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Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Review of Proposed Town of New Shoreham Project
Pursuant to RI General Laws §39-26.1-7
PUC Docket No. 4111

Dear Ms. Massaro:

I am writing to comment on the proposal by Deepwater Wind to install windmills off Block Island (New Shoreham).

I am not an expert in wind power per se, but do have the ability to analyze the merits of a project like this one. I am a retired Naval Aviator with a background in aeronautical engineering as well as a second career as a General Manager and as a CEO of several manufacturing companies, and was instrumental in marketing Reynolds Aluminum solar hot water systems in the 80s. I have also been involved with funding a number of business mergers, acquisitions, and startup projects.

I know we are all in favor of a cleaner environment and reducing our dependence on foreign oil, and would like to be able to do something about it overall. And in the case of Block Island, it would certainly be nice to be able to improve the cost and reliability of electric power there. But installing windmills in the ocean just isn't an economically or technically viable solution. Further, the project would essentially result in a tax, through increased utility rates, along with the assumption of other liabilities, on not just the residents of Block Island, but all residents of the state, without going through the proper legislative process.

Here are some, but not all, of the problems with offshore windmills in general, and this plan in particular:

1. Offshore wind power is far more costly than other sources, both to install and maintain. In fact, it is many times more expensive than land based systems. Massive taxpayer subsidies are required, along with higher ongoing costs. These costs will be passed on to consumers, just like a new tax, but without any revenue benefits to the state. And in twenty years, if they last that long in the harsh ocean

- environment, there will be a substantial, unfunded cost to remove their rusty hulks and perhaps replace them. Already, Hawaii and California have large, abandoned land-based windmill farms. And Hawaii's South Point complex lasted less than ten years. As we know, offshore hasn't been tried yet in the U.S.
2. As a result of providing Federal loan guarantees along with State and Federal grants and tax incentives to wind energy operators, it is the financial risks, not the benefits, which will fall on us taxpayers. And the increased electric power costs will fall on us all as well.
 3. In general, wind power requires costly excess conventional generation to back it up, since fluctuating winds vary output by up to 70 per cent, while demand varies between day and night, winter and summer. Current land-based systems do not replace dirty coal power; they replace gas and hydroelectric, which are cleaner, because they are more flexible to operate. And a large transmission infrastructure, with power losses that goes with it, is required.
 4. The technology is not environmentally risk-free or without impact on the ocean environment. Windmills and power transformers contain significant quantities of oil, up to 190 gallons each for some, with related risk to the environment. Numerous state-of-the-art land based windmills have toppled over already, such as one recently in Fenner, New York. More than 100 abandoned windmills near Palm Springs, California are broken and are leaking fluids. Some have been hit by lightning. Noise pollution and vibration problems have cropped up all over the U.S. with land-based systems, and here they would be directly transmitted to the ocean floor through the support columns. The effects on sea life, along with electrical currents from transmission grids, are still unknown, and potentially quite serious. The impact could be far wider than just dealing with a few beached whales. And if scientists still can't agree on the cause of the whale problem, it is hard to imagine how they can predict what would happen with offshore windmills.
 5. As for maintenance, modern land-based systems have shown a propensity for problems, such as one near Uelzen, Germany and another in Bloomfield, Nebraska that recently caught fire at the top. A number, such as one recently in Grand Ridge, Illinois, have had blade failures. Others have had gearbox problems. Imagine the difficulty and cost of dealing with these problems 400 feet up and miles offshore. According to the Providence Journal, retired U.S. Army General Wesley Clark, Chairman of Emergya Wind Technologies North America, recently warned that there would be a \$100,000 cost just for accessing an offshore tower for repairs, and the added effects of the harsh, corrosive environment offshore will be significant. For example, the effect of corrosion from electrolysis could destroy the entire project prematurely. If Deepwater Wind goes broke, the cost of failure to National Grid and the taxpayers could be very substantial.
 6. Safety of navigation will be impacted, particularly at night or in the fog, when the windmills will block out radar images from ships approaching from opposite sides. There is more research needed in this area.
 7. The jobs created will be largely temporary, and it happens that most major windmill components today are actually being made in China. In fact, Recovery Act ("stimulus") funds are currently headed for a \$1.5 billion Texas project with

the windmills being manufactured by China's Shenyang Power Group. Currently there are no windmill manufacturers at all in the U.S. who make them for ocean installation.

8. The one natural resource Rhode Island does have, the beauty of its bays and ocean, will be harmed, not just for the twenty-year project life, but forever. This would be like putting a wind farm in Yellowstone National Park. And all for a relative trickle of very costly, unreliable energy. There are better ways.

Block Island can reap the benefits of lower cost, cleaner, and more reliable power by either investing a new, state of the art generation system, or by simply installing an underwater transmission cable to the mainland. The cable may be expensive, but it would be required anyway for the windmill project. And either solution would be far more economical, reliable, and risk-free than the current proposal.

I urge the commission to reject the contract offered by Deepwater Wind and National grid. It does not satisfy the purpose of §39-26.1, it does not satisfy the commercial reasonableness requirements of §39-26.1.2, and is not in the public interest.

Thank you for your consideration.

SS// *Benjamin C. Riggs, Jr.*

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