

What is the Clean Energy Standard? What is the Renewable Energy Standard?

New York State is undertaking significant change in how it generates and delivers energy. Reforming the Energy Vision (REV) is Governor Andrew M. Cuomo's strategy aimed at building a next-generation energy system that is clean, resilient, and affordable for all New Yorkers. His aggressive Clean Energy Standard (CES) is the most comprehensive and ambitious clean energy mandate in the State's history. The CES has a requirement that 50 percent of the State's electricity be sourced from renewable energy sources by 2030.

The Renewable Energy Standard (RES) is one component of the CES. Through the RES, the State is working to grow the proportion of electricity that comes from renewable generation. The RES includes an obligation on retail electricity suppliers such as energy service companies (ESCOs) to purchase increasing amounts of renewable energy to supply their customers and a requirement that the New York State Energy Research and Development Authority (NYSERDA) support the development of new large-scale renewable energy projects needed to meet the retail electricity supplier obligation.

What is NYSEERDA's role in large-scale renewable projects?

NYSERDA was designated as the central procurement entity for the RES. Through a competitive selection process, NYSEERDA provides long-term contracts to developers of new renewable energy projects. In 2018, New York made the largest single commitment to purchase renewable energy by a state in U.S. history with an award of \$1.4 billion for 26 large-scale renewable energy projects.

What types of projects are funded through NYSEERDA's RES solicitations?

The RES solicitations seek to procure renewable energy resources that are eligible under Tier 1 of the RES. The resource categories eligible to participate in a RES solicitation include Biogas, Biomass, Liquid Biofuels, Fuel Cells, Hydroelectric, Solar, Tidal/Ocean, and Wind. To be eligible, generation projects must have commenced operation on or after January 1, 2015. More information on eligibility can be found at nyserda.ny.gov/RES-tier-1.

How do these solicitations support renewable energy development?

Since the construction of a renewable generation facility involves a significant capital investment, a long-term contract providing reasonably certain terms is necessary to induce such an investment. NYSEERDA's long-term contracts help to drive investment in new large-scale renewables to provide New Yorkers with clean energy.

How is this different from NY-Sun?

Through the NY-Sun program, NYSEERDA provides incentives to reduce the cost of installing solar electric generation systems for commercial and industrial companies, homes, multifamily buildings, small commercial, not-for-profit, and municipal buildings. NY-Sun funded solar electric systems operate in the retail markets, offsetting individual retail customer electricity bills. The RES procurement supports generation from solar and other renewable resources that deliver energy into the wholesale electricity market. The renewable energy from RES funded projects is available to all energy consumers as part of the mix of electricity generated to support state needs—not just to retail customers installing solar.

What is the difference between wholesale and retail electricity markets?

Electricity is bought, sold, and traded in wholesale and retail markets, which operate similarly to wholesale and retail markets for other products. Power plants generate electricity and sell it into the wholesale energy market. Resellers buy electricity at wholesale and supply it to retail consumers. These resellers include electric utility companies and ESCOs, who sell to consumers for use in homes or businesses. The purchase and sale of electricity to resellers is done in the wholesale market, while the purchase and sale of electricity to consumers is done in the retail market.

When will the projects be constructed/operational?

Large-scale renewable energy project development timelines vary depending upon the size and complexity of the project. These projects are large capital investment projects that take years to plan and build. Projects from the recent RES solicitation have a target commercial operation date of 2022. Some projects may be completed sooner depending upon the specifications of each project.

How will these projects benefit New York State? Will this bring jobs to my community?

Significant economic benefits of the large-scale renewable energy industry include payments to local landowners, short- and long-term job creation, payments to host communities, and spending on goods and services in supporting industries. The construction phase usually brings several short-term jobs; increases in hotel and restaurant use by non-local workers; purchase of materials, including cement and gravel; and services, such as equipment rental. Some long-term jobs may be created during operation, with ongoing spending on everything from maintenance to plowing access roads in winter.

In 2013, NYSERDA released the *Renewable Portfolio Standard Main Tier 2013 Program Review* that analyzed three years of spending from 18 renewable energy facilities under contract to NYSERDA (including two biomass facilities, eight hydroelectric facility upgrades, and eight wind farms) and extrapolated direct investments over the life-cycle of the project. The research examined verified spending on jobs, payments to public entities, in-state purchases, and land leases for these facilities from development and construction through the first three years of operation. The study found that every 1 megawatt-hour (MWh) of renewable energy generated under these contracts resulted in approximately \$27 of direct investment in the local community or other New York regions. Once operational, the 26 projects awarded in this RES solicitation are expected to generate more than 3.2 million MWhs annually, which is enough clean, renewable energy to power more than 430,000 homes each year.

How much renewable energy development should we expect in the State over the coming years?

Growth in renewable energy development is based on a number of factors, such as electricity prices, equipment costs, state and federal policies, and energy infrastructure development. Depending on its generation profile, New York will need thousands of megawatts (MW) of new renewable projects to meet its goals. The projects from the first RES solicitation announced in 2018 have a combined capacity of more than 1,380 MW. The projects resulting from this solicitation are expected to generate enough clean, renewable energy to reduce carbon emissions by more than 1.6 million metric tons annually, the equivalent to taking nearly 340,000 cars off the road.

These results will build on the State's strong foundation of renewables projects. Through the former Renewable Portfolio Standard and NY-Sun, New York has supported a total capacity of 3,447 MW of new wind, solar, hydropower,

and biomass energy projects. This is equivalent to powering more than 1.05 million homes each year. The new projects will complement previous investments and help move New York closer to its clean energy goals.

In addition to issuing annual solicitations for large-scale renewables, new renewable capacity to meet CES goals will be added through other channels, such as the continued progress of the NY-Sun program and the development of offshore wind resources. Increased application of energy efficiency will also offset some of the new renewable capacity needed to meet New York's goals.

Who oversees siting and permitting of the project? What role does local government play in this process?

Major electric generating facilities with capacities larger than 25 MW are sited according to New York State's Article 10 law. This comprehensive law provides guidance to the New York State Board on Electric Generation Siting and the Environment (Siting Board) about authorizing construction and operation of major electric generating facilities, including renewable generators. The Article 10 law streamlines the application process for developers, while providing a rigorous process for local input and ensuring environmental and public health laws are followed.

Projects with capacities less than 25 MW are subject to local land-use jurisdiction and coordinated review under the State Environmental Quality Review Act (SEQR) process. The lead agency authority under SEQR (the agency or board leading the SEQR review) is most often assumed by the local planning board.

Where will the project's electricity be used?

Projects awarded by NYSERDA must deliver their generation for end use in New York State. The projects resulting from the first RES solicitation are expected to generate enough clean, renewable energy to power more than 430,000 homes each year.

Are there resources available to help us understand this process?

NYSERDA continuously develops information resources to help communities understand renewable energy development. Selected examples are the Wind Energy Guide found at nyserdera.ny.gov/wind-energy-guide and the NY-Sun Solar Guidebook found at nyserdera.ny.gov/solar-guidebook.

Please contact NYSERDA at res@nyserdera.ny.gov with additional questions.

NYSERDA offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA professionals work to protect the environment and create clean energy jobs. A public benefit corporation, NYSERDA has been advancing innovative energy solutions since 1975.