

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
- BOEM Realtime Opportunity for Development Environmental Observations (RODEO) Program <u>Field Observations During</u> <u>Offshore Wind Structure Installation and Operation</u>







Recreational Fishing Opportunities

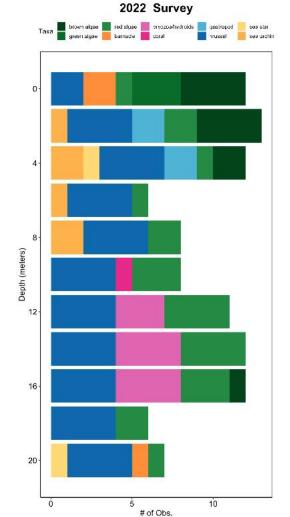


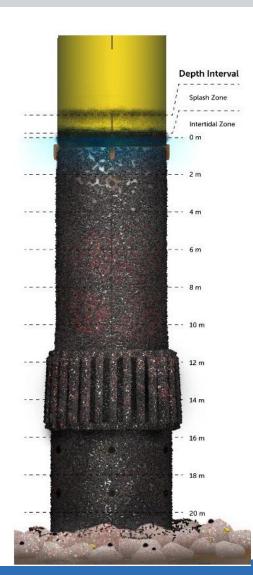
- Surveys conducted by Dominion Energy and reports from recreational anglers and divers indicate abundant life
- Monopoles act as vertical reef structure, holding fish and bait from top to bottom
- Anode cage, about 40' down from surface, creates structure off the bottom, filled with mussels
- Base of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

<u>Virginia Beach Windmill Fishing (Cobia, Mahi, Seabass) - YouTube</u>









CVOW Commercial Project





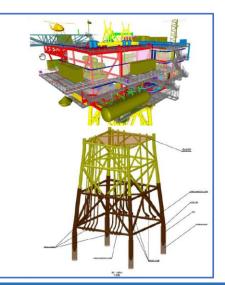
- Largest offshore wind project under development in the United States; 2.6 GW total capacity will power up to 660,000 homes.
- Builds on success of the two-test turbine pilot project
- 176 turbines spaced 1.1 miles (0.93 NM) in the N-S direction, and 0.9 miles (0.75 NM) in the E-W direction
- Scheduled for 2026 completion

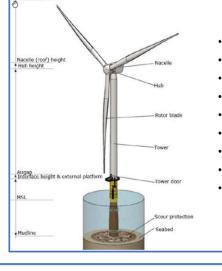
TopsideLength

- Length: 178 ft
- · Width: 98 ft
- · Height: 80 ft
- · Target weight: 4,000 tons

Jacket

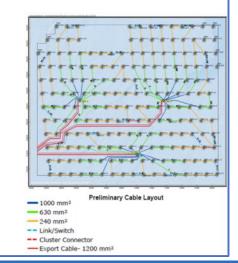
- · Seabed level footprint: 98 X 98 ft
- · Topside footprint: 85 X 85 ft
- Height: 174 ft
- Weight (without piles): ~3,300 tons
- Weight (with piles): ~4,400 tons
- · 4-legged jacket with 4 pilies





- 14.7 MW with power boost
- · 836 ft turbine tip height from MSL
- 728 ft rotor diameter
- 472 ft hub height from MSL
- 358 ft blade length
- · 60 ton blade weight
- 108 ft air gap
- 6.7 mph cut in wind speed
- 62.6 mph cut out wind speed

- Inter Array Cable
 - 66kV
 - 274 miles of cable
 - 7.1" diameter cable
- Offshore Export Cable
 - Nine 230 kV export cables
 - 417 miles of cable
 - 11.2" diameter cable
 - 3 to 16 ft burial depth
- Offshore Sub-Station
 - 3 x 880 MW substations
 - 66-kV-230-kV step up



CVOW Commercial Project - Timeline



Ongoing Offshore Survey Activities

- UXO survey complete 06-MAY-2023; Target assessment w/ROV in progress, confirmed targets shared with authorities (e.g., NOAA & USCG) and posted in Local Notice to Mariners (<u>LNM05222023</u>)
- 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.

Selected Construction Highlights	
UXO Identification	Balance of 2023
CVOW Operations Center Construction	May 2023
1 st Monopile Delivery	October 2023
Onshore Mobilization	November 2023
First Monopile Installation	May 2024
2024 Installation Ends	October 2024
2025 Installation Starts	May 2025
2025 Installation Ends	October 2025
2026 Installation Starts	May 2026
2026 Installation Ends	October 2026
CVOW Construction Completed	December 2026

Fishery Resource Assessment Studies



- Partnership with the Virginia Institute of Marine Science (VIMS), resource assessment studies for Black Sea Bass, Channeled Whelk, and Atlantic Surfclam.
- Black Sea Bass: Before and After Gradient (BAG) design, 8-strings with 6-ventless traps, 1 sampling event/month, 48-hour soak time w/timed buoy release, sites inside lease and control sites area outside lease area; gear in the water June 2023, fishermen support with study design and gear configuration; utilize VIMS R/V Bay Eagle.
- Atlantic Surfclam: w/Rutgers support, utilize survey dredge and F/V Joey D; study design consistent with previous studies; 20-stations inside lease and 20-station outside (40-sample tows in total); work to take place Mid-June 2023.
- Channeled Whelk: Study design agreed, gear acquisition and identifying commercial fishing vessels for cooperative support process.





Fisheries Mitigation and Compensation Planning



- Continue to plan offshore operations to avoid/minimize impacts to existing fisheries uses within the project area;
 - Survey vessels have been successful operating around fixed gear with very few interactions;
 - One gear claim filed to date and paid according to the Gear Damage/Loss Claim Process.
- Dominion Energy supports the ongoing activity being coordinated by the SIOW to establish a regional fisheries compensatory mitigation fund.
- Absent a fund being established ahead of the CVOW construction activities, Dominion Energy is working with the Commonwealth of Virginia, through the Virginia Marine Resources Commission (VMRC), to establish a funding mechanism/plan to be available in advance of construction.
- Funding levels for the Dominion Energy proposed compensatory mitigation fund would be based on direct input from fishermen that utilize the area, assumption of landings for data poor fisheries, and data from Socioeconomic Impacts of Atlantic Offshore Wind Development (OCS-A-0483)
 Socioeconomic Impacts of OSW)

