



Vineyard Wind Draft Environmental Impact Statement Public Hearings

February 11-15, 2019

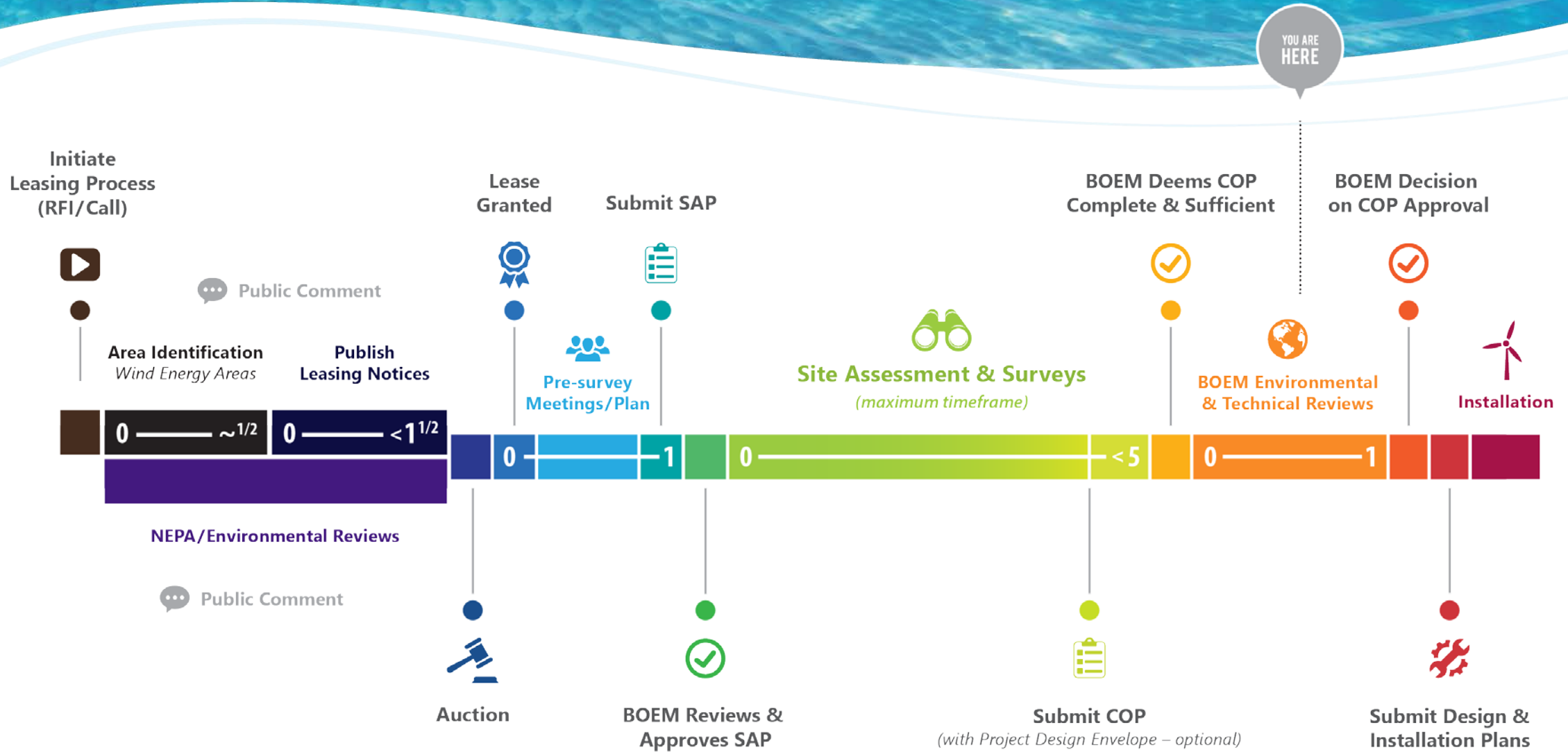
Brian Krevor | Environmental Coordinator, *Office of Renewable Energy Programs*

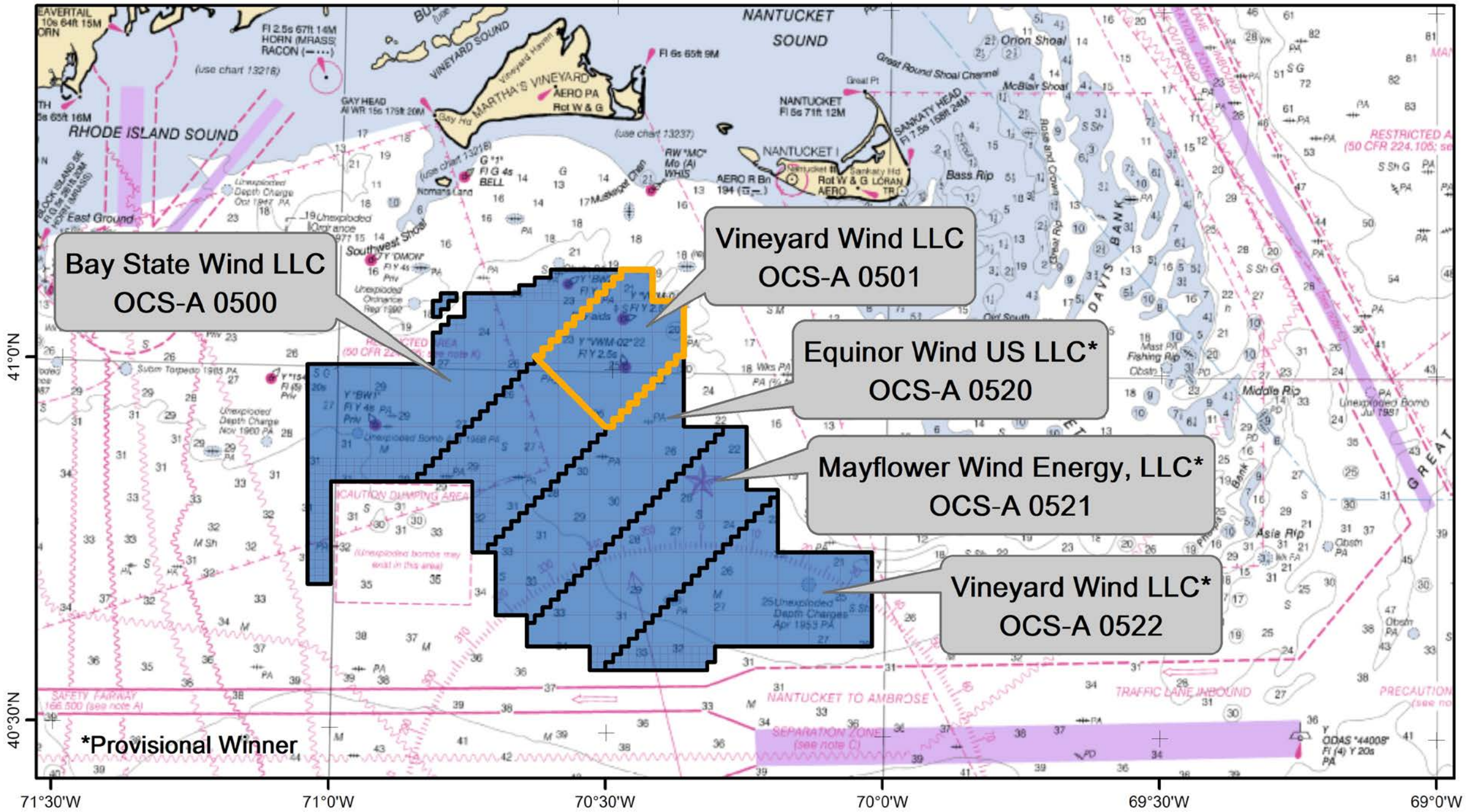


Poster Stations

- BOEM Leasing & Environmental Review Processes
- Commercial Fishing Impacts
- Marine Mammals and Underwater Noise
- Cumulative Impacts
- Navigation
- Impact Definitions
- Proposed Action and Alternatives
- Benthic Habitat
- Maps of Project Area
- Avian Impact
- Historic Preservation
- How to Comment
- Court Reporter

Leasing and Development Process





*Provisional Winner

Vineyard Wind Construction and Operations Plan (COP)

- Vineyard Wind (VW) submitted their COP on **December 20, 2017**
- BOEM can disapprove, approve, or approve with conditions
 - Will happen after Environmental Impact Statement (EIS) is complete and will be documented by the Record of Decision (ROD)

Vineyard Wind (VW) Project Overview

- 106 Wind Turbine Locations (up to 100 wind turbines)
- 8-10 Megawatt (MW) Wind Turbines
 - VW announced selection of 9.5 MW turbine
- Total Capacity: 800 MW
- All monopole, or up to 10 jacket foundations, remainder monopole
- Cable landfall at one of two locations on Cape Cod
 - VW's preferred landfall location is Covell's Beach
 - VW and Barnstable signed host community agreement (October 5)

National Environmental Policy Act (NEPA)

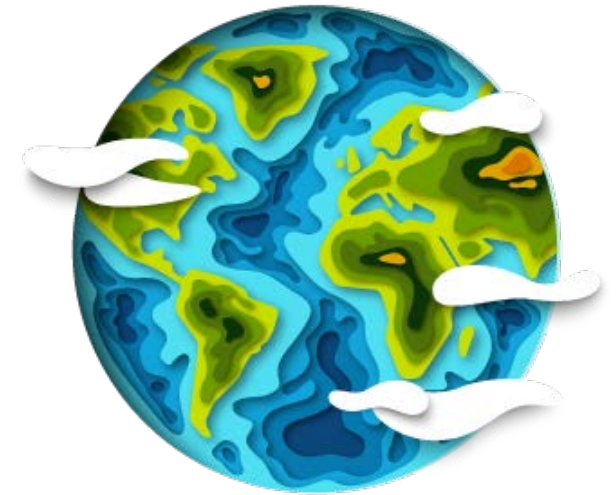
NEPA is a procedural law requiring Federal agencies to assess the environmental effects of their proposed action(s), and reasonable alternatives, prior to making decisions.

Major Actions/Decision Points:

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

Environmental Impact Statement (EIS)

- Must be prepared if agency is proposing a **major federal action** significantly affecting the quality of the human environment
- Public scoping required and public comment period required for Draft EIS
- Analysis of reasonable alternatives and cumulative effects required



Environmental Review and Approval Process for COP

~ 12 months



COP Submittal



- Completeness and sufficiency review

Public Scoping



- Publish Notice of Intent in *Federal Register*
- 30-day public comment period
- Hold public meetings
- Receive input on issues and alternatives

Draft Environmental Impact Statement



- Prepare with cooperating agencies
- Publish Notice of Availability in *Federal Register*
- 45-day public comment period
- Hold public hearings

Final Environmental Impact Statement



- Address public comments with cooperating agencies
- Publish Notice of Availability in *Federal Register*

Record of Decision



- "One Federal Decision"
- Minimum 30-day wait period

~2 years or longer

Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS)

- Published in *Federal Register* **March 30, 2018**
(www.boem.gov/83-FR-13777)
- Kicked off the EIS process
- Five Public Scoping Meetings Held **April 16-19, 2018**
- 30-day public comment period closed **April 30, 2018**
 - Comments can be found here:
<https://www.regulations.gov/docket?D=BOEM-2018-0015>

Notice of Availability (NOA) of Draft EIS

- Published in *Federal Register* **December 7, 2018**
(www.boem.gov/83-FR-63184/)
- Announced availability of DEIS
- Opened 45-day Public Comment Period
- Comment period reopened until **February 22, 2019** due to government shutdown (www.boem.gov/84-FR-2925/)

Public Comment on DEIS

- Providing your local expertise and perspective will help produce a more complete environmental analysis of the proposed project resulting in a more informed decision by BOEM
- Comments are due **February 22, 2019**



Types of information BOEM is looking for:

- **Accuracy** of information
- Adequacy of methodology or assumptions used in the environmental analysis
- **New information** relevant to the analysis or that would change the conclusions
- **New alternatives** that meet the purpose and need statement, are feasible, and are substantially different than the alternatives already considered in the draft EIS
- Where **clarification** is needed

Five Public Hearings

- **February 11** – Nantucket, MA
- **February 12** – Martha's Vineyard, MA
- **February 13** – Hyannis, MA
- **February 14** – New Bedford, MA
- **February 15** – Narragansett, RI



Proposed Action

Alternative	Description	Reason for Alternative
A	PROPOSED ACTION	The construction, operation, maintenance, and eventual decommissioning of an up-to-800-MW wind energy facility on the Outer Continental Shelf offshore Massachusetts within the proposed Project area and associated export cables would occur within the range of design parameters outlined in the Vineyard Wind Construction and Operation Plan, subject to applicable mitigation measures.
Analysis of the project proposed by Vineyard Wind LLC.		



Alternatives

Alternative	Description	Reason for Alternative	
B	Covell's Beach Cable Landfall Alternative	Same as the Proposed Action except the New Hampshire Avenue landfall location option presented in the COP would not be used, and the cable landfall would be limited to Covell's Beach.	Potentially reduce impacts on environmental and socioeconomic resources, particularly impacts on Lewis Bay.
C	No Surface Occupancy in the Northernmost Portion of the Project Area Alternative	Same as the Proposed Action except no surface occupancy would occur in the northernmost portion of the proposed Project area.	Potentially reduce the visual impacts of the proposed Project and potential conflicts with existing ocean uses, such as marine navigation and commercial fishing.
D1	One Nautical Mile Wind Turbine Spacing Alternative	Same as the Proposed Action except the wind turbine generators (WTGs) would have a minimum spacing of 1 nautical mile between them and the lanes between turbines would also be a minimum of 1 nautical mile.	Potentially reduce conflicts with existing ocean uses, such as commercial fishing and marine navigation.
D2	East-West and One Nautical Mile Wind Turbine Layout Alternative	Same as the Proposed Action except the wind turbine layout would be arranged in an east-west orientation and all WTGs in the east-west direction would have a minimum spacing of 1 nautical mile between them to allow for vessels to travel in an unobstructed path between rows of turbines in an east-west direction.	Potentially reduce conflicts with existing ocean uses, such as commercial fishing, by facilitating the established practice of mobile and fixed-gear fishing practices and vessels fishing in an east-west direction.
E	Reduced Project Size Alternative	Same as the Proposed Action, except the proposed Project would consist of no more than 84 WTGs.	Potentially reduce impacts on existing ocean uses and environmental resources.
F	No Action	Proposed Project and associated activities as described in the Vineyard Wind COP would not be approved and the proposed construction, operation, maintenance, and decommissioning activities would not occur. Any potential environmental and socioeconomic costs and benefits associated with the proposed Project as described under Alternative A, the Proposed Action, would not occur.	The alternative of no action is required to be analyzed under the National Environmental Policy Act.

Environmental and Socioeconomic Resources

Biological

- Marine Mammals
- Sea Turtles
- Fish and Essential Fish Habitat
- 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

What Impacts did the DEIS find?

- For most resources, impacts were **Negligible to Minor** with some **Moderate** short term impacts
- **Moderate to Major** impacts for Environmental Justice, Commercial Fisheries, and Navigation and Vessel Traffic.
- Some **Minor and Moderate** beneficial impacts (Primarily Coastal Habitats; Benthic Resources; Finfish, Invertebrates, and EFH; and Demographics, Employment, and Economics)
 - Note: Some resources had both potentially negative and beneficial impacts from the project



What Impacts did the DEIS find?

- Action alternatives similar in impacts to the Proposed Action except for Alternative B which has lower impacts
- Mitigation measures lower impacts to Commercial Fisheries from **Moderate to Major to Minor to Moderate**
 - This assumes financial compensation for fishing gear damage or loss and lost income due to construction, operations, and maintenance.

Resource affected	Proposed Action	Alternative B	Alternative C	Alternative D1	Alternative D2	Alternative E
Air Quality	Minor temporary impacts from construction vessel and equipment emissions, but a net benefit over the life of the Project ^c	Similar to the Proposed Action	Similar to Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree
Water Quality	Minor temporary impacts from sediment suspension and vessel discharges, but negligible impact over the long-term	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree
Terrestrial and Coastal Fauna	Minor short-term impacts from direct mortality, temporary habitat alteration, and risk of affecting wetlands and streams; minor to moderate impacts due to land clearing (permanent habitat loss)	Similar to the Proposed Action, but minor impacts due to land clearing (permanent habitat loss); less risk of affecting wetlands and streams	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Birds	Negligible to minor short-term impacts from onshore construction; negligible to minor long-term impacts from offshore operations	Similar to the Proposed Action, potentially to a lesser degree onshore	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Bats	Likely negligible but possibly minor short-term impacts due to forest clearing; negligible long-term impacts on migrating bats during offshore operation	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Coastal Habitats	Negligible to minor short-term impacts at landfall site; minor to moderate short-term impacts from vessel anchoring, dredging and cable installation; negligible to minor beneficial long-term impact of hard protection atop cables; overall impact likely negligible	Similar to the Proposed Action, but less impact at landfall site	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Benthic Resources	Minor short-term impacts from direct mortality and sedimentation; moderate short-term impacts from dredging and entrainment; minor long-term impact from scouring; possible long-term moderate beneficial effect of scour protection and cable protection	Similar to the Proposed Action, but no impact would occur in Lewis Bay	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree in the WDA

Resource affected	Proposed Action	Alternative B	Alternative C	Alternative D1	Alternative D2	Alternative E
Finfish, Invertebrates, and Essential Fish Habitat	Minor short-term impacts from turbidity, sedimentation, direct mortality, and installation noise; minor long-term impact from operational noise and electromagnetic frequencies; moderate impacts from temporary habitat disturbance and permanent habitat conversion; moderate beneficial long-term reef effect from piles and scour protection	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Marine Mammals	Minor to moderate short-term impacts from survey noise, pile driving noise, vessel noise, and vessel strikes; negligible to minor short-term impacts from turbidity and decommissioning noise; negligible to minor long-term impacts from electromagnetic frequencies and avoidance of the WDA; moderate long-term impact of increased vessel traffic; possible minor beneficial long-term impacts to seal habitat by hard protection.	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree
Sea Turtles	Minor short-term impacts from pile driving noise, vessel noise, and vessel strikes; minor long-term impacts from habitat alteration and increased vessel traffic	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree
Demographics, Employment, and Economics	Minor beneficial long-term effects of creating jobs and generating revenue	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Environmental Justice	Likely moderate, but potentially major short-term impacts on commercial fishing, subsistence fishing, and disruption of marine businesses in Lewis Bay	Moderate short-term impacts related to commercial fishing, subsistence fishing; no disruption in Lewis Bay	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Cultural, Historical, and Archaeological Resources	Minor short-term impacts on onshore and offshore archaeological sites; minor long-term visual impacts on historic properties	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree
Recreation and Tourism	Minor to moderate short-term impacts from construction and decommissioning activities onshore, offshore, and at public beaches and boating areas adjacent to landfall sites; minor long-term impacts on recreational vessel traffic and tourism	Less impact in the Lewis Bay area; Minor short-term impacts at public beaches and boating areas adjacent to landfall sites; minor long-term impacts on recreational vessel traffic and tourism	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree

Resource affected	Proposed Action	Alternative B	Alternative C	Alternative D1	Alternative D2	Alternative E
Commercial Fisheries and For-Hire Recreational Fishing	Minor short-term effects of increased vessel traffic; minor long-term effects on fishing trip distances and routes; moderate to major short-term effects from areas of temporarily restricted access; moderate to major long-term impacts on target populations or locations, loss or damage of gear	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action, potentially to a lesser degree ^d	Similar to the Proposed Action, potentially to a lesser degree ^d	Similar to the Proposed Action, potentially to a lesser degree ^d
Land Use and Coastal Infrastructure	Minor beneficial long-term effects at ports due to increased compatible uses of existing facilities and areas; moderate short-term adverse impacts due to onshore construction noise, dust, and traffic flow disturbances	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action
Navigation and Vessel Traffic	Minor to moderate short-term impacts from Project vessel traffic; minor to moderate long-term impacts from changes in navigation routes, delays in ports, and degraded communication and radar signals; potential temporary major impacts in Lewis Bay	Minor to moderate short-term impacts from Project vessel traffic; minor to moderate long-term impacts from changes in navigation routes, delays in ports, and degraded communication and radar signals; no impact in Lewis Bay	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action, potentially to a lesser degree	Similar to the Proposed Action, potentially to a lesser degree
Other Uses	Negligible long-term impacts on radar signals; minor long-term impacts on cables and pipelines, offshore energy and mineral use, aviation and air traffic, and military or national security uses; minor long-term adverse and beneficial impacts on scientific research in this area	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action	Similar to the Proposed Action

Remaining EIS Schedule

- **Early 2019:** Hold public hearings
- **Spring 2019:** Publish Final EIS
- **Summer 2019:** Conclude consultations, publish Record of Decision

How to Comment



At this public hearing through submission of:

a comment card | a public statement during the Q&A session | directly to the court reporter



In writing to:

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



Online at Regulations.gov using docket number **BOEM-2018-0069**

In the box titled "SEARCH for: Rules, Comments, Adjudications or Supporting Documents," enter **BOEM-2018-0069**, and click "search." View supporting and related materials available for this notice, then click the "Comment Now!" button on the right side of the screen.

For more information on the Vineyard Wind project, visit www.boem.gov/Vineyard-Wind



BOEM.gov



Brian Krevor | Brian.Krevor@boem.gov | 703-787-1346