


# DIRECTION

## THE FUTURE OF WIND

A photograph of two large offshore wind turbines in the ocean. The turbines are white with yellow bases, and their blades are spread out against a clear blue sky. The water is a deep blue with some whitecaps.

The agreement will allow USACE to provide BOEM additional scientific and technical resources needed to evaluate offshore wind projects on the OCS. (Courtesy: BOEM)

# BOEM and USACE collaborate to meet offshore wind goals

In order to increase renewable energy production in offshore waters and help the administration meet its commitment to deploy 30 GW of offshore wind energy by 2030, the Bureau of Ocean Energy Management (BOEM) and the U.S. Army Corps of Engineers (USACE) have entered into an agreement in support of planning and reviewing renewable energy projects on the Outer Continental Shelf (OCS).

The agreement will allow USACE to provide BOEM additional scientific and technical resources needed to evaluate offshore wind projects on the OCS. While the scope of the agreement covers all renewable energy activities in the Atlantic, the initial focus will be on the USACE supporting the review of the Coastal Virginia Offshore Wind Commercial project and the Kitty Hawk project, offshore North Carolina.

The partnership between BOEM and USACE is a result of President Joe Biden's executive order 14008, *Tackling the Climate Crisis at Home and Abroad*, which directed interagency consultation between the Department of the Interior and Department of Defense (DOD) in order to increase renewable energy production on public lands and in offshore waters, while ensuring robust protection for U.S. lands, waters, and biodiversity and creating good-paying jobs.

"This agreement shows the value of a whole-of-government approach to clean-energy development," said BOEM Director Amanda Lefton. "BOEM has a long history of successful collaboration with the DOD and USACE on energy and marine mineral projects. Additionally, our state partnerships are vital to the advancement of BOEM's renewable energy program."

"This partnership is a great example of federal agencies coming together for a common goal: to advance renewable energy solutions for the nation," said USACE North Atlantic Division Programs Director Karen Baker. "We look forward to applying USACE scien-

tific and technical support to enable the BOEM-led team."

The agreement gives BOEM access to USACE technical expertise while planning new leasing in the Atlantic and reviewing National Environmental Policy Act documents, construction and operations plans (project proposals), facility design reports, and fabrication and installation reports.

"The Commonwealth of Virginia and Old Dominion University were pleased to work with BOEM and the U.S. Army Corps of Engineers to develop this expanded review process," said Virginia Gov. Ralph Northam. "We hope that it will provide a clear line of sight for offshore wind development and signals to the world that Virginia and the United States are leaders in offshore wind."

"I applaud the Biden-Harris administration's commitment to advancing clean energy jobs and tackling climate change through additional support for offshore wind development," said North Carolina Gov. Roy Cooper. "North Carolina is a national leader in clean energy and manufacturing, and partnerships like this one support both our environment and economy."

The demand for renewable energy has never been greater. Recent technological advances have enhanced the cost effectiveness of renewable energy projects, and now their tremendous economic potential provides a promising path that will diversify our national energy portfolio, while at the same time combat climate change, create good-paying jobs, and encourage investment in communities.

**MORE INFO** [www.boem.gov](http://www.boem.gov)

## Biden administration advances Pacific offshore wind

Secretary of the Interior Deb Haaland,

National Climate Adviser Gina McCarthy, Under Secretary of Defense for Policy Dr. Colin Kahl, and California Gov. Gavin Newsom recently announced an agreement to advance areas for offshore wind off the northern and central coasts of California. This significant milestone is part of the Biden-Harris administration's goal to create thousands of jobs through the deployment of 30 GW of offshore wind by 2030.

These initial areas for offshore wind development could bring up to 4.6 GW of clean energy to the grid, enough to power 1.6 million homes.

The Department of the Interior, in cooperation with the Department of Defense and the State of California, has identified an area ("the Morro Bay 399 Area") that will support 3 GW of offshore wind on roughly 399 square miles off California's central coast region, northwest of Morro Bay. The Department of the Interior is also advancing the Humboldt Call Area as a potential Wind Energy Area (WEA) off northern California. These identified areas will enable the build out of a significant new domestic clean-energy resource over the next decade or more.

"I believe that a clean-energy future is within our grasp in the United States, but it will take all of us and the best-available science to make it happen. (This) announcement reflects months of active engagement and dedication between partners who are committed to advancing a clean energy future," Haaland said. "The offshore wind industry has the potential to create tens of thousands of good-paying union jobs across the nation, while combating the negative effects of climate change. Interior is proud to be part of an all-of-government approach toward the Biden-Harris administration's ambitious renewable energy goals."

The announcement comes after years of collaboration between the departments of the Interior and Defense



Pacific offshore wind development could bring up to 4.6 GW of clean energy to the grid, enough to power 1.6 million homes. (Courtesy: U.S. Department of the Interior)

to find areas off the central coast of California that are compatible with the Department of Defense's training and testing operations. The Bureau of Ocean Energy Management (BOEM) issued a Call for Information and Nominations for offshore wind on October 19, 2018, for three areas off the central and northern coasts, including Humboldt and Morro Bay.

The Department of Defense engages in significant testing, training, and operations off the coast of California that are essential to national security. The Department of the Interior acknowledges the critical nature of current and future military testing, training, and operations and acknowledges that ensuring the operational integrity thereof is a national security imperative. Interior's Bureau of Ocean Energy Management will work with the Department of Defense to ensure long-term protection of military testing, training, and operations, while pursuing new domestic clean energy resources.

"Tackling the climate crisis is a national security imperative, and the Defense Department is proud to have played a role in this important effort," Kahl said. "The Defense Department is committed to working across the U.S. government to find solutions that support renewable energy in a manner

compatible with essential military operations. Throughout this effort, the Defense Department has worked tirelessly with the White House, the Department of the Interior, and the State of California to find solutions that enable offshore wind development, while ensuring long-term protection for testing, training, and operations critical to our military readiness. The Defense Department applauds this step and looks forward to continued coordination to address the climate crisis."

In addition to contributing to the goals of the Biden-Harris administration, the development of offshore wind can help California reach its goal of carbon free energy by 2045, create good-paying, union jobs, and foster investments in coastal communities. Offshore wind resources are typically stronger and more consistent than land-based wind and is especially strong in the evening hours when solar production drops off, ensuring it can make an important contribution to California's electric grid.

"Developing offshore wind to produce clean, renewable energy could be a game changer to achieving California's clean energy goals and addressing climate change — all while bolstering the economy and creating new jobs," Newsom said. "This historic announcement, which could provide clean power

for up to 1.6 million homes over the next decade, represents the innovative approach we need for a clean energy economy that protects the coasts, fisheries, marine life, and Tribal and cultural resources we value so much as Californians."

BOEM, in partnership with California, will hold an Intergovernmental Renewable Energy Task Force meeting June 24 to discuss the identified areas off the north and central coasts as potential WEAs. Following the task force meeting, the WEAs can be finalized and will undergo environmental analysis; BOEM will also undertake government-to-government tribal consultation. The processes for the northern and central coasts will then be merged in a proposed sale notice (PSN) for one lease sale auction, targeted for mid-2022.

**MORE INFO** [www.doi.gov/priorities/clean-energy-future](https://www.doi.gov/priorities/clean-energy-future)

## Decarbonization development would cut emissions

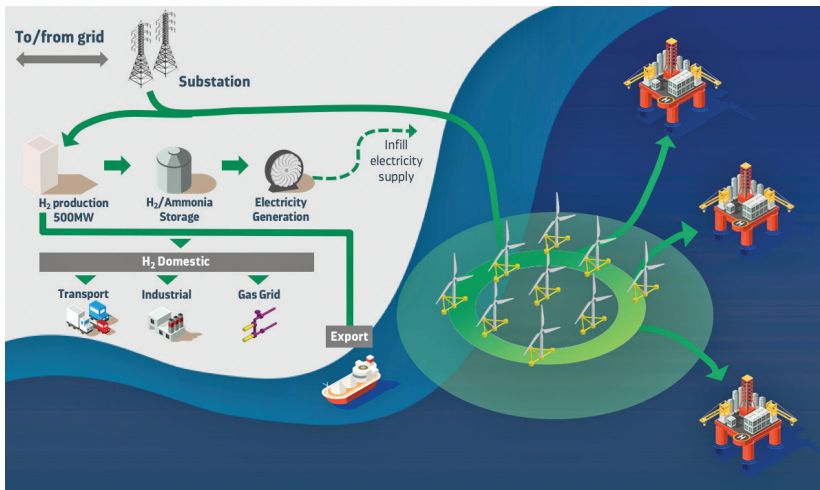
Green infrastructure developer Cerulean Winds has revealed an ambitious plan to accelerate decarbonization of oil and gas assets through an integrated 200-turbine floating wind and hydrogen development that would shift the dial on emissions targets and create significant jobs.

The £10 billion proposed green infrastructure plan would have the capacity to abate 20 million metric tons of CO<sub>2</sub> through simultaneous North Sea projects West of Shetland and in the Central North Sea.

The venture is now calling on U.K. and Scottish governments to make an exceptional case to deliver an extraordinary outcome for the economy and the environment. A formal request for seabed leases has been submitted to Marine Scotland.

Cerulean Winds is led by entrepreneurs Dan Jackson and Mark Dixon, who have more than 25 years' experience working together on large-scale





The £10 billion proposed green infrastructure plan would have the capacity to abate 20 million metric tons of CO<sub>2</sub> through simultaneous North Sea projects West of Shetland and in the Central North Sea. (Courtesy: Cerulean Winds)

offshore infrastructure developments in the oil and gas industry. They believe the risk of not moving quickly on basin wide decarbonization would wholly undermine the objectives set out in the recent North Sea Transition Deal.

“The U.K. is progressing the energy transition, but a sense of urgency and joined-up approach is required to enable rapid decarbonization of oil and gas assets or there is a risk of earlier decommissioning and significant job losses,” said Jackson, founding director of Cerulean Winds.

“Emissions are quite rightly no longer acceptable, but with emissions penalties and taxes coming, the U.K. oil and gas industry’s role in home-grown energy security during the transition could be threatened unless current decarbonization efforts can be greatly speeded up. The consequences of not moving quickly enough will be catastrophic for the economy and the environment.”

The Cerulean leadership has Tier 1 contractors in place to deliver the UKCS backbone development and has engaged the financial markets for a fully funded infrastructure construct.

The proposed development involves:

- More than 200 of the largest floating turbines at sites West of Shet-

land and in the Central North Sea with 3 GW per hour of capacity, feeding power to the offshore facilities and excess 1.5 GW per hour power to onshore green hydrogen plants.

- Ability to electrify the majority of current UKCS assets as well as future production potential from 2024 to reduce emissions well ahead of abatement targets.

- 100 percent availability of green power to offshore platforms at a price below current gas turbine generation through a self-sustained scheme with no upfront cost to operators.

- The development of green hydrogen at scale and £1 billion hydrogen export potential.

- No subsidies or CFD requirements and hundreds of millions of pounds to government revenue via leases and taxation through to 2030.

Cerulean has undertaken the necessary infrastructure planning for the project to ensure the required level of project readiness, targeting financial close in Q1 2022. Construction would start soon after with energization beginning in 2024. An infrastructure project finance model, commonly used for major capital projects is being adopted.

Société Générale, one of the leading European financial services groups, is advising Cerulean Winds.



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“The Cerulean UKCS decarbonization project has the potential to meet all of the basin’s transition needs by reducing oil and gas emissions as quickly as possible whilst also introducing large scale green energy,” said Allan Baker, Global Head of Power Advisory and Project Finance. “We are pleased to be supporting the leadership on what is a transformational proposition for the U.K.”

Corporate finance advisers to the

energy industry Piper Sandler are also advising.

“The Piper Sandler investment bankers in the U.K. and in the U.S. have partnered with Cerulean’s leadership over the last year to develop the UKCS decarbonization model, and we are pleased that it is now at the regulatory approval stage,” said Tim Hoover, managing director, Project Finance Investment Banking at Piper Sandler. “It is a scheme that understands the needs

and requirements of the financial markets to make it bankable.”

Cerulean estimates the current 160,000 oil and gas jobs can be safeguarded, and 200,000 new roles within the floating wind and hydrogen sectors will be created within the next five years.

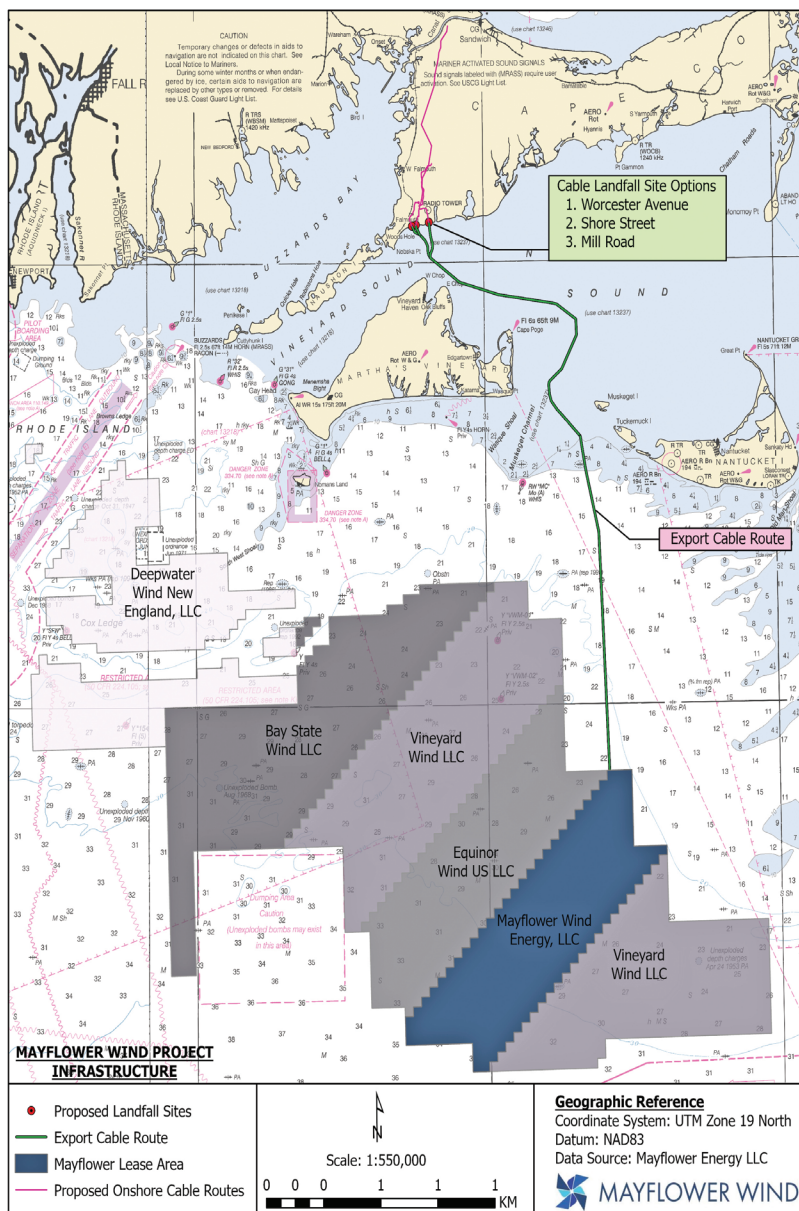
“We have a transformative development that will give the U.K. the opportunity to rapidly decarbonize oil and gas assets, safeguard many thousands of jobs, and support a new green hydrogen supply chain,” Jackson said. “The decision to proceed with the scheme will ultimately rest with the Scottish government and Marine Scotland and their enthusiasm for a streamlined regulatory approach. The ask is simply that an exceptional decision is made for an extraordinary outcome. We are ready to deliver a self-sustained development that will decarbonize the UKCS and be the single biggest emissions abatement project to date.”

**MORE INFO** [ceruleanwinds.com](http://ceruleanwinds.com)

## Mayflower Wind, Anbaric announce offshore agreement

Mayflower Wind and Anbaric Development Partners recently announced they have signed an agreement for Mayflower Wind to use transmission assets developed by Anbaric to bring offshore wind to Brayton Point. Mayflower Wind will bring clean offshore wind energy from its federal offshore energy lease area to Brayton Point, which will lay the foundation for the broad repowering of Brayton Point.

Brayton Point’s robust grid infrastructure and waterfront location make it an ideal interconnection location for offshore wind. The Mayflower Wind offshore wind-energy project will use state-of-the-art high voltage direct current technology that minimizes marine cabling, reduces energy losses, and strengthens the New England grid. Over the past three years, Anbaric has taken steps to develop the site as an optimal location to integrate



Mayflower wind project infrastructure. (Courtesy: Mayflower Wind)

offshore wind into the New England electric grid. Throughout that time, there have been many collaborative conversations between Anbaric and Mayflower about the electrical connection that would be a key element in the regeneration of Brayton Point.

When fully built out, and with continuing advancements in wind technology, Mayflower Wind's lease area will supply more than 2,000 MW of offshore wind, enough to power nearly a million homes. Mayflower Wind's use of the existing grid connection will help set in motion the development of supporting infrastructure at Brayton Point needed to revitalize the former coal plant site and enable Somerset and the South Coast to benefit from the rapidly expanding offshore wind industry. This cable landing in Somerset will supplement Mayflower's long-standing and continuing efforts in Falmouth on Cape Cod.

"Mayflower Wind is committed to helping Massachusetts and New

England achieve their ambitious clean-energy goals," said Mayflower Wind CEO Michael Brown. "The transmission infrastructure at Brayton Point initially developed by Anbaric, and now owned by Mayflower, will help us make those goals a reality. We look forward to collaborating with the community as we invest in and develop this project to bring clean energy to Brayton Point and beyond."

"We are thrilled to be collaborating with Mayflower Wind to bring our unique expertise to scale offshore wind and achieve renewable energy goals," said Anbaric CEO Clarke Bruno. "Brayton Point is a unique site to bring offshore wind to our shores while also bringing infrastructure investment and responsible development to the local community."

For 50 years, Brayton Point was home to the 1,600-MW coal-fired Brayton Point Power Station, the largest coal-fired power plant in New England and the last in Massachusetts. The

plant was closed in 2017, and in 2019, Anbaric presented a vision to create a Renewable Energy Center on the site of the shuttered plant. One aspect of that vision was bringing power ashore at Brayton Point — Mayflower Wind is now moving to translate that element into reality.

Mayflower Wind is continuing with its efforts in Falmouth, Massachusetts, to connect its first 804-MW project into the New England electric grid via the Cape Cod interconnection point.

"Massachusetts just issued its third solicitation to bring up to another 1,600 MW of offshore wind online," Brown said. "Mayflower Wind looks forward to delivering on the Commonwealth's commitments to achieve net zero carbon emissions by 2050. Our position at Brayton Point only strengthens our efforts to provide additional clean offshore wind energy to New England." ✎

**MORE INFO** [www.mayflowerwind.com](http://www.mayflowerwind.com)



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