

Offshore wind turbine test center planned for Eastern Shore

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A new international partnership of energy companies announced plans Wednesday to build a facility in Northampton County, Va., where offshore wind turbines can be tested on solid ground.

The project may mean about 25 new jobs on the Eastern Shore in the short term, but it also could bolster Virginia's Hampton Roads region's long-term prospects to become a supply hub for the offshore energy industry.

Poseidon Atlantic LLC, a joint-venture between Ecofys, a subsidiary of Dutch utility Eneco, and Real NewEnergy, a Rockville, Md.-based alternative energy consulting firm, plans to start developing the site in the second half of 2012.

The site will consist of up to 10 "test pads" on which private developers can build power-generating <u>wind turbines</u> that stretch as high as 750 feet. Before being installed offshore, wind turbines must gain certification from independent regulators, who determine whether the units meet standards on design, power performance, noise emissions and structural integrity.

Supporters of the project, including Virginia Gov. Bob McDonnell, the Virginia Port Authority and others, say it could spur a wave of economic development projects in the area, including increased port activity, manufacturing and assembly centers and research facilities dedicated to offshore wind.



Under Poseidon's plan, the firm would build the infrastructure, including tie-ins to the <u>electric grid</u> owned by Old Dominion Electric Cooperative. It is working with landowners to attain property leases and regulators to obtain proper permits, said Paul Vosbeek, a founding partner of Real NewEnergy.

Poseidon is working with Fugro, another Dutch-based firm, to provide engineering services associated with site location and development of the proposed test center.

Fugro, the world's largest collector of data related to the earth's surface and oceans, plans to begin installing wind-measurement equipment on the Eastern Shore within the next two months, said Sally McNeilan, a business development manager at the company's Norfolk, Va., office.

Once construction of the site is complete in late 2012 or early 2013, turbine developers would lease the test pads from Poseidon to conduct testing and certification.

The total cost of developing and building the facility will range between \$6.5 million and \$9 million, a majority of which must come through third-party investors, Vosbeek said.

"The whole idea is, if we build this project here, manufacturers will bring their turbines here, set them up here and certify them here," he said. "Through that, you're starting to create an offshore wind supply chain in Virginia, which could turn this state into the offshore energy hub on the East Coast."

Vosbeek said Poseidon is in discussions with turbine developers, but he declined to name them.

NEW JOBS



Virginia Lt. Gov. Bill Bolling, who announced the project Wednesday night at a dinner in Baltimore for potential stakeholders, said the project will create up to 25 jobs in Northampton County over the next two years and could result in more than 5,000 new jobs over the long-term.

"The Poseidon Atlantic project has huge potential for Virginia. If this industry takes root and matures, we could create thousands of new jobs in manufacturing, construction, logistics, operations and maintenance activities," Bolling said.

Northampton County, the mostly rural, southernmost county on Virginia's Eastern Shore, recently adopted an ordinance that would allow wind turbines up to 750 feet tall, the size of some of the larger turbine prototypes under development.

While similar facilities exist in Northern Europe, most of them are booked years in advance and operate on European power grids, which has different characteristics from the grid structure in the United States, said George Hagerman, director of offshore wind research for the Virginia Coastal Energy Research Consortium, which is not involved with the project.

On the East Coast, there are two facilities in New England that perform testing on turbine rotor blades and another in South Carolina that tests wind turbines' gear boxes and generators.

"But this would be the first facility dedicated to whole turbine testing," Hagerman said. "There's certainly a need for a facility of this kind. By having the permitting and electrical grid connections in place, it makes things a lot easier for the developers."

One of the partners in the project, Ecofys, is involved with a similar venture in the Netherlands. Built on a 3,000-acre plot in Lelystad, that



site will be able to handle 12 prototype wind turbines and is expected to begin testing in early 2012.

Within three months of that project's announcement, all of its test pads were booked for seven years, according to the company's website.

Test facilities in Europe "tend to draw innovation, entrepreneurs and other business and research interests," Hagerman said. "That economic benefit will materialize much more quickly."

Further down the line, the Poseidon project could help attract European turbine manufacturers to set up operations in the United States, a move that the consortium estimates can save them 10 percent to 20 percent in cost.

GROWING INTEREST

With its announcement, Poseidon joins a growing roster of firms jockeying to harness the emergence of the offshore wind industry in Virginia.

Combined with ideal winds and ocean depths off its coast, the commonwealth's deepwater port with no height restrictions, solid heavy manufacturing base and central position on the Atlantic Ocean have made it a hotbed of activity in the nascent industry.

A partnership between Newport News-based Huntington Ingalls Industries Inc. and the Spanish firm Gamesa launched an Offshore Wind Technology Center in Chesapeake in February.

The center, which now employs about 80 engineers, is developing a fivemegawatt offshore wind turbine prototype for installation in the United States.



Gamesa plans to install its first prototype turbine in the Chesapeake Bay off Cape Charles in the fourth quarter of 2012, said David Rosenberg, a company spokesman.

Then late last week, Norfolk-based Maersk Line Ltd. announced a partnership with Apex Offshore Wind to develop utility-scale offshore wind farms in the U.S.

Charlottesville, Va.-based Apex is involved with the development of offshore wind projects in Virginia, North Carolina, Maryland and on Lake Erie.

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