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Vineyard Wind project halted after turbine blade incident

Luther Turmelle : 7-9 minutes : 8/6/2024



Wind turbines off Block Island, R.I. CT-based Avangrid and Eversource are moving ahead with plans for wind farms off the southern New England coast, providing Connecticut with a new source of emission-free electricity. But activity on Avangrid's Vineyard Winds farm was halted a few weeks ago after one of the turbine blades broke off, smashed into the sea, and washed ashore beaches on Nantucket. The incident is under investigation. (AP Photo/Michael Dwyer, File)

Michael Dwyer / Associated Press

The massive blade that broke off a windmill tower, splashed down into the ocean and had pieces wash up on Nantucket beaches a few weeks ago is having repercussions here today in Connecticut.

The joint venture project being developed by a division of Orange-based Avangrid and a Dutch renewable energy company is under scrutiny, even as construction of the 806-megawatt offshore wind farm came to halt in mid-July when a 300-foot section of a 360-foot blade broke off one of the turbines that are part of Vineyard Wind. The project, which is a joint venture of Avangrid Renewables and Copenhagen Infrastructure Partners, is being developed about 15 miles south of Martha's Vineyard and Nantucket, and 35 miles from mainland Massachusetts.

The project began producing 5 megawatts of electricity at the start of 2024 and has gradually been increasing its power production, but that energy production has also been halted as the investigation into what caused the turbine blade to break off is still underway. The joint venture partners are also still scrambling to clean up the shards of fiberglass from the turbine that smashed into pieces and washed ashore beaches on both islands during the height of the summer tourist season.

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Brad Campbell, president and chief executive officer of the Conservation Law Foundation, a Boston-based environmental advocacy group, said he's had regular conversations with Avangrid executives about the serious nature of the predicament.

"They have mobilized in the way that is needed to focus on the problem and make sure this is being taken care of as quickly as possible," Campbell said.

Nantucket officials did not respond to several attempts to get their perspective on the current status of the clean-up.

Campbell said he hasn't seen any estimates yet on the financial impact that the detritus from the shattered turbine blade washing ashore has had on Nantucket or its tourist industry.

"I think that most people recognize that when the Vineyard Wind project and the others that come after it go into effect, they are going to offset the use of fossil fuels, an industry that has had a catastrophic environmental record," he said. "The problem with the turbine blade needs to be viewed in that context."

Still, as the wind-power industry continues to mature in the United States, an Oregon-based expert on energy projects, Robert McCullough, managing partner of McCullough Research, said the Vineyard Wind incident ought to result in a serious reassessment of wind power projects by government and industry officials. McCullough said that the turbines, blades and other components that are part of wind farms are not being adequately tested in terms of their ability to hold up in the rapidly evolving weather conditions produced by climate change.

"If we're going to spend billions of dollars building these wind farms, we need to be sure they are prepared for weather conditions in 2050, not conditions that existed in 2020," he said. "We are unprepared for the rapid nature of climate change. And we don't have a good sense of how powerful off-shore weather conditions are."

Campbell said after the turbine blade shattered, continued construction of the wind farm was stopped as was power production from the portion of the Vineyard Wind project that has already been completed in order to conduct a proper investigation. But a Vineyard Wind spokesman said late last week that some work activity involved in the development of the wind farm has been allowed to resume.

"The federal Bureau of Safety and Environmental Enforcement has issued a revised suspension order that clarifies the activities that are suspended and outlines actions that must be taken and information that must be submitted before certain necessary activities can resume at the Vineyard Wind 1 location," a statement from the company read in part. "Vineyard Wind and GE Vernova have submitted the required plans to be in compliance with the order. The work that can happen at this time is limited in scope and will not involve the AW38 wind turbine generator, where the GE Vernova blade failed, and it does not entail the operation or installation of turbines."

The manufacturer of the wind turbines, GE Vernova, has completed the preliminary investigation into what caused the turbine blade to shatter, company officials have said.

"Our preliminary investigation of the event indicates that the affected blade experienced a manufacturing deviation; in this case, insufficient bonding that the quality assurance program should have identified," a statement from GE Vernova read in part. "There is no indication of an engineering design flaw in the blade or information connecting this blade event to the blade event we experienced at an offshore wind project in the UK, which was caused by an installation error out at sea. Our investigation is ongoing, and we are working with urgency to scrutinize our blade manufacturing and quality assurance program across offshore wind."

Officials with the company have said that they still "have work to do, but we are confident in our ability to implement corrective actions and move forward."

A Vineyard Wind spokesman said the company and GE Vernova "have established a rigorous debris recovery system by land, air, and sea, all under established safety protocols."

"GE Vernova and Vineyard Wind have staged crews on Nantucket and other coastal communities to assist in the recovery of debris; dispatched maritime crews on multiple nearby vessels to secure as much debris as possible for immediate containment and

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removal; and conducted aerial reconnaissance." the statement from the joint venture company read in part. "Vineyard Wind has also utilized a combination of vessel surveying, aerial monitoring, and U.S. Coast Guard modeling, to track the potential path of debris, and is coordinating with local communities and utilizing mobilized resources to assist in the collection debris both offshore and onshore."

Officials with Vineyard Wind and GE Vernova did not respond to questions about the impact the broken turbine blade incident might have on the completion of the project or future wind farm projects.

The clean up of the broken turbine blade and the investigation into how it broke is coming at a critical juncture for the wind power industry and the New England states that hope to benefit from the renewable energy projects.

Massachusetts, Connecticut and Rhode Island will announce on Wednesday the winning bids that they have accepted for offshore wind development. The three states announced the joint procurement effort last October.

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