

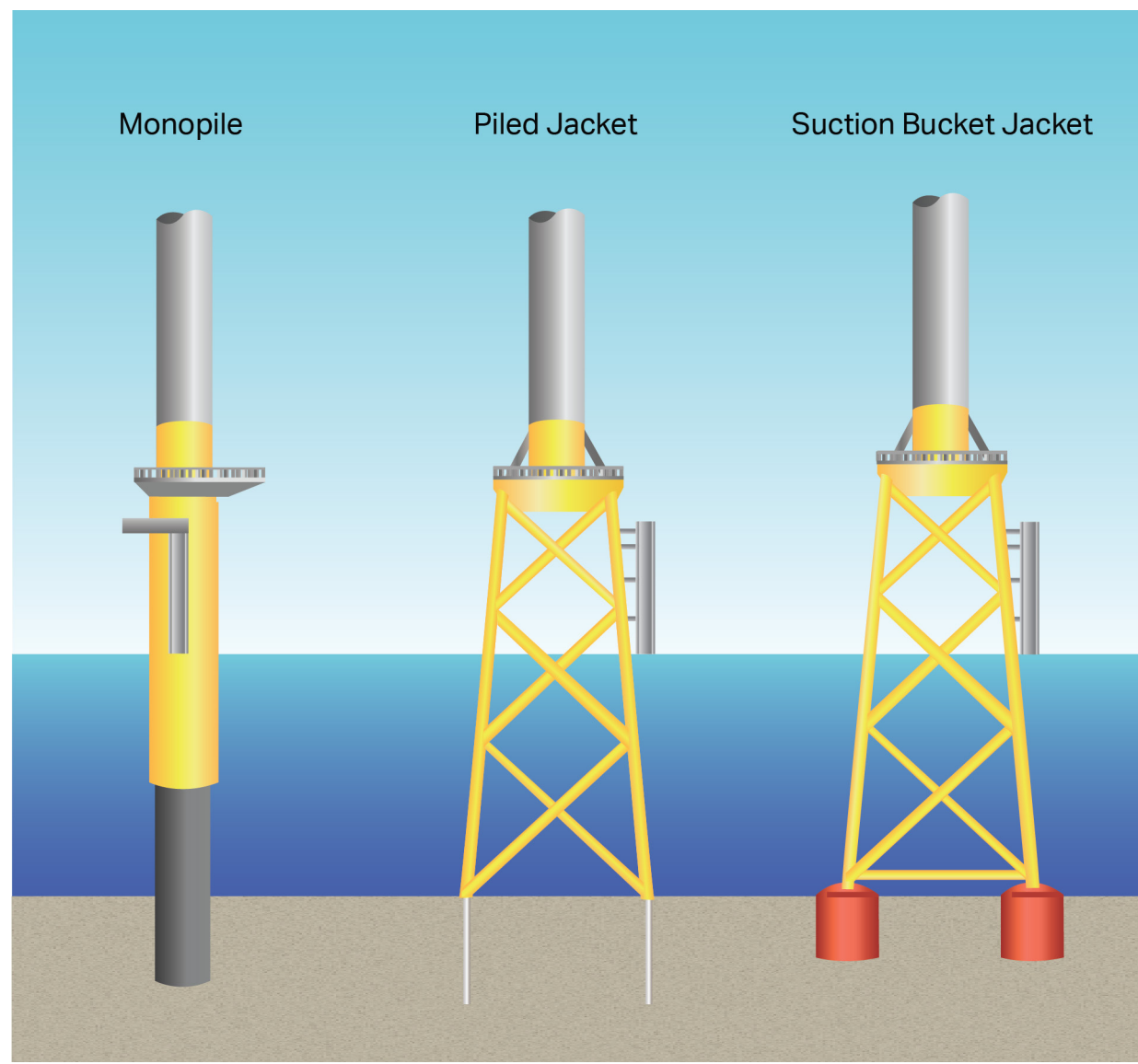


Beacon Wind Project

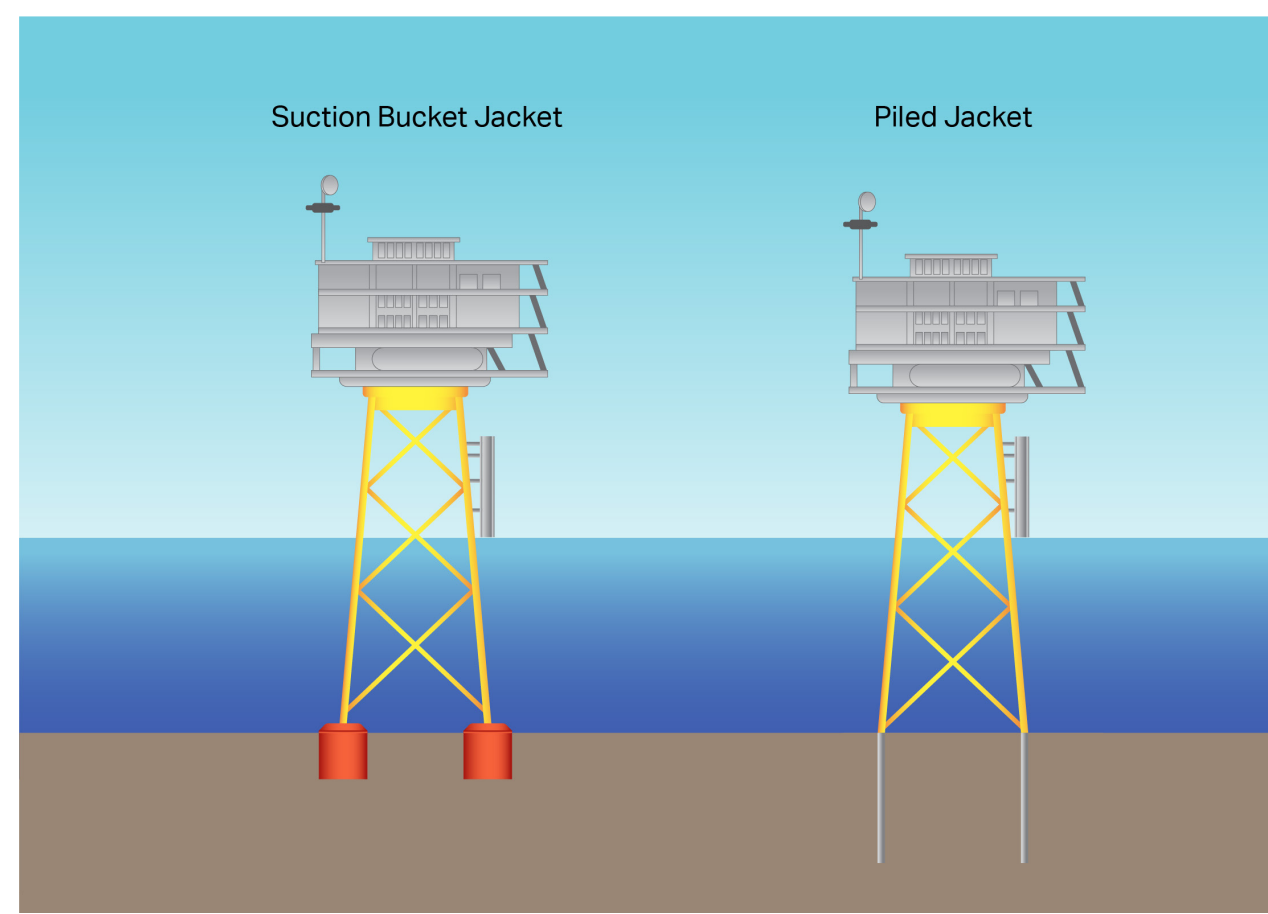
Project Design Envelope

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.”

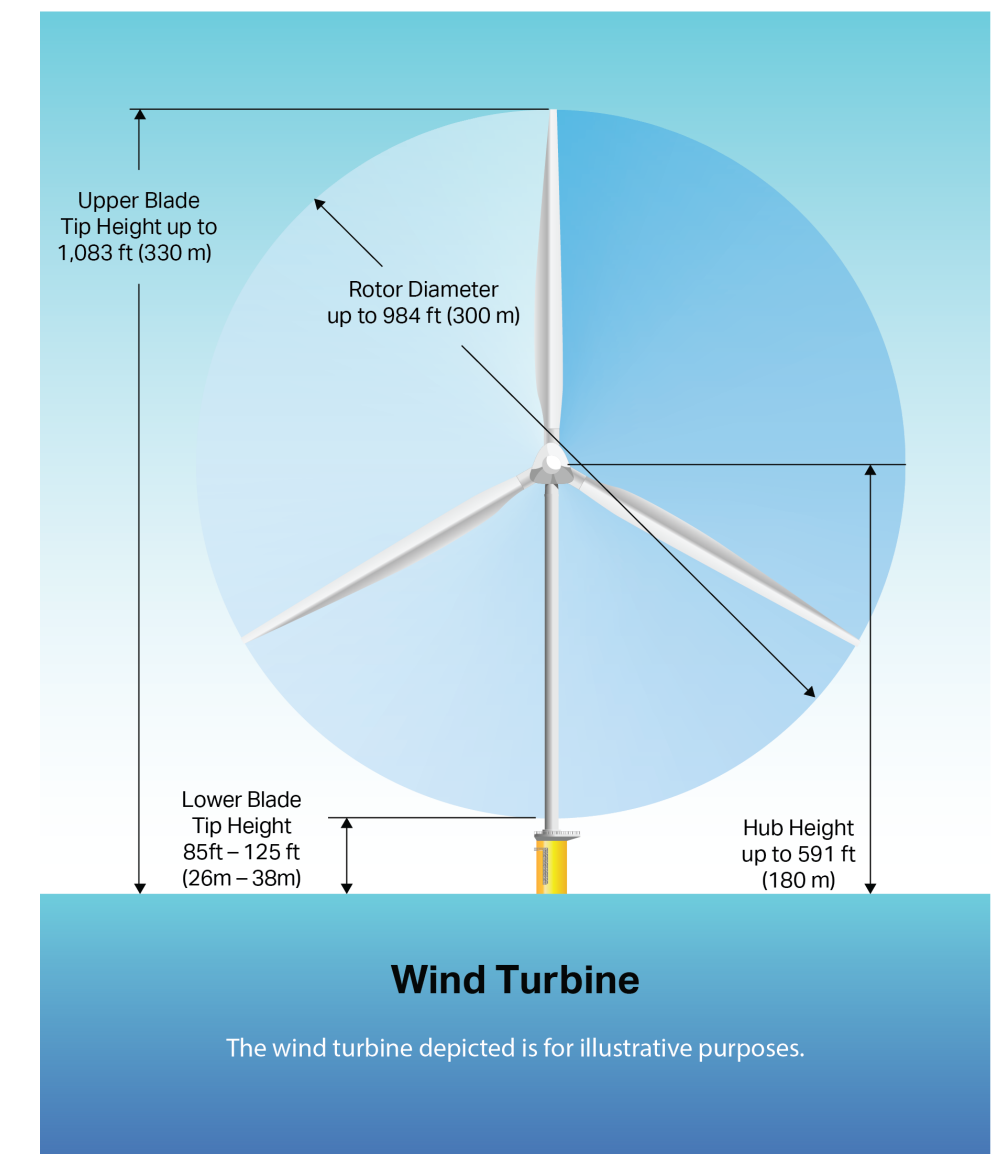
Representative design parameters for the Beacon Wind Project are outlined below. Refer to Beacon Wind’s Construction and Operations Plan for a detailed explanation of the project design envelope.



Representative Wind Turbine Foundation Types



Representative Offshore Substation Foundation Types



Maximum Wind Turbine Dimensions

Project Component	Representative Project Design Parameters
Foundations	<ul style="list-style-type: none"> WTGs supported by monopile, piled jacket, and/or suction-bucket jacket foundations OSSs supported by piled jacket and/or suction-bucket jacket foundations Scour protection may be installed around all foundation types
Wind Turbine Generators (WTGs)	<ul style="list-style-type: none"> Up to 155 WTGs Rotor diameter up to 984 feet (300 meters) Hub height up to 591 feet (180 meters) above highest astronomical tide (HAT) Upper blade tip height up to 1,083 feet (330 meters) above HAT Lower blade tip height (air gap) 85 to 125 feet (28 to 38 meters) above HAT
Offshore Substations (OSSs)	<ul style="list-style-type: none"> Voltage of up to 400 kilovolts (kV) Equipped with high-voltage alternating current (HVAC) to high-voltage direct current (HVDC) power converter Total OSS structure height up to 492 feet (150 meters) above HAT Base height (air gap) up to 105 feet (32 meters) above HAT Maximum length and width of topside structure 459 feet by 278 feet (150 meters by 140 meters)
Interarray Cables	<ul style="list-style-type: none"> Voltage of up to 150 kV Target burial depth of 3 to 6 feet (0.9 to 1.8 meters) Maximum total interarray cable length is up to 186 miles (300 kilometers) for each BW1 and BW2
Offshore Export Cables	<ul style="list-style-type: none"> One 400-kV HVDC cable for each BW1 and BW2 BW1 submarine export cable route up to 233 miles (375 kilometers) from the Lease Area through the Long Island Sound to Queens, New York BW2 would deliver power through either a separate but roughly parallel submarine export cable route to Queens, New York, or through a 130-mile (209-kilometer) submarine export cable route that follows the BW1 route from the Lease Area before branching north to Waterford, Connecticut Target burial depth of 3 to 6 feet (0.9 to 1.8 meters)
Onshore Facilities	<p>Queens, New York Point of Interconnection (POI) – BW1 and option for BW2</p> <ul style="list-style-type: none"> Three sites within the Astoria power complex are under consideration for development of new onshore substations to receive power from up to two onshore export cables Landfall of onshore export cables would be completed via open trench installation or horizontal directional drilling (HDD) up to approximately 2,000 feet (610 meters) in length Power delivered from the proposed onshore substation facilities would be transferred via onshore interconnection cables up to approximately 3,300 feet (1,006 meters) to one or two existing POI substations <p>Waterford, Connecticut POI – Option for BW2</p> <ul style="list-style-type: none"> Onshore export cable would extend approximately 2,000 feet (600 meters) via HDD to a proposed new onshore substation Power would be transferred from the onshore substation via an onshore interconnection cable approximately 130 feet (40 meters) to an existing POI substation facility within the Dominion Millstone Power Station
Operations and Maintenance (O&M) Facilities	<ul style="list-style-type: none"> Staffed O&M base at the South Brooklyn Marine Terminal, where Beacon Wind’s affiliate, Empire Offshore Wind LLC, intends to construct an O&M base Assessing an existing facility in New Bedford, Massachusetts, to act as a potential satellite O&M facility



For more information, please visit:
<https://www.boem.gov/renewable-energy/state-activities/beacon-wind>