

Offshore wind project completes final step, ready to deliver renewable energy to Virginians

by: [Nicole Brailer](#)
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VIRGINIA BEACH, Va. (WAVY) — Dominion Energy announced Wednesday that the Coastal Virginia Offshore Wind (CVOW) pilot project has completed the final stage of testing and is ready to enter commercial service providing clean, renewable energy to Virginians.

“This is a monumental day for the Commonwealth and the burgeoning offshore wind industry in America as CVOW is ready to deliver clean, renewable energy to our Virginia customers,” said Joshua Bennett, Dominion Energy vice president of offshore wind.

“Our team has worked diligently with key stakeholders and regulators while safely navigating through the coronavirus pandemic to complete this vitally important project that is a key step to reducing carbon emissions,” Bennett continued.

The next step for the two turbine, 12-megawatt project is submitting final documentation to the Bureau of Ocean Energy Management (BOEM) to complete its technical review — which is expected to be complete by the end of the year.

Dominion Energy officials say that the turbines will remain operational during the review process. The project is the only one permitted under BOEM and will be the “first fully operational wind power generation facility in U.S. federal waters with the capability to generate enough electricity to power up to 3,000 Virginia homes.”

Offshore wind generation is a significant portion of Dominion Energy’s comprehensive clean energy plan to meet Virginia Clean Economy Act standards by achieving net-zero carbon dioxide and methane emissions throughout the state by 2050.

That project, which is the largest announced offshore wind project in North America, is on track to commence construction in 2024, and upon completion, will provide enough renewable electricity to power up to 660,000 homes.

Glen Allen-based Mangum Economics recently conducted an economic impact study published by the Hampton Roads Alliance that estimates the CVOW project may create about 900 jobs and \$143 million in economic impact annually during construction. During the operation of the turbines, an estimated 1,100 jobs, and nearly \$210 million in economic impact can be expected annually.

The study also estimates that during construction, the 2.6-gigawatt CVOW commercial project is estimated to generate nearly \$5 million per year in local and state tax revenue which potentially increases to about \$11 million annually once the project is commissioned and operational.

Dominion Energy says customers will not see an increase in rates for the pilot project under the provisions of the Grid Transformation and Security Act of 2018.

Last year, Old Dominion University established an offshore wind task force to help with preparations as Dominion Energy worked to build the 220-turbine wind farm 27 miles off the Virginia Beach coast. Once complete, the \$7.8 billion project would be the largest offshore wind farm in the country.

The installation of the two pilot turbines was completed in June. Ørsted served as the offshore engineering, procurement, and construction lead for the pilot project. The L. E. Myers Company with members of the International Brotherhood of Electrical Workers performed the onshore construction work.



Work continues on Dominion Energy's proposed 2.6-gigawatt commercial wind project and its Construction and Operations Plan is on schedule to be submitted to BOEM later this year.

For more information on the Coastal Virginia Offshore Wind (CVOW) project, click <https://www.dominionenergy.com/cvow> .

Coastal Virginia Offshore Wind

Dominion Energy's dedication to a clean environment continues to be reflected in renewable energy initiatives such as our Coastal Virginia Offshore Wind (CVOW) project. It will be only the second offshore wind project in the nation and the first owned by an electric utility company.

It is also an important steppingstone toward commercial-scale offshore wind development, furthering Dominion Energy's commitment to 3,000 megawatts of solar and wind energy under development or in operation by the beginning of 2022.

The CVOW project calls for development of two 6-megawatt wind turbines on a site leased by the Virginia Department of Mines Minerals and Energy (DMME). Dominion Energy has an agreement with DMME to build and operate the turbines within the 2,135-acre site, which lies 27 miles off the coast of Virginia Beach.

On November 2, 2018, the Virginia State Corporation Commission approved the project and granted a certificate of public convenience and necessity to construct and operate the associated Virginia Interconnect Facilities.



We have contracted with a global wind leader - Ørsted Energy of Denmark - for construction of the two turbines. And Dominion Energy has selected the L.E. Myers Company to perform onshore electrical design and construction.

The CVOW project builds on earlier work carried out under the Virginia Offshore Wind Technology Assessment Project (VOWTAP), which was started five years ago in an effort to lower the cost of offshore wind and test new technologies.

Much of the work performed under VOWTAP is still applicable, including geophysical and geotechnical investigation of the sea floor for the turbine sites and export cable route, metocean studies including hurricane and breaking wave studies and seabed mobility studies.

Construction Updates

As of Summer, 2020 approaches, onshore and offshore construction activities will near completion on the CVOW pilot project! [View the news release. https://news.dominionenergy.com/2020-04-21-Dominion-Energy-Nears-Construction-on-First-Ever-Offshore-Wind-Turbines-in-U-S-Federal-Waters](https://news.dominionenergy.com/2020-04-21-Dominion-Energy-Nears-Construction-on-First-Ever-Offshore-Wind-Turbines-in-U-S-Federal-Waters)

Foundations for the two, 6-megawatt turbines were installed in May while the wind turbines are scheduled to be installed in June, 27 miles off the coast of Virginia Beach. In addition to the turbines, the CVOW project calls for a power cable to bring the clean energy to land. It will be buried under the seabed for much of its length but will ultimately come ashore through a 1,000-meter conduit installed under the beach.

Commissioning and testing of CVOW's two turbines will continue during the summer once the vessel returns to the project site. Meanwhile, a group of smaller ships will oversee final preparations for the power cable, completing its trenching and burial and then connecting it to Dominion Energy's onshore infrastructure. Dominion Energy expects to finish all this work and begin harnessing offshore wind energy in the fall of 2020.

Commercial Offshore Wind Plans

Along with clean energy, the CVOW project will provide Dominion Energy valuable experience in managing offshore wind resources. Specifically, it will provide critical permitting, design, installation, and operational experience as it is the first project to be installed in federal waters under the Bureau of Ocean Energy Management (BOEM) process. [View a news release. https://news.dominionenergy.com/2020-04-27-Dominion-Energy-Remains-on-Schedule-to-Build-Largest-Offshore-Wind-Project-in-United-States](https://news.dominionenergy.com/2020-04-27-Dominion-Energy-Remains-on-Schedule-to-Build-Largest-Offshore-Wind-Project-in-United-States)

This will further inform development for large-scale commercial wind deployment in the adjacent Virginia Wind Energy Area leased by Dominion Energy from BOEM. It will also help create the expertise and the necessary domestic supply chains that will ultimately lower the costs of offshore wind development.

In September 2019, we filed an interconnection request with PJM, the regional transmission organization that coordinates the electrical grid in all or parts of 13 states and Washington, D.C., to bring online more than 2,600MW of offshore wind.

Pending regulatory approval, construction is scheduled to begin in 2024, and once construction is complete in 2026, the project will provide enough clean, renewable energy to serve more than 650,000 customers.

This will be the largest single offshore wind project in the nation and surveys are underway at the lease area. These surveys will provide the company with the geological, biological, and oceanographic data needed to support planning and construction in a manner that facilitates coexistence between the natural marine ecosystem and clean energy development. Ultimately, this data will support preparation of the project's Construction and Operations Plan to be submitted to the Bureau of Ocean Energy Management (BOEM) later this year.

About the Project

The first phase of the CVOW project calls for the development of two 6-megawatt wind turbines on 2,135-acre site leased by the Virginia Department of Mines Minerals and Energy. Dominion Energy has an agreement with DMME to build and operate the turbines there.

Those two turbines should be in operation by late 2020 and will lay the groundwork for potential large-scale development in an 112,800-acre commercial wind site Dominion Energy has leased from the [Bureau of Ocean Energy Management](#).

Dominion Energy will partner with [Ørsted Energy](#) based in Denmark on the two turbines. Ørsted energy is a recognized global leader in offshore wind development.

The project is an important first step toward offshore wind development for Virginia and the United States. It would be only the second offshore wind project in the nation and the first owned by an electric utility company. Along with clean energy it will provide Dominion Energy valuable experience in managing offshore wind resources.

Specifically, it will provide the critical operational, weather, environmental experience needed for the large-scale development.

The CVOW project will build on earlier work carried out the Virginia Offshore wind Technology Assessment Project (VOWTAP), which was started five years ago in an effort to the cost of offshore wind and test new technologies.

Much of the work done by VOWTAP is still applicable, include geophysical and geotechnical investigation of the sea floor for the turbine sites and export cable route, metocean studies including hurricane and breaking wave studies and seabed mobility studies.



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FAQs

Will the turbines be visible from shore?

The turbines will be located approximately 27 miles offshore. That distance and the curvature of the Earth will make it difficult to see the turbines clearly from shore.

How will the electricity be delivered to shore?

A 34-kilovolt distribution line that runs from the turbines to a connection point in Dominion's electrical system near Camp Pendleton was buried approximately 6 feet underneath the ocean floor.

How many homes will the two turbines installed in 2020 serve?

The 12 megawatts produced by the turbines will serve 3,000 customers.

What is the total potential of the Virginia offshore wind area?

Our PJM application outlines a proposal for a 2,640 MW offshore wind project in the commercial lease area, to be deployed in three phases of approximately 880 MW each. That would be the largest single offshore wind project in the nation and would generate enough clean energy to power 650,000 homes at peak wind.

Will this project interfere with commercial shipping lanes?

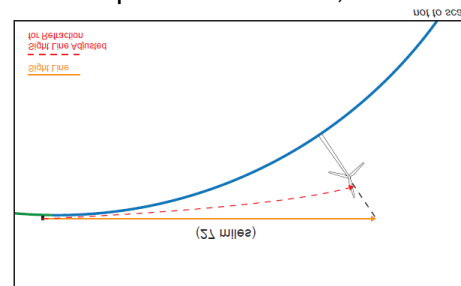
The commercial wind energy area was identified through an intergovernmental task force created by BOEM in 2009. The area was selected after extensive collaboration between the Commonwealth and stakeholders to avoid existing uses of the area, including ecological habitats, military training areas, marine vessel traffic, dredge disposal sites, and other areas of concern.

Will this project threaten birds?

Siting the project approximately 27 miles offshore is expected to reduce impacts to birds since most species stay relatively close to shore. The high-density area where you will find most birds/bird communities is within about two miles of shore. The further offshore you go, the fewer birds and bird communities encountered. Dominion Energy performed a full year of site-specific avian surveys and determined bird activity is relatively low within the offshore portion of the project. In the environmental impact assessment, BOEM concluded that impacts to avian resources due to collisions with the blades are expected to range from negligible to minor.

What is the timeline for commercial-scale offshore

In April 2020, vessels began geophysical studies in the acre project lease area off the coast of Virginia Beach. surveys will provide the company with the geological, and oceanographic data needed to support planning and in a manner that facilitates coexistence between the marine ecosystem and clean energy development. Ultimately, this data will support preparation of the project's Construction and Operations Plan to be submitted to the Bureau of Ocean Energy Management (BOEM) later in 2020.



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How many turbines will be constructed in the commercial scale buildout?

The exact quantity of turbines to be deployed is subject to final project site conditions and the design layout of the wind farm, but it will likely be around 180 turbines.