

Environmental Law

Offshore Wind Act Aimed at Duplicating New Jersey's Success With Solar Energy

By Christopher D. Ackerman

The National Renewable Energy Laboratory recently assessed the offshore wind energy resources in the United States and found that 99,675 megawatts of potential wind power is located off of the New Jersey coast. The recent passage of the Offshore Wind Economic Development Act is New Jersey's attempt to tap those offshore resources and hopefully duplicate the success of the state's solar market — now second in nation, next to California — for installed solar capacity.

The Wind Act, signed Aug. 19 by Gov. Chris Christie, amended the Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq., creating a certificate program similar in most respects to the Solar Renewable Energy Credit program. The Offshore Wind Renewable Energy Certificate (OREC) will represent one megawatt of electric generation from a qualified offshore wind project. Similar to solar, the new certificate program will now require that a certain percentage of the renewables portfolio standards requirement be generated by

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offshore wind. Initially this will require approximately 1,100 megawatts of generation from offshore wind projects.

The Wind Act also includes a change in the use of revenues received from the auction of greenhouse gas emission allowances pursuant to the Regional Greenhouse Gas Initiative. Under the former version of this statute, 60 percent of the fund was to be allocated to the state Economic Development Authority for grants and other incentives to promote energy efficient projects, new efficient electric generation facilities and combined heat and power projects.

The new amendment now includes language allowing the EDA to provide financial incentives to qualified wind projects and for manufactures of equipment associated with such projects. A supplement to the Urban Transit Hub Tax Credit Act further authorizes the EDA to provide up to \$100 million in tax credits for the development of qualified wind energy facilities.

The Wind Act also provides standards for siting qualified offshore wind projects. Applicants must provide the Board of Public Utilities with the necessary information to make an informed decision on the value and viability of the proposed offshore wind projects. Elements that must be included with an application include the total subsidy to

be paid by ratepayers over the life of the proposed project and whether a cost-benefit analysis of the proposed project demonstrates a net positive benefit to the state.

Offshore Wind Barriers

Although the Wind Act creates incentives that helped launch the New Jersey solar industry, the offshore wind industry faces a far more difficult path to development. The siting and construction of offshore wind is very much unlike solar, which for the most part has the luxury of siting on pre-existing structures, such as rooftops or utility poles. Even when siting larger ground projects in open space, the environmental impacts and regulatory oversight are much more limited.

Conversely, the siting of offshore wind creates a whole host of complex issues, including impacts on shipping lanes, access to fishing grounds, aesthetic impacts and compliance requirements with seemingly every conceivable state and federal environmental law and regulation. All of these issues must then be accounted for and planned for from inception through decommission.

Federal Oversight and Compliance

On April 22, 2009, the U.S.

Department of the Interior's Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), formerly the Minerals Management Service, issued their final rule regarding the development of nonkinetic alternative energy facilities on the outer continental shelf. The construction of alternative energy facilities on the shelf is extremely complex and resulted in a voluminous and comprehensive rule.

The rule provides BOEMRE with oversight of leases and grants on the outer shelf. After acquiring a renewable energy lease, the lessee must submit detailed plans from development to decommissioning. No applicant may move forward until their plans have been submitted and approved by BOEMRE. Plan approval includes finding the lessee's proposed plan in compliance with a multitude of federal environmental laws and regulations, including the National Environmental Policy Act (up to three separate rounds), the Clean Water Act, the Endangered Species Act and the Coastal Zone Management Act, to name a few. To ensure compliance, BOEMRE is armed with the ability to suspend or terminate leases or grants for applicants who fail to comply with the relevant laws and regulations.

Once operating, a facility will also be subject to operations and management oversight by BOEMRE. The agency will be in charge of overseeing the operations of these facilities by implementing "adaptive management practices," which, as the name suggests, will evaluate the actual operation and performance of these facilities and require mitigation measures when necessary. BOEMRE's oversight includes remote monitoring and shutdown procedures, emergency response procedures, reporting of repairs and scope of damages, periodic inspections of facilities, and structural assessments.

Objectors

Even when a proposed project meets all of these requirements, it will not likely stop third-party objectors from intervening. The environmental issues surrounding wind energy has been a divisive issue among various environmental advocates. Although there are strong supporters in the environmental community for wind energy, there are those who feel the impacts stemming from construction and operation are too great and in the alternative support smaller projects, more regulation or no projects at all.

All in all, the endeavor of building, operating and maintaining an offshore wind facility is far more complex, and as a result, far more expensive than most solar operations.

Then there's the issue of "not in my back yard." Many people oppose wind energy simply on the basis of aesthetics. The thought of wind turbines jutting 200 feet out of one of New Jersey's last untouched viewsheds is one that could rally objectors far and wide. To some extent the aesthetic concerns can be remedied by siting facilities far enough offshore to significantly diminish or completely eliminate any view of these wind farms.

However, this solution will not always be available and applicants seeking to build wind farms off of the New Jersey shore may have difficulty convincing the public that any potential aesthetic impact that a proposed wind farm will have on their views will be outweighed by the benefits of wind power.

Cost of Offshore Wind

Whereas solar has been successful in smaller residential applications in New Jersey, it is unlikely that offshore wind will have a large impact on such a small scale. Part of the reason for this is that wind becomes less expensive per kilo-

watt hour the larger the turbine. Although the cost of wind is proportional to the consistency of and the speed of the wind at a particular site, the design and size of the turbine also has a huge impact on the costs per kilowatt hour. The taller the turbine and the longer the blades, the more power a turbine can produce. Therefore, the incentive for wind developers is to build a large facility with large turbines, in an area that will maximize production and lower costs. This is what makes offshore wind so ideal.

Offshore waters offer large areas to site large facilities with consistently higher wind speeds the further offshore one goes. However, such facilities are far more capital intensive. Garden State Offshore Energy, a joint venture between Deepwater Wind and PSE&G, has proposed a 350-megawatt facility to be located 20 miles offshore of Avalon. After factoring predevelopment permitting, construction, operation and maintenance costs, the investment in a project of this size will be well in excess of \$1 billion. Even with incentives such as the federal Renewable Energy Production Tax Credit, 20 U.S.C. §45, and state incentives such as New Jersey's Wind Manufacturing Tax Credit, N.J.S.A. 34:1B-207 et seq., along with the new OREC program, the cost still presents a huge investment and huge risk to potential developers.

Taking into account the cost, regulatory oversight and public perception, the barriers to wind are far greater than that of solar. Legislation, such as the recent Wind Act, is critical to fostering growth of this industry in New Jersey. This act shows that the governor and the Legislature believe in economic and environmental benefits that the development of offshore wind, as a clean, renewable energy source, can provide. Only time will tell if this additional incentive is enough to place the N.J. offshore wind industry on a par with N.J. solar. ■