

5 billion offshore-wind electric grid could launch off Atlantic City coast

By MICHAEL MILLER, Staff Writer | Posted: Thursday, November 18, 2010

The developers behind the East Coast's largest — and only — offshore-wind electric grid say they want to launch the \$5 billion project off the coast of Atlantic City.

The first of the project's three stages would be built between Atlantic City and Rehoboth Beach, Del., in 2013. But eventually — possibly as early as 2020 — the Atlantic Ocean transmission lines would stretch from New Jersey to Norfolk, Va., harnessing as much as 6,000 megawatts of wind power, the equivalent of about nine Oyster Creek nuclear power plants.

“There are two ways to approach transmission for offshore wind,” said Robert Mitchell, chief executive for Trans-Elect, the company proposing the grid.

“One approach is to have each wind farm build its own transmission line to shore. And if you were only going to build a few farms off New Jersey or Virginia or Delaware, that would be just fine,” he said.

“If you want to have a major offshore wind industry, and you want it to be big enough to attract new factories and jobs along the East Coast, you have to have a very large transmission cable to bring that power of several thousand megawatts to shore,” Mitchell said.

Mitchell likened the offshore power grid to the nation's interstate highway system, which was a monumental undertaking in the 1950s that had enduring public benefits.

The U.S. Department of the Interior, which oversees leases to wind companies, envisions wind turbines dotting the Mid-Atlantic to help supply renewable energy. Secretary of the Interior Ken Salazar endorsed the concept of an offshore-wind transmission system when he spoke at a wind convention in Atlantic City this year.

Trans-Elect, based in Bethesda, Md., is partnering with Internet giant Google, international renewable-power company Good Energies and the Japanese firm Marubeni Corp.

Three companies, including Cape May-based Fishermen's Energy, plan to build wind farms off the coast between Atlantic City and Avalon. They would deliver their energy using their own transmission cables linked directly to the New Jersey coast.

None would be obligated to connect to the transmission spine proposed by Trans-Elect. The three wind farms proposed for New Jersey would produce AC power instead of the DC envisioned by Trans-Elect.

Using DC power would enable wind manufacturers to put their turbines farther out to sea without losing energy efficiency, Mitchell said.

“DC line losses are very minimal, even if you go very long distances,” he said. “The wind is stronger and more consistent the farther from shore you go.”

These distant wind farms presumably would face fewer public objections about cluttered ocean views from shore, he said.

Mitchell said this offshore grid would make the nation's power supply more reliable and less susceptible to blackouts such as the one that affected 50 million people in New Jersey and seven other northeast states in 2003.

"We still would have had the blackout, but if our transmission line were in place, power could have been restored much, much faster because of the DC technology we're using," he said.

Fishermen's Energy President Daniel Cohen said his near-shore wind farm 2.8 miles off Atlantic City likely will have its own transmission line. But he is open to the idea of linking his 350-megawatt farm to a bigger grid.

"I think all of this is very forward-thinking," Cohen said.

Ultimately, electric customers will foot the bill. Cohen said the issue of cost must be viewed in terms of wind power's 20-year fixed prices compared to the volatile fluctuations of oil, coal and natural gas.

"Ultimately, ratepayers are going to pay the costs. If you were looking at today's energy prices, you would say, 'Don't build offshore wind,'" he said. "But with offshore wind, we're fixing our prices for 20 years. We know our operational and capital costs."

In addition, the considerable cost of wind farms and transmission systems fare better when viewed through a health and environmental prism that factors in climate change, heavy metals in the ocean and other problems created by fossil fuels.

PSEG Global President Scott Jennings said the transmission system as proposed is expensive. But his company would consider using Trans-Elect's grid, among other options, when it builds its first offshore wind farm in federal waters off New Jersey.

"We're just looking to do this in a cost-effective way," he said. "That line could have its merits. But we don't see that as providing any cost benefit at this stage."

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