

STATE ENVIRONMENTAL REGULATION

Expert Analysis

Looking to the Ocean for Power, And a Problem

In recent months, New York state has taken a number of significant steps forward toward the state's previously announced goal of obtaining 50 percent of New York's electricity from renewable sources by 2030.

Perhaps the most important of these recent steps is an order, issued and effective on July 12, 2018, in which the New York State Public Service Commission (PSC) established an "Offshore Wind Standard and Framework for Phase I Procurement" (the OSW Order). In the OSW Order, the PSC required the New York State Energy Research and Development Authority (NYSERDA) to solicit (as an initial step) approximately 800 megawatts (MW) of offshore wind renewable energy credits (ORECs). An OREC represents one megawatt-hour (MWh)

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of electricity generated from offshore wind resources and consumed by a retail customer in New York State. That initial solicitation is scheduled to be issued in the fourth quarter of 2018 and selected projects will be awarded in the second quarter of 2019. A second solicitation will be issued in 2019, if needed, to achieve the 800 MW objective. The offshore wind industry is projected to be a \$6 billion industry, generating 5,000 new jobs, almost half of which will be long-term career opportunities.

Once the initial solicitation and awards take place, New York will be on a clear and inexorable path to reaching its goal of 2,400 MW

of new offshore wind generation by 2030. That is enough electricity to power 1.2 million New York households.

Background

The OSW Order arose out of the PSC's adoption of its Clean Energy Standard (CES). The CES, enact-

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ed by the PSC on Aug. 1, 2016, is designed to achieve the statewide goal of 50 percent renewable generation resources by 2030, known as the "50 by 30" goal.

NYSERDA estimates in its publication, "Benefits of Offshore Wind," that 2,400 MW of offshore wind

energy would annually reduce greenhouse gas emissions in New York State by more than five million short tons. This reduction is equivalent to removing nearly one million cars from the road by 2030.

At the time it adopted the CES, the PSC recognized that New York has a substantial potential for offshore wind production. It tasked NYSERDA with studying the appropriate mechanisms to reach the goal and making recommendations for the PSC's consideration.

Gov. Andrew Cuomo also has a significant track record of supporting offshore wind production. As part of his 2017 State of the State Address, he set a wind energy development goal of 2.4 gigawatt (GW) by 2030. In his 2018 State of the State Address, the governor called for the procurement of at least 800 MW of offshore wind power ORECs by 2019.

In response to the CES, NYSERDA conducted 20 studies on a variety of potential issues related to offshore wind power. These studies included environmental, social, economic, regulatory, and infrastructure-related issues, an assessment of ports and infrastructure, an aviation and radar assets study, a birds and bats study, a cable landfall permitting study, a fish and fisheries study, a marine mammals and sea turtles study, an environmental sensitivity analysis, a fish and fisheries

study, a sand and gravel resources study, and a shipping and navigation study. Thereafter, on Jan. 29, 2018, NYSERDA released the New York State Offshore Wind Master Plan (the Master Plan), in essence, a roadmap for offshore wind development.

Among other things, the Master Plan identified the most favorable sites for offshore wind development off New York's Atlantic Coast, described the economic and environmental benefits of offshore wind energy development, addressed mechanisms to procure offshore wind energy at the lowest cost to ratepayers, recommended measures to mitigate potential impacts of offshore wind energy development, and identified infrastructure requirements and workforce opportunities. It also established technical working groups to develop best practices for development and provided options for the purchase of offshore wind energy in an effort to ensure the lowest cost to the ratepayer.

In preparing the Master Plan, NYSERDA studied a 16,740 square mile area in the Atlantic Ocean extending from New York City and the south shore of Long Island to beyond the continental shelf. This area is regulated by the federal Bureau of Ocean Energy Management, which already has entered into a number of lease agreements

for wind development in areas along the Atlantic coast between New Jersey and New England and which is expected to issue additional leases near the end of 2019.

The Master Plan reported that, in Europe, over 12.6 GW of offshore wind resources are in operation and an additional 24.2 GW have been approved. Moreover, NYSERDA observed in the Master Plan that the cost of offshore wind in Europe had fallen substantially as a result of local infrastructure development and economies of scale. NYSERDA projected that, upon achieving the 2,400 MW goal by 2030, the cost to obtain offshore wind would be lower than the cost to procure land-based renewables in New York. According to information on NYSERDA's website, development of the first 800 MW of offshore wind only would result in a 0.14 to 0.76 percent rate increase for ratepayers, or less than \$0.76 per month for the typical residential customer. See "New York State Offshore Wind Frequently Asked Questions."

In the Master Plan, NYSERDA pointed out that, because of the size of towers and blades, construction of offshore wind projects requires regionally-based waterfront facilities. NYSERDA screened 65 port sites within the state and determined that New York Harbor, the Hudson River, and Long Island contain numerous

suitable candidates for manufacturing, assembly, operations, and maintenance.

After reviewing NYSERDA's Master Plan, the PSC concluded that a series of actions related to offshore wind are necessary to help achieve the CES goal. That culminated in the July 20, 2018 OSW Order.

The PSC's Order

In the July 20 order, the PSC adopted the goal of procuring 2.4 GW of new offshore wind generation facilities by 2030. The July 20 order also directed that Phase I of the offshore procurement program include procurement solicitations during 2018 and 2019, for approximately 800 MW of offshore wind, and an obligation on the part of utilities (referred to in the order as load-serving entities or LSEs) to obtain, on behalf of their retail customers, the ORECs procured in Phase 1 in an amount proportional to their load. The July 20 order also authorized NYSERDA to expend up to \$9,797,000 for salary and overhead expenses for the OSW program through Dec. 31, 2023 as well as for certain other OSW program expenses and costs.

Next Steps

To prepare for its first solicitation, NYSERDA released a request for information soliciting feedback regarding specifics of the procurement process. NYSERDA received

more than two dozen comments, ranging from Anbaric Development Partners (a developer of independent open access transmission lines) and the City of New York to the United Steelworkers and the Workforce Development Institute (a New York State non-profit). Using this information, NYSERDA, in consultation and coordination with the New York Power Authority and the Long Island Power Authority, will draft and issue the request for proposals soliciting bids from offshore wind projects and award OREC contracts in the second quarter of 2019.

Since the task force was appointed in August 2018, it is not clear if it will meet that deadline, or whether an extension of the deadline will be necessary.

As all of this suggests, offshore wind development is coming to New York. Interested parties will find new, updated information about the process on NYSERDA's offshore wind development website.

Ocean Acidification

Not everything about the ocean is rosy, however. Consider ocean acidification.

According to the National Ocean Service, an office of the National Oceanic and Atmospheric Administration within the U.S.

Department of Commerce, ocean acidification refers to a reduction in the pH of the ocean over an extended period of time, caused primarily by the uptake of carbon dioxide from the atmosphere. See *What Is Ocean Acidification*.

New York is taking a role in studying and addressing the problem of ocean acidification. The New York State Department of Environmental Conservation recently convened an ocean acidification task force, as required by Assembly Bill A10264, which became law in 2016. See *Ocean Acidification Impacts*. The task force was formed to identify the causes and factors contributing to ocean acidification and to evaluate ways of addressing the problem by applying the best available science as to ocean acidification and its anticipated impacts.

The 2016 law requires that the task force issue a report by Dec. 31, 2018. Since the task force was appointed in August 2018, it is not clear if it will meet that deadline, or whether an extension of the deadline will be necessary. It will be interesting to review the report once it is issued.