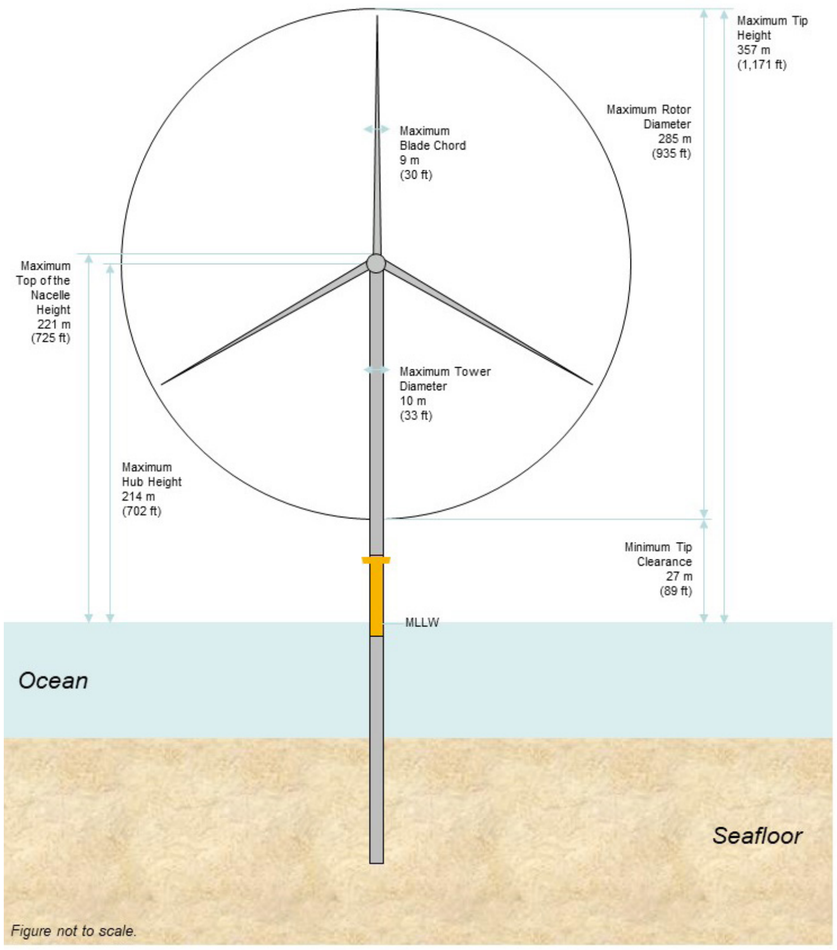
Vineyard Wind South Offshore Wind Project

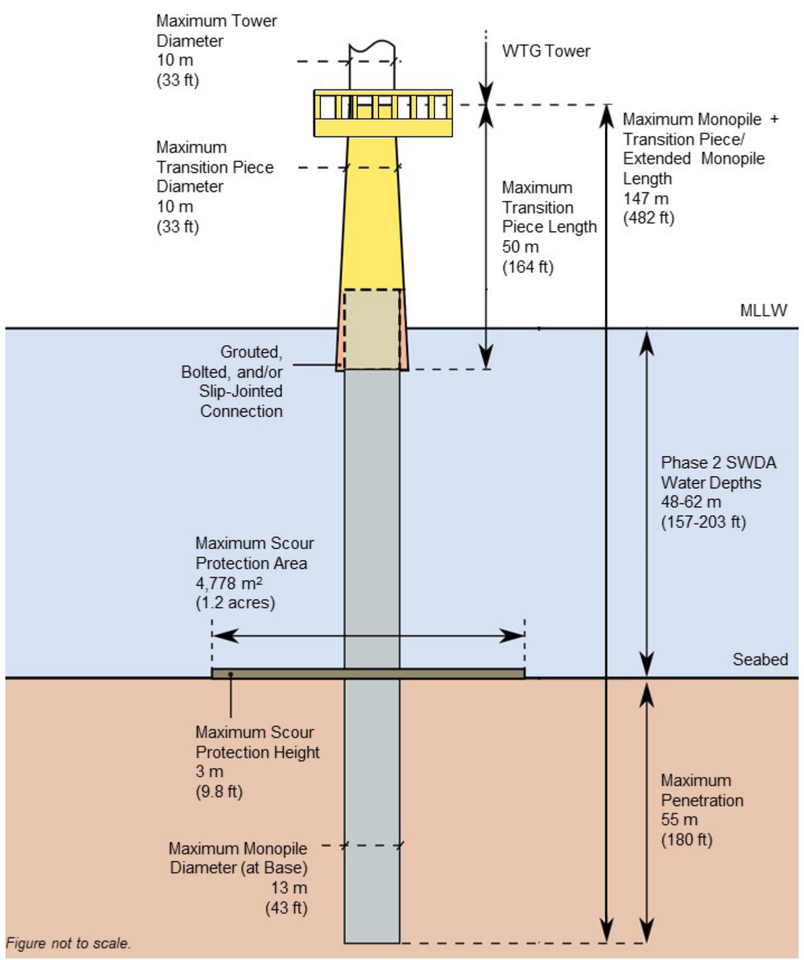
Project Design Envelope - Phase 2

A project design envelope is a permitting approach that allows a lessee to define a range of design parameters within a Construction and Operations Plan. BOEM then analyzes the maximum impacts that could occur within the range of the design parameters — referred to as the "maximum design scenario.

"Representative design parameters for the Vineyard Wind Phase 2 project are outlined below. Refer to Vineyard Wind's Construction and Operations Plan for a detailed explanation of the project design envelope.



Phase 2 Wind Turbine Generators



Monopile Foundation

Typical Foundation Installation Vessel

Project Component	Representative Project Design Parameters
Wind Turbine Generators (WTG)	• Up to 79 WTGs with rotor diameter up to 935 feet. • Upper blade tip height up to 1,171 feet above MLLW; lowest blade tip height 89 feet above MLLW.
Turbine Foundations	• Monopile, jacket, or button-frame foundations with scour protection. • Installation with jack-up vessel, anchored vessel, or DP vessel and components potentiallysupplied by feeder vessels.
Electric Service Platforms (ESP)/Offshore Substations	• Up to three ESPs on monopile or jacket foundations. • Up to one Reactive Compensation Station. • Installation with jack-up vessel, anchored vessel, or DP vessel. • Maximum 345 kV inter-link cables with target burial depth of 5 to 8 feet, and options for cable protection
Inter-Array Cables	• Maximum 132 kV inter-array cables with target burial depth of 5 to 8 feet. • Cable protection (rock, gabion rock bags, concrete mattresses, half-shell pipes [or similar]) in areaswith minimal cable burial.
Offshore Export Cables	• Up to three 345 kV HVAC cables, or one 500 kV HVDC cable with a target burial depth of 5 to 8 feet. • One export cable route corridor to landfall site(s) in the Town of Barnstable. • Cable protection (rock, gabion rock bags, concrete mattresses, half-shell pipes [or similar]) in areaswithminimial cable burial.
Landfalls and Onshore Export Cable System	• Alternate landfall and onshore cable route options within the Town of Barnstable. • Landfall installation method to be determined in coordination with Town of Barnstable.
Onshore Substations and Interconnector Cable	• Up to two new onshore substations with associated infrastructure. • Underground cable options to connect onshore substations to the existing grid.

DP = dynamic positioning; HDD = horizontal directional drilling; HVAC = high voltage alternating current; HVDC = high voltage direct current; kV = kilovolt; MLLW = mean lower low water.

For more information on BOEM's Renewable Energy Program, visit www.boem.gov/Renewable-Energy