

OFFSHORE WIND CONTRACTS AND PHASE ONE REPORT

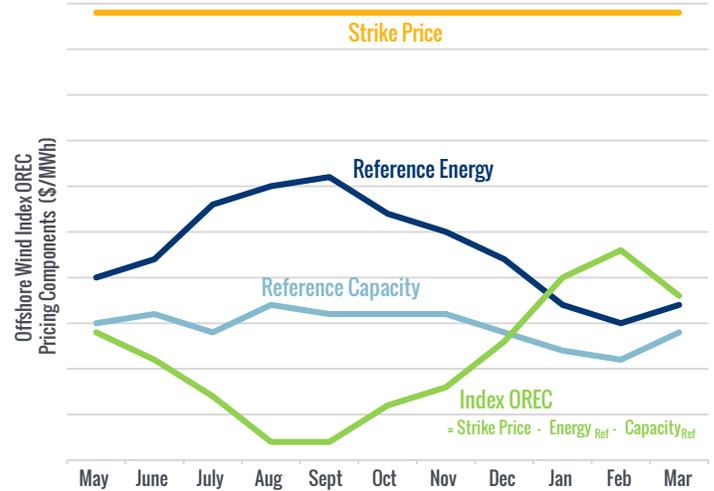


In October 2019, New York State Energy Research and Development Authority (NYSERDA) finalized contracts for its first two offshore wind projects, Empire Wind (816 MW, Equinor US Holdings, Inc.) and Sunrise Wind (880 MW Sunrise Wind LLC, a joint venture of Ørsted A/S and Eversource Energy) as the largest procurement for offshore wind in the nation. These projects are the first step in advancing New York’s offshore wind goals under the Clean Energy Standard and in satisfaction of the 2015 State Energy Plan, which will also help achieve Governor Andrew M. Cuomo’s nation-leading Green New Deal goal of reaching 9,000 megawatts of offshore wind by 2035.

NYSERDA also submitted “Launching New York’s Offshore Wind Industry: Phase 1 Report” (Report), a comprehensive filing, to the New York State Department of Public Service on the competitive solicitation process and results with the contracts appended to the Report. The Report demonstrates the State’s commitment to transparency as it delivers the promise of a clean electricity future.

Unprecedented competition

New York’s first procurement garnered the most competitive market response to date among all U.S. state offshore wind solicitations. With four developers submitting a total of 18 proposals, the proposals demonstrated New York’s unparalleled reach to existing lease areas spanning New England to New Jersey. This response demonstrates that the New York State procurement mechanism for offshore wind renewable energy certificates (ORECs) is seen as attractive to private developers in the U.S. offshore wind market.



Strike Price
Represents the all-in cost per megawatt hour to develop an offshore wind project as competitively bid to NYSERDA.

Index OREC
Payments rise and fall inversely to a composite average of New York’s energy and capacity market prices, which do not reflect actual project revenues but do provide protection for ratepayers and projects against volatility in utility bills and project revenue, respectively.

Cost-effective pricing

New York’s nation-leading solicitation design, robust competition, and rigorous evaluation process delivered competitive pricing, significant economic benefits, and strong projects to make the State’s first offshore wind procurement a resounding success.

The Empire Wind and Sunrise Wind projects have an average **all-in development cost of \$83.36 per megawatt-hour (2018 dollars)** with an expected average **OREC cost of \$25.14 per megawatt-hour**. The average bill impact for residential customers will be less than a dollar per month per customer – approximately 73 cents. The OREC prices are approximately 40 percent less than expected¹ and are in line with recent offshore wind procurement results from other regional states.

Index ORECs: How do they work?

To support offshore wind development, NYSERDA provides performance-based payments to contracted projects for ORECs. An OREC represents the environmental attributes associated with one megawatt-hour (MWh) of electricity generated from offshore wind resources and consumed by retail customers in New York State and will provide financial support for investments in offshore wind energy. The development and construction of offshore wind projects involves significant capital investment, necessitating long-term contracts from an entity such as NYSERDA in order to finance and construct the projects.

\$40 / MWh

2018 Expected Pricing¹

\$25 / MWh

2019 Solicitation Results

~40% savings delivered to New York ratepayers through robust competition

The ratepayer impacts from this award are estimated to be less than \$1 dollar per month for an average residential customer.

Under the contracts, NYSERDA will purchase ORECs from the two projects after they become operational and begin to deliver power to the State and continue over the 25-year lifespan of the projects.

The contracts utilize an **innovative Index OREC** contracting structure where payments rise and fall inversely to a composite average of New York's energy and capacity market prices, which do not reflect actual project revenues but do provide protection for ratepayers and projects against volatility in utility bills and project revenue, respectively.

Who is funding these agreements?

The achievement of New York's Clean Energy Standard mandate to reach 70 percent renewables by 2030 is a statewide initiative that is supported by all New York load-serving entities (LSEs) – that is, utilities, energy service corporations and other purchasers of wholesale electricity. LSEs recuperate their costs through sales to electricity consumers.

NYSERDA will purchase ORECs from awarded projects once they become operational, and then resell them to the LSEs for compliance with their OREC obligation. Each year, LSEs will be obligated to purchase the pro-rata percentage of ORECs that represents the portion of the electric energy load served by the LSE in relation to the total electric energy load served by all LSEs. This framework is as directed by the State's energy and utility regulator, the Public Service Commission.

Clean energy projects contracted directly by utilities contribute to the State's overall clean energy mandate but are paid for by local electricity consumers. Clean energy projects contracted by NYSERDA are supported statewide across all LSEs.

When do NYSERDA's payments begin for these projects? What if the projects encounter cost-overruns?

With an executed OREC contract, a project developer can begin its detailed development work including siting and permitting efforts, securing supply contracts, workforce development, and infrastructure development for the project. NYSERDA expects projects will be operational by the mid-2020s, with development activity building from contract execution to commercial operation.

NYSERDA will only begin to buy ORECs from the projects when they complete construction and begin to deliver power to New York's grid. In this manner, NYSERDA's contracts protect ratepayers against cost overruns that might be incurred by the project developers who bear all the upfront capital and risk through construction.

Visit nyserdera.ny.gov/offshorewind for more information on offshore wind in New York State.

What are the global trends regarding offshore wind prices?

New York State's Index OREC approach is similar to that in other countries, such as the United Kingdom, where offshore wind projects are already competitive with existing fossil fuel plants, and costs are dropping steadily. By the next auction, the United Kingdom anticipates that costs for offshore wind "will go well below that of existing fossil fuel plants" eliminating the need for subsidies.²

Under the Climate Leadership and Community Protection Act, many conventional power plants reliant on fossil fuels will eventually be replaced by emissions-free renewable energy. NYSERDA's long-term studies of a decarbonized electricity sector that includes 9,000 megawatts of offshore wind by 2035 suggest that technology costs will likewise decrease in the long run, helping to lower statewide clean-energy costs.

Protecting New York families

The impacts from these projects are estimated to be less than \$1 dollar per month for an average residential customer. This figure does not account for the avoided health impacts associated with pollution in the downstate area. NYSERDA estimates that these two offshore wind projects will provide approximately \$700 million of avoided health impact benefits in the form of avoided hospitalization and premature death associated with asthma and respiratory and cardiovascular diseases.

The contracted projects demonstrate a strong commitment to mitigation plans that actively address the interests of ocean users such as commercial and recreational fishing and environmental stakeholders and ensure that coastal communities will be fully engaged and informed during the development and construction process.

Kickstarting a powerhouse clean energy industry in New York

NYSERDA's first offshore wind projects, Empire Wind and Sunrise Wind, will produce enough electricity to power more than one million New York homes and bring significant economic benefits:

- \$3.2 billion in combined economic impact to upstate, downstate and Long Island;
- More than \$85 million in investments in long-term port facilities and cutting-edge technologies;
- Over 1,600 jobs in project development, component manufacturing, installation, and operations and maintenance, directly offering careers with salaries of approximately \$100,000 per year.

By 2035, 9,000 megawatts of offshore wind is anticipated to bring 10,000 jobs and serve more than six million homes, or approximately 30 percent of the State's electricity load.

Through these projects and the important seed investments they bring, New York is poised to become a hub for the United States' emerging offshore wind industry.

¹ NYSERDA. "Offshore Wind Policy Options Paper." NYS Offshore Wind Master Plan. January 29, 2018. www.nyserdera.ny.gov/-/media/Files/Publications/Research/Biomass-Solar-Wind/Master-Plan/Offshore-Wind-Policy-Options-Paper.pdf

² Bloomberg. September 20, 2019. "The World's Biggest Offshore Wind Farm Will Be as Cheap as Coal." <https://www.bloomberg.com/news/articles/2019-09-20/plunging-offshore-wind-costs-could-soon-end-u-k-subsidies>