

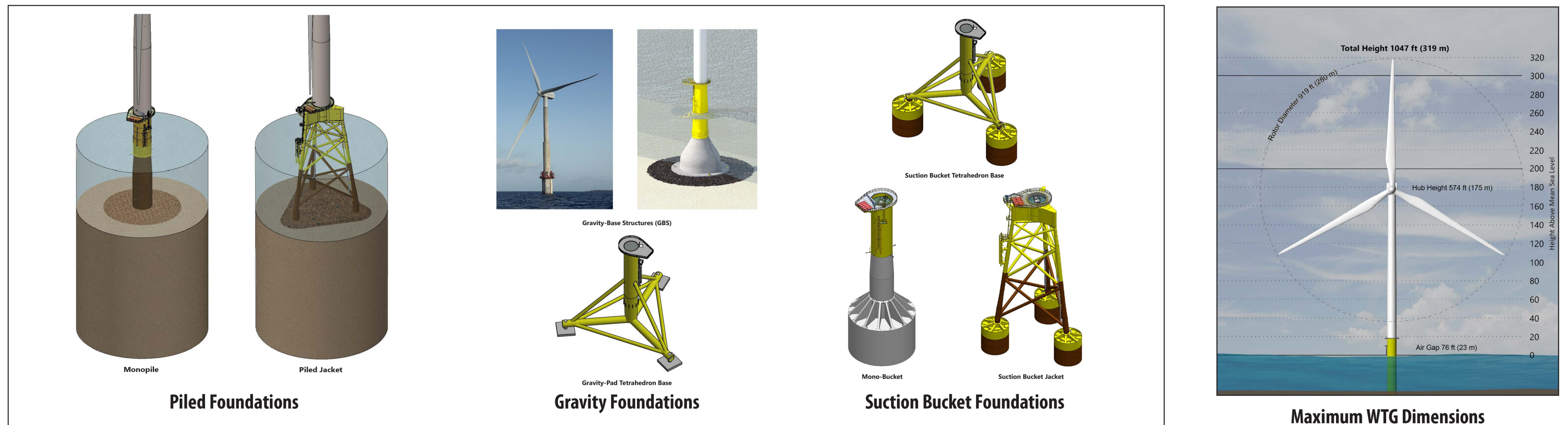


## Atlantic Shores Offshore Wind Projects

# 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 Atlantic Shores projects are outlined below. Refer to Atlantic Shores Offshore Wind Construction and Operations Plan for a detailed explanation of the projects design envelope.



Project Component	Project 1	Project 2
Foundations	<ul style="list-style-type: none"> <li>Installation of one or more foundation types: monopile, piled jacket, suction jacket, and gravity foundation</li> <li>Installation using hammered pile driving (for monopiles and/or piled jacket foundations)</li> <li>Scour protection may be installed around all foundation types</li> </ul>	<ul style="list-style-type: none"> <li>Same as Project 1</li> </ul>
Wind Turbine Generators (WTGs)	<ul style="list-style-type: none"> <li>105 to 136 WTGs</li> <li>Rotor diameter up to 918.6 feet (280 meters)</li> <li>Hub height up to 574.2 feet (175.0 meters) above mean sea level</li> <li>Tip height up to 1,046.6 feet (319.0 meters) above mean sea level</li> <li>Lowest blade tip height 75.8 feet (23.1 meters) above mean sea level</li> </ul>	<ul style="list-style-type: none"> <li>64-95 WTGs, otherwise other components are the same as Project 1</li> </ul>
Inter-Array Cables	<ul style="list-style-type: none"> <li>Maximum total cable length 273.5 miles (440 kilometers)</li> <li>66 to 150 kilovolt, 3-core cables buried up to 5 to 6.6 feet (1.5 to 2 meters) beneath the seabed</li> <li>Jet trencher, mechanical trencher, and free-lay and post-lay burial installation</li> <li>Proposed protection if target cable burial depth is not achieved includes rock armor, rock bags, concrete mattresses, and protective half-shells</li> </ul>	<ul style="list-style-type: none"> <li>Same as Project 1</li> </ul>
Offshore Export Cables	<ul style="list-style-type: none"> <li>Up to 8 230 to 275 kilovolt HVAC or 320 to 575 kilovolt HDVC offshore export cables buried up to 5 to 6.6 feet (1.5 to 2 meters) beneath the seabed</li> <li>Minimum separation distance between circuits is 164 feet (50 meters)</li> <li>Maximum total corridor length is 99.4 miles (160.0 kilometers) to Atlantic Landfall Site; 341.8 miles (550.0 kilometers) to Monmouth Landfall Site</li> <li>Jet trenching, jet plow, mechanical plow, and free-lay and post-lay burial installation, with dredging in some locations to achieve burial depth</li> <li>Proposed protection if target cable burial depth is not achieved includes rock armor, rock bags, concrete mattresses, and protective half-shells</li> </ul>	<ul style="list-style-type: none"> <li>Same as Project 1</li> </ul>
Meteorological (Met) Towers and Metocean Buoys	<ul style="list-style-type: none"> <li>Up to 1 permanent met tower and up to 3 temporary metocean buoys (during construction)</li> </ul>	<ul style="list-style-type: none"> <li>Up to 1 temporary metocean buoy (during construction)</li> </ul>
Offshore Substations (OSSs)	<ul style="list-style-type: none"> <li>Up to 5 small OSSs, 2 medium OSSs or 2 large OSSs</li> <li>Positioned along the same east-northeast/west-southwest rows as the WTGs</li> <li>Minimum distance from shore: small OSS - 12.0 miles (19.3 kilometers); medium and large OSS - 13.5 miles (21.7 kilometers)</li> </ul>	<ul style="list-style-type: none"> <li>Up to 5 small OSSs, 3 medium OSSs or 2 large OSSs, otherwise other components are the same as Project 1</li> </ul>
Onshore Facilities	<ul style="list-style-type: none"> <li>Landfall of export cables will be completed via horizontal directional drilling</li> <li>Construction work area for the existing Larrabee substation in Howell NJ to disturb up to 14.6 acres (5.9 hectares); construction area work for existing Cardiff substation in Egg Harbor Township NJ to disturb up to 23.9 acres (9.7 hectares)</li> <li>Onshore transmission and interconnection cables with total maximum cable length of 12 miles (19.1 kilometers)</li> <li>Up to 12 230 to 275 kilovolt HVAC or 320 to 525 kilovolt HVDC onshore export cables, and 4 fiber optic cables</li> </ul>	<ul style="list-style-type: none"> <li>Same as Project 1</li> </ul>
Operations & Maintenance Facilities	<ul style="list-style-type: none"> <li>Atlantic City, NJ</li> </ul>	<ul style="list-style-type: none"> <li>Same as Project 1</li> </ul>