



VINEYARD WIND

CABLE CORRIDOR FAQs

Vineyard Wind is in the process of building the nation's first utility-scale offshore wind energy project over 15 miles off the coast of Massachusetts. Vineyard Wind has received state permits necessary for 2 cables for the Vineyard Wind 1 project.

Why do you need multiple offshore export cables?

Each 800 megawatt (MW) wind farm requires two cables to transmit power and to ensure uninterrupted transmission.

What type of cables are used?

Offshore export cables are 220 – 275 kv AC cables. Inter-array cables are 66 kv AC cables.

What is the diameter of the cables?

The offshore export cables are 10-11 inches in diameter. The inter-array cables are 5-6 inches in diameter.

Why can't they be buried together?

Offshore export cables will be buried in the same corridor but a reasonable distance must be maintained so cables don't impact each other and in case any repairs are necessary.

How wide an area will be disturbed during burial?

Trench width is expected to be approximately 3.5 feet for each cable. Cable installation equipment can temporarily disturb a 3.5-6.5 foot wide area on the seafloor.

How deep will they be buried?

The offshore export cables and the inter-array cables will be buried beneath the seafloor at a target depth of 5-8 feet.

What happens if it cannot be buried?

Cable burial is a top priority, however if sufficient depth cannot be reached there are different cable protection methods that can be used:

Rock placement - Laying rocks on top of the cable to provide protection.

Concrete mattresses - Prefabricated flexible concrete coverings that are laid on top of the cable.

Half-shell pipes - Two halves are fixed around the cable to provide mechanical protection.

What effect will the cables have with respect to electromagnetic (EMF) fields?

AC subsea power cables have the potential to emit a low-level (less than a common magnet) localized EMF, within a few feet of a buried cable. At the target depth of 5-8 feet, EMF levels are greatly reduced. Find studies and research about EMF at BOEM.gov.

How fast do the cable laying vessels move?

Typical cable vessel installation speeds are expected to range from approximately 330ft – 650ft per hour (equivalent to 1-2 nautical miles in 18 hours) along the offshore export cable corridor with similar or faster speeds for the inter array cables between the turbines.

When will the cables be installed?

Export cables will be installed in accordance with state and federal time of year restrictions to reduce conflict with commercial fishing activity and sensitives spawning seasons.

How do I stay informed about survey and installation vessels offshore?

Sign up for Vineyard Wind's Offshore Wind Mariner Updates. We provide timely bulletins by email and text message about where and when vessels are deployed, what they will be doing and contact information for the vessels. Sign up here: vineyardwind.com/fisheries.

Please contact Vineyard Wind Fisheries Liaisons for latest information.

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Geophysical and geotechnical data has been collected along the cable corridor during the summers of 2017-2020.

The width of the cable corridor sampled is 3,100-5,100 feet. The cables will be monitored after installation and at regular intervals over the life of the project.

GEOPHYSICAL SURVEYS

Geophysical surveys collect data using remote sensing systems that include:

Side scan sonar – high frequency sonar to obtain acoustic images of the seafloor only

Bathymetry – multibeam sonar - provides a swath of water depth (bathymetry) data

Magnetometer – sensor that detects ferrous (iron) objects on and below the seafloor

Sub bottom profilers – lower frequency sonar that penetrates below the seafloor to look at sediment layers in the upper 30-250 feet

GEOTECHNICAL SURVEYS

Geotechnical surveys collect data from physical sampling devices that include:

Cone penetration testing (CPT) – a 1.6 inch diameter probe that measures sediment properties as it is pushed into the sub-surface at 10-16 feet, or up to 115 feet

Benthic grabs – a small bucket that retrieves sediment from the surface layer of the seafloor and is used to analyze sediment grain size and benthic organisms

Vibracore – takes a core sample 3-4 inches in diameter through sediment up to 15 feet

VISUAL IMAGERY

Visual Imagery is also collected along the cable corridor and includes:

Underwater cameras – records continuous video transects and/or still photos of the seafloor

