

News release
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Diamond Offshore Wind, RWE Renewables join the University of Maine to lead development of Maine floating offshore wind demonstration project

Orono, Maine — The University of Maine will collaborate with New England Aqua Ventus, LLC (NEAV), a joint venture between Diamond Offshore Wind, a subsidiary of the Mitsubishi Corporation, and RWE Renewables, the second largest company in offshore wind globally, to develop UMaine's floating offshore wind technology demonstration project off the coast of Maine.

As the developer, NEAV will own and manage all aspects of permitting, construction and assembly, deployment and ongoing operations for the project. UMaine's Advanced Structures and Composites Center will continue with design and engineering, research and development and post-construction monitoring.

The project will consist of a single semisubmersible concrete floating platform that will support a commercial 10-12 megawatt wind turbine and will be deployed in a state-designated area 2 miles south of Monhegan Island and 14 miles from the Maine coast. The purpose of the demonstration project is to further evaluate the floating technology, monitor environmental factors and develop best practices for offshore wind to coexist with traditional marine activities. It will supply clean, renewable electricity to the Maine grid.

Construction, following all permitting, is expected to be completed in 2023.

Sens. Susan Collins and Angus King and Reps. Chellie Pingree and Jared Golden issued a joint statement on the partnership announcement: "For generations, Maine has been a national leader when it comes to using our natural resources sustainably to create jobs, protect our environment and power our economy. The University of Maine's floating deepwater offshore wind project carries on that tradition. We have strongly supported UMaine's development of the Aqua Ventus project. We are proud to see the project's progress and applaud the \$100 million public-private partnership launched today, which will accelerate UMaine's development of its innovative technology and create jobs. Maine's offshore wind resource potential is 36 times greater than the state's electricity demand, making this project so significant for Maine's clean energy future."

An immediate priority for the new development team is to engage with the fishing industry, other maritime users, coastal communities and other interested parties on how to ensure this new

renewable energy source can optimally provide economic growth to Maine and work with maritime industries.

Since 2008, the University of Maine has researched floating offshore wind technology as a solution to Maine's overdependence on imported fossil fuels. After winning funding from the U.S. Department of Energy (DOE), the university worked with Maine-based construction firm Cianbro to build and deploy the first grid-connected offshore wind turbine in the U.S. in 2013, a one-eighth scale prototype of its VoltturnUS floating hull technology. The success of the project led to additional funding from the DOE to further advance the VoltturnUS technology, which has been issued 43 patents to date. The university and Cianbro sought to partner with a world-class offshore wind developer to further demonstrate this technology on a commercial scale. UMaine will continue to own its VoltturnUS floating hull intellectual property and license it to NEAV for this project.

"Diamond Offshore Wind and RWE Renewables bring global expertise in offshore wind project development and construction and we look forward to working with them to demonstrate UMaine's floating hull technology in Maine waters," says Habib Dagher, executive director of UMaine's Advanced Structures and Composites Center, where the VoltturnUS hull technology was invented. "Our design is ideally suited for deepwater deployment anywhere and has the potential to play a significant role in global efforts to decrease dependence on fossil fuels."

Diamond Offshore Wind and RWE Renewables, with years of collective offshore energy experience and success, will invest \$100 million to build the project and help demonstrate the technology at full scale. Combined, the two new partners are responsible for nearly a quarter of the world's offshore wind capacity.

"We are pleased to see the University of Maine continuing to make progress and that new private sector partners recognize the great potential of this project," said Daniel Simmons, assistant secretary of energy efficiency and renewable energy for the U.S. Department of Energy. "This complements the investment of research, development and demonstration funding from DOE to advance innovation in a floating design for offshore wind."

Under the Mills administration and with a long history of bipartisan support, Maine has moved boldly ahead on renewable energy and offshore wind development, including enacting legislation authorizing approval by the Maine Public Utilities Commission of the power purchase contract for Aqua Ventus, and initiating a study of the port at Searsport as a potential site to support and develop offshore wind. The governor also accepted the invitation for Maine to join the Bureau of Ocean Energy Management Gulf of Maine Intergovernmental Renewable Energy Task Force, along with New Hampshire and Massachusetts, which is charged with facilitating coordination related to renewable energy activities in federal waters in the Gulf of Maine.

"The strength of Maine's economy, the preservation of our natural resources, the long-term health and well-being of our communities and of future generations depend in great part on our transitioning to clean energy and tackling the threat of climate change," said Gov. Janet Mills. "This new public-private partnership joins world-class offshore wind developers and the University of Maine, and puts us on track to be home to the nation's first floating offshore wind project, reflecting the major economic growth opportunity of the clean energy economy. I am pleased this project is moving forward, and encouraged by the partners' strong commitment to work collaboratively with Maine fishermen to protect and support our traditional industries as we chart a greener future for our state."

"This is a significant milestone for the University of Maine, the offshore wind research team and the state of Maine," says UMaine President Joan Ferrini-Mundy. "As Maine's research university, UMaine is continually advancing its broad land grant, sea and space grant mission. The path

from fundamental research to economic realization is complex, and success takes incredible innovation, persistence and strategic partnerships. Many faculty, staff and students have participated in the development of this technology, and will continue to support the energy and marine economy as this project transitions to the private sector. This collaboration exemplifies our role and commitment to creating and supporting the future of Maine.”

NEAV will continue to involve Maine companies in permitting, construction and assembly, deployment, and ongoing operations and maintenance of the project. In addition, NEAV has committed to working with the University of Maine on research, development and design to take the technology elsewhere in the U.S. and the world. The concrete hulls are designed to be built in communities adjacent to potential projects, generating local construction jobs and other benefits during the building and assembly phase.

The project is projected to produce more than \$150 million in total economic output and create hundreds of Maine-based jobs during the construction period.

“Cianbro has been a founding member of the Aqua Ventus team for over ten years and we remain deeply supportive and committed to the development of offshore wind in Maine,” says Pete Vigue, chairman of The Cianbro Companies. “We look forward to working with the NEAV team and all related stakeholders to complete the initial demonstration unit.”

The developers also will work with the University of Maine System, the Maine Community College System and Maine Maritime Academy to attract K–12 students to science, engineering and business programs, prepare college students and help to create a skilled workforce in Maine with the technical skills necessary to support offshore wind development and operation.

“We are pleased to partner with the university to bring its ideas for floating offshore wind to fruition,” says Chris Wissemann of Diamond Offshore Wind. “This project south of Monhegan is a perfect opportunity to demonstrate a new technology that can be built in Maine, create jobs in Maine, and demonstrate how fishing and offshore wind can co-exist. Together with RWE, our engineers conducted an extensive due-diligence review of UMaine’s VoltturnUS floating wind technology, and believe it is a world leader in floating wind that reduces costs and creates local jobs. We are really focused on creating economic opportunities for Maine as this new carbon-free economy emerges.”

“We see great potential for floating wind farms worldwide, especially in countries like the U.S., with deeper coastal waters,” says Sven Utermöhlen, chief operating officer, Wind Offshore Global of RWE Renewables. “This innovative project combines the University of Maine’s knowledge with the state’s maritime heritage, allowing RWE Renewables to gain the experience that can help us provide future opportunities to grow local economies and produce clean, renewable power.”

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About the University of Maine and its Advanced Structures and Composites Center:

Founded in 1865, the University of Maine is a land, sea and space grant institution. The flagship campus of the University of Maine System is Maine’s only public research university. This vibrant and dynamic university serves Maine, the nation, and the world through its teaching, research and public engagement mission. UMaine students come from every county in Maine, more than 49 other states and 70 countries. Moreover, its nationally and internationally recognized research and graduate programs have global impact and local relevance in diverse areas,

ranging from the energy, environment, marine and forestry sectors, to community revitalization, cultural preservation and advances in human health.

The Advanced Structure and Composites Center (ASCC) is the largest research center at the University of Maine. Founded in 1996 through a National Science Foundation award, it is housed in a 100,000-square-foot laboratory with 250 employees and students. ASCC is focused on green energy and materials research, has over 500 clients and partners worldwide, and has received top international awards for its research. It is home to the Alford W² Wind-Wave Ocean Engineering Laboratory, as well as the second-largest wind blade testing facility in the U.S. In 2013, it deployed VoltturnUS 1:8, the first grid-connected offshore wind turbine in the US.
composites.umaine.edu

About Diamond Offshore Wind: Diamond Offshore Wind (DOW) is a wholly owned subsidiary of Diamond Generating Corporation (DGC), a wholly owned subsidiary of Mitsubishi Corporation (MC), and was formed by DGC to develop, own and operate offshore wind projects in the U.S. Building on MC's success in the global offshore wind market and DGC's deep experience and outstanding performance as a U.S. independent power producer, DOW is uniquely positioned to be a strong, long-term leader in the burgeoning U.S. market.
dgc-us.com

About RWE Renewables: RWE Renewables, the newest subsidiary of the RWE Group, is one of the world's leading renewable energy companies. With around 3,500 employees, the company has onshore and offshore wind farms, photovoltaic plants and battery storage facilities with a combined capacity of approximately 9 gigawatts. RWE Renewables is driving the expansion of renewable energy in more than 15 countries on four continents. For further growth a net investment budget of €5 billion is available until 2022. When adding in possible partnerships, the medium-term investment budget could reach up to €9 billion. The focus is on the Americas, the core markets in Europe and the Asia-Pacific region.
americas.rwe.com

About Cianbro: Cianbro is a Maine-based, 100 percent employee-owned and fully diversified construction company operating in over forty states including its affiliated companies Starcon and A/Z Corp. Cianbro has operated continuously for over seventy years and is recognized as an industry leader in multiple markets across the United States.
cianbro.com

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