



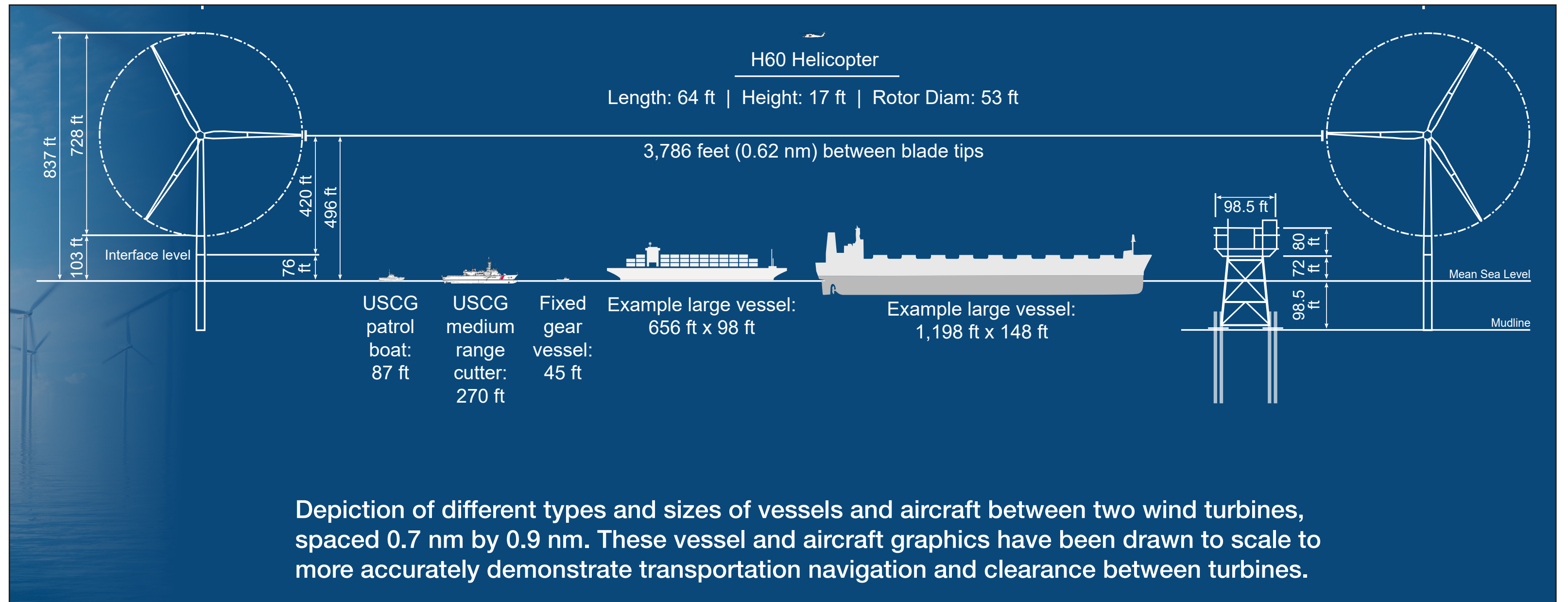
Coastal Virginia Offshore Wind – Commercial Project (CVOW-C)

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 CVOW-C project are outlined below. Refer to CVOW-C’s Construction and Operations Plan for a detailed explanation of the project design envelope.

Vessel and Aircraft Clearance



Project Component	Representative Project Design Parameters
Wind Turbine Generators	<ul style="list-style-type: none"> WTG generating capacity 14 – 16 MW; up to 205 wind turbine generators with rotor diameter up to 761 feet. Turbine tip height from MSL up to 869 feet; hub height from MSL up to 489 feet.
Turbine Foundations	<ul style="list-style-type: none"> Monopile foundations with scour protection. Foundation piles installed using a hydraulic hammer while guided by a pile gripper..
Offshore Substations	<ul style="list-style-type: none"> Up to three offshore substations installed atop piled jacket foundations. Foundation piles installed using a hydraulic hammer. Maximum 230 kV substation interconnector cables with options for cable protection.
Inter-Array Cables	<ul style="list-style-type: none"> Turbine tip height from MSL up to 869 feet; hub height from MSL up to 489 feet. Post-lay surveys will determine the need for additional cable protection.
Offshore Export Cables	<ul style="list-style-type: none"> Maximum 230 kV with target burial depth of approximately 3 to 16 feet. Three export cable route corridors to Virginia Beach, Virginia. Up to three layers of cable protection may be used.
Landfalls and Onshore Export Cable System	<ul style="list-style-type: none"> Alternate landfall and onshore cable route options. Utilize a combination of open trench (e.g., HDD) and trenchless installation techniques at varying depths along the selected route.
Onshore Substations and Interconnector Cable	<ul style="list-style-type: none"> Onshore substation to be expanded and upgraded (e.g., safety fencing, erosion controls and stormwater management system). Interconnection cable would be installed either overhead or a hybrid of overhead and underground to connect to the onshore substation.

HDD = horizontal directional drilling; kV = kilovolt; MSL = mean sea level.