

Survey shows strong support for offshore wind power

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This is the Nysted wind farm in the Baltic Sea off Denmark, photographed from a boat in November 2006. Credit: Photo by Jeremy Firestone, University of Delaware

Delawareans are strongly in favor of offshore wind power as a future source of energy for the state, according to a survey conducted by University of Delaware researchers.

When asked to select from a variety of sources to help the state increase its energy supply, more than 90 percent of the 949 Delaware residents responding to the survey supported an offshore wind option--in which whirling wind turbines as tall as 40-story buildings would be erected off the coast to generate electricity--even if wind power were to add between \$1 and \$30 per month to their electric bills. Fewer than 10 percent voted for an expansion of coal or natural gas power at current prices.

The results are highlighted in an interim report released today by the study's authors, Jeremy Firestone and Willett Kempton, who are both marine policy scientists on the faculty of UD's College of Marine and Earth Studies, and doctoral student Andrew Krueger.

Their research was supported by a Green Energy Fund grant from the Delaware Energy Office in the Department of Natural Resources and Environmental Control and by the college.

The policy scientists began the project last February, developed and pilot-tested the survey questions in the spring and summer, and then mailed the 16-page booklet-sized questionnaire to 2,000 Delaware residents in September, with remailings to individuals who had not yet returned their surveys in late October. Of the 1,839 valid mailings to Delaware addresses, 949 were completed and analyzed, for a response rate of better than 50 percent.

Delawareans "Amazingly Supportive"

"Based on our results, Delaware could become the Denmark of the United States when it comes to relying on offshore wind power as a major energy source," Firestone said. "Delawareans are amazingly supportive of it."

And that came as a surprise to the policy scientists.

In 2004 and 2005, Kempton and Firestone had conducted two surveys of residents of Cape Cod about the controversial Cape Wind project, in which Energy Management Inc., a Massachusetts-based company, proposes to establish a wind farm of 130 423-foot-tall wind turbines in Nantucket Sound. They first interviewed 24 Cape Cod residents face-to-face, then did a larger survey of 500 people.

"The Cape Wind project has been under considerable public debate," Firestone said. "We found that a plurality of Cape Cod residents was opposed to that project."

However, the researchers found that nearly 78 percent of Delawareans statewide would give a project identical to Cape Wind a thumbs-up if it were located in Delaware, and only 4 percent would

oppose such a project, with the remainder unsure. another beach," Kempton said.

To compare the Cape Cod and Delaware studies, the researchers included matching questions about the Cape Wind project in the Delaware survey and included photo simulations of how a wind farm at sea would appear at various distances, including from six miles from shore, the approximate distance from Hyannis, Mass., to the proposed Cape Wind project.

"Even in the ocean area, where respondents live, on average, about a half-mile from the coast, support for wind power outnumbers opposition by more than 3 to 1 in Delaware," Firestone noted.

"Interestingly, Delaware respondents who can see the ocean from their home were more supportive of a wind farm, at 59 percent, than all residents of either Cape Cod, at 25 percent, or New Jersey, at 41 percent," he added, noting that the New Jersey statistic is from a recent poll by non-UD researchers.

What accounts for Delawareans' positive opinions about offshore wind power?

It could be due to a range of factors, the scientists say, from "a well-financed opposition" to the Cape Wind project on Cape Cod, to increasing public awareness and concern about changing climate and "global warming," to health impacts and the recent electricity rate hikes in Delaware.

"The short answer is we just don't know yet why Delawareans are so much more supportive," Kempton said. "That's something we're hoping to determine in the more detailed statistical analysis we'll be doing next."

Potential Effects on Beach Visitation

The Delaware survey also included questions to determine any potential effects on beach visitation by in-state residents if a large, 500-turbine wind farm were installed 6 miles off the state's coast.

"Our questions first placed the wind farm off the beach that an individual last visited and asked whether it would cause the individual to switch to

While 88.6 percent would continue to go to the same beach they last went to in Delaware even if a large wind farm were constructed offshore there, 5.6 percent said they would "switch" to another beach in Delaware, another 3.5 percent said they would go to a beach outside Delaware and 2.4 percent said they would visit no beach at all.

"A 5-6 percent loss of tourism could be a serious impact," Kempton said. "However, we also asked if people would be inclined to visit a Delaware beach that they did not typically visit, at least once, where a wind farm was visible offshore. The high response, at 84 percent, suggests that the wind turbines would actually draw visitors instead of drive them away."

This summer, the scientists and their graduate students will survey out-of-state visitors to Delaware's beaches to further explore how an offshore wind farm would affect tourism. That project is funded by the Delaware Sea Grant College Program--a partnership of the National Oceanic and Atmospheric Administration, the state of Delaware and the University that conducts marine research, education and outreach projects throughout the state.

The scientists said one of the reasons they sought to conduct a survey of offshore wind power in Delaware is because there has not been a lot of public debate about the topic here.

"We wanted to study a place along the East Coast where there hadn't been much debate about offshore wind power and compare the results to places like Cape Cod," Firestone noted.

As the UD survey was being administered and analyzed this past fall, Bluewater Wind, a company from Hoboken, N.J., announced that it planned to submit a proposal to Delmarva Power & Light, in response to the utility's solicitation for bids to line up new long-term energy supplies for the state.

State Encourages Nonpolluting Energy Development

The Delaware state legislature had mandated that Delmarva Power & Light solicit the energy bids before the end of 2006 and included preferences for nonpolluting sources of electricity.

"I think interest in wind power and other renewable energy sources is now growing not only in Delaware, but nationally due to the rising cost and long-term supply issues associated with traditional energy sources, as well as other concerns such as global warming," Kempton said.

Kempton and Firestone are part of a research group at the UD College of Marine and Earth Studies that is exploring the science, resource and policy implications of offshore wind power. The group offers a graduate course on offshore wind power, including science, engineering and policy.

Kempton said UD students are interested in the topic, and he has seen increased enrollment across campus in the course.

"We now have a number of graduate students working in this area," he said.

Source: University of Delaware

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