On Aug. 19, Gov. Chris Christie, R-N.J., signed into law the Offshore Wind Economic Development Act. The legislation, which passed in the State Senate by a 28-10 vote and in the State Assembly by a 71-6-1 vote on June 28, is the first law of its kind, as it directs the New Jersey Board of Public Utilities (BPU) to launch an offshore wind renewable energy credit (OREC) program.

The OREC program requires a certain percentage of electricity sold in New Jersey to be from offshore wind energy – enough to support at least 1,100 MW of energy generation from qualified offshore wind projects. The offshore wind act also provides monetary incentives for offshore turbine manufacturers and tax credits for qualified wind energy facilities in wind energy zones.

Christie, who took office in January, wants New Jersey to have one of the most aggressive clean energy programs on the East Coast. According to Christie’s office, the administration believes that offshore wind development in New Jersey will result from a fairly priced OREC and by offering tax incentives to offshore wind turbine manufacturing and support services.

Offshore projects have different needs than onshore projects. For example, developing port facilities is significant because offshore turbines are larger. Offshore turbines in the range of 3.6 MW are generally manufactured off site and then transported to a port that is accessible to the project site.

However, 5 MW to 9 MW turbines are so large that they need to be manufactured portside. Moreover, ports must also be able to accommodate large barges and other vessels that tow partially erected turbines offshore. Having New Jersey ports facilitate such towing, as well as turbine manufacturing, will help the state capitalize on the trend-setting cities and companies engaging in such port development.

ORECs explained

The offshore wind act defines an OREC as a certificate the BPU or its designee issues that represents the environmental attributes of 1 MWh of electric generation from a qualified offshore wind project. ORECs may be used for renewable portfolio standard (RPS) compliance in the “energy year” in which they are generated, and for two energy years thereafter.

Within 180 days of the act’s enactment, the state’s RPS must be modified to require each power supplier and each generation service to sell offshore wind energy as a percentage of the total kilowatt hours sold in New Jersey.

The BPU-set percentage would reflect projected OREC production from each BPU-approved qualified offshore wind project for 20 years from each project’s commercial operations start date. Once the project’s production and purchase requirements receive BPU approval, neither can be reduced at a later date.

The 20-year period, aimed at giving ORECs long-term stability, addresses earlier concerns of developers – such as having a long-term, fixed OREC price – because such a price lends stability to the non-liquid OREC market.

The act also calls for construction of a transmission system that delivers offshore wind-generated energy into New Jersey’s power grid.

According to the act, a qualified offshore wind project consists of a wind turbine electricity-generation facility in the Atlantic Ocean that is connected to New Jersey’s electric transmission system. A developer seeking to construct an offshore wind project must provide the BPU with a plan for grid interconnection, including engineering specifications and costs.

The act does not clarify whether the developer must bear all or part of the grid interconnection costs. However, because there is an expectation that onshore wind developers construct the necessary transmission substation structures to allow grid interconnection, the same unwritten expectation may potentially apply to offshore developers.
The greater challenge, though, may be determining who will bear the cost of the additional grid transmission modifications that will need to occur in order to successfully integrate the wind power-generated energy into the current grid structure. Additionally, to obtain BPU approval of its qualified offshore wind project, a developer’s application must include the condition that ORECs will only be paid for by the project’s actual electrical output delivered into New Jersey’s electric transmission system. Therefore, unless and until underwater infrastructure connecting the offshore turbines to the electric grid becomes fully operational, no OREC payments will be made. Currently, no underwater infrastructure exists, so it may be years until actual OREC payments are made.

Producing energy from offshore wind turbines achieves the goal of reducing greenhouse gas (GHG) emissions, particularly carbon dioxide, that would otherwise be released into the atmosphere from fossil fuel-based energy-generation sources.

Accordingly, the offshore wind act’s Section 5 authorizes the New Jersey Economic Development Authority to distribute revenues from GHG emissions-allowance auctions deposited in New Jersey’s Global Warming Solutions Fund to state-of-the-art energy-efficiency projects, such as qualified offshore wind projects.

Equipment manufacturers associated with such projects are also eligible to receive financial assistance from the fund. The goal for such funding is to award renewable energy equipment manufacturers for assisting in the development of carbon emissions-abatement technologies – such as wind power – that offer significant potential for carbon emissions reduction or avoidance.

**Commerce clause issues avoided**

Notably, the act does not address whether manufacturers who receive global warming fund awards must have a New Jersey-based manufacturing facility. This is not legislative oversight, but likely intentional.

Having both in-state as well as out-of-state manufacturers eligible for financial assistance from the fund invites more robust economic competition among these manufacturers so that a fair market price – arrived at through a competitive bidding process – may be achieved. Also, unrestricted free trade does not afford differential treatment to in-state versus out-of-state manufacturers, and therefore does not discriminate against out-of-state manufacturers as the commerce clause of the U.S. Constitution forbids.

By including both out-of-state and in-state manufacturers as eligible participants, the New Jersey legislature has taken precautions to protect the offshore wind act from litigation by out-of-state manufacturers alleging discriminatory treatment resulting from commerce clause violations.

**Financial risk burden allocation**

The act also addresses qualified offshore wind projects’ financial risks and costs. Historically, this issue has been a point of contention between offshore wind developers and other stakeholders, as noted in the October 2009 points of concerns that offshore wind developers wanted addressed by the BPU. The issue is who will bear the burden of the approximately $1.5 billion cost for a single offshore wind project.

The act also requires that New Jersey ratepayers would bear no responsibility between the offshore wind project’s initial estimated construction and completion costs, and its actual costs.

The act, therefore, is supposed to protect New Jersey residents and the state against the cost burden and financial risk associated with potential cost overruns. As a result, project developers bear the burden of costs and risks. Because these developers are not required to post bonds to cover these risks, the question arises as to how the state will ultimately enforce such a provision.

The act requires developers to include equity and fixed-income investors, as well as other capital sources, in applications. Developers are also required to provide a cost-benefit analysis that includes potential impacts on residential and industrial ratepayers over the project’s life that may result from New Jersey incorporating any subsidy that developers receive into electricity rates.

Passing this subsidy cost to consumers may translate into New Jersey taxpayers experiencing spikes in their current electricity rates. Although the offshore wind act is aimed at protecting New Jersey residents from bearing certain project costs, other project costs may be passed to them.

**Supply chain issues raised**

The requirements for businesses are problematic and raise supply chain issues, due to the definition of what constitutes a qualified wind energy facility, which limits the location of such facilities to one New Jersey area. According to the act, a qualified wind energy facility includes any building, water-access infrastructure, and all machinery and equipment used in the manufacturing, assembly, development or administration of component parts that support the development and operation of a qualified offshore wind project, or other wind energy project located in a wind energy zone.

Under the offshore wind act, a wind energy zone is defined as any property located in the South Jersey Port District. This could be problematic because it restricts location. Such a restrictive definition excludes the Port of New York and New Jersey, located on Newark Bay. This facility, consisting of Port Newark and the Elizabeth Marine Terminal, is located just west of New York City and east of Newark Liberty International Airport and the New Jersey Turnpike.

Port of Elizabeth is located a short distance from the Hoboken, N.J., headquarters of Deepwater Wind and Bluewater Wind and includes the Port Newark and the Elizabeth Marine Terminal. It also has roll-on/roll-off (RORO) barge capacity, which requires less supporting infrastructure because cargo can be “rolled on” and “rolled off” the vessels’ built-in ramps when they are in port.
An increasing number of global wind manufacturers are now using barges to transport goods, so having RORO barge capacity for larger ocean-going vessels is beneficial to the offshore wind supply chain. Omitting the Port of New York and New Jersey from the definition of wind energy zone may, therefore, have substantial adverse ramifications with respect to New Jersey’s development of a robust offshore wind supply chain.

The Paulsboro Marine Terminal and the Camden Marine Terminals are the only two ports in the South Jersey Port District. However, Paulsboro Marine Terminal, a former 190-acre BP Oil Co./Dow Chemical Co. oil and chemical bulk-storage facility, is currently under construction. Phase I, which involves rail infrastructure improvements and added long-term storage facilities, is expected to be completed in 2012, while Phase II is not scheduled for completion until 2017.

That leaves the Camden Marine Terminals as the only operational port in the South Jersey Port District. This port does not have RORO barge capacity. Given the status of each of the two ports in the wind energy zone, certain benefits to businesses may not be realized until years down the road.

Notably, as this issue went to press, New Jersey State Sens. Stephen M. Sweeney and Thomas H. Kean Jr. introduced S-2231, which proposes to amend the definition of a wind energy zone to include “the port district of the Port Authority of New York and New Jersey.” This modification would allow tax credits for the development of qualified wind energy facilities in those port districts.

Because the offshore wind act relies on the developer to launch and develop offshore projects, and relies on the completion of the Paulsboro Marine Terminal, the question arises as to whether the act is intended to be a means of implementing a truly forward-looking framework whose results and impacts are not intended to be seen until years later, or whose enactment is meant to inspire and move the offshore wind industry forward from today. *NP*

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