

A photograph of an offshore wind turbine in the ocean. The turbine is white with a red nacelle and is positioned in the foreground on the left. Another turbine is visible in the distance. The sky is blue with some light clouds.

Coastal Virginia Offshore Wind

2023 Virginia Charter Boat Workshop

Ron Larsen - Fisheries Liaison

Mike Lewis - Marine Affairs Manager

25-March-2023

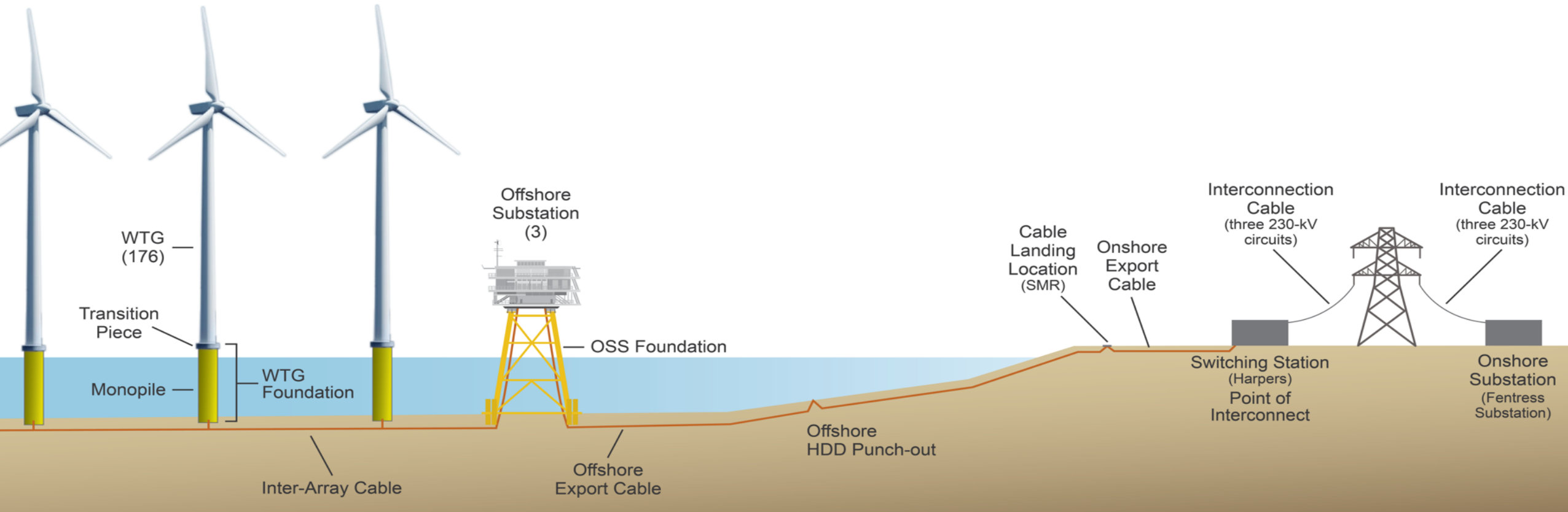
- CVOW Pilot Project Description
- CVOW Commercial Project Description
- Commercial Construction Timeline
- Navigation Safety
- Fishing Opportunities
- Q&A

CVOW Research (Pilot) Project

- First US offshore wind project installed in federal waters.
- Two 6MW Wind Turbine Generators (WTGs), 12 MW total capacity, power up to 3,000 homes
- Located within a 2,135-acre research lease area, 27 miles off the coast of Virginia Beach
- Installed JUN-2020, began producing power OCT-2020

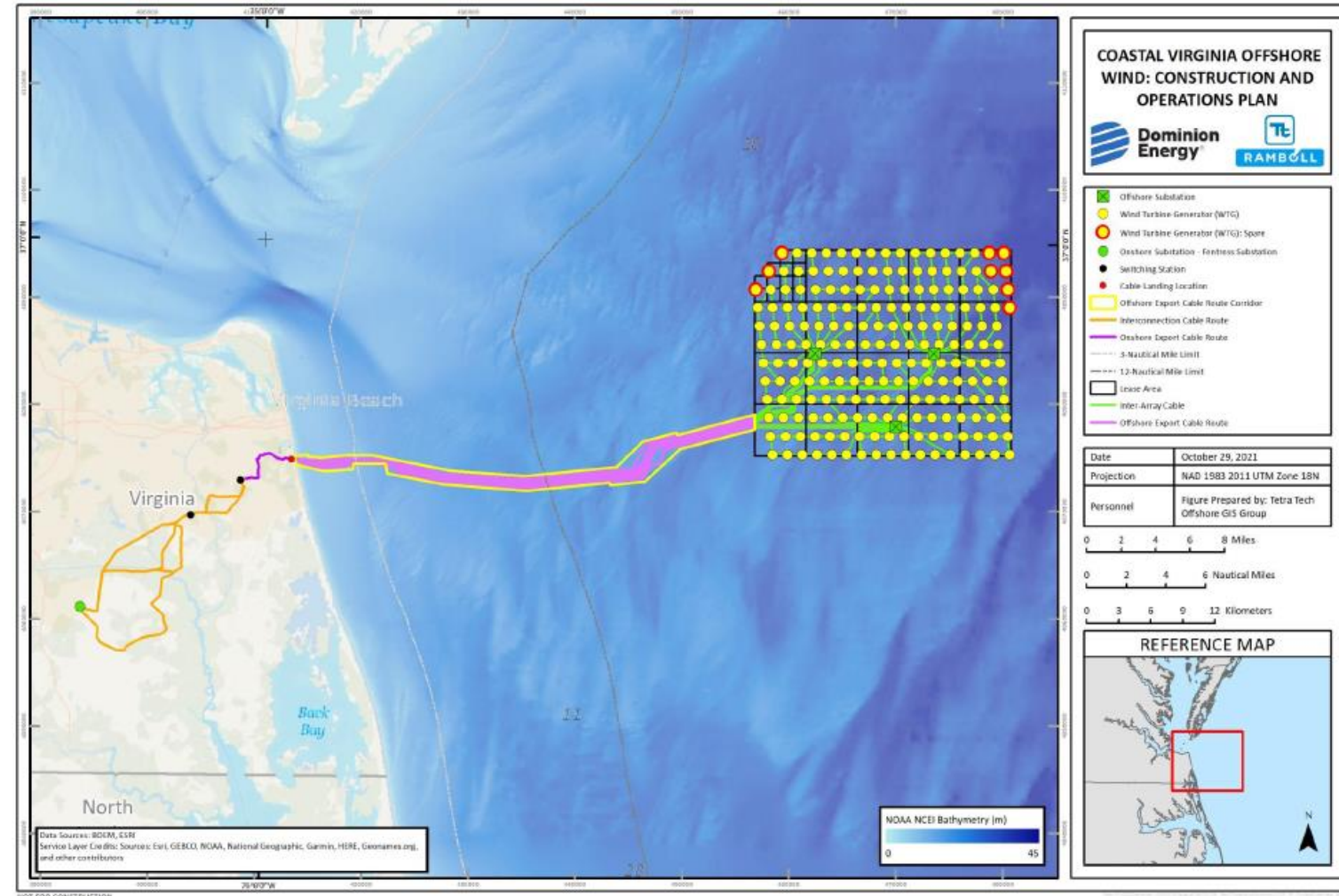


CVOW Commercial General Layout



CVOW Commercial Project

- 176 turbines, 2.6 GW total capacity, power up to 660,000 homes
- Located 27 to 42 miles offshore, Lease is 15 x 12 miles, roughly 176 square miles
- Distance between turbines is 1.1 miles (0.93 NM) in the N-S direction, and 0.9 miles (0.75 NM) in the E-W direction
- Scheduled for 2026 completion



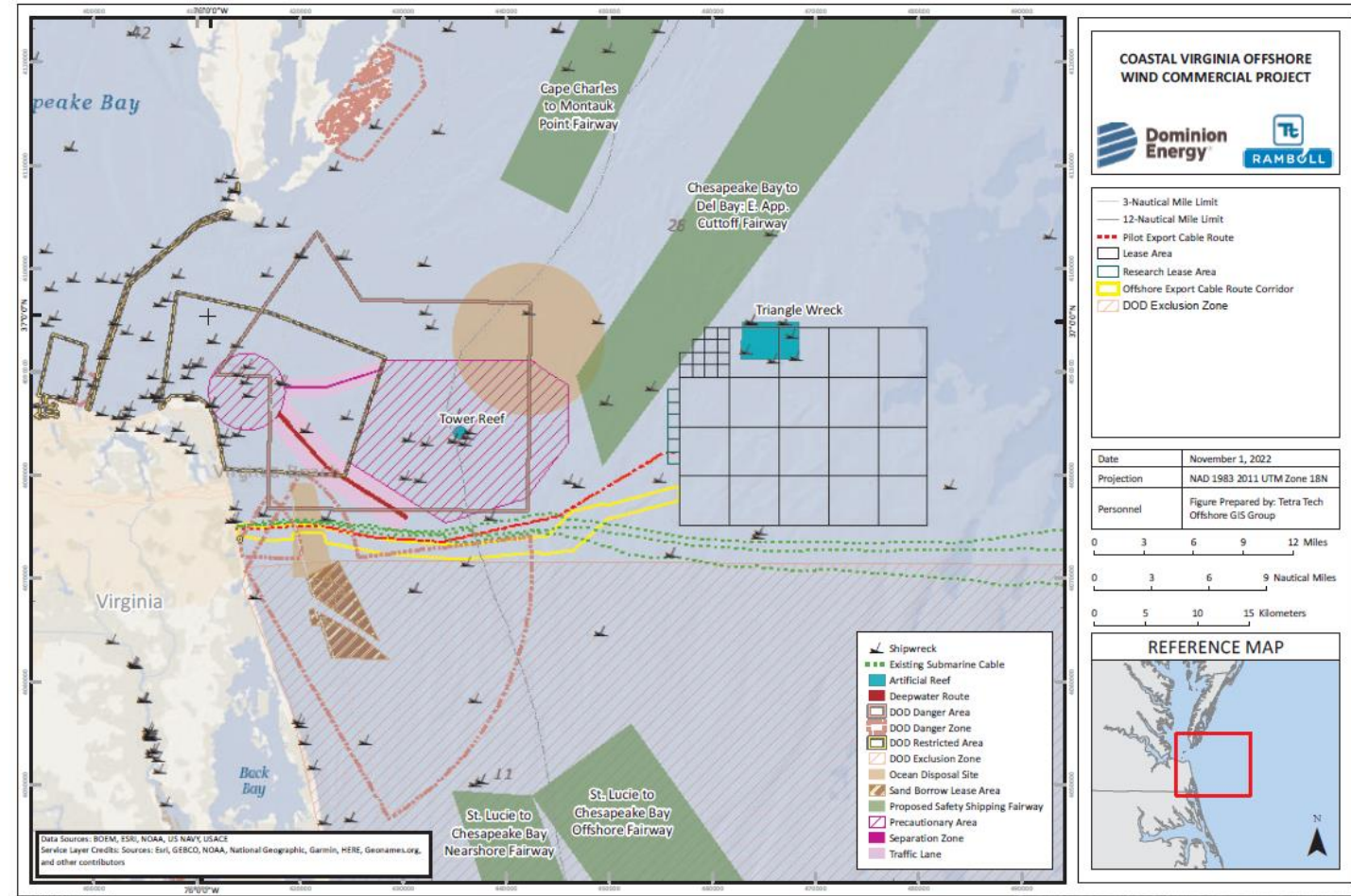
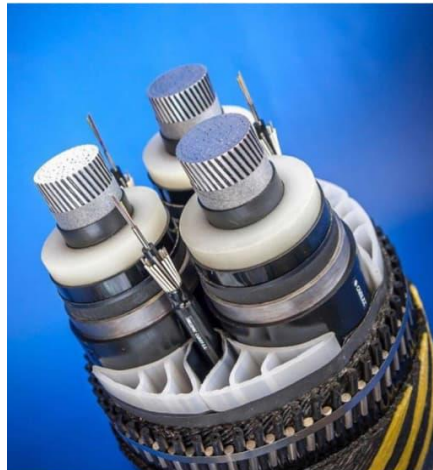
Export Cables and Offshore Substations

Export Cables and Route Details

- Nine 230-kV export cables (3 per substation), 417 total miles of cable
- Cables 10.2" in diameter, target ~8' ft burial depth
- Cable corridor minimizes route length and impacts to benthic habitat, DNODS area, sand borrow areas, navigation channels, DoD training and testing areas, and existing subsea cables

Substations Details

- 3 substations,
- 880 MW each;
- 66-kV to 230-kV step up



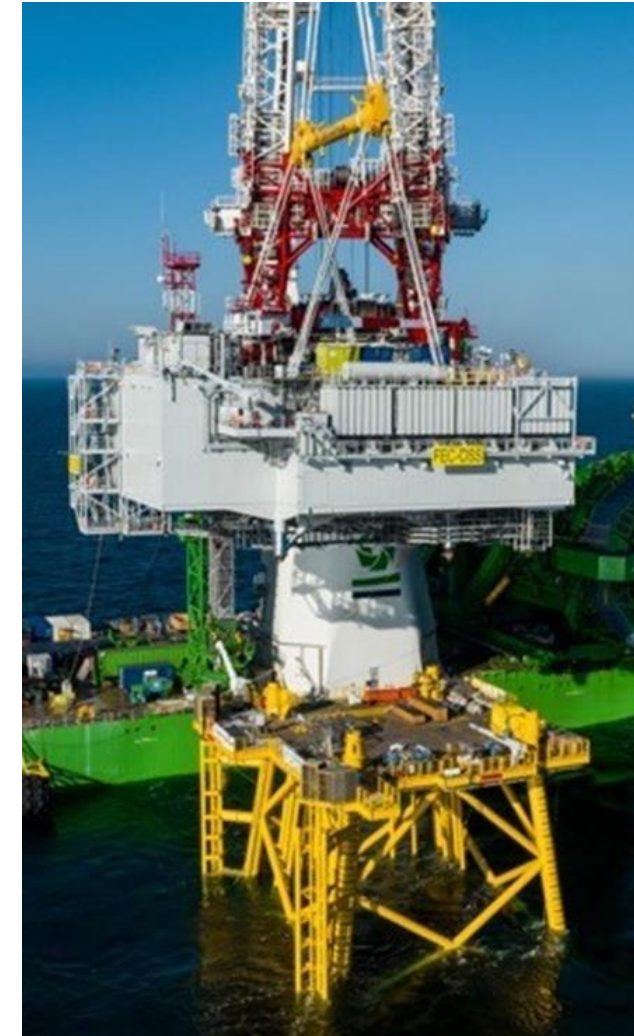
Installation Begins Q1 2024

Ongoing Offshore Survey Activities

- UXO survey through APR-2023; Target assessment survey via ROV begin as early as APR-2023; UXO disposition (if needed) following consultation w/authorities

Installation Begins Q1 2024

- Start with export cable installation activities and scour protection installation
- Monopole installation begins following NARW migration period in MAY-2024
- Ongoing installation activities rotating through lease area, monopole installation restricted from NOV-APR (NARW Migration), other activities continue.
- Target installation complete 2026



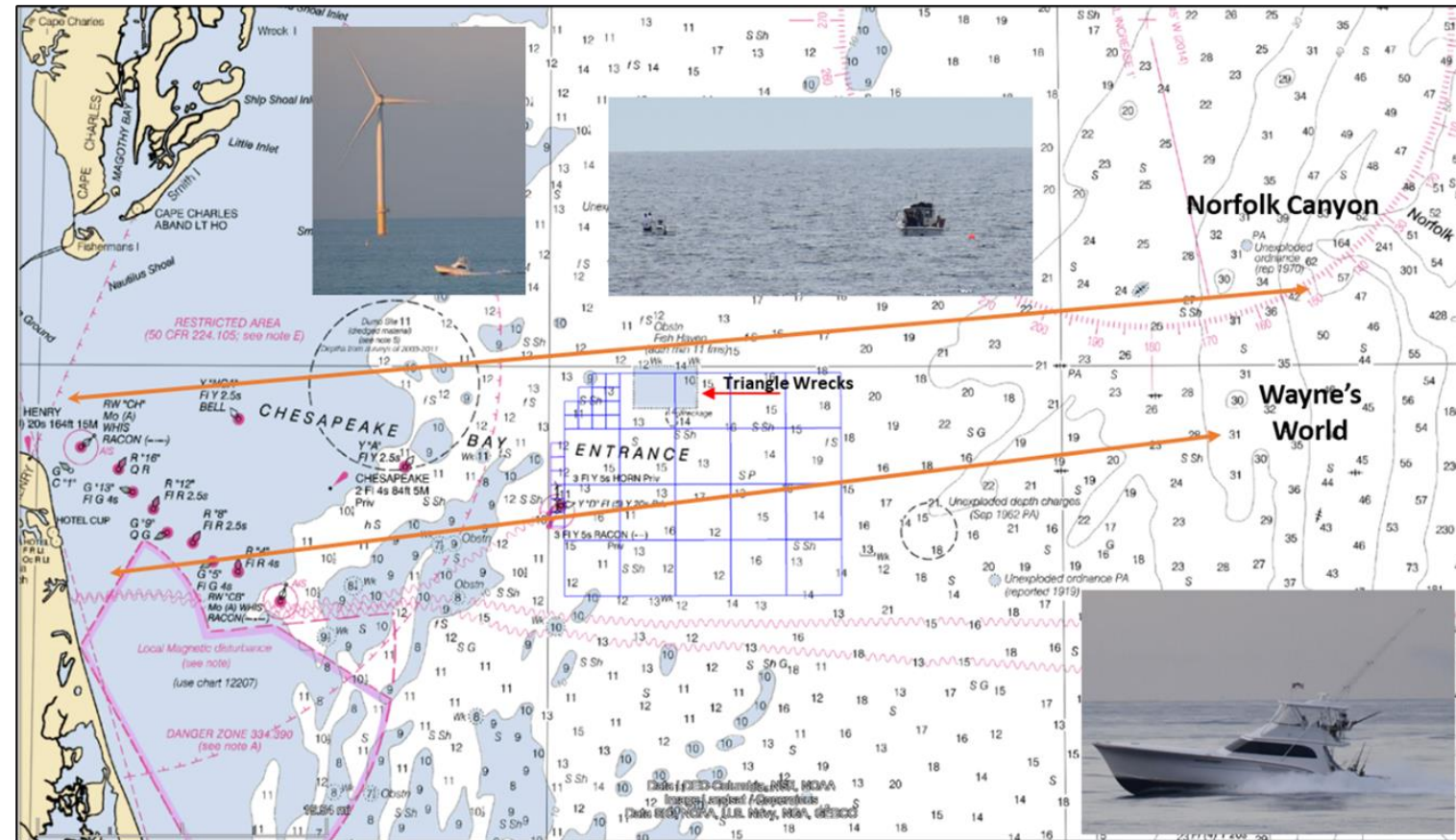
Navigational Safety – Potential Impacts

During Construction

- Short-term increase in project related vessel traffic, including a temporary displacement of existing regional and military vessel traffic.
- USCG Local Notice to Mariners will be updated for obstructions and safety related information.
- Vessel allision risk with partially installed structures during construction

During Operation

- Displacement of traditional large vessel traditional navigation routes
- Vessel allision risk with WTGs and OSSs
- Temporary diversion of smaller vessel traffic during O&M activities
- Possible impacts to marine radar, HF Radar and Air surveillance radar due to WTGs.

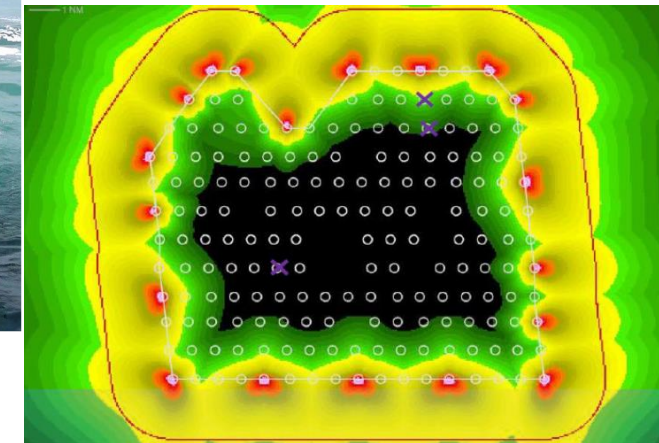


Lighting and Marking

- Unique alpha numeric identifier on each structure, visible from air and waterline, provides position within the wind farm by row and column
- Structures will be marked with appropriate Navigational Lighting to warn mariners from sunset to sunrise.
- Marine navigation lighting is synchronized across the wind farm by structure type, and range and flash sequence changes as you go further within the wind farm
- Mariner Radio Activated Sound Signal (MRASS)
- Automatic Identification System (AIS).; Physical and virtual AIS overlaid along the entire wind farm

Marine Coordination Center

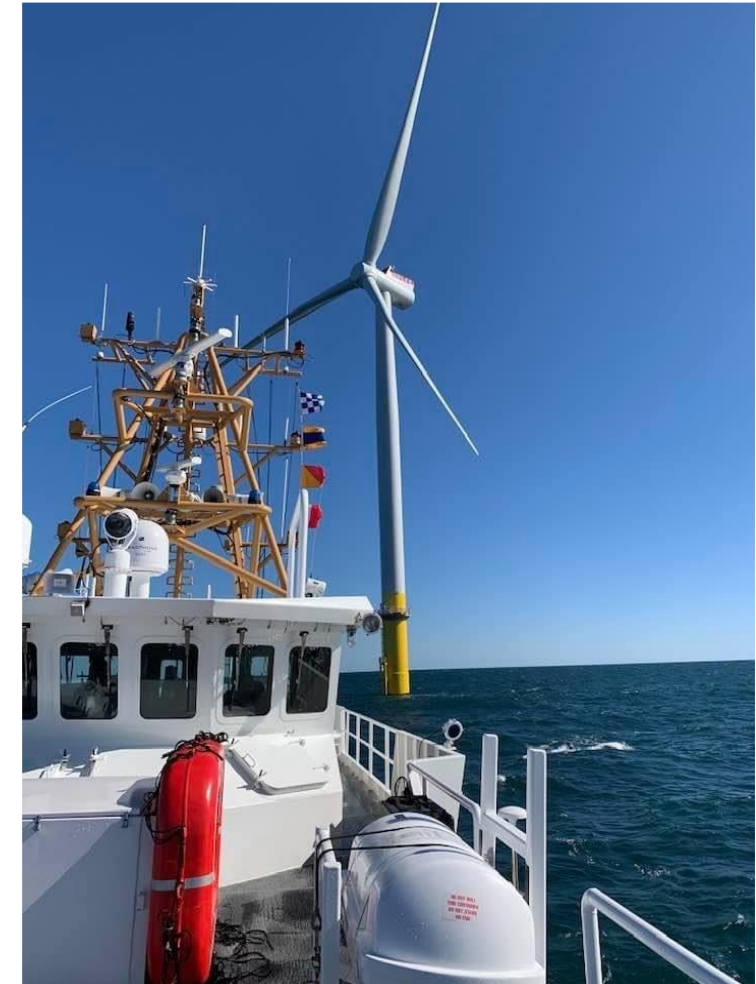
- Continuous monitoring project vessels and third-party vessel traffic within wind farm and general area
- Monitor weather conditions and advise on changing weather patterns
- Monitoring and controlling project personnel accessing WTGs
- Communication systems include public address, general alarm, closed circuit television, and local area network (LAN)



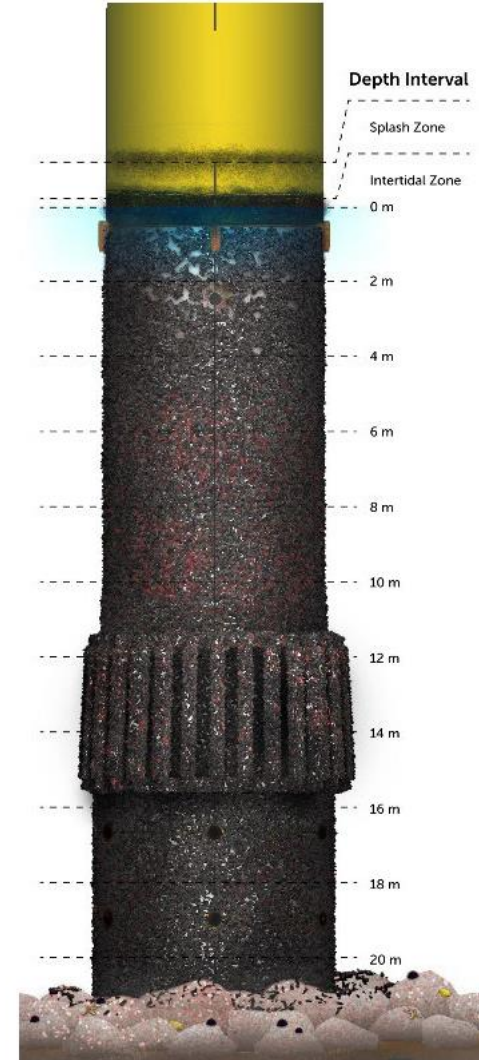
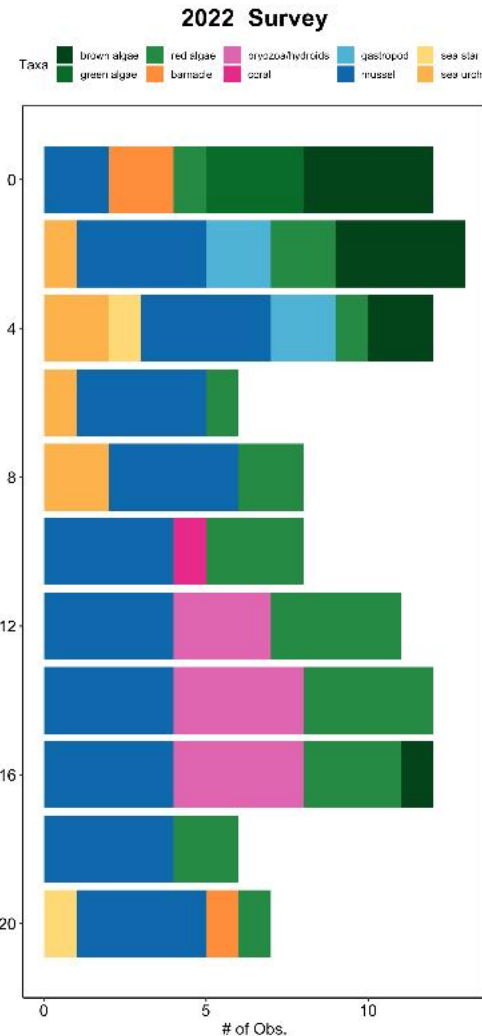
Navigation Safety - SAR

Search and Rescue:

- Near continuous on-scene project vessel presence, Construction/O&M
- Operations Center will monitor wind farm and surrounding area, including third-party and project vessel traffic
- During SAR operations to reduce visual distraction, physical collision, and turbulence risk to helicopters, Operations Center personnel can shut down WTGs individually, or in a string, or across the complete array
- SAR procedures will be discussed and agreed with the USCG in advance of construction and will be updated as necessary in liaison with the USCG
- SAR procedures will include project vessels assisting with non-project related SAR in the vicinity of the wind farm



Fishing Opportunities



- Surveys conducted by Dominion Energy and reports from recreational anglers and divers indicate abundant life
- Monopoles act as vertical reef structure, holding fish and bait from top to bottom
- Anode cage, about 40' down from surface, creates structure off the bottom, filled with mussels
- Base of the turbine has rock layer, Scour protection, that extends approximately 75' from the monopole

[Virginia Beach Windmill Fishing \(Cobia, Mahi, Seabass\) - YouTube](#)

Fishing Opportunities

- Fishermen and divers have been utilizing structure created by monopoles since construction complete in OCT-2020
- Tackle shops have provided seminars on how to fish around turbines.
- Following construction, expect recreational fishery to flourish
- Charter fishing opportunities like industry that developed fishing the oil and gas platforms in the Gulf of Mexico

- [Fishing OIL RIGS in VENICE Louisiana!](#)
- [Oil Rig Fishing Louisiana](#)
- [Home Run Fishing Charters Offshore Oil Rig Fishing](#)
- [The Full Guide to Oil Rig Fishing in the Gulf of Mexico](#)
- [Paradise Outfitters Offshore Fishing Charters](#)
- [Salt Walker | Oil Rig Fishing Trips](#)



Fishing Opportunities - Guidelines

- There will be temporary “Safety Zones” in place during construction and maintenance operations, ~500 meters from monopile.
- Do not attempt to touch, bump, tie-off to or access the turbines
- Give way to project vessels involved in project/maintenance activities
- Monitor VHF CH16 to communicate with any safety, construction or operational vessels.
- As always, follow the USCG Rules of the Road for mariners
- Communicate with Fisheries Liaison and/or access the Coastal Virginia Offshore Wind website for fisheries related information about the project.

[Dominion Energy | CVOW Mariners and Fisheries](#)

We welcome your feedback on how we can help improve the recreational fishing experience in the CVOW wind farm.



Questions, Discussion, and Shared Insights

Contact Us:

CoastalVAWind@dominionenergy.com

Ron Larsen

Fisheries Liaison

RonLarsen@searisksolutions.com

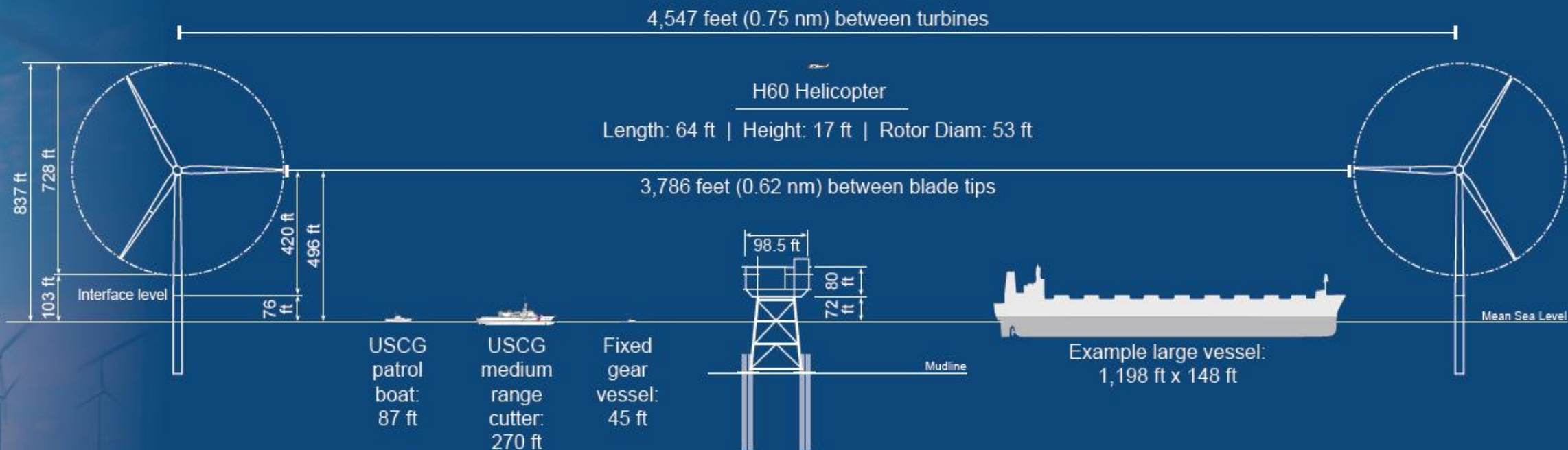
Mike Lewis

Marine Affairs Manager

michael.b.lewis@dominionenergy.com

Coastal Virginia Offshore Wind Commercial Project

Vessel and Aircraft Clearance



Depiction of different types and sizes of vessels and aircraft between two wind turbines, spaced 0.75 nm by 0.93 nm. These vessel and aircraft graphics have been drawn to scale to more accurately demonstrate transportation navigation and clearance between turbines.

