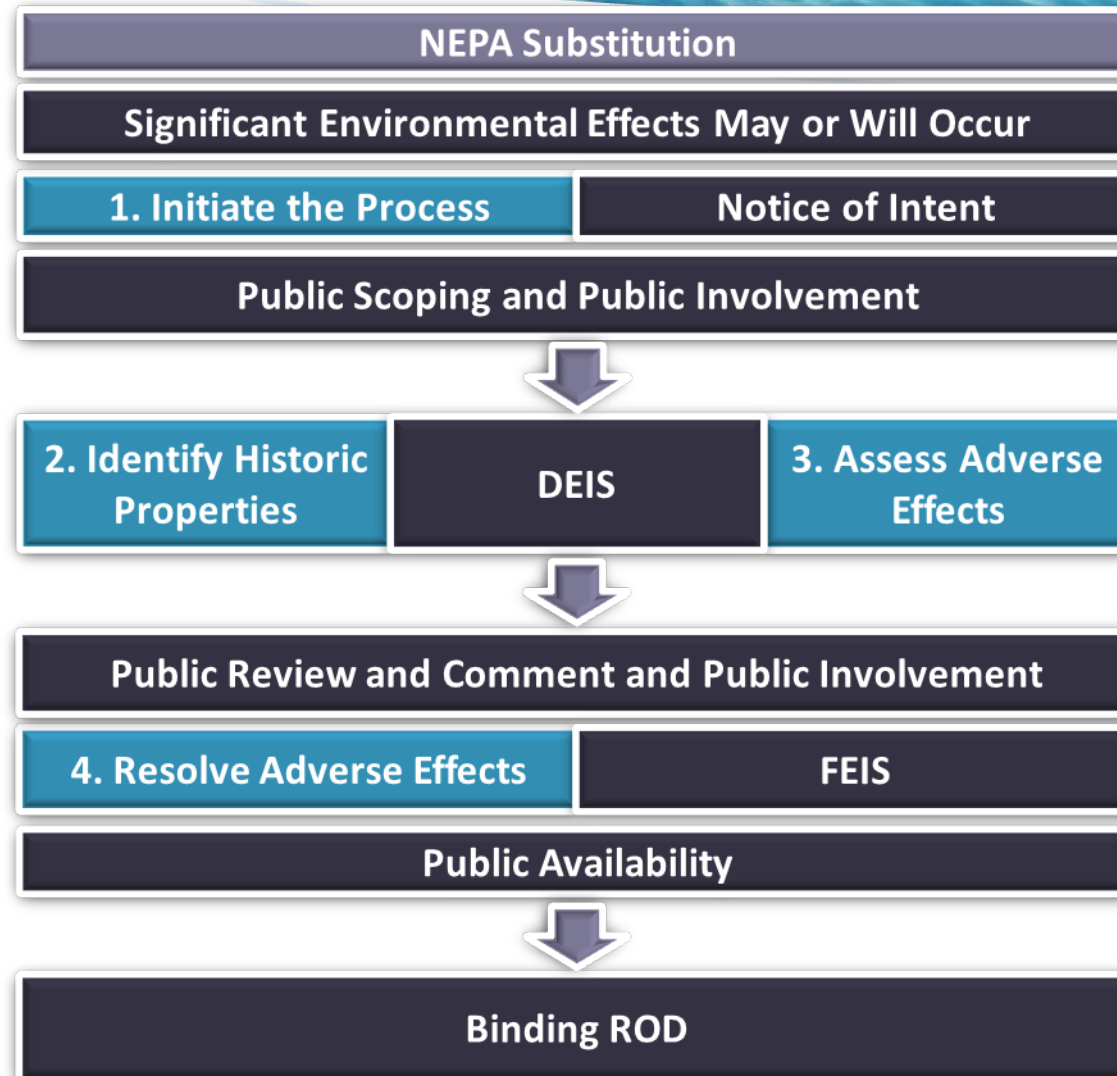


Coastal Zone Management Act
(CZMA)

NEPA substitution for Section 106 is used to reflect stakeholder needs.

- **BOEM:** Substitution = efficient, streamlined approach to better integrate NHPA and NEPA
- **Lessees:** Clearer expectations for environmental review timeline and mitigation costs
- **Consulting Parties and Stakeholders:** Earlier and more direct input into alternatives and mitigation measures selection
- **Tribes:** Greater focus on government-to-government consultation

Environmental Review of COP



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 Vineyard Wind South 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 – (initiates a 45-day public comment period)



Summer 2023

Publish Final EIS



Late Summer 2023

Conclude consultations and publish Record of Decision



BOEM Environmental Studies Program

<https://www.boem.gov/environmental-studies>

- Rigorous scientific research
- Informs decision-making processes and fills data gaps
- **Snapshot of studies:**
 - EMF Impacts on Elasmobranch (sharks, rays and skates) and American Lobster Movement and Migration – Led by University of Rhode Island (<https://espis.boem.gov/final%20reports/5659.pdf>)
 - Evaluation of Potential EMF Effects on Fish Species of Commercial or Recreational Fishing Importance in Southern New England (https://espis.boem.gov/final%20reports/BOEM_2019-049.pdf)
 - 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://espis.boem.gov/final%20reports/5662.pdf>)

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

BOEM

Bureau of Ocean Energy
Management

BOEM.gov



Kelly Hammerle | kelly.hammerle@boem.gov | 703-787-1613

For more information on the Vineyard Wind Project, visit:

www.boem.gov/vineyard-wind-south

State of Connecticut Remarks

Lauren Savidge &
Victoria Hackett



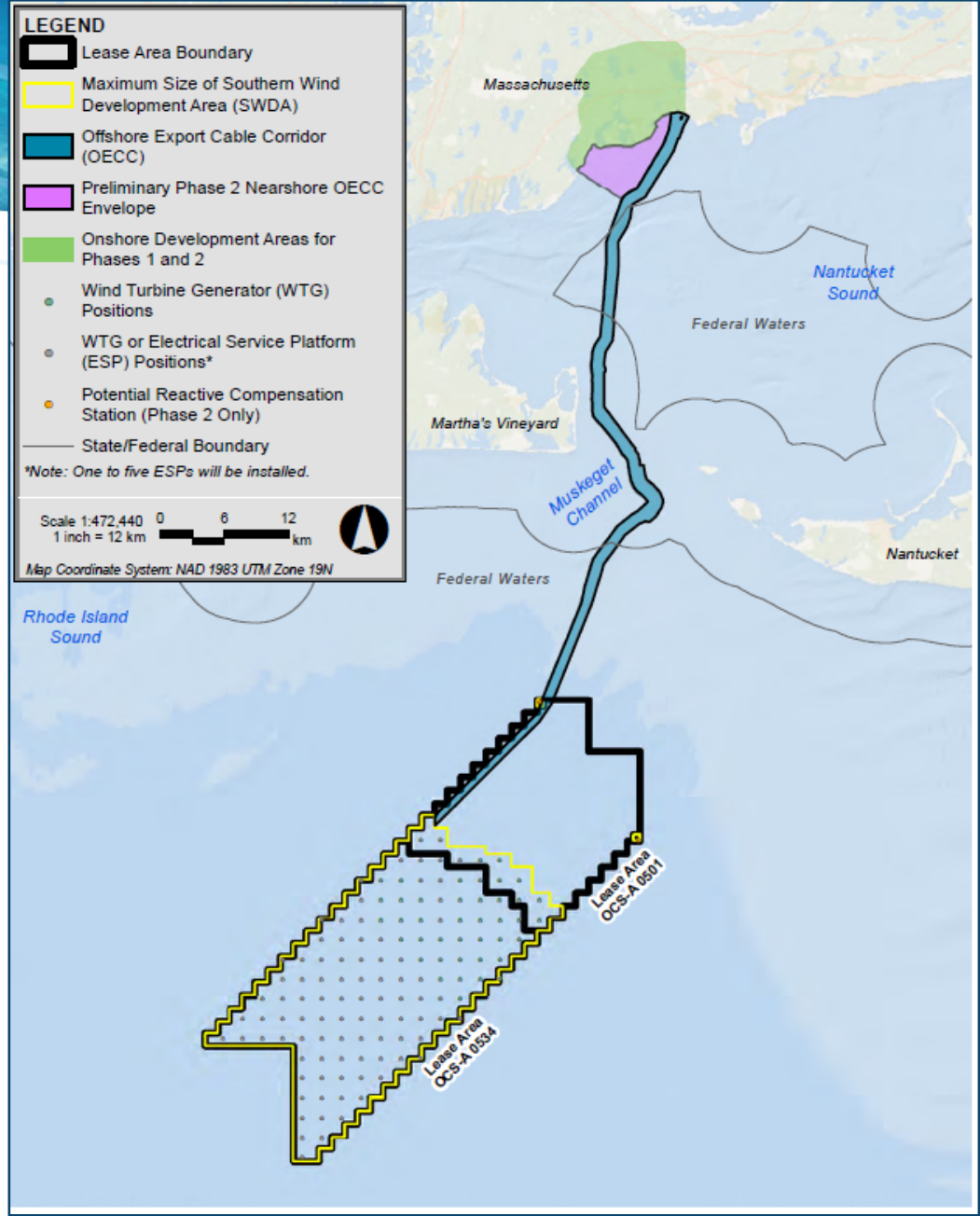
Commonwealth of Massachusetts Remarks

Lisa Engler &
Bruce Carlisle



Five Minute Break

05:00



Public Comment Listening Session

Liz Valsamidis,
ERM Meeting Facilitator



Have a Clarifying Question?

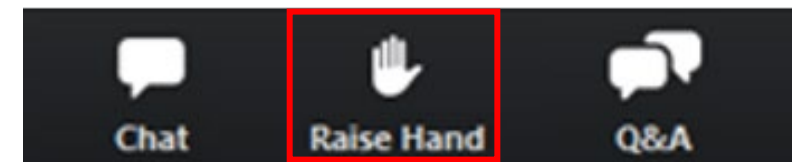
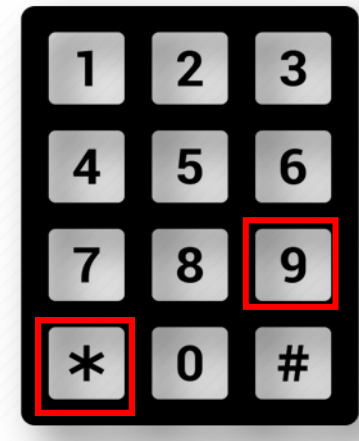
Questions and Answers

- If you have a question, please click on the Q&A icon at the bottom of your screen to send it to us
- We will take new questions through the end of the Public Comment session
- During the Q&A session we will share the questions and answers verbally



Order of Public Comments

- We will post the names of the next five people in line to comment in the chat so you can see when your turn is coming up.
- We will start by calling on those who registered in advance to comment. The Facilitator will call on them in the order they registered.
- Once those comments are completed, others will be invited to comment.
- Commenters will be called on by the Facilitator in the order they raised their hands.



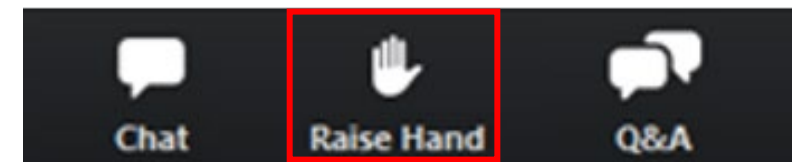
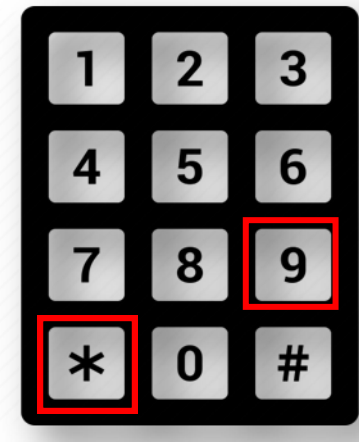
Comment Guidelines

- At this stage in the process, the following types of information are particularly useful:
 - 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
- Please refrain from inappropriate language or profanity
- Direct comments to BOEM rather than to or about other commenters

Public Comment Session

How to Comment

- To comment, use the 'raise hand' button in Zoom (or *9 for phone-only participants).
- When you are called upon, the Facilitator will invite you to unmute your line.
- Please state and spell your name when you begin
- Please limit comments to 5 minutes. For testimony more than 5 minutes you may submit comments in writing.



How to Comment



<https://www.regulations.gov/docket/BOEM-2021-0047>



At a meeting

“Raise your hand” in the Zoom meeting during the listening session portion

Through the mail

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-2021-0047; click “search.” Use the “Comment Now!” button on the right side of the screen



Public Comment Session

05:00

Public Comment Session

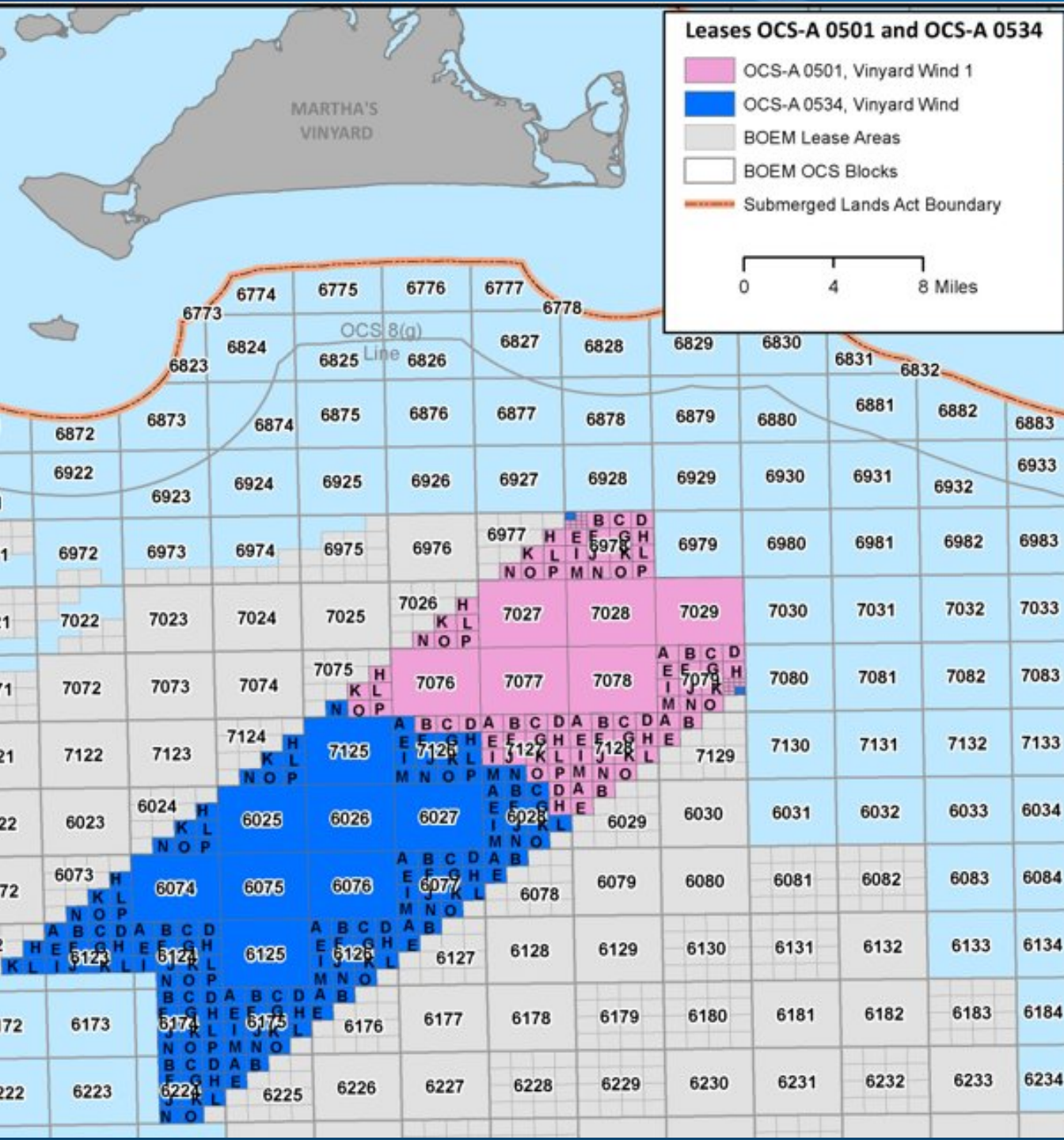
05:00

Question & Answer Session

**Liz Valsamidis,
ERM Meeting Facilitator**



Leases OCA-A 0501 and OCA-A 0534



Thank You & Closing Remarks

Brian Krevor,
BOEM

Atlantic NEPA Lead for the Renewable Energy Program

