

# Atlantic Shores Offshore Wind South Project

# Alternatives A, B, and C

Alternative A: No Action: BOEM would not approve the COP. The Project construction and installation, operations and maintenance (0&M) and decommissioning activities would not occur.

Alternative B: Proposed Action: Atlantic Shores Offshore Wind LLC, would develop up to 200 total wind turbine generators (WTGs) (between 105 and 136 WTGs for Project 1, and between 64 and 95 WTGs for Project 2), up to 10 offshore substations (OSSs) (up to 5 in each Project), up to 1 permanent meteorological (met) tower, and up to 4 temporary meteorological and oceanographic (metocean) buoys (up to 1 met tower and 3 metocean buoys in Project 1, and 1 metocean buoy in Project 2), interarray and interlink cables, 2 onshore substations, 1 0&M facility, and up to 8 transmission cables making landfall at 2 New Jersey locations.

# **Alternative C: Habitat Impact Minimization/Fisheries Habitat Impact Minimization**

**Alternative C1:** Lobster Hole Avoidance





Up to 16 WTGs, 1 OSS, and associated interarray cables within the Lobster Hole designated area (area of concern [AOC] 1) as identified by NMFS would be removed.

Up to 13 WTGs and associated interarray cables within the NMFSidentified sand ridge complex (AOC 2) would be removed.

**Alternative C2:** Sand Ridge Complex Avoidance

# **Alternative C3:** Demarcated Sand Ridge Complex Avoidance



Up to 6 WTGs and associated interarray cables within 1,000 feet (305 meters) of the sand ridge complex area identified by NMFS, but further demarcated through the use of the NOAA's Benthic Terrain Modeler and bathymetry data provided by Atlantic Shores, would be removed.



### **Alternative C4:** Micrositing

29 WTGs, 1 OSS, and associated interarray cables would be microsited outside of the 1,000-foot (305-meter) buffer of the ridge and swale features within AOC 1 and AOC 2.



# Atlantic Shores Offshore Wind South Project

# Alternatives D and E

# Alternative D: No Surface Occupancy at Select Locations to Reduce Visual Impacts

**Alternative D1:** No Surface Occupancy of Up to 12 Miles (19.3 Kilometers) from Shore: Removal of Up to 21 Turbines

**Alternative D2:** No Surface Occupancy of Up to 12.75 Miles (20.5 Kilometers) from Shore: Removal of Up to 31 Turbines



 

 Fire Road Onshore Substation/ Onverter Station

 Attantic Landiall Site

 Attantic Export

 Corridor

 Attantic Export

 One Proposed Project Area

 Wind Turbine

 Turbine Distance to Shore

 One 12.75 Miles (31)

 Attantic City O&M Facility

 Existing Cardiff Substation

 Substation and/or Converter Station

Source: Atlantic Shores 2023.

0 2 4 Miles

The remaining WTGs in Project 1 would be restricted to a maximum hub height of 522 feet (159 meters) above mean sea level (AMSL) and maximum blade tip height of 932 feet (284 meters) AMSL.

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**Alternative D3:** No Surface Occupancy of Up to 10.8 Miles (17.4 Kilometers) from Shore: Removal of Up to 6 Turbines



The remaining WTGs in Project 1 would be restricted to a maximum hub height of 522 feet (159 meters) AMSL and maximum blade tip height of 932 feet (284 meters) AMSL.

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There would be no surface occupancy along the southern boundary of the Atlantic Shores South Lease Area through the exclusion or micrositing of up to 4 to 5 WTG positions to allow for a 0.81-nautical mile (1,500-meter) to 1.08nautical-mile (2,000-meter) separation between WTGs in the Atlantic Shores South Lease Area and WTGs in the Ocean Wind 1 Lease Area.



## Atlantic Shores Offshore Wind South Project

# **Alternative F: Foundation Structures**

## **Alternative F1: Piled Foundations**

The use of monopile and piled jacket foundations only is analyzed for the maximum extent of impacts.





Monopile

**Piled Jacket** 

## **Alternative F2: Suction Bucket Foundations**

The use of the mono-bucket, suction bucket jacket, and suction bucket tetrahedron base foundations only is analyzed for the maximum extent of impacts.



Suction Bucket Tetrahedron Base



Mono-Bucket



Suction Bucket Jacket

The use of gravity-pad tetrahedron and gravity-based structure foundations only is analyzed for the maximum extent of impacts.







### **Alternative F3: Gravity-Based Foundations**



Gravity-Base Structures (GBS)



**Gravity-Pad Tetrahedron Base**