Agenda

1. Vineyard Wind 1 Project Details
2. Compensatory Mitigation for Vineyard Wind 1
3. Fisheries Science
4. Cable Monitoring Plans
5. Vessel Opportunities
6. Fisheries Outreach
7. Future Development - Vineyard Wind South
Overview

• **Capacity:** 800 MW

• **BOEM Permitting:** Completed
  - Construction & Operations Plan: December 2017
  - Draft Environmental Impact Statement: December 2018
  - Supplemental Environmental Impact Statement: June 2020
  - Final Environmental Impact Statement: March 12, 2021
  - Record of Decision: May 10, 2021

• **State Permitting:** Completed

• **Point of Interconnection:** Barnstable Substation

• **Power Purchase Agreements:** 20-year PPAs with Massachusetts utilities (approved)
Vineyard Wind 1 Layout

- 1 x 1 nautical mile spacing
- 13 MW GE Haliade-X turbine
- 62 turbines
- Reduced footprint
- Turbine locations on northern corners eliminated
### High-level Construction Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onshore duct bank and export cable</td>
<td>Q1</td>
<td>Q1</td>
<td>Q1</td>
<td>Q1</td>
</tr>
<tr>
<td>Onshore substation incl. commissioning &amp; test</td>
<td>Q2</td>
<td>Q2</td>
<td>Q2</td>
<td>Q2</td>
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<tr>
<td>Offshore export cables installation &amp; termination</td>
<td>Q3</td>
<td>Q3</td>
<td>Q3</td>
<td>Q3</td>
</tr>
<tr>
<td>Scour protection</td>
<td>Q4</td>
<td>Q4</td>
<td>Q4</td>
<td>Q4</td>
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<tr>
<td>Foundations Installation</td>
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<tr>
<td>ESP installation &amp; commissioning</td>
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<tr>
<td>Array cables installation &amp; termination</td>
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<td></td>
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<tr>
<td>WTG installations &amp; commissioning</td>
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</tbody>
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**Note:** The schedule is high-level and provides an overview of the construction activities planned for the years 2021 to 2024. Each activity is represented by a horizontal bar indicating the quarters in which it is planned for completion.
Methodology for compensatory mitigation – MA approach

• Obtain best available up to date data on fishing activity within the project area and offshore export cable corridor
  • NOAA 2021 : 2008 – 2019
  • Adjust for Lobster and Jonah Crab revenue

• Estimate **economic exposure** by state from the project area
  • **Economic exposure** = the value of fish landed from project

• Estimate **direct economic impact** by state from the project area taking into consideration costs associated with fishing (fuel, ice, crew)

• Estimate **indirect economic impacts to shoreside businesses**
  • **Upstream** = fishing inputs, e.g., fuel, ice, equipment, supplies
  • **Downstream** = processing and distribution after landing
Compensatory Mitigation

- Compensatory mitigation for Rhode Island and Massachusetts was established through the Coastal Zone Management Act federal consistency review process.
- NY/ NJ/ CT combined compensatory mitigation fund uses the same methodology employed for Massachusetts.

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of Landings</th>
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</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>53.9%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>37.2%</td>
</tr>
<tr>
<td>New York</td>
<td>4.3%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>3.2%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1.3%</td>
</tr>
<tr>
<td>Total Landings</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Mitigation Fund Summary

- **Massachusetts**
  - $19 million in direct compensation fund
  - $1.75 million for Fisheries Innovation Fund

- **Rhode Island**
  - $4.2 million in direct compensation fund
  - $12.5 million in Fishermen’s Future Viability Trust

- **CT/ NY/ NJ**
  - $3.3 million in direct compensation fund
Survey Objectives

- Monitor the impact of offshore wind projects on fisheries
- Establish baseline pre-construction
- Document impacts post-construction

Survey Design

- Before and After Control Impact (i.e., BACI) Design
- **Trawl Survey**: 4x year – 501 and 522
  - Finfish species
  - Follows NEAMAP protocols
- **Drop Camera Survey**: 2x year – 501 and 522
  - Macro invertebrates
  - Follows scallop survey protocols
- **Ventless Trap Survey**: May/June – October - 501N
  - Lobster, Jonah Crab, Black Sea Bass
  - Follows Atlantic State Marine Fisheries Commission and MA/RI state survey protocols
- **Plankton Survey**: May/June – October
  - Done in conjunction with Ventless trap survey
  - Neuston net – lobster larvae and ichthyoplankton

Local Fishing Vessel Participation

- 9 fishing vessels have participated over the past 2 years
Highly Migratory Species

Study Objective
- Collect baseline data on the timing, nature, and extent of recreational fishing effort in Southern New England

Study Design
- Mine and analyze both direct (Large Pelagics Survey) and indirect (conventional tagging) data on recreational fishing effort for HMS over recent decades
- Survey of recreational fishermen from private and charter boat sectors to characterize their fishing effort for HMS over past 5 years

Figure 7 – The cumulative number of days (number inside each circle) the 170 survey respondents holding federal angling or charter/headboat highly migratory species (HMS) permits testified to fishing in each named area in a typical year. The Wind Energy Area (WEA) is outlined in gray. Note that circles for “spot INSIDE WEA” and “spot OUTSIDE WEA” are placed in random locations on the map and represent those broad categories of the survey.
Fisheries Surveys Completed – 2019 / 2020
Data available: https://www.vineyardwind.com/fisheries-science
• Two years of pre-construction surveys
• Highly Migratory Species study completed

Fisheries Survey Plan Review
Public Virtual Meeting – June 3, 2021
Presentation and recording available:
SMAST Virtual Meeting for Fishermen: Review of Fisheries Surveys — Vineyard Wind
• 2 fishermen reviewers for each survey (8 total)
  • Fishermen who fish in the lease area
  • Participated in planning workshops (2018)
• 3 academic reviewers
  • Experts in fisheries science
  • Stock assessment, benthic habitat, trawl survey design

Fisheries Survey Plan Going Forward
An additional (3rd year) pre-construction, 1 year during construction, and three years post construction.
HMS tagging/acoustic array design discussions ongoing
Cable Monitoring Plans

Benthic Habitat Monitoring Plan (pre and post)
- A study of benthic habitats in and around seafloor areas that may be impacted by construction activities within the northern portion of Lease Area OCS-A 0501 and the offshore export cable corridor.

Cape Poge Eel Grass Survey (pre and post)
- A monitoring study of eelgrass beds around Cape Poge off Martha’s Vineyard

Cable burial (post)
- Geophysical surveys - compare bathymetry data sets to look for changes in the seafloor
- Cable temperature is monitored constantly – changes in temp may indicate changes in burial

EMF (post)
- Measure EMF from cable at full capacity to ground truth model outputs

Potential opportunities for local fishing vessel(s) to participate in surveys
Geological Surveys and Fishermen Opportunities

Onboard Fishery Liaisons

- Fishermen onboard geophysical and geotechnical survey vessels to help communicate with fishing vessels in area
- Help survey vessel locate and navigate around gear
- Documentation of gear/vessels in area
- Survey season 2020 – 10 fishermen on 6 vessels

Scout Vessels

- Opportunity to use fishermen/fishing vessels
- Work ahead of survey vessel locating fixed gear
- Help communicate with fishermen working in area of survey vessel’s plans
- 2021 survey season will utilize scout vessels
# Vessel Request for Information

**Tell Us About Your Vessel**

Vineyard Wind is looking to hire local vessels to work on offshore wind projects. If you are all interested in participating in the development of offshore wind, please fill out the form to the best of your ability.

**Vessel Owners:** Please fill out one form per vessel. Complete the form below or download a PDF copy and submit to info@vineyardwind.com or mail to Vineyard Wind, 700 Pleasant Street, Suite 510, New Bedford, MA 02740.

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## Vessel Request for Information

**Name:**

**Company:**

**Address:**

**City/Town:**

**State/Province:**

**ZIP Code:**

**Phone Number:**

**Email:**

**City/Town:**

**State:**

**ZIP Code:**

**Months of Availability (Circle all that apply):**

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sept
- Oct
- Nov
- Dec

---

## Vessel Information

**Vessel Name:**

**Length of Vessel:**

**Vessel Type (circle one):** Trawler/Dragger, Scallop, Longline, Dredge, Pot/Trap, Gillnet, Charter Fishing, For-Hire, Workboat

**Year Built:**

**Beam:**

**Draft:**

**Engine Make:**

**Engine Model:**

**Horsepower:**

**Average Steaming Speed:**

**Number of Propeller Shafts (circle one):** 1, 2, 3, 4, Jet Drive

**Is Vessel equipped with a winch:** Y/N

**Generator Capacity (kW):**

**Normal Crew Size:**

**Rated Passenger Capacity (If Rated):**

**Additional Bunk Space (in addition to crews' quarters):** Y/N

**If yes, please specify how many bunks:**

**Lifting Capacity (Deadweight Tons):**

**Towing Capacity (Deadweight Tons):**

**Equipment on the Bridge (Circle all that apply):** Radar, GPS, AIS, Chart Plotter, Compass, Satellite Phone, Marine Radio (Fixed), Marine Radio (Handheld)

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## Safety Equipment on Board

- PFDs (1-6)
- PFDs (6+)
- Life Raft (1-4)
- Life Raft (4+)
- Search & Rescue Transponder (SART)
- Emergency Position Indication Radio Beacon (EPIRB)

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## Captain/Crew Information

1. Is Captain licensed by USCG?
2. Is Captain Standards of Training, Certification, and Watchkeeping (STCW) Certified?
3. Has Captain/crew undergone cold water safety training?
4. Would Captain/crew be willing to participate in a random drug screening program?
5. Is at least one crewmember CPR certified?
6. Does Vessel have a Formal Safety Management System?
7. Are all proper pollution disposal standards visibly posted?
Fisheries Outreach

Fisheries Representatives

Fisheries Representatives are independent fishermen organizations that represent their fisheries/port interests, not Vineyard Wind’s interest. They help facilitate two-way communication between the industries.

- Massachusetts Lobstermen’s Association
- New Bedford Seafood Consulting
- New Bedford Port Authority
- Martha’s Vineyard Fishermen’s Preservation Trust
- Commercial Fisheries Center of Rhode Island
- Coastal Asset Management - Connecticut
Dear Fishermen,

Umass Dartmouth’s School for Marine Science and Technology (SMAST) is hosting a virtual meeting for fishermen to provide an overview of Vineyard Wind’s fisheries survey methods and results to date, feedback from the fishermen and scientific review groups, and survey plan going forward. There will be time for questions and discussion. Details here.

When: Thursday, June 3rd 9:00am-11:00am
Where: https://zoom.us/w/893882754197
Meeting ID: 936 0775 5410
Passcode: 694Xt
Mobile: 401-670-0223

This meeting is open to the public.

Sunny Reports being discussed:
- Trawl Surveys
- Drop Camera
- Video Trawl
- Hatchery Monitoring Studies

If you have any questions please contact the Vineyard Wind Fisheries Liaisons:
- Crisla Dank: chdank@vinyardwind.com, 508-521-8421
- Cassandra Howard: chhoward@vinyardwind.com, 508-381-9032

SIGN UP FOR UPDATES

Vineyard Wind sends out mariner updates about vessel survey activity in the lease areas.

MONTHLY PORT HOURS

FISHERIES OUTREACH

SIGN UP FOR UPDATES

VINEYARD WIND

UPCOMING WIND MARINER UPDATE NO. 23

WINTER FISHERIES TRAWL SURVEY PLAN

During the month of February, 2022 the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) is conducting a fisheries meet survey following the Northeast Area Monitoring Assessment Program (NOMAP) protocol within the Vineyard Wind Lease Areas 0501 North, 0501 South, 522 and control area (see attached chart).

The first trip will survey in lease area 0501 North with 20 tons inside the lease area and 20 tons in the exclusion control area. Subsequent trips will survey lease areas 0501 South and 522 with 10 tons in each.

Dates:
(Multiple Trips throughout the month of February)

Location:
All Lease areas: 0501 North; 0501 South; 522 and a control area.

Vessel: FV HEATHER LYNN
Port: Point Judith, RI
Boat Contact Info:
SAT Phone: 1-544-460-4763
Boatraiser: Heatherlynn@boatraiser.com
Standing by on VHF channel 16 & 13

Please contact Crisla Dank, Fisheries Liaison, for more information.
Cell: 508-521-8421 - Email: chdank@vinyardwind.com

Vineyard Wind所发送的FISHERIES OUTREACH消息，包括会议通知、海洋生物研究计划和海洋生物更新信息。会议将于6月3日举行，时间为9:00am-11:00am。会议将向公众开放，主题包括拖网调查、下降相机和视频拖网等。如果有关于会议的问题，请联系Vineyard Wind的渔业联络人：Crisla Dank（chdank@vinyardwind.com）或Cassandra Howard（chhoward@vinyardwind.com）。

此外，Vineyard Wind将发送有关海上调查活动的更新，包括冬季拖网调查计划。计划将于2月进行，涉及马萨诸塞大学达特茅斯分校海洋科学与技术学院的渔业调查。调查将在Vineyard Wind租赁区0501北、0501南、522以及控制区内进行。首航将在0501北租赁区进行，20吨货物在租赁区内，20吨货物在排除控制区内。后续航班将分别在0501南和522租赁区内进行。更多信息，请联系Crisla Dank（chdank@vinyardwind.com）或Cassandra Howard（chhoward@vinyardwind.com）。

最后，Vineyard Wind还提供了海洋生物更新的信息，包括会议日程、地点和联系方式等。如果您有关于海洋生物更新的问题，可以联系Crisla Dank（chdank@vinyardwind.com）或Cassandra Howard（chhoward@vinyardwind.com）。
Future Development - Vineyard Wind South

Overview

• **Location:** Vineyard Wind South is located immediately to the south of Vineyard Wind 1.

• **Two Phases:** Maximum of 130 Turbines and up to 5 Electric Service Platforms
  - **Phase 1** is Park City Wind – 804 MW for CT
  - **Phase 2** is Rest of Zone/Future Project – 1200 -1500 MW

• **Federal Permitting:**
  - Construction & Operations Plan submitted June 2020
  - Issuance of Notice of Intent to prepare an Environmental Impact Statement anticipated June 30, 2021

• **Development:** Each Phase has its own Project Design Envelope

• **Size:** SWDA approximately 410-455 km²

• **Landfall sites and grid interconnection:** Town of Barnstable for each Phase

• **Offshore export cables:** Up to five offshore export cables within the same corridor as VW 1
Contact us:
Crista Bank, Fisheries Liaison
cbank@vineyardwind.com

Caela Howard, Fisheries Liaison
choward@vineyardwind.com

Sign up for EMAIL Updates OR TEXT ALERTS

www.vineyardwind.com/fisheries

QUESTIONS?