Case 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard

Draft 2026 Clean Energy Standard Biennial Review

July 1, 2026

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Introduction

Public Service Law section 66-p requires that the Public Service Commission (PSC or Commission) issues a review for notice and comment that considers "(a) progress in meeting the overall targets for deployment of renewable energy systems and zero emission sources, including factors that will or are likely to frustrate progress toward the targets; (b) distribution of systems by size and load zone; and (c) annual funding commitments and expenditures." This Report serves to inform the Commission's review. It summarizes the progress made toward the renewable energy and zero emission goals since the establishment of New York State's Clean Energy Standard (CES) as set in Public Service Law section 66-p, assesses what remains to be done to achieve those goals, and invites comments from stakeholders and the public on these or any other matters raised in this Report. As part of the assessment, this Report also addresses how changes in federal energy and trade policy have impacted State progress, including forecasted deployment of additional offshore wind resources. This Report also identifies available clean energy solutions that can be incorporated within reliability planning processes to meet State reliability needs, particularly in New York City, per directive from the Commission in the Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings (2025 CES Biennial Review Order)[1] and the Order Withdrawing Public Policy Transmission Need.[2]

Section 1 identifies the key regulatory actions taken to date to support renewable energy deployment in New York, including the establishment of the CES and updates thereto as a result of the 2019 Climate Leadership and Community Protection Act (CLCPA). Section 2 offers a detailed assessment of major factors and risks that have affected and may continue to affect progress towards New York's clean energy goals. Section 3 summarizes progress to date in achieving the State's clean energy goals as expressed in the CES and Public Service Law section

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1 Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings (issued May 15, 2025) (2025 CES Biennial Review Order).

2 Case 22-E-0633, In the Matter of New York Independent System Operator, Inc. Proposed Public Policy Transmission Needs for Consideration for 2022, Order Withdrawing Public Policy Transmission Need (issued July 17, 2025) (July 2025 PPTN Order).

66-p in terms of current contributions of operational renewable energy systems and zero-emission sources to the State's energy portfolio. Section 4 reports on the pipeline of contracted renewables from previous Tier 1, offshore wind, and Tier 4 solicitations. Section 5 assesses the amount of renewables that are forecasted to be deployed by 2030 according to currently operational and contracted facilities, applying attrition assumptions. Section 6 identifies and provides an overview of clean energy solutions that may be available to incorporate into existing reliability planning processes.

Appendix A provides further detail on operational and contracted renewable energy projects by size and technology. Appendix A also provides CES funding and expenditures for recent years through 2025. Forward-looking cost estimates for the CES and other costs associated with pursuit of the CLCPA goals are provided separately in the Department of Public Service (DPS) Annual CLCPA Report.[3] Appendix B includes detailed information on the incremental economic benefits to be delivered by the renewable energy projects contracted under the CES.

[3] See, Case 22-M-0149, Proceeding on Motion of the Commission Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act, New York State Department of Public Service Second CLCPA Informational Report on Overall Implementation of the Climate Leadership and Community Protection Act (filed September 18, 2025).

1 New York Policy and Regulatory Background

New York has been a leader in building clean energy generation for more than 100 years. In 2004, the Commission established an incentive program to support new renewable generation projects under the Renewable Portfolio Standard (RPS). The goal of the RPS was to increase the proportion of renewable energy New Yorkers used from 19.3% (using 2004 as the baseline year) to at least 25% by the end of 2013. On January 1, 2010, after a review of the RPS, the Commission raised the RPS goal from 25% by 2013 to 30% by 2015, using the same 2004 baseline.

The 2015 State Energy Plan required that renewable energy sources provide 50% of the State's electricity supply by 2030 as part of a strategy to reduce statewide greenhouse gas (GHG) emissions by 40% over the same period. On August 1, 2016, the Commission replaced the RPS Main Tier program with the CES through the Order Adopting a Clean Energy Standard (2016 CES Order).[4] The CES includes a Renewable Energy Standard (RES) and a Zero-Emissions Credit (ZEC) requirement. The RES established a Tier 1 program under which NYSERDA was authorized to procure eligible new large-scale renewables projects and a Tier 2 maintenance program to provide financial support for existing renewable facilities. The ZEC program was intended to support certain nuclear power facilities and is also referred to here as Tier 3. NYSERDA initiated the first solicitation under the CES in 2017.

The 2016 CES Order also recognized that New York had substantial potential for offshore wind production. The Commission requested that NYSERDA perform a study to identify mechanisms that could realize this potential. In July 2018, following completion of that study and presentation of NYSERDA's recommendations, the Commission issued an Order adopting the

[4] Case 15-E-0302, supra, Order Adopting a Clean Energy Standard (issued August 1, 2016) (2016 CES Order).

Offshore Wind Standard (Offshore Wind Order), which established the framework for the first phase of offshore wind generation solicitations.[5]

The 2016 CES Order further directed NYSERDA to undertake these procurements by employing Fixed-Price Renewable Energy Certificate (REC) contracts, pursuant to which winning bidders would receive a fixed as-bid REC price throughout the contract lifetime for the environmental attributes associated with every megawatt-hour (MWh) produced by their facilities. This structure provided developers with Fixed-Price RECs for the contract term at a price that does not respond to changes in market conditions and allowed developers to also sell energy and capacity as they see fit.

In 2018, the Commission's Offshore Wind Order modified this approach to renewable procurements to address the limitations of using Fixed-Price REC contracts to encourage development. The Offshore Wind Order directed NYSERDA to require each developer to provide both a Fixed-Price Offshore Wind REC (OREC) bid, similar to a Tier 1 Fixed-Price REC, and a bid based on what was termed the Index REC approach. An Index REC/OREC bid is the developer's proposed "strike price," or estimate of the developer's full revenue requirement, to be drawn from energy and capacity markets as well as RECs/ORECs. Under this approach, the amount the developer is paid for its ORECs varies and is based on a calculation that subtracts index prices for energy and capacity from the strike price. This formulation was intended to increase the likelihood that a developer would satisfy its revenue requirement for a project and ultimately reduce what ratepayers pay for each OREC.

In 2019, the CLCPA was signed into law.[6] The CLCPA increased and extended the goals set out in the 2016 CES Order by establishing two targets: (1) procurement of at least 70% of New York State electric load from renewable energy resources by 2030; and (2) creating a "zero emissions" "statewide electrical demand system" by 2040. The CLCPA also includes technology-specific

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[5] Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018) (Offshore Wind Order).

[6] PSL §66-p.

objectives for offshore wind and solar resources, specifically a 9-gigawatt (GW) target for offshore wind by 2035, a 6 GW by 2025 target for distributed solar, and a 3 GW energy storage resources target by 2030.

On January 16, 2020, the Commission further incorporated the use of index-based contracts into the CES by directing NYSERDA to offer bidders an Index REC price option in RES Tier 1 solicitations from 2020 on.[7] In the Index REC Order, the Commission concluded that providing an Index REC price option would (1) give developers more flexibility to adapt their bidding behavior to their financing and operational needs, (2) reduce the risk premiums that developers account for in their bids to accommodate for uncertainty in power market revenues, and (3) lower ratepayer costs on a per-REC basis. Building on this approach, on November 20, 2020, the Commission authorized NYSERDA to offer eligible Tier 1 projects the one-time option to convert the Fixed-Price REC price term in their existing contract to an Index REC price approach.[8]

In May 2020, the Commission approved recommendations submitted by NYSERDA for the implementation of the statute's 6 GW distributed solar goal and the extension of the program through 2025.[9] Two years later, on April 14, 2022, the Commission further expanded the installation goal for the NY-Sun program to 10 GW by 2030.[10] On April 24, 2025, the Commission expanded the NY-Sun target to 10.5 GW.[11]

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7 Case 15-E-0302, supra, Order Modifying Tier 1 Renewable Procurements (issued January 16, 2020) (Index REC Order).

8 Case 15-E-0302, supra, Order Authorizing Voluntary Modification of Certain Tier 1 Agreements (issued November 20, 2020).

9 Case 19-E-0735, Proceeding on Motion of New York State Energy Research and Development Authority Requesting Additional NY-Sun Program Funding and Extension of Program Through 2025, Order Extending and Expanding Distributed Solar Incentives (issued May 14, 2020).

10 Case 19-E-0735, supra, Order Expanding NY-Sun Program (issued April 14, 2022).

11 Case 21-E-0629, In the Matter of the Advancement of Distributed Solar, Order Approving NY-Sun Program Modifications (issued April 24, 2025).

On June 18, 2020, DPS and NYSERDA jointly filed a white paper on Clean Energy Standard Procurements to Implement New York State's Climate Leadership and Community Protection Act (2020 CES White Paper).[12] On October 15, 2020, the Commission issued its responsive Order Adopting Modifications to the Clean Energy Standard (2020 CES Order).[13] In the 2020 CES Order, the Commission increased the 50% goal to 70% by 2030 and the offshore wind goal to 9 GW by 2035 and adopted several other modifications to align the CES with CLCPA goals. The 2020 CES Order also established a competitive procurement program under Tier 2 of the CES to secure the continued availability of existing renewable resources and authorized a new Tier 4 to support renewable energy projects that deliver energy to New York City.

On April 20, 2023, the Commission again modified the CES by transitioning the CES Tier 1 compliance obligation for Load Serving Entities (LSEs) from the predetermined percentage-based obligation to a load share obligation, similar to other existing LSE obligations under the CES. Under the load share obligation, which took effect in the 2025 compliance year, LSEs will be obligated to procure all Tier 1 RECs made available by NYSERDA, after the completion of sales to the voluntary market, in a proportion equivalent to their share of State load. The Phase 5 Implementation Plan filed by NYSERDA on August 30, 2023, details this approach.[14]

On May 10, 2023, the Federal Energy Regulatory Commission (FERC) approved the New York Independent System Operator, Inc. (NYISO) Capacity Accreditation Rules, which took effect in May 2024 and are designed to better reflect the capacity value of generation and storage resources, based on their marginal contribution to resource adequacy. In response, NYSERDA filed a petition on June 29, 2023, seeking to revise the way in which future REC and OREC agreements that utilize an Index REC and Index OREC pricing mechanism calculate the Reference Capacity Price. On November 20, 2023, the Commission issued its Order Addressing

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[12] Case 15-E-0302, supra, White Paper on Clean Energy Standards Procurements to Implement New York's Climate Leadership and Community Protections Act (filed June 18, 2020) (2020 CES White Paper).

[13] Case 15-E-0302, supra, Order Adopting Modifications to the Clean Energy Standard (issued October 15, 2020) (2020 CES Order).

[14] Case 15-E-0302, supra, NYSERDA Tier 1 Transition Phase 5 Implementation Plan (filed August 30, 2023).

Capacity Accreditation Rules, removing the obligation that resources include a set production factor in their bids to ensure that future CES solicitations can accommodate the new NYISO Capacity Accreditation Rules.[15]

On June 7, 2023, the Alliance for Clean Energy New York, Sunrise Wind, and Empire Offshore Wind/Beacon Wind filed separate petitions requesting the Commission to authorize NYSERDA to amend existing contracts for 86 land-based large-scale renewable projects and four offshore wind projects. The petitions cited unprecedented global and regional supply chain bottlenecks, high inflation, rising interest rates, and the impacts of the Russo–Ukrainian War, including increased global demand for renewable energy and higher component and equipment costs. However, on October 12, 2023, the Commission issued its Order Denying Petitions Seeking to Amend Contracts with Renewable Energy Projects,[16] asserting that competitive solicitations remain the most effective mechanism to ensure just and reasonable rates for renewable generation while advancing CLCPA goals.

Following the denial of these petitions, Governor Hochul announced New York State's 10-Point Renewable Energy Action Plan (Action Plan) in October 2023. The Action Plan is an action-based set of directives to sustain interest and drive growth in large-scale renewable energy development. This action-based plan outlines directives designed to reinvigorate the State's efforts to achieve its renewable energy targets. A key feature of the action plan is the continuation of offshore wind and onshore renewable energy solicitations beyond those conducted in 2022. To implement the Action Plan, NYSERDA launched expedited competitive solicitations for the Tier 1 program (RESRFP24-1) and the Offshore Wind program (ORECRFP23-1).

On October 17, 2024, in response to a request from several hydroelectric parties to expand eligibility

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[15] Case 15-E-0302, supra, Order Addressing Capacity Accreditation Rules (issued November 20, 2023).

[16] Case 15-E-0302, et al., supra, Order Denying Petitions Seeking to Amend Contracts with Renewable Energy Projects (issued October 12, 2023).

for the Environmental Value (E-Value) compensation to include distributed energy resources (DERs), the Commission issued its Order Approving Compensation for Hydroelectric Baseline Generating Facilities.[17] The order grants hydroelectric facilities, in service before January 1, 2015, with a capacity of up to 5 megawatt (MW), the opportunity to receive H-Value compensation. This compensation is set at 75% of the current E-Value, with a maximum contract duration of 25 years. To qualify for the H-Value, facilities must register with the local utility as a Community Distributed Generation project and register with DPS as a DER supplier, committing 100% of output to subscribers.

Following the filing of the 2024 Clean Energy Standard Biennial Review,[18] on May 15, 2025, the Commission issued its 2025 CES Biennial Review Order.[19] The Order adopted the 2024 Clean Energy Standard Biennial Review as final and approved several changes to CES procurements and evaluations, including authorizing annual Tier 1 solicitations aimed at procuring 5,600 gigawatt-hours (GWh) per year on average through 2029, establishing minimum eligibility thresholds for Tier 1 solicitations, authorizing extended contract tenors for the Tier 1 and Offshore Wind programs, clarifying rules for developers regarding the commercial operation milestone date, and authorizing Tier 2 Maintenance award agreements to have a contract tenor of 10 years.

The Commission's CES Biennial Review Order strengthened project maturity requirements to reduce project cancellations, safeguarded critical baseline hydroelectric resources, and directed DPS Staff to file a white paper with recommendations for market and procurement reform, including an evaluation of utility-owned generation, to achieve a cost-effective and durable clean energy transition. The Commission also directed DPS Staff to file a white paper for defining and identifying Clean Energy Zones (CEZs) to incorporate into existing Commission planning processes and clean energy procurements. The Commission noted that CEZs may offer benefits

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[17] Case 15-E-0751, et al., In the Matter of the Value of Distributed Energy Resources, Order Approving Compensation for Hydroelectric Baseline Generating Facilities (issued October 17, 2024).

[18] Case 15-E-0302, supra, Draft Clean Energy Standard Biennial Review (filed July 8, 2024).

[19] 2025 CES Biennial Review Order.

in aligning transmission and generation development activities, foster greater community engagement, and support increased economic growth in the expansion of the State's electric grid. On May 15, 2026 DPS Staff filed the CEZ white paper to explore ways to better coordinate investment in clean generation and transmission in areas of the State experiencing current or planned load growth, or those areas otherwise well-suited for energy infrastructure investments, while streamlining and prioritizing community engagement and collaboration.[20]

DPS filed a white paper[21] proposing an extension of the ZEC program on July 31, 2025, as well as a proposal[22] to modify repowering requirements specific to hydroelectric resources in Tier 1 solicitations in November 2025.

The Commission issued the Order Extending Zero-Emissions Credit Program[23] in January 2026, approving the 2025 ZEC extension proposal, with modifications, and extending the program through December 31, 2049. NYSERDA and DPS subsequently filed the proposed ZEC 2.0 Implementation Plan[24] for Commission and public consideration on March 16, 2026, and the Commission approved the proposed Implementation Plan, with modifications, on June 12, 2026.[25] The Commission also launched a new proceeding evaluate the development of a 8.4 GW Nuclear Reliability Backbone, including an assessment of the mechanisms to integrate new advanced nuclear energy technologies into the State's electric grid in a timely and cost-effective manner, and while maximizing benefits to New York State ratepayers.[26] NYSERDA and DPS

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20 Case 15-E-0302, supra, White Paper on Clean Energy Zones Program (filed May 15, 2026).

21 Case 15-E-0302, supra, Department of Public Service Staff Zero Emissions Credit Extension Proposal (filed July 31, 2025)

22 Case 15-E-0302, supra, Staff Proposal RE Tier 1 Repowering Requirements (filed November 12, 2025)

23 Case 15-E-0302, supra, Order Extending Zero-Emissions Credit Program (issued January 22, 2026)

24 Case 15-E-0302, supra, Zero-Emissions Credit (ZEC) 2.0 Implementation Plan and Load Serving Entity Master Agreement Proposal (filed March 16, 2026).

25 Case 15-E-0302, supra, Order Approving Zero-Emissions Credit 2.0 Implementation Plan and Making Other Findings (issued June 12, 2026).

26 Case 26-E-0335, In the Matter of Implementation of a Nuclear Reliability Backbone, Order Establishing a Nuclear Reliability Backbone Process (issued June 11, 2026).

filed an Advanced Nuclear Options Paper for public consideration into the Nuclear Reliability Backbone proceeding on June 12, 2026. More broadly, NYPA started to pursue advanced nuclear project development in 2025 further to a directive from Governor Hochul for NYPA to develop an advanced nuclear generation project of at least 1 GW in size. NYPA recently issued a Request for Qualifications (RFQ) to identify experienced developers and highlighted additional progress made over the last year towards development of at least 1 GW of new advanced nuclear capacity.[27]

In October 2025, NYSERDA filed the proposed OSW Implementation Plan,[28] which the Commission approved on February 2, 2026.[29] Approval of the implementation plan provides for several avenues for the sale of ORECs, including the long-term contracting of ORECs, and the pre-sale and re-sale of ORECs to interested parties, sales which would reduce the obligation upon LSEs and utilities and thereby reduce ratepayer costs.

The 2023-2024 State Budget Enactment significantly expanded NYPA's role in the renewable energy sector. It gave NYPA new authority to plan, design, develop, finance, construct, own, operate, maintain, and improve renewable energy generation projects to support New York State's renewable energy goals established in the CLCPA in support of an adequate and reliable supply of electric power, and energy in the state and support the Renewable Energy Access and Community Help program. NYPA is authorized to partner with other entities to develop new renewable generation projects, paving the way for public-private partnerships on projects. On January 28, 2025, NYPA published its inaugural NYPA Renewables Strategic Plan, which described how it will operationalize its new renewables work, along with continued and critical obligations to its existing generation, transmission, customer, and community commitments. On December 9, 2025, NYPA published its final Updated Strategic Plan reflecting its plans to

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[27] NYPA. (June 22, 2026). *One Year In, NYPA Highlights Progress Toward Developing at Least 1 GW of Advanced Nuclear Energy in Upstate New York* [Press Release]. https://www.nypa.gov/News/Press-Releases/2026/20260623-nuclear.

[28] Case 15-E-0302, supra, Offshore Wind Implementation Plan Proposal, Updated (filed October 3, 2025).

[29] Case 18-E-0071, et al., In the Matter of Offshore Wind Energy, Order Approving Offshore Wind Implementation Plan (issued February 13, 2026).

develop an ambitious and scalable model to build renewable generation resources for New York. The final Updated Strategic Plan includes solar PV, wind, and energy storage projects totaling approximately 5.5 gigawatts (GW) of capacity.

2 Factors Affecting Progress

The previous section laid out the policy actions taken by New York to advance clean energy deployment in the State and the following sections summarize the progress from New York's efforts to meet its clean energy goals. This section provides local, national, and international context and describes major factors and risks that affect the development and deployment of renewables, such as the implications of future load growth and evolving federal policies. Some of the factors influencing the pace of progress are specific to the New York environment, while others are more national or global and thus may be beyond New York State's direct control.

2.1 State-Level Factors

This section provides an overview of state-level developments and circumstances that may impact renewable energy development and deployment in New York.00

2.1.1 Electric Load Growth

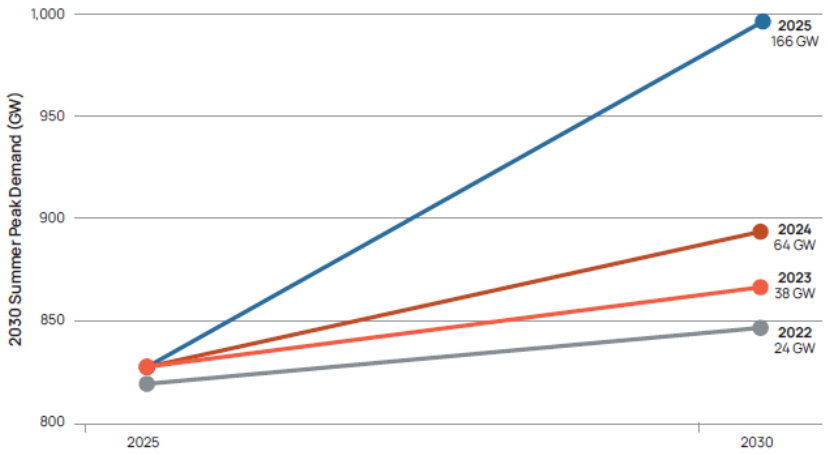
As discussed in the 2024 CES Biennial Review, the United States is projecting a significant increase in electricity usage in the coming years. The U.S. Energy Information Administration's latest forecasts indicate that the 2024-2027 period could be the strongest four-year growth period in electricity demand across the country since 2000, with demand driven by new large loads.[30] A review of utilities' load forecasts to FERC found that electricity demand across the country could grow by an average of 5.7% per year through 2030 largely due to data centers. This forecasted load growth stands in stark contrast to recent decades of relatively flat electricity demand – average annual national electricity demand grew by less than 1% per year between 2000 and 2024.[31] Moreover, recent FERC submissions reflect that utilities and energy planners across the country have been consistently revising their 2030 load forecasts upwards due to new large load

[30] U.S. Energy Information Administration (EIA), Press Room: EIA forecasts strongest four-year growth in U.S. electricity demand since 2000, fueled by data centers (2026), Available at: https://www.eia.gov/pressroom/releases/press582.php

[31] Grid Strategies. 2025. "Power Demand Forecasts Revised Up for Third Year Running, Led by Data Centers."

requests. Forecasts for peak demand in 2030 increased by more than 140 GW between 2022 and 2025 – jumping from 22 GW to 166 GW – a nearly six-fold increase (see Figure 1).[32]

Figure 1. Total National Peak Demand Growth Forecast for 2025—2030 (Forecasts from 2022—2025)



New York State faces similar circumstances. Per the NYISO, in the coming years, electricity demand is forecasted to significantly increase as large load customers are expected to come online, reshaping the State's energy landscape (medium- to long-term load growth is forecasted to also be driven by continuing transportation and building electrification efforts).[33] Similar to the pattern developing across the country, NYISO has been forecasting increasing load projections in recent years after many years of relatively flat electricity demand. This contrasts sharply with the energy landscape at the time the 2020 CES Order was issued. NYISO's 2020 Gold Book forecasted load to increase by approximately 6.5 TWh between 2020 and 2030, a 3.6% load increase over a decade;[34] the 2020 CES Order established a 2030 load forecast of

[32] Grid Strategies. 2025. "Forecasting for Large Loads: Current Practices and Recommendations."

[33] New York Independent System Operator, Inc., 2023-2032 Comprehensive Reliability Plan (2023), available at: https://www.nyiso.com/documents/20142/2248481/2023-2032-Comprehensive-Reliability-Plan.pdf.

[34] New York Independent System Operator, Inc., Analysis of NYISO's annual Load and Capacity Data reports from 2016 through 2025, available at: https://www.nyiso.com/publications.

151.7 TWh,[35] a 2.5% increase over the 147.9 TWh of energy LSEs actually secured to meet New York State load in 2020.[36] Evolving market and electrification circumstances – particularly the rise in the past three years in large loads projected to deploy in New York State – have rapidly changed the energy outlook for the State.

As seen in Figure 2, NYISO's state energy projections have evolved from forecasts of relatively flat and even declining annual load growth in 2016 – 2022 NYISO Gold Books, to recent reports that project load growth to increase by 1-3% annually through 2040 (NYISO Gold Books 2023-2026). Between 2020 and 2026, NYISO's forecast for the State's 2030 load increased by 10%, or 16 TWh, from 157 TWh to 173 TWh. Between the forecasts developed in 2020 and 2026, NYISO's baseline load forecast for 2040 increased by more than 23 TWh, a 13% jump. The increase in the load forecasts are largely attributable to continued economic development in the state, including rising energy demand from greater large loads in the State – NYISO's recent reporting includes baseline large load forecasts of 21.4 TWh – that was not envisioned nor anticipated at the time of the CES's establishment. Also notable is the downward estimates in future load growth between the 2025 and 2026 Gold Book Baseline forecasts. Large loads can generally be built much faster than large generation and much of the country is experiencing this same phenomenon of new, unexpected large loads entering interconnection queues.

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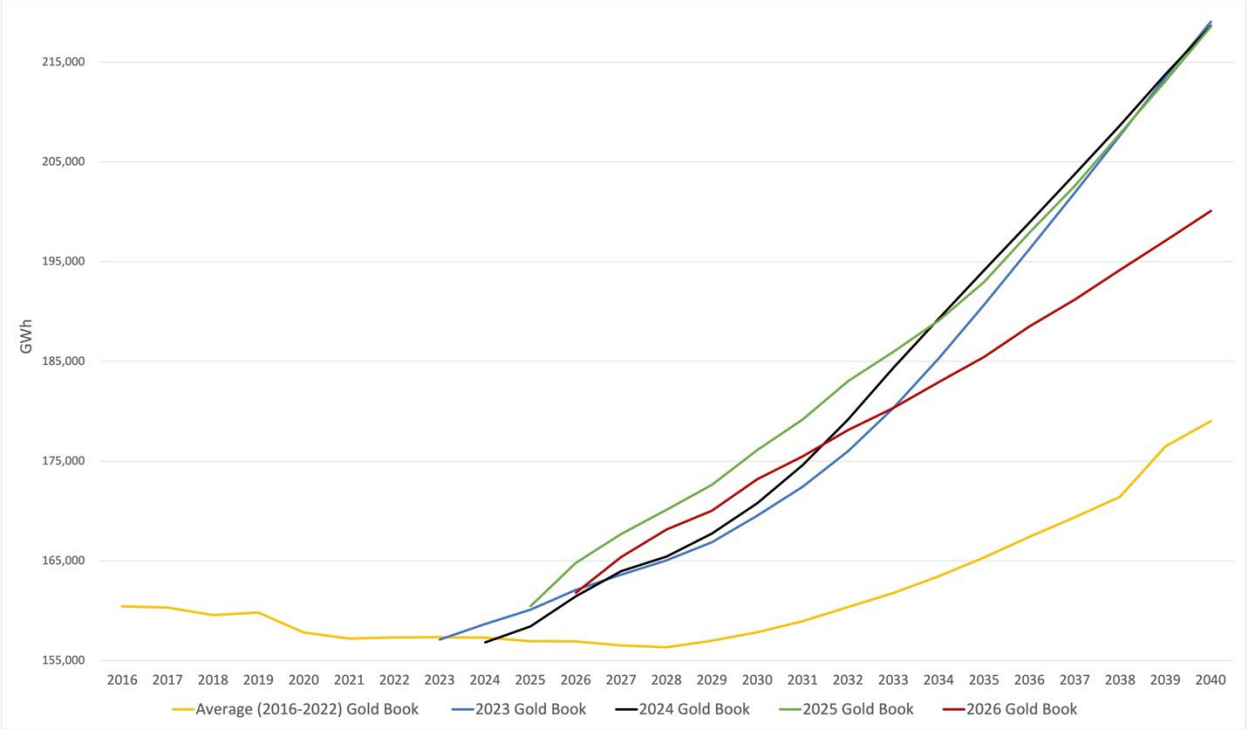
35 2020 CES Order.

36 Case 15-E-0302, supra, Clean Energy Standard Annual Progress Report: 2020 Compliance Year (filed January 31, 2022).

Figure 2. NYCA Load Forecast by Gold Book Publication Year



* Note forecasts provided are net of BTM Solar PV

This dynamic was similarly reflected in the 2025 State Energy Plan (2025 SEP), which assumed new large loads (consistent with the 2025 NYISO Gold Book Baseline scenario[37]) – including large manufacturing projects and data centers – and the continued electrification of transportation and buildings driving growing electricity demand in all examined scenarios.[38]

The 2025 SEP report emphasized that consumer preferences and government policies and programs are already driving adoption of clean energy technologies, including electric vehicles, building energy efficiency, and heat pumps. State actions (e.g., various transportation decarbonization initiatives and investments, heat pump incentive programs, advanced building

[37] New York Independent System Operator, Inc., 2025 Load and Capacity Data report, available at: https://www.nyiso.com/documents/20142/2226333/2025-Gold-Book-Public.pdf

[38] New York State Energy Planning Board, 2025 New York State Energy Plan (2025 SEP), available at: https://energyplan.ny.gov/Plans/2025-Energy-Plan.

codes, and all-electric new construction) may continue to accelerate the adoption of more efficient and electrified alternatives as existing vehicles and heating and cooling appliances age out and are replaced, which could contribute to future load growth.

Large manufacturing projects and data centers are projected to be a major driver of new industrial load in the State; however, planning considerations and appropriate forecasting are complex, as uncertainty exists around their location, long-term energy consumption, and demand flexibility. The 2025 SEP Additional Action Scenario projects a 25% increase in annual electricity demand and a 22% increase in peak demand by 2040 as compared to 2025, inclusive of load growth expected from new large load projects. These large loads include projects currently underway and driving economic development, including Micron's and GlobalFoundries' large manufacturing facilities in Upstate New York. As highlighted by the various scenarios in the 2025 SEP, there is a significant range in load forecasts due to the multitude of variables to be considered. However, all projections point to increasing load and continued economic development in the State.[39] Section 5.1 of this report will provide additional context on load forecasts to ground the report's quantitative analysis.

On February 12, 2026, the Commission initiated a proceeding, *Case 26-E-0045: Proceeding on Motion of the Commission to Address Interconnection Reforms for Large Loads*, consistent with Governor Hochul's 2026 State of the State address in which the Governor announced the Energize NY Development initiative to assess and modernize how large loads connect to the electric grid. As part of the proceeding, the Commission seeks to advance a large load interconnection framework to (1) modernize the interconnection process for all building loads; (2) improve transparency and predictability related to grid upgrades; (3) ensure that data centers and similar facilities bear the cost they impose on the electric system; (4) provide for the continued reliability of the electric system; (5) develop programs and policies for the interconnection of large loads that consider the objectives of State clean energy goals; and (6) explore ways in which new large electric load could lead to downward pressure on rates for all

[39] See, 2025 SEP, Supplemental Analysis.

customers. As part of the ongoing proceeding, DPS Staff was directed to publish a white paper with recommendations for the Commission's consideration in early 2027.[40]

2.1.2 Interconnection

In order to connect to the grid and participate in the wholesale energy and capacity markets, most proposed new generation projects must adhere to the NYISO interconnection process.[41] The process determines, among other things, what system upgrades the generator must undertake in order to safely and reliably connect to the transmission system. Both the length of time needed to study a generator's impacts, and the costs of the resulting system upgrades continue to impact the pace at which new generation resources are added to the grid.

Generators begin the process by entering the interconnection queue and then undergo several technical studies. These studies identify the: (a) Attachment Facilities that are necessary to directly and reliably interconnect the generator to the system; (b) System Upgrade Facilities needed to ensure that the generator has no adverse reliability impacts to the system; and (c) System Deliverability Upgrades for those generators intending to sell capacity that would not be fully deliverable on the existing system without such upgrades. The studies determine a generator's interconnection costs. Developers and investors rely on information about interconnection costs and timing to make decisions about whether to proceed with their projects.

In1996, FERC issued Order No. 888, which required jurisdictional electric utilities to unbundle wholesale electric generation and transmission services and file open-access nondiscriminatory transmission tariffs. This was in response to a finding by FERC that there was a monopoly control over interstate transmission facilities to disadvantage potential competitors and doing so was not in the public interest. One means of compliance with Order 888 was for these utilities to turn over operational control of their transmission facilities to an Independent System Operator

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[40] Case 26-E-0045, Proceeding on Motion of the Commission to Address Interconnection Reforms for Large Loads, Order Instituting Proceeding and Soliciting Comments (issued February 12, 2026)

[41] New York Independent System Operator, Inc., Interconnection Process, available at: https://www.nyiso.com/interconnections.

(ISO).[42] In late 1996 and in 1997 the New York Power Pool Member Systems made a series of filings to FERC for approval to become an ISO. In June 1998, FERC conditionally authorized the establishment of the NYISO and then addressed tariff issues, market rules, and market-based rates in January 1999. In July 1999, FERC authorized the start-up of the NYISO and the NYISO commenced operations in December 1999.[43]

Since 1999, the NYISO has managed a process for interconnecting electric resources to the bulk electric system – originally designed assuming that most of the projects in the queue would be fossil fuel generation plants – by studying groups of projects on a "Class Year" basis. As greater numbers of generation projects entered the interconnection queue the time it took to complete a Class Year increased. Due to the structure of the interconnection process and the number of projects entering the queue, many projects were ultimately experiencing a three- to four-year timeline (median duration), or longer in some cases, to complete the interconnection process.[44]

In response to FERC Order No. 2023, which mandates the elimination of separate feasibility and system impact studies, the NYISO implemented its new Cluster Study Process in the summer of 2024, with expected completion of the first Transitional Cluster Study at the end of October 2026.

Figure 3 below shows the timeline of the 2024 Transitional Cluster Study process.[45] The 2024 Transition Cluster Study is a gated, two-phase interconnection process that narrows projects

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42 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Service by Public Utilities, 61 Fed. Reg. 21,540, FERC Statutes and Regulations ¶31,036 (1996).

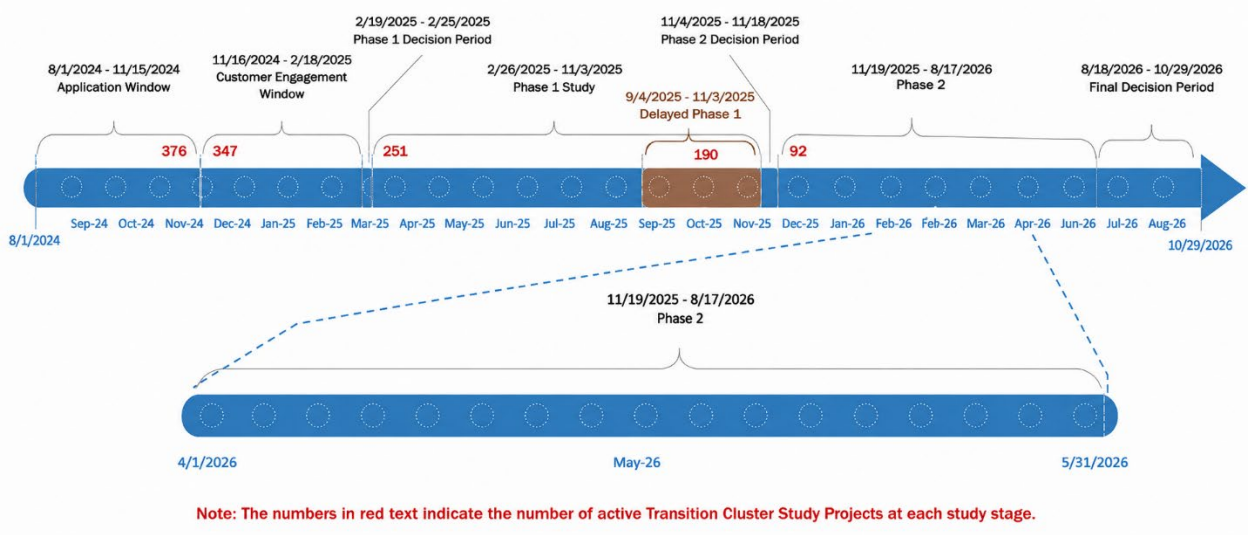
43 Central Hudson Gas & Electric Corporation, et al., 88 FERC ¶ 61,138 (1999); 86 FERC ¶ 61,062 (1999); 83 FERC ¶ 61,352 (1998).

44 Lawrence Berkeley National Laboratory, Queued Up: 2024 Edition, Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2023 (2024), available at: https://emp.lbl.gov/queues.

45 New York Independent System Operator, Inc., Public Dashboard for Transition Cluster (2026), available at: https://www.nyiso.com/documents/20142/57604192/05%2002%202026%20-%20Interconnection%20Cluster%20Study_%20Projects%20Dashboard%202026%20R0.pdf/37e74a5f-2753-8dc7-1a1a-e1b826637f30.

from application intake to binding commitments. The Application Window collects project requests, technical data, site control, fees, and deposits; the Customer Engagement Window validates applications, cures deficiencies, confirms models and points of interconnection, and executes study agreements. The Phase 1 Decision Period is the first go/no-go gate, followed by Phase 1, which studies project-specific direct-connection facilities and preliminary cost/schedule estimates. The Phase 2 Decision Period is the second gate, followed by Phase 2, where NYISO studies the remaining cluster collectively, identifies shared system upgrades, and allocates costs. The Final Decision Period requires customers to accept or reject their allocations and post required security before moving toward interconnection agreements.

Figure 3. 2024 NYISO Transition Cluster Timeline

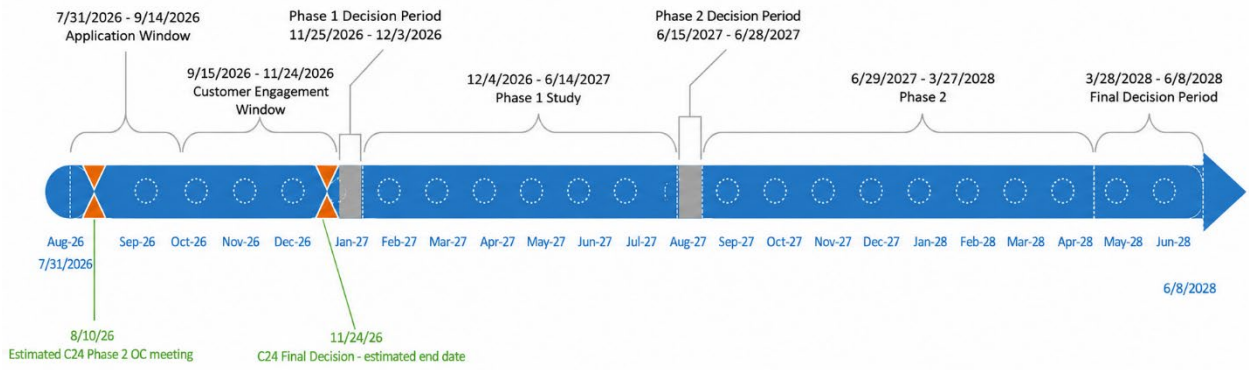


Source: NYISO ."Public Dashboard for Transition Cluster"

The application window for the 2026 Cluster Study is expected to open on July 31, 2026, with the Phase 1 Study commencing on December 4, 2026. Under this tentative schedule, subject to revision, the 2026 Cluster Study is anticipated to be complete around June 8, 2028. Figure 4 below shows the expected timeline of the 2026 Cluster Study process.[46]

[46] New York Independent System Operator, Inc., Public Dashboard for Transition Cluster (2026), available at: https://www.nyiso.com/documents/20142/57604192/05%2002%202026%20-

Figure 4. 2026 NYISO Cluster Timeline



Source: NYISO ."Public Dashboard for Transition Cluster"

NYISO's 25 proposed 2026 Cluster Study enhancements are best understood as a package of process-tightening measures aimed at making the next interconnection cluster more disciplined, transparent, and manageable.[47] The enhancements address the front end of the process through more training, simpler and clearer Interconnection Request forms, better use of application data for modeling, limits on transmission owner (TO) data requests, and clearer deficiency-cure rules. They also try to reduce unnecessary project attrition by refining the treatment of physical infeasibility, including conditional Phase 1 entry for projects whose infeasibility may depend on other higher-queued projects withdrawing. Other changes focus on improving coordination with affected TOs, narrowing the scope of upgrade alternatives studied, clarifying site-control, base-case, contingent-project, withdrawal, dispute-resolution, and final-decision rules, and adding stronger discipline around commercial operation date (COD) extensions, unpaid invoices, pre-application requests, Interconnection Agreement processing, non-cluster study cost allocation, and minor tariff cleanup. Overall, the package does not fundamentally redesign NYISO's cluster framework; it is a practical set of incremental reforms intended to reduce ambiguity, improve

%20Interconnection%20Cluster%20Study_%20Projects%20Dashboard%202026%20R0.pdf/37e74a5f-2753-8dc7-1a1a-e1b826637f30.

47 New York Independent System Operator, Inc., 2026 Cluster Study Enhancements (2026), available at: https://www.nyiso.com/documents/20142/57464236/Cluster%20Enhancements%2020260325%20MC.pdf/1caf4f12-8c9f-a7aa-1ae3-e2a80cfa2ef5.

study efficiency, manage project withdrawals more effectively, and help the interconnection process keep pace with New York's energy development needs.

In the 2025 Biennial Review Order, the Commission established a minimum project maturity threshold to participate in Tier 1 solicitations, directing NYSERDA to require prospective bidders in future solicitations to have at minimum (i) satisfied requirements for entry into the NYISO Cluster Study's Phase 2 Study following completion of the Phase 1 Study, including making any deposit payment that may then be due or (ii) completed the interconnection process under the NYISO's prior rules.[48] An overview of projects participating and advancing in the Transitional Cluster Study is included in Table 1.

Table 1. Participating Projects in the 2024 Transitional Cluster Study

Technology	Elected to Proceeded to Phase 2	
	Projects	**Total Capacity (MW)***
Solar	9	1,210
Onshore Wind	10	1,298
Co-located Solar + Storage	7	1,350
Offshore Wind	2	2,631
Energy Storage	61	9,122
Natural Gas	2	1,245
Oil	1	49
Total*	**92**	**16,905**

* Totals may not add due to rounding.

2.1.3 Transmission

As the energy supply portfolio changes and as electrification proceeds, New York's grid will need to be expanded to ensure that energy is delivered to customers across the State with the

[48] 2025 CES Biennial Review Order.

necessary level of reliability. Constraints in the existing system adversely affect the progress of renewable and emissions-free generation projects in at least two ways: (1) they reduce the amount of energy a project can inject to the grid, and (2), they increase the costs of interconnection. More broadly, these transmission constraints slow renewable and emissions-free generation deployment by increasing congestion and curtailment risk, extending interconnection timelines and uncertainty.

In recognition of this challenge, New York State has already begun investing in its transmission and distribution infrastructure, but the full cost of modernizing and expanding the grid is not yet known. Furthermore, while there has been progress, uncertainties about the timing of this new infrastructure remain and create risk for generation developers. New York has new authority to permit needed infrastructure on expedited timeframes, but it is difficult to predict how these new authorities will actually impact the pace of development since many factors that impact development are not in the State's control.[49]

In 2020, the State passed the Accelerated Renewable Energy Growth and Community Benefit Act (Accelerated Renewables Act), which mandated new efforts to identify system upgrades needed to meet CLCPA goals and provided authority to expedite certain upgrades. To implement these directives, the Commission opened a proceeding that to date has led to action on both near and long-term transmission infrastructure needs.[50] Pursuant to the Accelerated Renewables Act, the Commission created the Coordinated Grid Planning Process to holistically analyze the supply, demand, and the configuration of the electric network to systematically identify the specific needs and investments that best achieve cost-effectiveness for affordability, reliability, and clean energy deployment.[51] While the CGPP will identify long-term transmission needs, the

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[49] Chapter 58 of the Laws of 2024, part O.

[50] Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (issued May 14, 2020).

[51] Case 20-E-0197, supra, Order Approving a Coordinated Grid Planning Process (issued August 17, 2023).

Commission has already approved an estimated $8 billion in transmission investments specifically designed to support the integration of renewable energy sources, including:

- **Smart Path Connect**: Led by NYPA and National Grid, the Smart Path Connect project modernizes over 100 miles of transmission lines in the North Country and the Mohawk Valley.[52] The Smart Path project – completed in the summer of 2023 – and Smart Path Connect combined enable the delivery of an estimated 900 MW of renewable energy to 900,000 homes statewide.
- **Phase 1 Projects**: 30 upgrades to utility local transmission systems that, when completed, will add close to 4,000 MW of capacity for renewable energy.[53]
- **Area of Concern Projects**: A total of 62 local transmission upgrades that will add 3,400 MW of capacity once in-service.[54]
- **Brooklyn Clean Energy Hub.** In April 2023, the Commission approved Con Edison's proposal to develop the Brooklyn Clean Energy Hub to address the local reliability needs and increased demand associated with the electrification of vehicles and buildings in New York City as well as provide interconnection points for 4,500 MW of renewable and emissions-free energy resources. The project is under construction.[55]

Since 2020, the Commission has also taken measures to maximize grid reliability benefits, including actions to address downstate needs (further discussion of available renewable and emissions-free energy solutions to incorporate into existing reliability planning processes to meet reliability needs, particularly in New York City, is included in Section 6). By enhancing reliability and connectivity across the state, a positive secondary effect of unlocking and

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52 New York Power Authority, The Smart Path Connect Transmission Project, available at: https://www.nypa.gov/power/transmission/transmission-projects/smart-path-connect.

53 Case 20-E-0197, supra, Order Authorizing Development of Phase 1 Transmission Projects and Cost Recovery Measures (issued July 14, 2022).

54 Case 20-E-0197, supra, Order Approving Phase 2 Areas of Concern Transmission Upgrades (issued February 16, 2023).

55 Case 20-E-0197, supra, Order Approving Cost Recovery for Clean Energy Hub (issued April 20, 2023).

connecting additional renewables to the grid is possible, further supporting State clean energy goals. Relevant updates on these efforts include:

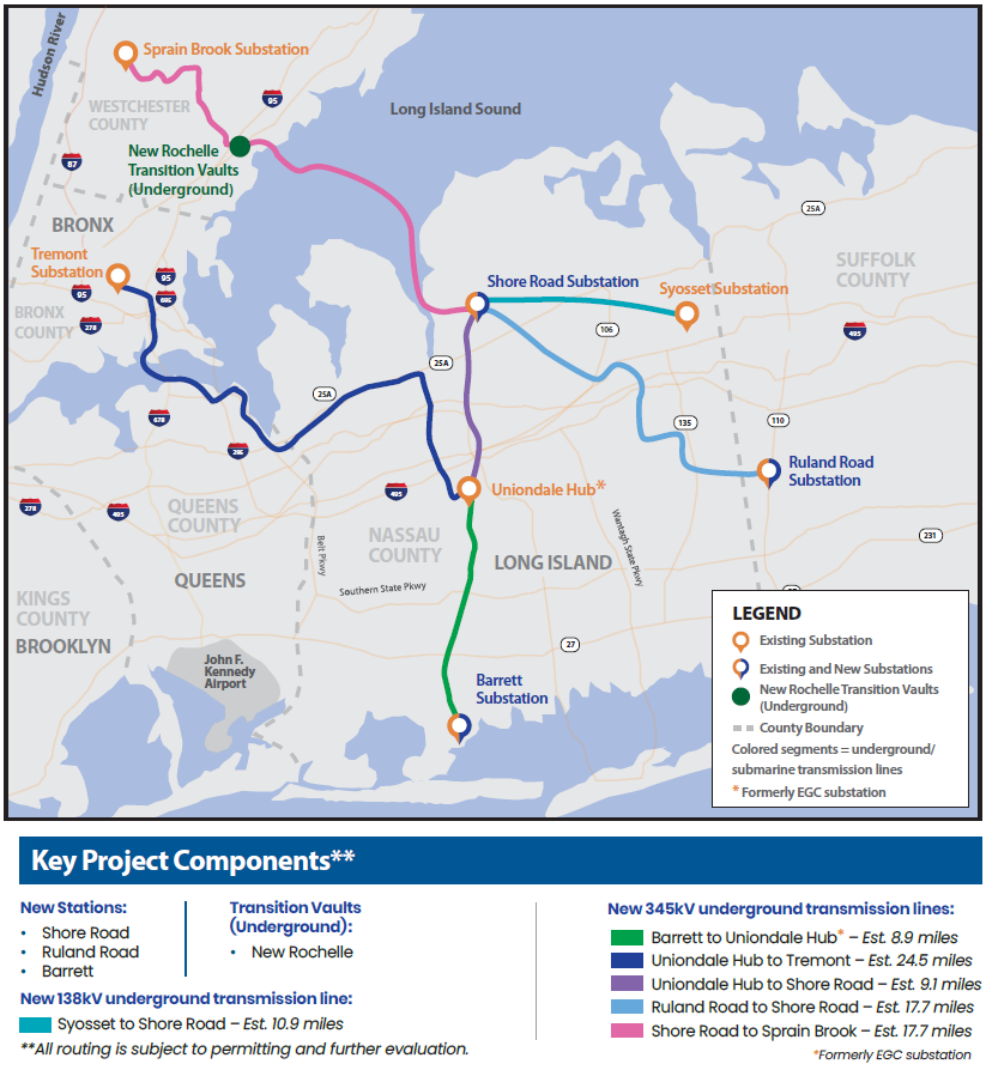
- **Propel New York:** The Propel New York project,[56] a collaboration between NYPA and New York Transco, intends to enhance the state's electrical system by bolstering grid reliability and resilience while also delivering renewable and emissions-free energy into the statewide electric grid through system improvements in Long Island, New York City, and Westchester County (see Figure 5). The project has a projected in-service date of May 2030.

As part of the Tier 4 program and subsequent Tier 4 solicitation, the Commission approved two projects to increase the penetration of renewable and emissions-free energy in New York City, Clean Path NY and the Champlain Hudson Power Express (CHPE) project. NYSERDA and Clean Path NY mutually agreed to terminate the project's Tier 4 REC Purchase and Sale Agreement. Additional detail on the Tier 4 program is available in Section 4.3.

- **Champlain Hudson Power Express (CHPE):** The CHPE project, a 1,250 MW, 339-mile fully buried underground and underwater transmission line, entered service in May 2026. The project is now able to deliver clean, reliable hydropower from Quebec and supply more than 10 million MWh of renewable energy annually to NYISO Zone J. CHPE will provide up to 20% of New York City's power and will help reduce the emissions that went up across downstate with the 2021 closure of the Indian Point power plant.

[56] Propel NY Energy, Our Mission: A Reliable Grid & Clean Energy for NY Homes and Businesses, Available at: https://www.propelnyenergy.com/overview

Figure 5. Propel New York Project Map



Key Project Components**

New Stations:
- Shore Road
- Ruland Road
- Barrett

Transition Vaults (Underground):
- New Rochelle

New 138kV underground transmission line:
Syosset to Shore Road – *Est. 10.9 miles*

***All routing is subject to permitting and further evaluation.*

New 345kV underground transmission lines:
Barrett to Uniondale Hub* – *Est. 8.9 miles*
Uniondale Hub to Tremont – *Est. 24.5 miles*
Uniondale Hub to Shore Road – *Est. 9.1 miles*
Ruland Road to Shore Road – *Est. 17.7 miles*
Shore Road to Sprain Brook – *Est. 17.7 miles*
**Formerly EGC substation*

Coordinated Grid Planning Process

As directed by the Accelerated Renewables Act, the Commission and the utilities have developed a new CGPP that focuses on identifying the transmission investments needed to meet CLCPA goals. The CGPP, approved August 17, 2023, is a six-stage, statewide planning process intended to provide the Commission with an overview of the upgrades needed at all levels of the system, including distribution, local transmission, and bulk transmission, resulting in a cost-

effective investment plan that supports the State's clean energy goals as well as other system needs.[57]

On November 13, 2025, the Commission issued an Order refining the CGPP to make it more transparent, analytically robust, and better coordinated with NYISO's forthcoming action in response to FERC Order No. 1920 on long-term regional transmission planning process (see below), while preserving the CGPP's three-year cycle. The Order strengthens cycle governance by requiring clearer upfront scheduling, a public "Cycle Map," improved meeting notice and materials posting, ongoing website updates, and a post-cycle review process. Substantively, it improves the CGPP study framework by directing continued coordination with NYISO, adding production-cost modeling after capacity expansion in Stage 1, improving the treatment of local headroom and generation siting, expanding dispatchable emissions-free resources (DEFR) and storage modeling, adding extreme-weather sensitivities, and developing conceptual bulk-transmission cost inputs so that local and interzonal solutions can be evaluated on a more comparable basis. The Order also directed a shift in the cost estimation and engineering design of modeled projects, reserving rate-case quality estimates for prioritized projects only, saving time, effort, and cost in the early stages of the process. Overall, the modifications are intended to move the CGPP from a first-cycle planning framework toward a more mature, transparent, and decision-useful process that can better inform New York's transmission investment needs while aligning with emerging federal regional-planning requirements.[58]

The first cycle of the CGPP study process concluded with the filing of the utilities' report on transmission needs and proposed solutions on May 4, 2026. The next cycle will begin following the Commission's decision on the proposed portfolio of investments.

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[57] Case 20-E-0197, supra, Order Approving a Coordinated Grid Planning Process (issued August 17, 2023).

[58] Case 20-E-0197, supra, Order Modifying Coordinated Grid Planning Process (issued November 13, 2025).

FERC Order No. 1920

On May 13, 2024, FERC issued Order No. 1920, Building for the Future Through Electric Regional Transmission Planning and Cost Allocation, to improve regional electric transmission planning and cost allocation, a rule which was subsequently clarified through FERC's Order No. 1920-A and Order No. 1920-B. The FERC orders adopt new long-term regional transmission planning processes, in which transmission planners are directed to conduct long-term scenario planning to identify transmission needs; to evaluate the efficiency and cost-effectiveness of potential transmission facilities; and to use transparent selection criteria when selecting facilities for inclusion in long-term transmission planning.[59] Order No. 1920-A specifically includes clarification on how states should have input in long-term regional transmission planning processes requiring that transmission providers (i) consult with states before running scenario analysis as required by Order No. 1920 and (ii) consider input from the state on how to consider factors associated with state public policies.[60] In the Commission's Order Modifying Coordinated Grid Planning Process, the Commission expressed its belief that the FERC orders and the CGPP process are complementary and "that significant ratepayer benefits can be gained by properly aligning the two processes." While NYISO's obligations under the FERC orders will be determined by FERC, the Order noted that the Commission suggests NYISO seek authorization from FERC in its Order No. 1920 compliance filing to schedule the start of its Order No. 1920 process with the ongoing CGPP.[61]

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[59] Federal Energy Regulatory Commission, Explainer on the Transmission Planning and Cost Allocation Final Rule (2025), available at https://www.ferc.gov/explainer-transmission-planning-and-cost-allocation-final-rule.

[60] Federal Energy Regulatory Commission, Docket No. RM21-17-001, Order No. 1920-A (2024), available at: Order No. 1920-A. https://www.ferc.gov/media/e-1-rm-21-17-001.

[61] Case 20-E-0197, supra, Order Modifying Coordinated Grid Planning Process (issued November 13, 2025).

2.1.4 Siting and Permitting

Land-Based Renewable Energy Permitting

New York's permitting processes for renewable energy projects depend primarily on a proposed project's size and technology. Projects smaller than 25 MW typically require permits issued by local land use authorities and are subject to the State Environmental Quality Review Act (SEQRA). Additionally, developers may need to obtain other discretionary and ministerial permits depending on applicable local laws for renewable energy projects. Due to the variability of municipal laws and procedures, timelines for approving these projects are hard to predict and local permits may be difficult to obtain.

Prior to 2021, major renewable electric generating facilities equal to or larger than 25 MW were permitted pursuant to the Public Service Law Article 10 process. Presently, these projects are required to seek permits through the New York State Office of Renewable Energy Siting and Electric Transmission (ORES). ORES was established, as set forth in Public Service Law Article 8, to streamline the environmental review and permitting of major renewable energy facilities.[62] The process is crafted to support the State's renewable energy goals while safeguarding the environment and considering all relevant social, economic, and environmental factors, including environmental justice. The ORES permitting process is also designed to help ensure that the economic benefits of renewable energy development are shared locally by requiring projects to provide host community benefits, including financial benefits for local governments and utility bill credits for residential ratepayers.

In 2024, the State has further indicated its commitment to reducing permitting timelines by enacting the Renewable Action Through Project Interconnection and Deployment (RAPID) Act that transferred ORES to DPS and established a new Article VIII, expanding ORES's mission to now include the environmental review and permitting of major electric transmission facilities.[63]

[62] Chapter 58 of the Laws of 2020, part JJJ.

[63] Chapter 58 of the Laws of 2024, part O.

Overall, the ORES process is intended to provide a single forum for reconciling a project's design with State and local requirements, and is proving to be fruitful in this regard.

The ORES process is having a significant impact on the rate of approval of new generation. On average, under the former Article 10 process for new generation, it took 3.5 years from the initial filing to a permit being issued. By contrast, ORES is obligated to make a final decision on a generation permit within one year from the date the application is considered complete, or within six months if the facility is planned to be situated on a brownfield, former commercial or industrial site, landfill, former power plant, or other abandoned or underutilized site.[64] The first 36 permits issued by ORES have taken an average of eight and a half months (i.e., from time of complete application to issuance of permit).[65] These 36 permits are also projected to provide more than $635 million in benefits, as well as over $18 million in utility bill credits for residential ratepayers.

While ORES has served to streamline State permitting, most generation projects also require one or more federal permits which may impact project timelines and extend the development process. Federal permits fall into several categories including wildlife protection, air and water protection, and protected land usage. See Section 2.2.3 for more information on federal permitting. It should be noted that while ORES, which has jurisdiction over utility-scale projects that are 25 MW or larger, has permitted 36 solar and wind projects to date, local governments have approved the bulk of all solar projects--more than 1,400 community solar projects thus far.

Balancing the Agricultural Industry and the Energy Industry

The characteristics of agricultural land, which is generally relatively flat, with minimal shading, and is frequently cleared of vegetation, make those areas attractive for energy system development. This has led to a longstanding tension between communities located around agricultural lands and the energy industry. That tension has increased as the volume of solar and

[64] New York State, Office of Renewable Energy Siting and Electric Transmission, About Us, available at: https://ores.ny.gov/about-us.

[65] New York State, Office of Renewable Energy Siting and Electric Transmission, Permit Applications, available at: https://dps.ny.gov/ores-permit-applications.

wind projects has increased in the most recent 25 years. Stakeholders have raised concerns that solar threatens farming and local farm economies by taking land out of agricultural production, and that certain regions may experience higher solar development pressure than others. To be clear, New York energy development is occurring only on land that is willingly leased by landowners, and under Governor Hochul, 134,000 acres of prime farmland have been preserved to date. At the behest of the New York State Agricultural - Technical Working Group (A-TWG), NYSERDA commissioned and recently finalized a Phase 1 report exploring potential regional agricultural impacts associated with solar energy development.[66] Among its many findings was that the primary driver of agricultural land loss over the last 20 years has been its transition to shrubland, forest, and other non-developed land uses, and its conversion to human development (such as urban expansion or suburban "sprawl"). The report identified that between 2011 and 2025, an estimated 20,066 acres of combined community and utility-scaled solar development (projects that were ≥1 MWac) were built statewide, which represents the equivalent acreage of about 0.3% of state farmland. An analysis of proposed solar development in interconnection queues identified that greater than 50% of proposed capacity was concentrated in twelve counties, raising the potential for regional effects. The committee recommended additional analysis to address State specific information and modeling gaps necessary to further characterize potential economic effects from agricultural land loss – from all forms of development (solar, urban/suburban sprawl, etc.).

While renewable energy is not the main driver of agricultural land conversion, large scale renewable energy is the only category of development required by New York State to mitigate for impact to agricultural land. In addition, there is evidence that solar development is often beneficial to the host farms. A recent study by Cornell University[67] found that farmers who

[66] New York State Energy Research and Development Authority (NYSERDA). 2026. "Regional Agronomic Impact from Solar Energy—Phase 1 Final Report," NYSERDA Report Number 26-01. Prepared by WSP USA Inc., New York, NY. nyserda.ny.gov/publications.

[67] Solar's threat to NYS agriculture may be overstated | Cornell Chronicle (2026) available at: https://news.cornell.edu/stories/2026/03/solars-threat-nys-agriculture-may-be-overstated

received solar lease payments were three times more likely to use that funding to continue or expand farming operations vs. use the proceeds as an exit strategy from active farming.

Agrivoltaics, or the co-location of solar and agricultural activities, has the potential to further reduce conflict between the two uses. NYSERDA has initiated an Agrivoltaics Research and Demonstration program to test and document how solar energy systems and agricultural operations can function together on the same land under actual farming and energy production conditions, generating data on both agricultural outcomes—crop yields, livestock health, soil conditions—and solar energy performance. These projects represent a range of agricultural uses – including dairy cattle grazing, hay production and specialty crops, solar configurations, and geographic contexts across New York State. The A-TWG is actively collaborating on agrivoltaics, and the American Farmland Trust has developed comprehensive guidelines for best practice co-location of solar and agricultural activities. Consideration of these best practices early in project development, together with thoughtful siting, will help support the long-term viability of both agricultural activities and new energy development.

To achieve the State's clean energy goals, New York State has long recognized the need to balance renewable energy project development with the protection and enhancement of its agricultural and natural resources. The State has taken significant steps towards this through the adoption of permitting strategies and project procurement practices aimed at mitigating any potential adverse effects of renewable energy initiatives and simultaneously maximizing the co-benefits and synergies that can be derived from integrating these land uses.

Transmission Permitting

Adequate grid capacity or headroom is critical to allowing new renewable energy projects to get online. Transmission permitting procedures impact the pace at which new renewable resources can be interconnected and their level of contribution to the overall energy supply.

Beginning in 2020, the Commission has required utilities to develop plans for transmission investment needed to meet State clean energy goals. Over $5 billion in local transmission investments, which directly impact existing and contracted projects, were identified and

approved through 2023. The majority of these upgrades are in advanced development or under construction.

The State continues to take action to accelerate the pace at which necessary transmission upgrades are identified and constructed so that renewable energy projects can interconnect and commence commercial operation within the timeframes necessary to maintain tax credit eligibility.

To fully implement the RAPID Act[68], which expanded ORES's jurisdiction to include major electric transmission permitting, ORES adopted final regulations that provide for an expedited process for transmission permitting. Applications for the permitting, design, construction, and operation of major transmission facilities will be considered under the new regulations, although previously submitted applications for certificates for major electric transmission facilities currently under consideration will continue to be processed pursuant to Public Service Law VII. The full impact of the RAPID Act on transmission permitting will not be known until the agency and transmission developers build experience under the new regulations.

Offshore Wind Permitting

Any segment of an offshore wind project situated within the territorial limits of New York State, which includes land areas and waters up to three nautical miles offshore, is subject to adherence to the state's regulations. Table 2 shows the state permitting and consultation requirements for offshore wind development in New York.[69]

[68] RAPID Act Regulations, available at: https://dps.ny.gov/news/rapid-act-regulations-set-lower-costs-and-accelerate-grid-modernization-new-york

[69] New York State Energy Research and Development Authority, Permitting and Approvals, Offshore Wind, available at: https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Permitting.

Table 2. State Permitting and Consultation Requirements for Offshore Wind Development in New York

Permitting/Consultation Requirement	State Regulatory Agency
Permit for the transmission system connecting the offshore wind farm to New York's electricity grid	New York State Public Service Commission
Permits for coastal environmental impacts	New York State Department of Environmental Conservation; New York State Public Service Commission
Easement for underwater cables	New York State Office of General Services
Federal Consistency Review under the New York State Coastal Management Program	New York State Department of State
Permit for work on State-owned roads and applicable federal highways	New York State Department of Transportation

In addition to the above state regulations, advancing offshore wind projects, and achieving the State's target for offshore wind generation, is heavily dependent on federal approvals and reviews. As elaborated in Section 2.2.3, recent Federal actions have impeded federal approvals and reviews pertaining to offshore wind projects, and there is considerable uncertainty as to when the federal government may resume leasing and permitting activity for offshore wind generation.

2.2 Federal and Global Factors

This section provides an overview of key legislation, programs, and related initiatives led by the federal government, as well as global developments relevant to renewable energy development and deployment in the State.

2.2.5 Federal Spending Bill

On July 4, 2025, the H.R. 1 119th Congress (2025-2026) (H.R. 1) was signed into law. Among other changes, including making many aspects of the Tax Cuts and Jobs Act of 2017 into permanent law, H.R. 1 introduced a revised phase-out of the production tax credit (PTC) and clean electricity investment tax credit (ITC) for many renewable technologies and imposed compliance requirements regarding engagement with foreign entities of concern (FEOC). The revised phase-out created considerable incentive for wind and solar developers to accelerate

project development and begin construction by mid-2026 or be placed in service by December 31, 2027, to qualify for the full ITC/PTC. The changes to the PTC and ITC are more restrictive for renewable energy technologies compared to phase-outs enacted by the Inflation Reduction Act of 2022 (IRA).

Final guidance from the Internal Revenue Service (IRS) for provisions relating to safe harbor regarding construction start as well as FEOC considerations are still pending, and the information provided in this section is subject to change and is not intended to be read as final interpretation nor to provide tax guidance.

Production Tax Credit

The PTC for renewable electricity is a per kilowatt-hour (kWh) federal tax credit included under Section 45 of the U.S. tax code for electricity generated by qualified renewable energy resources.[70] The IRA extended and expanded the production tax credit for renewable electricity production in Section 45 of the Internal Revenue Code and established new wage and apprenticeship requirements. For facilities placed in service after December 31, 2021, that were more than 1 MW in capacity, the IRA established a base PTC of 0.3 cents/kWh to 0.55 cents/kWh, depending on the technology type and qualification for labor-related bonuses. The IRA also introduced tax bonuses pertaining to domestic content and being located within an "energy community." The credit applies to all eligible generation for 10 years after the qualifying equipment is placed in service.[71]

Under the IRA, the PTC was set to gradually phase out beginning in the later of 2032 or the calendar year in which annual GHG emissions from the production of electricity in the United States are equal to or less than 25% of 2022 levels. The revised PTC phase-out in addition to establishing maturity eligibility requirements. These include requiring solar and wind projects to

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[70] U.S. Environmental Protection Agency, Renewable Electricity Production Tax Credit Information (2023), available at: https://www.epa.gov/lmop/renewable-electricity-production-tax-credit-information (EPA PTC Resource).

[71] U.S. Environmental Protection Agency, Renewable Electricity Production Tax Credit Information (2025), available at: https://www.epa.gov/lmop/renewable-electricity-production-tax-credit-information

either begin construction by July 4, 2026 (one year after enactment), or be placed in service by December 31, 2027, to be eligible for the full PTC. Other eligible renewable technologies, including geothermal generation and hydropower, may receive the full PTC if they begin construction by December 31, 2033.

Clean Electricity Investment Tax Credit

Section 13702 of the IRA made several significant changes to the ITC, including expanding the eligible technologies, extending the expiration date, modifying the scheduled step-down in its value, providing for new bonus credits, and establishing new criteria to qualify for the full credit. It also phased-out the ITC under Section 48 of the Internal Revenue Code and replaced it with a new technology-neutral clean energy tax credit for investment in qualifying zero-emissions electricity generation facilities or energy storage technology under Section 48E of the Internal Revenue Code.[72]

Under the IRA, eligible projects under 1 MW commencing construction between January 1, 2022 and December 31, 2024 could receive a full ITC credit of 30% of the qualified investment, while projects that commence construction on or after January 1, 2025 could receive a tax credit under the Clean Electricity ITC (48E).[73] "Projects over 1 MW that begin construction 60 days after the Treasury Secretary releases labor guidelines (January 29, 2023) and no later than January 1, 2025 will receive a base tax credit of 6%. However, projects can qualify for the full 30% tax credit if they ensure that all laborers and mechanics involved in the construction of the project or the maintenance of the project for 5 years after project completion are paid wages at

[72] N.C. State University, N.C. Clean Energy Technology Center, DSIRE (2025). "Business Energy Investment Tax Credit." https://programs.dsireusa.org/system/program/detail/658/business-energy-investment-tax-credit-itc.

[73] Id.; Projects under 1 MW (or larger projects that are commenced no more than 60 days after the Treasury Secretary develops labor guidelines) do not need to meet the new labor standards established by the Inflation Reduction to receive the full 30% tax credit.

rates not less than prevailing wages. Projects must also ensure that a percentage of total labor hours are performed by qualified apprentices."[74]

Under the IRA, the Clean Electricity ITC applied to all generation facilities and energy storage systems that have an anticipated greenhouse gas emissions rate of zero, with the offered credit amount set to be gradually phased out as the U.S. meets greenhouse gas emission reduction targets. Under the IRA, the tax credit was set to be reduced in a way such that projects that commenced in the second year following the year in which greenhouse gas emissions from electricity production in the United States are equal to or less than 25% of 2022 levels would receive a tax credit worth 75% of what it would be otherwise; projects commenced in the third year would receive a credit worth 50%; and all projects that commenced after that point would not be eligible for a tax credit.[75]

Similar to the PTC, the Federal Spending Bill (H.R. 1) requires solar and wind facilities to either begin construction by July 4, 2026, or be placed in service by December 31, 2027, to be eligible for the full ITC. Other eligible technologies, including geothermal generation and hydropower, may receive the full ITC if they begin construction by December 31, 2033.

Foreign Entities of Concern (FEOC)

The Federal Spending Bill (H.R. 1) builds upon and expands the IRA's FEOC restrictions by limiting the issuance of tax credits – and the transfer of credits – to projects or entities owned by, under effective control by, or receiving material assistance from prohibited foreign entities (PFEs). Taxpayers defined as PFEs – whether as specified foreign entities and foreign-influenced entities – are restricted from claiming the PTC or ITC beginning January 1, 2026. Similarly, projects that began construction after 2025 are restricted from PTC or ITC eligibility if they are found to receive material assistance from a PFE. The U.S. Department of the Treasury and IRS issued interim guidance in February 2026 regarding how material assistance can be determined

[74] Id.

[75] Id.

and calculated for the purposes of tax credit eligibility as well as new safe harbor tables. Final guidance is still pending, creating market uncertainty and potential risk exposure for developers.

Safe Harbor

Under the Federal Spending Bill (H.R. 1) and subsequent IRS guidance, developers face greater restrictions qualifying for the ITC and PTC in establishing the beginning of construction relative to the IRA.

The IRS, via Section 2.02 of Notice 2022-61, had previously provided developers and taxpayers with guidance that for the qualification for the ITC or PTC they may establish the beginning of construction date using either the "Physical Work Test" or the "Five Percent Safe Harbor," and that they may satisfy either the "Continuity Requirement" or the "Continuity Safe Harbor."

Per IRS Notice 2025-42, issued August 15, 2025, developers are limited to only using the Physical Work Test to establish the beginning of construction for the purposes of qualifying for the ITC or PTC and are no longer able to use the Five Percent Safe Harbor. In addition, the Continuity Requirement still applies, and qualified solar or wind projects must be placed in service no later than the last day of the fourth calendar year after the calendar year in which construction began. On June 6, 2026, the U.S. District Court for the District of Columbia issued a memorandum opinion in which it vacated IRS Notice 2025-42 and remanded the matter to the IRS for further consideration. The situation remains fluid and dynamic, with developers facing persistent uncertainty due to the potential for further changes to safe harbor guidance.

Modified Accelerated Cost Recovery System

The Federal Spending Bill (H.R.) revised the rules pertaining to the Modified Accelerated Cost Recovery System (MACRS). The IRA allowed for "a five-year recovery period for the depreciation of clean electricity facilities placed in service after [December 31,] 2024,"[76] enabling owners of qualified property and energy storage technology facilities to potentially be

[76] U.S. Congress, 2022, H.R. 5376 – Inflation Reduction Act of 2022 (Inflation Reduction Act), available at: https://www.congress.gov/bill/117th-congress/house-bill/5376..

eligible for the 5-year MACRS depreciation deduction. While this left the 5-year MACRS in place for projects claiming the technology-neutral 45Y (PTC) or 48E (ITC), it eliminated eligibility for the 5-year MACRS depreciation for solar, wind, and energy storage facilities that began construction after December 31, 2024, and are claiming the Section 48 legacy tax credits.

2.2.6 Tariffs and Import Policies

New York's progress in developing and deploying renewable energy resources has been and will continue to be affected by conditions in global markets. Utility-scale renewable energy projects are large and complex projects that require various and substantial inputs, the supply and prices of which are subject to global commodity and trade markets. The renewable energy supply chain is a global network of materials procurement, processing, production, recovery, infrastructure, and logistics operations. Accordingly, trade policies – including tariffs on project inputs – impact the cost and availability of materials and components. Such impacts can have an effect on project financing, construction, and timely completion.

During the Trump Administration, a series of executive orders and tariff actions created a cumulative and compounding cost burden on solar and wind project inputs. These tariffs stack across multiple trade authorities simultaneously — meaning a single imported component can be subject to a combination of antidumping and countervailing duties (AD/CVD), Section 301 tariffs, and Section 232 national security tariffs. While domestic manufacturing capacity exists, pricing and volume by domestic suppliers is variable and may ultimately offer limited cost relief. These factors, combined with ongoing tariff investigations, as detailed below, create considerable future tariff exposure uncertainty that materially affect project economics at every stage of development.

Specific federal government tariff and import policies that have impacted and may be expected to continue impacting renewable development in the U.S. in general, including in New York State, include:

Antidumping and Countervailing Duties (AD/CVD)

Antidumping and countervailing duties are trade remedies imposed by the U.S. Department of Commerce to counteract foreign pricing and government subsidization of imported goods deemed to be unfair. For solar development, these duties directly affect the cost of cells and modules — the primary generation component of solar projects.

The U.S. has maintained AD/CVD orders on Chinese crystalline silicon solar cells and modules since 2012, and since June 2024, imports from Cambodia, Malaysia, Thailand, and Vietnam (CMTV) have also been subject to those orders following circumvention findings. In April 2024, a coalition of U.S. solar manufacturers filed a separate petition alleging direct dumping and subsidization by CMTV manufacturers. The U.S. Department of Commerce issued preliminary determinations in November 2024 and final affirmative determinations on April 21, 2025, imposing AD rates of up to 125% and CVD rates of up to 3,404% for Cambodia; up to 81% AD and 169% CVD for Malaysia; up to 203% AD and 800% CVD for Thailand; and up to 271% AD and 543% CVD for Vietnam. The ITC confirmed final injury in May 2025, giving full effect to the orders. New AD/CVD investigations targeting solar imports from India, Indonesia, and Laos were initiated in August 2025 and remain pending as of the date of publication of this Report.

Section 301 and Section 201 Tariffs

Section 301 tariffs on Chinese solar products have been in place since 2018 at 25%. Following a statutory four-year review, the Biden Administration significantly expanded their scope. Effective September 27, 2024, tariffs on Chinese solar cells and modules were doubled from 25% to 50%. Effective January 1, 2025, coverage was extended to Chinese polysilicon and monocrystalline silicon wafers at 50%, closing a significant upstream supply chain loophole. Exclusions for certain solar manufacturing equipment, effective January 1, 2024, were extended through November 10, 2026, as part of U.S.-China trade negotiations. On March 11, 2026, the Office of the United States Trade Representative announced initiation of further Section 301 investigations into 16 economies, including the EU, China, and India, specifically citing solar module manufacturing capacity in India.

Section 201 safeguard tariffs on imported solar cells and modules, which had been in place since January 2018, expired on February 6, 2026.

Section 232 Tariffs — Steel, Aluminum, Copper, and Polysilicon

Section 232 national security tariffs on steel and aluminum have been in place since 2018. Under the second Trump Administration, these rates were raised to 25% in February 2025 and doubled to 50% in June 2025, with all prior exemption arrangements suspended. On April 2, 2026, a new proclamation expanded the scope of Section 232 to apply tariffs to the full customs value of covered steel, aluminum, copper, and their derivative products. Copper was added to Section 232 coverage in March 2025 at 25%, covering unwrought copper, alloys, wire, rod, and related products — all significant cost inputs for solar and wind project construction.

On July 1, 2025, the U.S. Department of Commerce initiated a Section 232 national security investigation into imports of polysilicon and its derivatives. Polysilicon is a foundational input for crystalline silicon photovoltaic cells and modules, with China controlling approximately 80-93% of global production capacity (as noted, effective January 1, 2025, Chinese polysilicon is also subject to a 50% Section 301 tariff). An affirmative Section 232 determination would impose additional tariffs on polysilicon imports broadly, regardless of country of origin, potentially affecting the full crystalline silicon solar supply chain. As of the date of this Report, a final ruling has not yet been publicly announced.

Reciprocal Tariffs

In April 2025, the Trump Administration imposed a 10% universal baseline tariff on imports from all trading partners and higher country-specific rates ("reciprocal tariffs") on many others under the International Emergency Economic Powers Act (IEEPA). These tariffs were additive to Section 301 and AD/CVD duties, while products subject to Section 232 were exempted.[77]

On February 20, 2026, the U.S. Supreme Court ruled that IEEPA does not authorize the President to impose tariffs, invalidating all IEEPA-based reciprocal tariffs and creating a potential refund obligation for duties previously collected (the mechanics of any refund process

[77] The White House, Executive Orders, Regulating Imports with a Reciprocal Tariff to Rectify Trade Practices that Contribute to Large and Persistent Annual United States Goods Trade Deficits(2025), available at: https://www.whitehouse.gov/presidential-actions/2025/04/regulating-imports-with-a-reciprocal-tariff-to-rectify-trade-practices-that-contribute-to-large-and-persistent-annual-united-states-goods-trade-deficits/.

remain unresolved as of the date of this Report). Following the ruling, President Trump announced a 10% global tariff under Section 122 of the Trade Act of 1974 as a replacement measure, effective February 24, 2026, and operative until July 24, 2026. Section 122 tariffs are capped at 15% and limited to 150 days unless extended by Congress.[78] Court proceedings regarding the legality of the Trump administration's global 10% tariff under Section 122 are ongoing.

2.2.7 Federal Permitting

Since publication of the 2024 CES Biennial Review, the federal government's approach towards renewable development has changed considerably. Under the Trump Administration, the federal government has taken a number of actions and issued policy directives that have directly impeded land-based renewable project and offshore wind project development, with several of these actions subsequently challenged and overturned in court. These actions have increased development risk and financing costs for developers, delayed project deployment, impacted the ability of New York State to proceed with advancing supportive infrastructure, and resulted in project cancellations.

Both land-based and offshore wind projects require a large number of development, planning, approval and financing steps prior to being able to commence construction and go into operation. For offshore wind projects, these sequenced steps include long-term engagement with the federal Bureau of Ocean Energy Management (BOEM) and at least 10 other federal agencies or departments to address at least 16 federal statutes requiring numerous detailed submissions and reviews. To secure financing and begin construction, an offshore wind project must receive final approval for those permits and secure an energy or OREC purchase contract from a buyer like NYSERDA and negotiate and finalize engineering, procurement, and construction contracts. These steps take several years. Offshore wind projects such as Empire Wind, Sunrise Wind, and future projects will interconnect to New York's Zones J (New York City) and K (Long Island),

[78] The White House, Proclamations, Imposing a Temporary Import Surcharge to Address Fundamental International Payments Problems(2026), available at: https://www.whitehouse.gov/presidential-actions/2026/02/imposing-a-temporary-import-surcharge-to-address-fundamental-international-payments-problems/.

which the NYISO identifies to be constrained areas, meaning that a certain percentage of each zone's electric load must be served by generators electrically located within the zone, or connecting directly to the zone (such as offshore wind projects) due to transmission limitations.

Unlike offshore wind projects, which are located in federal waters, most land-based wind projects in New York State are located on private land and therefore do not entail the same level of federal agency permitting as offshore wind projects. However, there are numerous common federal determinations that are required for many land-based wind projects, including those from the U.S. Fish and Wildlife Service, the Federal Aviation Administration, and the U.S. Army Corps of Engineers.

Below is an overview of select actions taken by the federal government, including directives limiting project permitting and stop work orders issued for specific projects.

Presidential Memorandum of January 20, 2025

On January 20, 2025, a Presidential memorandum was issued ("Wind Memo") temporarily withdrawing unleased areas on the Outer Continental Shelf from further leasing and directing agencies to take other actions, including pausing all permits and other approvals, such as environmental reviews under the National Environmental Policy Act (NEPA).[79] Subsequent to its issuance, federal agencies with permitting responsibilities for wind energy projects adopted the Wind Memo's indefinite halt on approvals of those projects and took steps to implement that halt.

At the time of the Wind Memo, there were more than 30 land-based wind projects in various stages of development in New York State, many of which had not yet received their necessary federal permits. There were approximately 13 offshore wind projects under various phases of

[79] The White House, Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government's Leasing and Permitting Practices for Wind Projects (2025), available at: https://www.whitehouse.gov/presidential-actions/2025/01/temporary-withdrawal-of-all-areas-on-the-outer-continental-shelf-from-offshore-wind-leasing-and-review-of-the-federal-governments-leasing-and-permitting-practices-for-wind-projects/.

pre-construction development from which New York State could procure energy; three offshore wind projects with federally approved Construction Operations Plans (COP), four projects under active NEPA review, and six projects collecting data and preparing COPs for federal review. The Wind Memo's issuance effectively stopped all federal reviews of both land-based and offshore wind projects.

Seventeen states, including New York, together with the District of Columbia and Alliance for Clean Energy New York, brought a legal challenge to the Wind Memo. On December 8, 2025, the United States District Court for the District of Massachusetts ruled that the Wind Memo was arbitrary and capricious and contrary to law and vacated the Wind Memo.[80] The Trump Administration filed a notice of appeal of, but on June 15, 2026, withdrew the appeal, finalizing the case and the District Court Order.

The federal government has continued to take actions that undermine the certainty of federal permits despite the court's decision on the validity of the Wind Memo. This has and will continue to impact New York State's implementation of its legislation and policy and threatens the State's progress toward its wind-specific statutory procurement and greenhouse gas emission targets set forth in the Climate Act. Specifically, the permitting standstill and federal actions to dismantle existing, granted federal permits and lease areas impede the State's ability to meet its procurement target of 9 GW of offshore wind energy by 2035 and its other renewable energy and greenhouse gas emission targets. It profoundly disrupts timelines for offshore and land-based wind projects, which threatens the State's ability to serve increased energy demand, foster new economic development, employment opportunities and electric resource diversity that were pursued with offshore and land-based wind development.

Developers of offshore wind projects are largely unable to proceed under the existing federal permitting uncertainty. Even if federal administrative actions were to become more favorable to offshore wind development, there will likely be substantial costs and delays to the prospective

[80] New York v. Trump, 811 F. Supp. 3d 215, 226 (D. Mass. 2025).

timelines of contracting, constructing, and delivering power to the grid due to the lack of personnel, project advancement, and investment in the U.S. offshore wind market.

Federal actions have also impeded state energy planning efforts; one key example of this is the recent cancellation of a transmission solution designed to enable new offshore wind energy to connect to the grid in the New York City area. On July 17, 2025, the Commission formally withdrew a previously approved Public Policy Transmission Need (PPTN) for infrastructure to support the integration of at least 4,770 MW of offshore wind generation with the New York City grid, citing federal actions indefinitely halting new offshore wind leasing and permitting. Federal actions have disrupted offshore wind project schedules, resulting in a mismatch in timing between the transmission and generation projects, thereby creating significant financial risk for New York ratepayers. Under these conditions, ratepayers would have been responsible for the costs of constructing PPTN-related transmission infrastructure—even if those assets had remained unused due to federal permitting delays in, or resulting cancellations of, wind projects. Citing this risk, the Commission determined that proceeding with the PPTN under such conditions would expose New York ratepayers to unjustifiable costs.[81]

In addition, in response to the federal government's actions, developers of land-based wind projects have been observed as pursuing design alternatives such that projects would be able to avoid federal agency approval or reviews. This process itself can be expensive and may significantly delay development and construction timelines. Moreover, developers have indicated that there is a risk that some design alternatives may be significantly more expensive, which ultimately can result in higher costs to New York's ratepayers (i.e., where they result in more expensive offtake agreements). In other cases, no design alternatives may be available due to prohibitive expenses or technical infeasibility. However, development costs continue to accrue while projects are on hold, and contractual commitments, such as land use agreements and local permits, can expire. These ongoing costs and contractual deadlines make it less likely that projects would be built even if federal agencies were to resume their permitting activities.

[81] July 2025 PPTN Order.

The permitting halt and lack of federal approvals that originated with the Wind Memo have also delayed and undermined the ability of projects to take advantage of the benefits of previously legislated and established federal tax credits that apply to wind project development because of expiration dates that were accelerated in the federal budget legislation signed into law on July 4, 2025 (see Section 2.2.1). The current federal permitting dynamic, as well as the potential loss of any tax credits, would increase the cost for developers to build projects, causing unnecessary harm through increased costs to New York's ratepayers and, in some cases, could potentially undermine project viability.

Litigation Challenging Federal Actions

Developers, industry groups, and states, including New York, have brought legal actions to challenge the adverse federal activities that have undermined renewable energy projects.

In the offshore wind context, both developers and New York State have challenged suspension orders to five offshore wind projects in development,[82] including Empire Wind, an 810 MW project developed by Equinor, and Sunrise Wind, a 924 MW project developed by Ørsted (see Section 4.2). The single-page suspension orders were purportedly based on "national security threats" identified in a November 2025 classified assessment conducted by the Department of War (DOW). Between January and February 2026, federal district courts stayed or preliminarily enjoined all five suspension orders based on determinations that the classified assessment did not, contrary to BOEM's assertion, identify an immediate national security risk.[83] While their respective lawsuits progress, both Empire Wind and Sunrise Wind are continuing their offshore

[82] BOEM Acting Director Giacona issued orders directing five offshore wind projects to "suspend all ongoing activities related to the [projects] on the Outer Continental Shelf for the next 90 days for reasons of national security." "Director's Order to […]." Letter from Matthew N. Giacona, Acting Director, BOEM, to Matthew Brotmann, Secretary, Empire Wind (December 22, 2025).

[83] Prelim. Inj., Revolution Wind, LLC v. Burgum, No. 25-cv-02999 (D.D.C. Jan. 12, 2026), ECF No. 63; Order, Empire Leaseholder LLC v. Burgum, No. 26-cv-0004 (D.D.C. Jan. 15, 2026); Order, Va. Elec. & Power Co. v. U.S. Dep't of the Interior, No. 25-cv-00830 (E.D. Va. Jan. 16, 2026), ECF No. 81; Order, Vineyard Wind 1 LLC v. U.S. Dep't of the Interior, No. 26-cv-10156 (D. Mass. Jan. 27, 2026), ECF No. 71; Order, Sunrise Wind LLC v. Burgum, No. 26-cv-00028 (D.D.C. Feb. 2, 2026).

scopes of work and are expected to be fully operational in 2027. However, the orders have added to the heightened development risk and uncertainty in the offshore wind market for future prospective New York offshore wind developers.

A multistate coalition of attorneys general, including New York, have also taken legal action against the Trump administration over its cancellation of lease areas. In April 2022, BOEM entered into lease agreements for offshore win development in the New York area. Beginning in early 2026, the Department of Interior began entering into agreements with leaseholders to cancel New York Bight and North Carolina leases. The multistate lawsuit challenging these lease cancelations is still in the early stages.

Clean energy industry plaintiffs have also brought legal actions to challenge federal agency actions that they argue have unlawfully disrupted established permitting frameworks and imposed categorical disadvantages on wind and solar energy development. In one such case,[84] the District Court has issued a preliminary injunction enjoining the federal agency actions. A separate lawsuit alleges that the Department of War violated its statutory mandate to assess wind projects' impacts on military readiness, creating a "total halt of all wind project development in the United States."[85] The complaint, which has yet to be considered by the court, notes the review freeze has affected at least 125 land-based wind projects across the United States.

[84] Renew Northeast et al. v. U.S. Department of Interior et al. (D. Mass).

[85] Renewable Northwest et al. v. Hegseth et al., (D. Or.).

3 Operational Renewables and Zero-Emission Resources

This section reports the results of New York's efforts to increase electricity generation from renewable sources and to reduce emissions from its electricity system, as reflected in the composition of the State's electricity supply portfolio, relying on data reported to NYSERDA through the end of the 2024 compliance year[86] because that is the most recent completed compliance year for which final generation and load data have been published.[87] Since that time, a number of renewable energy projects under contract to NYSERDA, including the CHPE transmission project, have begun operation. In addition, several projects which only became operational during the 2024 compliance year had partial-year generation reported in Table 3 and Table 4 below. Further details and quantification of the estimated annual contributions from the operational and contracted portfolio are provided in Section 4 and Section 5.

For renewables specifically contracted under the CES, more detailed information is provided in Appendix A, both for operational projects and contracted projects still in development as of the date of this Report. Appendix A also includes details on the distribution of projects by size and load zone, as well as annual expenditure data for operational CES projects.

Renewable and zero-emission utilization is summarized below by source of energy supply and by technology (Table 3 and Table 4, respectively). The data represents all compliance-year renewable energy supply settled in the State through the New York Generation Attribute Tracking System (NYGATS) and considers all renewable energy imports and exports. The CLCPA's definition of "renewable energy systems" does not include biomass and biogas (earlier eligibility determinations previously allowed for biomass and biogas resources).[88]

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[86] New York's electricity system mix, the amount of renewable and zero-emission generation in the system mix, the statewide electric load, and the resulting percentage of renewables and zero-emission generation are all reported after the conclusion of the calendar year.

[87] Case 15-E-0302, supra, Clean Energy Standard Annual Progress Report – 2024 Compliance Year (filed January 30, 2026) (2024 CES Annual Progress Report).

[88] 2020 CES Order.

Table 3 and Table 4 detail renewable energy generation in the New York System Mix, as reported in the Clean Energy Standard Annual Progress Report: 2024 Compliance Year (2024 CES Annual Progress Report).[89] With a view toward fully reflecting progress toward the CLCPA goal of a zero-emissions grid by 2040, Table 3 also provides data on nuclear generation. More fulsome consideration of the path to this goal is ongoing.[90]

In 2024, renewable energy resources supplied 23.6% of the State's current electric load, reflecting total renewable generation of 35,854 GWh and statewide electric load of 152,120 GWh.[91] Combined with nuclear generation of 31,865 GWh, total renewable and zero emission generation in New York in 2024 amounted to 67,719 GWh, or 44.5% of the current statewide load.

Table 3. 2024 Renewable and Zero-Emission Energy in New York

Generation Type	GWh
Generation from Baseline Renewable Energy	29,522[92]
Generation from Tier 1-Eligible Energy	6,684[93]
Total Renewable Energy Serving Load	**35,854**[94]
Nuclear generation under CES Tier 3 (ZECs)	31,865
Total Renewable and Zero-Emission Energy*	**67,719**

89 2024 CES Annual Progress Report.

90 Case 15-E-0302, supra, Order Initiating Process Regarding Zero Emissions Target (issued May 18, 2023).

91 Total load represents MWh in 2024 as reported in NYGATS.

92 Excludes biogas and biomass and fuel cells and includes imported renewable energy. Further information on imported renewables is available in the 2024 CES Annual Progress Report.

93 Includes fuel cell and biogas.

94 Tier 1 Energy includes generation from fuel cells that utilize natural gas as a fuel source as were previously eligible under Tier 1. Since these generation projects are fired with natural gas, their megawatt hours are reported as natural gas in the New York System Mix, which is consistent with the fuel reporting in the 2014 Statewide Fuel Mix. Therefore, the Generation from Baseline Renewable Energy plus Generation from Tier 1-Eligible Energy will not equal the Total Renewable Energy Serving Load.

* Totals may not add due to rounding.

Table 4. 2024 New York System Mix, Renewable Energy by Technology

Fuel Type[95]	GWh
Hydroelectric	25,567
Solar	6,798
Wind	3,489
Total*	**35,854**

* Totals may not add due to rounding.

[95] The CLCPA's definition of "renewable energy systems" does not include biomass and biogas.

4 Contracted Renewables

NYSERDA's pipeline of contracted renewables from previous Tier 1, offshore wind, and Tier 4 solicitations have continued to evolve since the 2024 Biennial Review due to a combination of renewable project development and construction, new contracts executed following Tier 1 solicitations and terminated contracts, and federal policy and related market challenges, as discussed in Section 2. This section provides updated information on these changes. Note that the generation contribution from operational projects is included within the data presented in Section 3 (projects which became operational during the 2024 compliance year only had partial-year generation captured in Section 3; further quantification of the full estimated annual contributions from these projects is reflected in the quantification presented in Section 5). Further data showing NYSERDA's pipeline of contracted renewables is also provided in Appendix A, which includes both operational projects and contracted projects still in development and sets out details on the distribution of projects by size and load zone.

As of April 30, 2026, NYSERDA maintains an active contracted portfolio of 91 large-scale renewable projects across the Tier 1, Tier 4, and Offshore Wind programs, representing nearly 10,358 MW of new renewable capacity,[96] which, if built, would reflect more than $33 billion in project investment and add thousands more jobs to the more than 184,000 clean energy jobs already represented in New York State as of 2024.[97]

As of this publication, NYSERDA has launched ten Tier 1 solicitations, five offshore wind solicitations, and one Tier 4 solicitation. NYSERDA updates data regarding all CES

[96] Open NY, Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004 (2026), accessed April 30, 2026, available at: https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye.

[97] New York State Energy Research and Development Authority, 2025 New York Clean Energy Industry Report (2025), available at: https://www.nyserda.ny.gov/About/Publications/New-York-Clean-Energy-Industry-Report

procurements through the large-scale renewables dataset on Open NY.[98] The dataset will reflect the latest solicitation results once provisionally awarded contracts are finalized.

4.1 Tier 1

The 2016 CES Order[99] authorizes NYSERDA, as central procurement administrator, to award long-term contracts to Tier 1–eligible generators through annual competitive solicitations for the purchase of Tier 1-eligible RECs.[100] As of January 1, 2025, NYSERDA sells the resulting RECs to obligated LSEs for use toward their Tier 1 compliance obligations as well as to the voluntary market.

In September 2025 Governor Hochul announced New York's all-of-the-above energy strategy, a coordinated set of actions to accelerate the deployment and construction of reliable and clean energy across New York State to help stabilize energy prices and ensure there is enough power to meet growing demand. Following the Governor's directive, NYSERDA is prioritizing contracting mature large-scale renewable energy projects, with a focus on qualifying projects for existing federal tax credits that will soon expire in order to bring down costs for ratepayers and ensure that as many projects as possible can successfully move to construction and begin providing clean power to New York homes and businesses. Since September 2025, NYSERDA has issued two Tier 1 solicitations – including issuing RESRFP26-1, its tenth and most recent solicitation, on April 24, 2026 – that will add to the pipeline of contracted large-scale renewable projects. The results of RESRFP25-1, the ninth Tier 1 solicitation, are anticipated to be announced after the date of this publication. Appendix A of the 2024 CES Annual Progress

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98 Open NY, Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004, accessed April 30, 2026, available at: https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye.

99 2016 CES Order.

100 RES Tier 1-eligible RECs are those generated by renewable energy projects that meet eligibility requirements under Appendix A of the 2016 CES Order or the updated renewable energy systems definition expanded in the 2020 CES Order. Projects must have a commercial operation date on or after January 1, 2015, and comply with the RES Tier 1 Certification Submission Instructions and Eligibility Guidelines. Only NYSERDA-certified renewable energy Tier 1 projects can issue Tier 1 RECs in the NYGATS, which publicly reports certified projects in the "Operational Eligibility" report.

Report has additional information on Tier 1 solicitations through the eighth RES solicitation, RESRFP24-1, as of January 31, 2026.

Table 5 summarizes the status of contracted projects from solicitations with awarded Tier 1 eligible resources from the RPS through RESRFP24-1 as of April 30, 2026, consistent with the Open NY data set published March 31, 2026.

Table 5. Tier 1-Eligible Contracted Projects and Associated Status and Bid Quantity

Bid Quantity		**Tier 1 RPS**	**17-1**	**18-1**	**19-1**	**20-1**	**21-1**	**22-1**	**23-1**[101]	**24-1**	***Total***
Operational	GWh	1,393	1,235	582	119	6	0	0	0	17	*3,351*
	Projects	14	11	3	3	1	0	0	0	1	*33*
Under Development	GWh	0	0	0	0	0	0	2,768	5,092	4,984	*12,844*
	Projects	0	0	0	0	0	0	12	21	22	*55*
Total GWh*		**1,393**	**1,235**	**582**	**119**	**6**	**0**	**2,768**	**5,092**	**4,000**	***16,195***
Total # of Projects[102]		**14**	**11**	**3**	**3**	**1**	**0**	**12**	**21**	**23**	***88***

* Rounding applied; total may not add due to rounding.

4.2 Offshore Wind Standard

New York State actively advances offshore wind development and procurement as a key strategy to meet the CES goals. In 2017, the State committed to supporting the installation of up to 2,400 MW of offshore wind capacity by 2030 which was adopted by the New York State Public Service Commission Order 18-E-0071 establishing an offshore wind standard in 2018. Later, this

[101] Includes BRRFP23-1.

[102] Multiple Tier 1 projects have had contracts executed across multiple solicitations. Projects are counted as of the earliest solicitation award and generation is associated with the applicable solicitation.

goal was expanded to at least 9,000 MW by 2035 and codified into law through the CLCPA in 2019.

ORECs represent the environmental benefits associated with 1 MWh of electricity generated from offshore wind resources and consumed by retail customers in New York State. These credits provide a critical revenue stream to support offshore wind development, addressing the lack of direct valuation for environmental attributes in the State's electricity markets. Under NYSERDA's contracts with offshore wind developers, NYSERDA will purchase ORECs from project developers as renewable energy is delivered to the State's electricity grid and then resell them to LSEs to fulfill OREC obligations. LSEs must purchase a pro rata percentage of ORECs proportional to their electric energy load compared to the total electric energy load served by all LSEs.

Since 2018, NYSERDA has issued five offshore wind solicitations. This includes NYSERDA's fifth solicitation for ORECs, ORECRFP24-1, issued in July 2024. On September 9, 2024, NYSERDA received 25 proposals in response to ORECRFP24-1 from four offshore wind developers, representing 6,870 MW in total offer capacity. On February 13, 2026, NYSERDA concluded ORECRFP24-1 without award due to federal actions disrupting the offshore wind market and instilling significant uncertainty into offshore wind project development. That week, NYSERDA launched a request for information to gather information from the industry to help address these challenges in a thoughtful and timely manner. The State is contemplating potential next steps to support offshore wind pre-development to mitigate further impacts to the industry inflicted by federal policies.

As of the time of publication, New York State has 1,734 MW of offshore wind generation under development through two projects, Empire Wind and Sunrise Wind, as a result of New York State's fourth offshore wind solicitation, ORECRFP23-1. In addition, the South Fork Wind Farm, a 132-MW project contracted to LIPA, became fully operational in 2024. Appendix A of the 2024 CES progress report has additional information on offshore wind solicitations as of January 31, 2026.

Together, Sunrise Wind and Empire Wind are expected to produce enough clean energy to power more than 1 million New York homes. These projects began offshore construction in April and June 2025, respectively; onshore and offshore construction for both is ongoing. Both projects are expected to achieve first power in late 2026 and reach full commercial operation in 2027. Additionally, both projects have been delivering on the near-term economic, social, and educational commitments made to New York State.

Sunrise Wind completed all major federal and State permitting milestones, receiving approval of its COP from BOEM in June 2024. Onshore installation of the cable route and construction of the onshore converter station in Holbrook, NY, began in July 2024 and is 100% complete. As of this publication, overall project construction is approximately 50% complete with more than ten offshore turbines fully installed, over half of the project's 84 offshore foundations installed, and the offshore export cable fully laid during the 2025 and 2026 construction campaigns. The remainder of 2026 will see these activities continue ultimately leading to first power by the end of the year and full commissioning in 2027. The operations and maintenance center for all of Ørsted's regional projects, located in East Setauket, New York, is fully operational.

Empire Wind completed its federal and State permitting milestones, including COP approval from BOEM in November 2023 and Commission approval for its grid connection plan. Construction began in June 2024 at the South Brooklyn Marine Terminal, which will serve as the staging hub for Empire Wind during offshore turbine installation, the location of the cable landfall, and the project's operations and maintenance center. As of publication, overall project construction is over 50% complete and the South Brooklyn Marine Terminal received the project's first turbine components in May 2026. Offshore, all 54 turbine foundations were installed by the end of 2025, and the export cable and inter-array cables are fully laid. The remainder of 2026 will see turbine staging, marshalling, and offshore installation occur ultimately leading to first power by the end of the year and full commissioning in 2027. Onshore work at the converter station and O&M hub at SBMT are ongoing.

While not part of the Offshore Wind Standard, South Fork Wind, a 12-turbine farm located approximately 35 miles off Montauk, New York, is currently operational and delivering clean,

reliable energy into the Long Island electric grid. At its completion in 2024, the South Fork Wind Farm became the first commercial-scale offshore wind farm in the U.S. providing enough energy to power approximately 70,000 New York State homes. According to Ørsted, in its first full year of operation, the project achieved a net capacity factor of 46.4%. Through the first half of 2025, the net capacity factor increased to 53%, and the project generated electricity 92% of the time.[103]

New York State's offshore wind projects have also supported the development and utilization of ports in the State, contributing to the localization of supply chain and economic benefits, including a manufacturing facility in the Capital Region at the Port of Coeymans, and a premier 60-acre staging and assembly port at South Brooklyn Marine Terminal. Advanced foundation components manufactured in New York State and assembled at the Port of Coeymans with union labor, were installed offshore at Sunrise Wind's lease area during the 2025-26 construction seasons. The South Brooklyn Marine Terminal is expected to be completed in mid-2026 to support the installation of offshore towers and wind turbine generators. This site will be the largest, state-of-the-art offshore wind working waterfront in New York City, serving the U.S. offshore wind industry.

In late 2025, NYSERDA released a Port Infrastructure Request for Proposals, making up to $300 million available for port upgrades that will attract and sustain a diverse supply chain in New York State – including improvements to load bearing capacity and extending the length of wharfs – to support many uses, including offshore wind manufacturing, staging, and logistics. Results of the Request for Proposal are pending.

Table 6 summarizes operational and contracted offshore wind facilities in the State as of April 30, 2026. This includes two contracted facilities under OREC solicitation ORECRFP23-1 as well as the South Fork Wind Farm (under contract with LIPA).

[103] Ørsted, One Year of South Fork Wind (2025), accessed January 28, 2026, available at: https://cdn.orsted.com/-/media/www/docs/corp/us/factsheets/sfwreport_web_vf.pdf?rev=8ad02de9ad374f26a92de95c633bd05d&hash=087B58CC2E26F117F40AB379A56FF397.

Table 6. New York State Offshore Wind Facilities

Calculated Generation		LIPA	ORECRFP23-1	Total
Operational	GWh	537[104]	0	*537*
	Projects	1	0	*1*
Under Development	GWh	0	7,539[105]	*7,539*
	Projects	0	2	*2*
Total GWh*		**537**	**7,539**	***8,076***
Total # of Projects		**1**	**2**	***3***

* Totals may not add due to rounding.

4.3 Tier 4 – New York City Renewable Energy

The Commission's 2020 CES Order established a new Tier 4 program within the CES. This program aims to increase the penetration of renewable energy in New York City and thereby reduce reliance on fossil fuel generation in this densely populated area. Eligible Tier 4 resources include electricity generated through the use of the following technologies: solar thermal, solar PV, land-based wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells that do not utilize a fossil fuel resource in the process of generating electricity. Non-hydroelectric resources must have entered commercial operation on or after October 15, 2020, and hydroelectric resources must be existing or already under construction as of October 15, 2020. All eligible resources must be either located in New York City, or their energy must be delivered through a new transmission interconnection to the City.

[104] Estimated generation calculated according to an assumed net capacity factor of 46.4%, per Ørsted. 2025. "One Year of South Fork Wind." https://us.orsted.com/renewable-energy-solutions/offshore-wind/south-fork-wind-report.

[105] Estimated generation calculated according to an assumed net capacity factor of 50%, per the assumptions used in the 2020 CES Order.

On January 13, 2021, NYSERDA issued a Tier 4 Request for Proposals, evaluating bids from seven proposers.[106] On September 20, 2021, NYSERDA announced the selection of two projects: Clean Path NY and CHPE. After contract negotiations, two executed contracts were submitted by petition[107] for Commission approval on November 30, 2021, followed by a public comment period. On April 14, 2022, the Commission issued an Order[108] under Case 15-E-0302 approving 25-year contracts for Clean Path NY and CHPE. On November 27, 2024, NYSERDA and Clean Path NY mutually agreed to terminate the project's Tier 4 REC Purchase and Sale Agreement.

Construction on the CHPE project began in late 2022 and the transmission line entered service in May 2026. The CHPE project is one of New York's largest transmission infrastructure investments in the last 50 years and has added 1,250 MW to the State's grid using high-voltage direct current technology. The project is now able to deliver clean, reliable hydropower from Quebec and supply more than 10 million MWh of renewable energy annually to NYISO Zone J – which, at its peak, is nearly 20% of New York City's electric consumption—significantly reducing the City's reliance on fossil fuels.

NYSERDA's contract with HQ Energy Services (U.S.) Inc is to purchase the RECs derived from the clean energy delivered to New York City. REC purchases have commenced now that the project has (1) secured all required permits and local approvals, (2) completed construction, and (3) reached commercial operation on May 13, 2026.

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[106] New York State Energy Research and Development Authority, Solicitation and Award: Tier 4 2021 Solicitation (Closed), available at: https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/Tier-Four/Solicitation-and-Award.

[107] Case 15-E-0302, supra, Petition Regarding Agreements for Procurement of Tier 4 Renewable Energy Certificates (issued November 30, 2021).

[108] Case 15-E-0302, supra, Order Approving Contracts For The Purchase Of Tier 4 Renewable Energy Certificates (issued April 14, 2022).

5 Clean Energy Standard Progress

This section quantifies progress in the amount of renewable resources currently deployed and contracted to contribute towards the State's overall goals. Renewable deployment measures the sum of generation from all operational and under-development contracted renewable facilities in New York State. Assessing progress towards to the goal – quantifying the ratio of renewable generation to load – depends on the forecasted state load, and a range of statewide electric load forecasts is used to inform the quantification accordingly, as well as the amount of renewables expected to be contributing to the state grid, which is impacted by attrition and deployment assumptions, as detailed below.

5.1 Load Forecast

Load forecasts change through time as expectations of future energy consumption change. The 2020 CES Order estimated the 2030 statewide electric load as 151,678 GWh.[109] The 2024 Biennial Review Report revised expectations to a new projection of 164,915 GWh in 2030. This report revises the projection of load in 2030 to 171,050 GWh, sourced from the Additional Action scenario of the 2025 SEP Pathways Analysis.[110]

Additional Action, the core planning case in the 2025 SEP, includes a bottom-up assessment of current progress toward existing policies and programs and ambitious but achievable further progress. This scenario includes the impacts of federal policy changes on the adoption of key technologies.

New large loads, sourced from the 2025 NYISO Gold Book, are the largest near-term contributor to load growth, adding 10 TWh in 2030. Transportation electrification contributes an additional 3

[109] 2020 CES Order.

[110] See, Studies Completed by NYSERDA Supporting the Greenhouse Gas Emissions Report, 2025 State Energy Plan Pathways Analysis and the 2022 Scoping Plan Integration Analysis, available at: https://www.nyserda.ny.gov/About/Publications/Energy-Analysis-Reports-and-Studies/Greenhouse-Gas-Emissions.

TWh of demand growth, while stock-wide adoption of building energy efficiency helps to offset the impact of building electrification.

5.2 Renewable Deployment Progress

Table 7 below summarizes currently operational and contracted renewables, as set out above in Section 3 and Section 4 of this Report. In addition, the quantification includes 10.5 GW of distributed renewable generation projected to be deployed by 2030, to be secured outside the CES framework.

Sections 3 and 4 quantify operational and contracted renewables based on, respectively, the actual historic data for existing renewables and the expected amount of future generation from contracted projects. This section adds further considerations in terms of contracted renewables that may not be deployed or deployed in time (attrition). The 2020 CES White Paper conducted a similar analysis, assuming 20% attrition on contracted renewables. Based on the challenges and attrition experienced for Tier 1 projects, the 2024 Biennial Review applied a more conservative assumption of 30% attrition to yet-to-be-deployed projects and assumed negligible levels of reduction in generation from existing baseline renewables. This Report applies a 20% attrition rate to contracted and under development facilities from RESRFP22-1, in line with the 2020 CES White Paper, due to their relative maturity, while maintaining the 30% attrition assumption from the 2024 Biennial Review to all other under development Tier 1 contracted projects. There is no assumed attrition or reduction in generation applied to current operational projects, Build-Ready projects, or offshore wind facilities. Such an approach is distinct from the methodology used in New York State's Climate Act Dashboard, which is an objective reporting of operating renewables generally reflective of the latest NYGATS compliance year, with some exceptions, and pipeline values that generally reflect NYSERDA contracts as published in Open NY without attrition.[111]

[111] Climate Act Dashboard. N.d. https://climate.ny.gov/dashboard

Table 7. Summary of Operational and Contracted Renewables (after attrition assumptions)[112]

Renewable Portfolio	2030 Generation After Assumed Attrition (GWh)
Contracted & operational as of 2024	35,854
Contracted & became operational after 2024	594
Contracted onshore	19,676
Contracted offshore wind	7,539
Future NY Sun to achieve 10.5 GW by 2030	4,570
Total*	**68,234**

* Totals may not add due to rounding.

With these assumptions, the forecasted amount of renewable generation in 2030 from currently operational and contracted renewable resources totals 68,234 GWh. This equates to 40% of the 2025 SEP's Additional Action statewide load forecast. Table 8 summarizes each of the three previously mentioned state-produced statewide load forecasts and expected renewable generation in 2030, inclusive of the aforementioned attrition assumptions.

[112] Operational renewables as of 2024 represents the contribution from renewable energy resources to meet the energy secured by LSEs to meet customer electric load in the 2024 compliance year, per the 2024 CES Annual Progress Report, including imports and behind-the-meter and distributed solar.

Table 8. 2030 Load Forecast Scenarios and Expected Renewable Generation

	2020 CES Order	2024 CES Biennial Review Base Case	2025 SEP Additional Action
2030 Statewide Load (GWh)	151,678	164,915	171,050
70% of 2030 Statewide Load (GWh)	106,175	115,440	119,735
Operational and Contracted Renewables (GWh)*	68,234		
Renewable Energy % of 2030 Statewide Load**	**45%**	**41%**	**40%**

* Reported operational and contracted renewables is inclusive of attrition assumptions, as detailed above.
** Totals may not add due to rounding.

6 Reliability Concerns

Reliability of the electricity system describes its ability to provide consistent and uninterrupted electricity. This spans the reliability of the bulk power system and the utility distribution systems. A comprehensive system of reliability rules established by North American Electric Reliability Corporation (NERC), the Northeast Power Coordinating Council, Inc. (NPCC), the New York State Reliability Council, LLC (NYSRC), and the Commission govern the planning and operation of the electric system, including the operations of generators.

Service on New York's bulk power system was curtailed only once in nearly two decades, during the 2003 Northeast blackout, which was caused by factors outside of the state. The NYISO and the Commission conduct near-term and long-term planning (described below) to ensure that the electricity system is designed to maintain reliability, using both resource adequacy and transmission security modeling to identify future system needs. Due to short- and long-term planning conducted by a variety of entities, New York fares better than the national average and neighboring states on reliability metrics for electric utility customers. For example, New Yorkers experienced the second-fewest power outages on average, across U.S. states. However, work continues to improve the statewide electric grid.[113]

6.1 Existing Reliability Planning Processes

The NYISO conducts reliability planning on both a near-term and long-term basis to ensure that the system is designed to maintain reliability, using both resource adequacy and transmission security modeling to identify any future system needs. The NYISO has three primary reliability planning studies including:

- Short-Term Assessment of Reliability (STAR): This study examines future electricity system needs over a five-year period, focused on addressing needs arising in the first three years, and is conducted quarterly in direct collaboration with TOs.

[113] 2025 State Energy Plan: Volume II, Electricity.

- Reliability Needs Assessment (RNA): This biennial study examines long-term reliability needs occurring four to ten years into the future, incorporating TOs' long-term plans. If the RNA identifies a need, the NYISO issues competitive solicitations for projects to address reliability needs and requires TOs to propose backstop transmission solutions.

- Comprehensive Reliability Plan (CRP): This study is also conducted biennially and reports on the results of the RNA and the STAR interim assessments. The CRP includes the appropriate solutions to any reliability needs identified in the RNA.

Additionally, local TOs are responsible for planning for their respective transmission areas by performing transmission studies according to all applicable criteria. Each TO produces a Local Transmission Owner Plan (LTP), which feeds into the NYISO's determination of system needs through its processes.

In October 2025, the NYISO issued its Q3 2025 STAR Report.[114] The report identified generator deactivation reliability needs as early as summer 2026 in New York City, as well as Long Island local transmission reliability needs beginning in 2026, and bulk-transmission reliability needs beginning in summer 2027. While investments are underway to address these near-term needs, including the CHPE project, Empire Wind offshore wind project, Sunrise Wind offshore wind project, and the Propel NY Energy transmission project, the report highlights longer-term risks that require additional near-term intervention. On November 10, 2025, the NYISO issued a solicitation[115] for solutions to address the generator deactivation needs identified in the Q3 2025 STAR Report. That solicitation closed on January 9, 2026, and the NYISO issued its report

[114] New York Independent System Operator, Inc. Short-Term Assessment of Reliability: 2025 Quarter 3 (2025), available at: https://www.nyiso.com/documents/20142/39103148/2025-Q3-STAR-Report-Final.pdf/86d4e2d9-e1eb-475b-c5db-ee5de81ea799

[115] New York Independent System Operator, Inc. Short-Term Reliability Process Solution Solicitation Regarding Generator Deactivation Reliability Needs (2025), available at: https://www.nyiso.com/documents/20142/15930765/STRP-Q3-2025-Solicitation-Letter-Final.pdf/

summarizing the evaluation and selection of solutions[116] on April 15, 2026. The NYISO also released its Q1 2026 STAR Report[117] on April 15, 2026, which continued to observe the deficiencies identified in the Q3 2025 STAR Report. DPS will closely watch these actions to ensure adequate supply and demand solutions come online in time to preserve reliability standards.

Con Edison also identified a local reliability need for New York City in their 2025 LTP, observing longer-term needs increasing over the five-year period 2031-2035. On December 18, 2025, the Commission issued an order opening a new proceeding to address the potential reliability needs in New York City and included specific requirements for Con Edison to update its reliability assessment, issue a request for information seeking solutions to the identified reliability needs, and file a reliability contingency plan within 180 days.[118]

With respect to Long Island, the Commission also noted that NYISO had identified reliability needs and encouraged LIPA to conduct a similar planning exercise and develop a Long Island contingency plan. On January 20, 2026, PSEG Long Island, on LIPA's behalf, filed a response describing near-term actions, including its response to NYISO's Q3 STAR solicitation, retention of the Far Rockaway gas turbines, planned water-injection upgrades at existing units, and potential New England capacity imports[119]. PSEG Long Island also issued a Clean and Non-

[116] New York Independent System Operator, Inc. Short-Term Reliability Process Report: 2026-2030 Generator Deactivation Reliability Needs (2025 Quarter 3 STAR) (2026), available at: https://www.nyiso.com/documents/20142/15930753/2025-Q3-Short-Term-Reliability-Process-Report-Final.pdf/

[117] New York Independent System Operator, Inc. Short-Term Assessment of Reliability: 2026 Quarter 1 (2026), available at: https://www.nyiso.com/documents/20142/16004172/2026-Q1-STAR-Report-Final.pdf/

[118] Case 25-E-0764, Proceeding on Motion of the Commission to Address New York City Reliability Needs, Order Initiating Proceeding and Directing Reliability Contingency Plan (issued December 18, 2025).

[119] PSEG Long Island and LIPA, Response of PSEG Long Island and LIPA, Case 25-E-0764, Jan. 20, 2026, at 2–3.

Emitting Resources RFI to inform longer-term resource planning and LIPA's next Integrated Resource Plan[120].

Taken together, the NYISO, Con Edison and LIPA/PSEG Long Island materials point to several factors that contribute to the advancing problem, namely increasing overall demand for electricity, anticipated retirements of existing generation resources, and difficulties in developing new generation supplies.

The NYISO STAR Report highlights a deeper, structural reliability challenge. New York has been retiring more generation than it has added to the grid since 2020, while also seeing a significant increase in electric demand. New York has faced significant inflation and supply chain issues impacting the State's ability to build new, clean generation. Now, there are unprecedented headwinds from the federal government. These structural issues, combined with the limited options available to provide clean firm power into highly constrained and dense urban areas downstate – described below – create significant challenges for regulators and grid operators to maintain reliability while pursuing rapid decarbonization.

6.2 Clean Energy Solutions

Pursuant to the July 2025 PPTN Order, this section describes the potential clean energy generation solutions available to support grid reliability and incorporate into reliability planning processes, with a special focus on resources that can support reliability in New York City.

There are a number of clean energy solutions that produce zero carbon emissions while improving the reliability of the power system. The list below provides the current view of available resources in alphabetical order, informed by the 0x40 Technoeconomic Assessment, along with their characteristics and potential uses.[121]

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[120] PSEG Long Island, 2026 Request for Information Concerning the Prospects for Clean & Non-Emitting Resources on Long Island, issued Mar. 16, 2026

[121] New York State Energy Research and Development Authority, Greenhouse Gas Emissions Studies, Zero by 40 Technoeconomic Assessment(2025), available at:

- Clean Firm Resources – This category includes resources such as nuclear power, hydrogen for use in fuel cells or combustion turbines, certain types of renewable natural gas, and emerging technologies such as iron fuel. The 0x40 Assessment reviewed this category of technologies and found that each has significant limitations in availability and technical feasibility over the next decade or more. These resources may play a role in reliability planning over the long-term, but are unlikely to support near-term needs, such as those identified by NYISO or Con Edison in recent reports.

- Demand Response and Load Reduction – Market-based and voluntary demand reduction programs can serve an important role in reliability, particularly in constrained areas downstate. New York has a long track record of leveraging demand-side programs, with new initiatives underway to improve program scale and compensation mechanisms through the Grid of the Future Proceeding and other generic proceedings. Additionally, with the passage of the Fiscal Year 2026-2027 Executive Budget, New York State authorized the use of $33 million to support the start up of the Excelsior Power program. Excelsior Power will be a significant expansion of the residential demand response capability of the State. Preliminary estimates show the potential for hundreds of MWs of new demand-side resources in the coming years, although complexity remains in how these resources are considered in reliability planning. Demand respond resources are often considered "emergency resources" and are therefore not included in reliability model base cases, meaning planners must design the energy system to maintain reliability without considering demand response resources. Work is underway to consider new methods for evaluating the reliability contribution of demand response resources.

- Distributed Energy Resources – This category includes resources such as distributed and behind-the-meter energy storage, distributed and rooftop solar PV, and other resources on the distributed system, such as small-scale fuel cells. Distribution resources can provide relief to all levels of the energy system due to their location near loads, often providing outsized value from the combination of distribution and transmission impacts.

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https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Energy-Analysis/Zero-x-40-Technoeconomic-Assessment.pdf.

Consideration must be given to coordination and operation of these resources to ensure utilization during periods of need, and this issue is being analyzed through both the Grid of the Future Proceeding and the VDER Proceeding.

- Energy Efficiency – While efficiency projects are not dispatchable and do not provide incremental generation, the value of peak demand reductions through energy efficiency is extremely high. Permanent load reductions on peak adjust the load forecast down, reducing the total amount of resources required to maintain reliability and also impacting the reserve margin and other reliability planning thresholds. In this way, a single MW of efficiency could provide 1.2 MW or more of reliability benefit. New York has a long history with energy efficiency deployment, and the State has programs in place to continue these successes, although given the magnitude of efficiency projects already completed, the future potential may be limited in certain areas as compared to a State that is just beginning to pursue additional energy efficiency.

- Energy Storage – In addition to serving as a potential distributed energy resource, energy storage can provide strategic reliability benefits to constrained grids due to its operational flexibility, small siting footprint, and rapid deployment potential. Long-duration storage also provides unique values, providing 10 hours or more of power as needed. The two primary considerations when leveraging energy storage as a reliability resource are charging time and accurate dispatch. For charging, the local electric system must be able to provide enough power in off-peak periods to charge the energy storage system, even during times when reliability issues may occur. Storage can provide its highest value when significant clean generation or transmission capacity is available to ensure charging needs are met in all scenarios. Regarding dispatch signals, the local utility or the NYISO – depending on the location of the energy storage – must be able to accurately predict and identify reliability issues and dispatch the energy storage accordingly to capture the reliability value of storage. In normal circumstances, grid operators have become proficient in predicting peaks and responding to extreme weather events. However, unique circumstances related to contingency situations may arise, where unplanned outages or system/component failures lead to abnormal operations and urgent need for

reliability resources. These circumstances lead to uncertainty as to whether a given energy storage device will be fully charged and capable of responding to contingency events, which may lead to a derate of their projected reliability contribution in planning studies.

- Grid-Enhancing Technologies – Similar to demand response and energy efficiency, grid enhancing technologies are not traditional generation resources. However, their characteristics provide similar values by enabling higher utilization of the existing grid and increased capacity to address reliability needs. A number of technologies exist under this category, with advanced power controllers and dynamic line ratings among the most mature. In each case deploying the new technologies provides grid operators with additional capacity on the existing system that can be used to flow more power to areas of need. Other grid-enhancing technologies include storage-as-transmission and smart/grid-forming inverters, which provide new capabilities that allow system operators to manage physical disturbances on the grid, avoiding potential reliability issues. Work is underway with the Advanced Technology Working Group to ensure grid operators have the information and expertise required to deploy and utilize grid-enhancing technologies.

- Renewable Energy Generation – Strategically sited renewable energy generation can provide much-needed energy supply to constrained areas of the state. Additional supply also provides more options for charging energy storage resources, a synergy that boosts the value of both the generation and storage resources. Certain areas of the state are more constrained than others in their ability to site and interconnect renewables, and most renewable resources are not dispatchable, meaning grid operators do not have the option to leverage them in unexpected reliability events. However, abundant supply of energy is a critical need in the State moving forward and preempts a number of reliability issues that could arise through diminished supply margins.

- Transmission – Increasing the amount of transmission into a given area of the state provides an additional pathway for energy supply to flow into the area, which improves overall reliability. The total reliability contribution is heavily dependent on the design of

> the transmission line, the operational flexibility, as well as the generation resources available to flow through the line to its destination. Additional transmission can provide both energy and capacity value, improve local reliability, and provide storage resources with additional charging capabilities, providing operators with multiple important services. As mentioned above, design considerations are crucial, as the size of individual transmission projects and the operational characteristics can lead to vastly different reliability outcomes for the area of concern. For example, a single transmission line of 2,000 MW into New York City from Upstate New York would immediately become the largest planning contingency on the Con Edison system, leading to additional operational complexity, increased reserve requirements, and overall degradation of the reliability contribution of the line. It is possible that the resulting system configuration is still preferable to the one that existed before the deployment of the new line, but these considerations must be managed and considered during the design phase of any new transmission project.

While the list above provides numerous options for new resources to improve reliability, current regulatory dynamics and the specific characteristics of the highly constrained grid in New York City limits the ability of certain resources to provide value in that locality. Based on the status, operation, and availability of the above technologies the following paragraphs describe the potential for these resources to provide reliability benefit in New York City in the next 5-10 years.

The clean firm technologies described above and examined further in the 0x40 assessment each have limitations that prevent them from making meaningful contributions to downstate reliability in the near future or potentially from ever being a suitable resource. Hydrogen resources require system-wide planning for production, storage, transportation and utilization that will take a decade or more to evaluate and deploy, if such efforts overcome the current infeasibilities. Renewable natural gas could serve as a drop in fuel for existing fossil fuel generators, but many of those generators are at their end-of-life and may require significant rebuilds to maintain operation for any significant duration. Furthermore, the current supply of renewable natural gas is not sufficient for reliability use cases, even when confined only to the needs in New York

City. Additionally, nuclear provides firm generation, but its contribution to downstate reliability could be locationally constrained, limited to upstate nuclear paired with sufficient transmission capacity to deliver to New York City. Other clean firm technologies are still in the very early stages of technology development and will not be ready to provide value in the near term.

Demand response and other load reductions are a growing area of interest in downstate New York, particularly considering the synergies with the significant electrification efforts downstate. While more electrification of heating, cooling, hot water, and vehicles may lead to higher loads, they also provide new resources with grid-response capabilities. New programs to make full use of managed charging and heat pump flexibility could provide significant value, in the hundreds of MWs in the next 5-10 years.

Distributed energy resources are another resource type with significant deployment potential in New York City. Rooftop and canopy solar as well as behind the meter and distributed storage could provide hundreds of MWs of reliability value in the next decade. NYSERDA's Retail and Residential Energy Storage Programs incentivize new storage deployments, and the NY-Sun program has funding remaining to deploy additional solar capacity in New York City. As mentioned above, the key to maximizing the value of these resources will be ensuring they are sited in a way that utilizes available grid capacity and that they are operated in a way that allows their reliability value to be captured by the energy system. Additionally, the State will need to continuously leverage multiple resources to ensure the most cost-effective buildout of the electric grid as utility-scale projects provide economies of scale that can lower overall production costs as compared to distributed resources that may see higher per kilowatt hour costs to develop due to integration requirements with existing building electrical systems and incremental material costs for building certain distributed energy resources like carport solar. However, despite the potential for higher costs and longer timelines, certain small-scale solar developments will still provide net value to the State, and New York is fully committed to continue supporting solar development for multiple types of installations.

Energy efficiency has the potential to improve reliability in New York City as well. While energy efficiency programs in New York have already achieved significant load reductions,

strategic initiatives on resources beyond lighting may provide new savings in the tens to hundreds of MWs.

Energy Storage is likely the resource that provides the largest reliability potential in New York City in the near term. This is due to the maturity of the market, availability of incentives, and the speed of deployment as compared to other resources of this scale. With individual projects delivering 100 MW or more, the State is on track to surpass 1,000 MW of value to New York City in the next 10 years. Similar to distributed storage, siting, operation, and charging needs are key to capturing the value of energy storage for reliability.

The reliability value of grid-enhancing technologies may be more limited in New York City than in other areas of the State. This is due to the unique operation of the New York City grid at or near emergency ratings during the times of year that typically correspond to high reliability needs. The networked design of the system further complicated the ability to utilize certain power control devices and dynamic line ratings. However, the CGPP, Proactive Planning Process, and the ATWG have directed the utilities, including Con Edison to identify and pursue any grid-enhancing technology projects that are able to provide value to their system.

Large-scale renewable generation in New York City has historically been limited due to the limited siting opportunities and the cost and complexity of deploying rooftop systems, although NYSERDA has funded hundreds of MWs of rooftop and commercial solar in New York City since the program's inception. Offshore wind provides the best opportunity for new renewable generation in New York City, with the potential for thousands of MWs of nameplate capacity in the region and has been a cornerstone of the long-term decarbonization plan for downstate New York for many years. However, recent developments at the federal level have significantly delayed offshore wind, making it unlikely that significant amounts of offshore wind – beyond existing resources in operation or construction – will be available in the next 5-10 years.

New transmission capacity into New York City may be a key component of the long term decarbonization strategy from downstate New York. With the majority of new energy resource deployments occurring outside the City, including renewable and nuclear generation, new transmission will be required to allow energy to flow through the state and down to load centers.

The Coordinated Grid Planning Process identified the need for a minimum of 7 GW of new firm capacity in New York City after offshore wind, storage, DERs, and load flexibility resources were exhausted in scenarios evaluating full achievement of zero carbon electricity by 2040. While transmission will likely not be able to serve the full need in the long term, it is the primary technology solution available today to meet a portion of that need. Furthermore, the JU Final Report on CGPP recommends at least 750 MW of new transmission into Zone J be approved in the near term to ensure availability within the next 8-10 years. The State is also pursuing a long-term strategy integrating significant amounts of new firm nuclear capacity statewide through the Nuclear Reliability Backbone process announced by the Governor in early 2026.

In summary, the State continues to explore many options for clean energy resources to provide reliability value in New York City, with many of the options progressing through programs and proceedings at NYSERDA and DPS, including the proceeding on reliability needs in New York City referenced earlier in this section. The total near term contribution of the indicated resources is likely over 1,000 MW of incremental reliability value over the next 10 years, with additional support from transmission possible near the end of the time horizon, and offshore wind deployments possible shortly thereafter. While this combination of resources can likely offset the current forecasted reliability deficits, changes in the availability or capacity value of existing fossil generation may result in additional reliability needs, particularly in the mid- to late-2030s.

New York remains committed to clean energy deployment and continues to provide New York City with reliable power, but headwinds are clear: an aging generation fleet, rapidly growing demand, and challenges in developing new dispatchable resources. Local energy storage moratoriums and prohibitive laws compound this, with a growing number of active battery storage restrictions across the state. Because standalone storage falls outside ORES's purview, these projects remain subject to local permitting requirements. Extended moratoriums and prohibitive laws have the potential to block a project outright, eliminating the benefit of its peak-shifting and peak demand-serving reliability value to NYS. Locational constraints across the state underscore the need for firm, dispatchable resources of diverse fuel types to complement the State's buildout of renewable energy resources.

Appendix A: Operational and Contracted Renewables

This Appendix provides further data on renewable generation projects, in addition to the information provided in Sections 3 and 4 of this Report. This supplementary detail is derived from the Open NY database as of April 30, 2026.[122]

The data in this Appendix covers NYSERDA's operational and awarded projects in the Tier 1, Tier 2 Maintenance, Tier 4, and Offshore Wind programs under the CES, with the exception of RESRFP25-1 awards, for which details have not been announced as of the time of publication of this report. Projects that terminated their contracts or for which contracts have been completed are not included. This Appendix does not provide information for projects awarded under the RPS program, distributed solar generation, baseline hydroelectric generation without NYSERDA contract, or any other Tier 1 eligible generator that did not receive an award from NYSERDA. Open NY includes a full list of NYSERDA large-scale renewable contracts including those predating the CES. The NYISO Gold Book includes a list of all generators participating in the NYISO wholesale electricity market, including renewable projects without a NYSERDA contract.[123]

Nuclear generation under the Tier 3 ZEC program is not addressed in this Appendix. In addition to the data provided in Section 2, a list of ZEC-contracted nuclear generators is available in the 2016 CES Order.[124]

For operational projects, this Appendix provides the most recent data on annual program expenditure through 2025. Forward-looking cost estimates for the CES and other costs

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[122] Open NY, Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004 (2026).

[123] New York Independent System Operator, Inc. 2023 Load & Capacity Data Report (Gold Book) (2023), available at: www.nyiso.com/documents/20142/2226333/2023-Gold-Book-Public.pdf.

[124] 2016 CES Order.

associated with pursuit of the CLCPA goals are provided separately in DPS's annual information report on the CLCPA.[125]

A.1 Distribution of CES Contracted Systems by Size and Load Zone

As of April 30, 2026, 94 large-scale renewable energy projects contracted with NYSERDA under the CES are expected to provide renewable capacity of 10,358 MW and annual generation of 34,154 GWh once projects are operational.[126] This includes projects in the Tier 2 Maintenance program and excludes the awards from the RESRFP25-1 solicitation for which, as noted, details have not yet been released. Of these projects, based on capacity, 87% are under development, and 13% are operational.[127]

- 35 operational projects have a total new renewable capacity of 1,356 MW and annual bid quantity of 3,361 GWh.
- The 59 projects under development total 9,001 MW of new renewable capacity and expected annual generation of 30,793 GWh.

The following tables provide data by program, NYISO load zone, county, size, and technology and include the designations of "operational" (i.e., generating power) or "under development" (i.e., not yet delivering power to a load zone).

Table 9 summarizes the awarded new renewable capacity and generation by program.

[125] Case 22-M-0149, supra, New York State Department of Public Service Second CLCPA Informational Report on Overall Implementation of the Climate Leadership and Community Protection Act (filed September 18, 2025).

[126] This does not reflect potential attrition in the portfolio, as reflected in the analysis in Section 5 of this report.

[127] As data in this section is as of April 30, 2026, the CHPE project is classified as being under development. As discussed in Section 4.2.3 of this Report, the CHPE project subsequently entered service in May 2026.

Table 9. Active Project Awards by Program

Program	Active Awards	New Renewable Capacity (MW)	Generation[128] (GWh)	Number of Projects
Land Based Renewables – Tier 1[129]	Operational	1,356	3,351	33
	Under Development	6,017	12,844	55
Tier 2 Maintenance[130]	Operational	0	10	2
	Under Development	0	8	1
Offshore Wind (OREC)	Under Development	1,734	7,539	2
Tier 4	Operational	1,250	10,402	1
	Total*	**10,358**	**34,153**	**94**

* Total may not add due to rounding.

The NYISO control area is divided into eleven load zones designated A through K, as shown in Figure **6**.[131]

[128] Note that for operational projects, calculated generation reflects the commitment of the bid facility at the time of Commercial Operation; for projects under development, generation is conditioned on the as-build project configuration and is subject to change.

[129] Calculated figures only reflect incremental capacity and generation for repowering projects.

[130] New renewable capacity reflects nameplate capacity, as there is no incremental capacity resulting from Tier 2 Maintenance agreements.

[131] New York Independent System Operator, Inc. 2021 – 2040 System and Resource Outlook (2022), available at: https://www.nyiso.com/documents/20142/33384099/2021-2040-Outlook-Report.pdf.

Figure 6. NYISO Load Zone Map

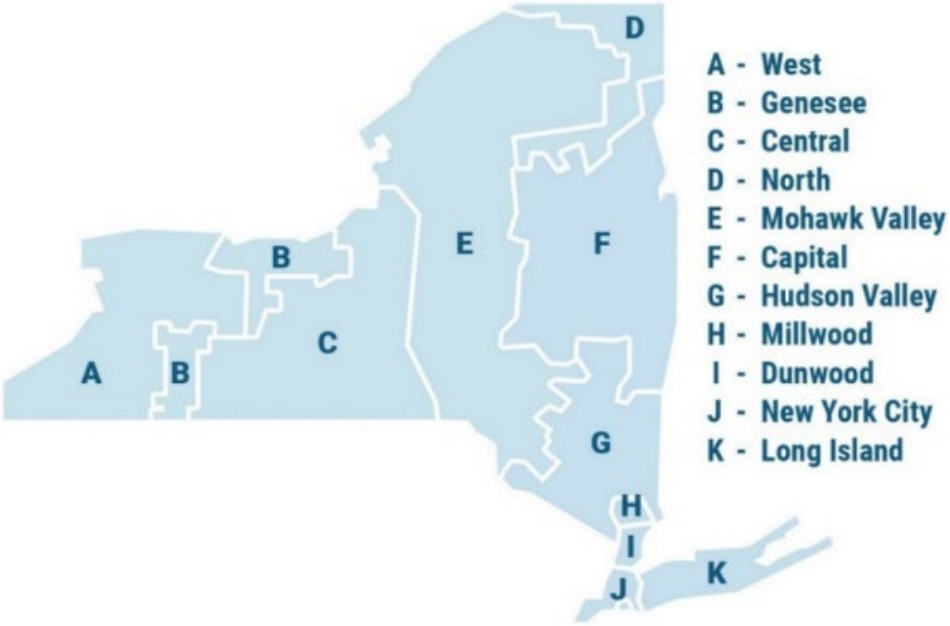


Table 10 summarizes the project capacity in operation and under development for each NYISO load zone for which there are active NYSERDA awarded projects.

Table 10. Active Project Awards by NYISO Load Zone[132]

NYISO Load Zone	Active Awards	New Renewable Capacity (MW)	Awarded Generation (GWh)	Number of Projects
A-West	Operational	196.1	522.8	4
	Under Development	1,038.0	2,353.0	8
B-Genesee	Operational	-	-	0
	Under Development	1,633.0	3,161.0	8
C-Central	Operational	489.0	1,167.0	9

[132] The table reflects the NYISO Load Zone where power is injected, which may not align with the geographical location of the project shown in Figures 5 and 6.

	Under Development	1,258.0	3,152.0	15
D-North	Operational	79.3	214.1	3
	Under Development	939.1	2,060.0	7
E-Mohawk Valley	Operational	308.0	910.3	8
	Under Development	727.4	1,475.0	14
F-Capital	Operational	280.0	536.5	9
	Under Development	422.0	650.4	6
G-Hudson Valley	Operational	2.2	4.8	1
	Under Development	-	-	0
I - Dunwoodie	Operational	1.5	6.4	1
	Under Development	-	-	0
J-New York City	Operational	-	-	0
	Under Development[133]	2,060.0	13,924	2
K-Long Island	Operational	-	-	0
	Under Development	924.0	4,017	1
Total*	**Operational**	**1,355**	**3,355**	**35**
	Under Development	**9,001**	**30,793**	**59**

* Total may not add due to rounding.

NYSERDA's awarded projects include eligible renewable technologies such as solar, land-based wind, offshore wind, and hydroelectric. Solar and wind (land-based and offshore) technologies comprise the majority of NYSERDA's portfolio for both operational and under development designations. Table 11 summarizes operational and under development project capacity and awarded generation by size category and for each renewable energy technology.

[133] Includes the CHPE project.

Table 11. Active Projects with Awards by Technology and Size

Technology	Active Awards	New Renewable Capacity (MW)	Awarded Generation (GWh)	Number of Projects
Hydroelectric	Operational: 0-50 MW	18.4	85.2	11
	Operational: 51-100 MW	--	--	--
	Operational: Over 100 MW	--	--	--
	Under Development: 0-50 MW	7.7	59.1	3
	Under Development: 51-100 MW	--	--	--
	Under Development: Over 100 MW	1,250	10,402	1
Fuel Cell	Operational: 0-50 MW	1.6	6.4	1
Land-Based Wind**	Operational: 0-50 MW	47.3	119.2	3
	Operational: 51-100 MW	235.8	665.5	3
	Operational: Over 100 MW	556.2	1,559	5
	Under Development: 0-50 MW	--	--	--
	Under Development: 51-100 MW	695.9	2,064.0	7
	Under Development: Over 100 MW	1,084.0	3,124.0	6
Offshore Wind	Under Development: 0-50 MW	--	--	--
	Under Development: 51-100 MW	--	--	--
	Under Development: Over 100 MW	1,734.0	7,539.0	2
Solar	Operational: 0-50 MW	230.0	438.6	10
	Operational: 51-100 MW	90.0	167.1	1
	Operational: Over 100 MW	177.0	319.9	1
	Under Development: 0-50 MW	404.5	756.0	20
	Under Development: 51-100 MW	546.3	980.0	6
	Under Development: Over 100 MW	3,279.0	5,869.0	15
Total*	**Operational**	**1,356**	**2,503**	**35**

	Under Development	**9,001**	**30,793**	**59**

* Totals may not add due to rounding.

** Projects with multiple awards counted once.

Figure 7 shows the location of operational projects contracted to NYSERDA under the CES by NYISO load zone.

Figure 7. NYSERDA-Contracted Operating Projects by NYISO Zone

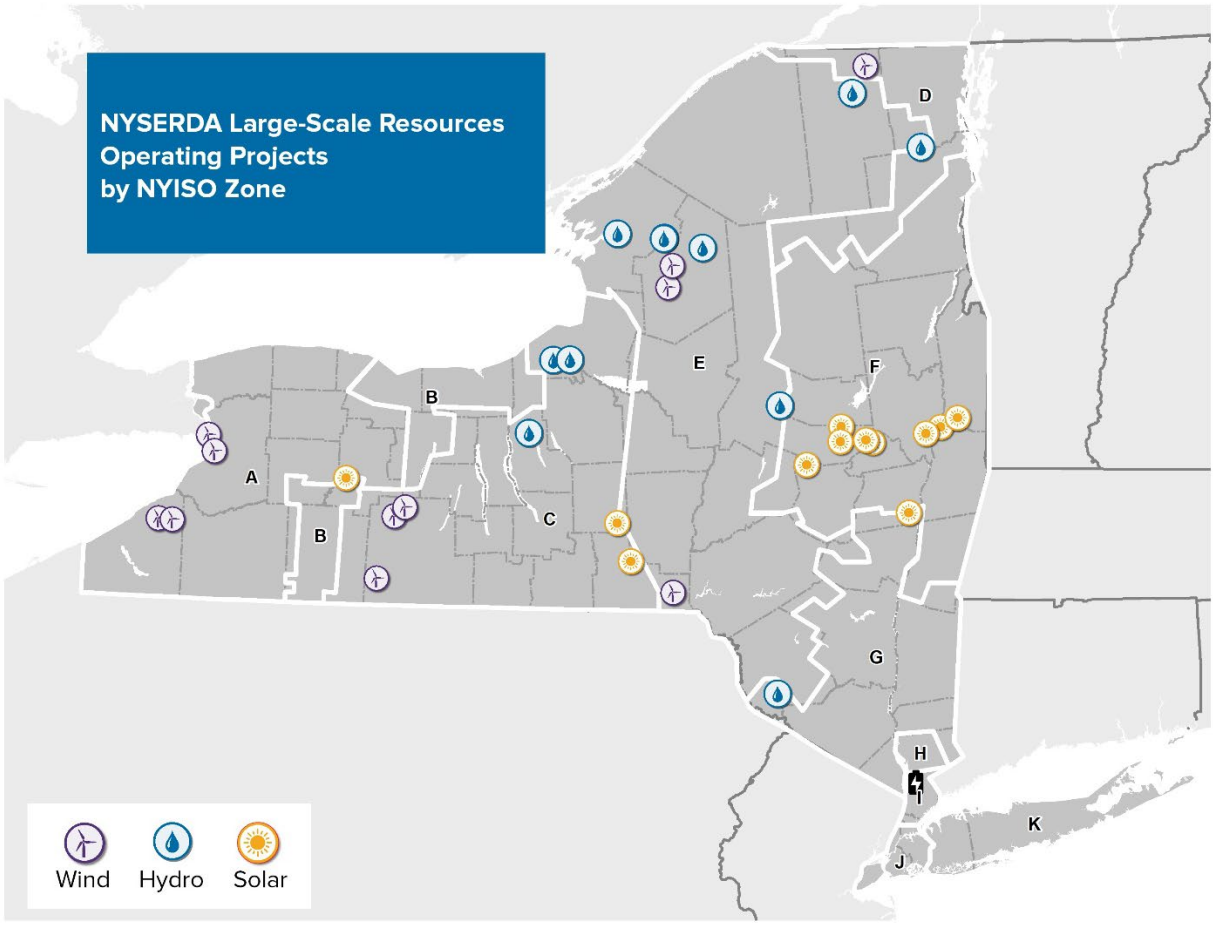
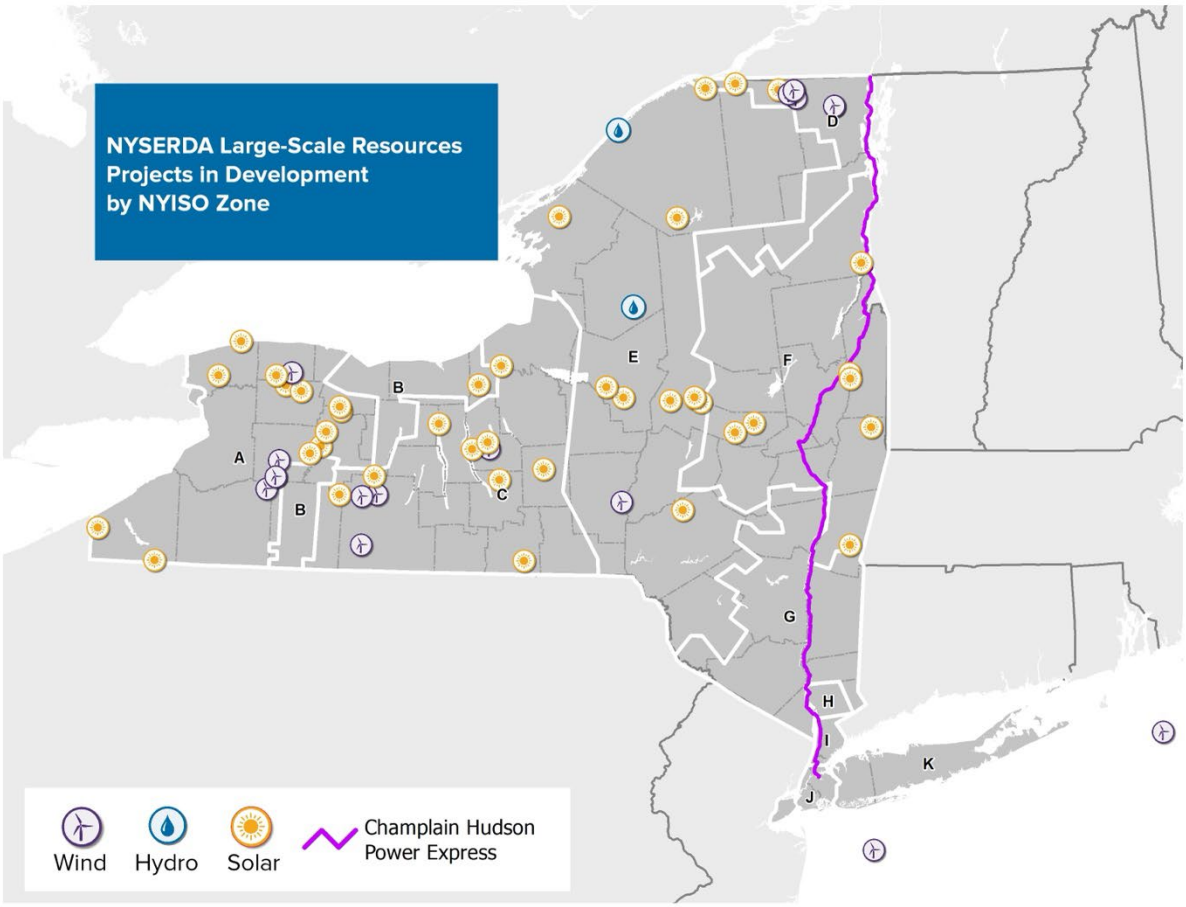


Figure 8 shows the locations of large-scale renewable projects under development contracted to NYSERDA by NYISO load zone.

Figure 8. NYSERDA-Contracted Large-Scale Renewable Projects Under Development by NYISO Zone as of April 30, 2026 (Note that CHPE reached commercial operation on May 13, 2026)



A.2 Program Funding Commitments and Expenditures

The Commission designated NYSERDA as the administrator of all CES programs. Pursuant to Ordering Clause 5 of the Commission's Order Approving Phase 2 Implementation Plan, in March of each year NYSERDA files with the Commission in Case 15-E-0302 an Annual Clean Energy Standard Financial Status Report.[134] The most recent report available is for calendar year 2025 and is shown in Table 12.[135] Table 13 shows data for calendar year 2024[136] and Table 14 shows data for calendar year 2023[137]. Further details are available in quarterly itemized reports that NYSERDA files on costs associated with the administration and the development of the CES programs.

[134] Case 15-E-0302, supra, Order Approving Phase 2 Implementation Plan (issued November 17, 2017).

[135] Case 15-E-0302, supra, CES Financial Status Report for calendar year 2025 (filed March 31, 2026)

[136] Case 15-E-0302, supra, CES Financial Status Report for calendar year 2024 (filed March 31, 2025)

[137] Case 15-E-0302, supra, CES Financial Status Report for calendar year 2023 (filed April 1, 2024)

Table 12. CES Financial Status Report for Calendar Year 2025 (In Thousands)

CES Financial Status Report for calendar year 2025
(In Thousands)

	ZEC	Tier 1	Tier 2	Tier 4	OREC	Total
Revenues/Sources of Funds						
Zero-Emission Credit Assessments (Includes Administrative Adder)	$ 400,113	-	-	-	-	400,113
Renewable Energy Credit Proceeds	-	144,928	-	-	-	144,928
Tier 2 Energy Credit Proceeds	-	-	-	-	-	-
Alternative Compliance Payments [1,2]	-	40,485	-	-	-	40,485
Voluntary Compliance Payments	-	-	-	-	-	-
Intra-Fund Transfer for Operating Costs [1]	-	(17,606)	159	3,522	13,925	-
Contract Security forfeitures, Bid Fees [1]	-	21,510	-	-	3,415	24,925
Interest Earnings [1]	2,630	9,786	20	80	907	13,423
Electric Distribution Company Backstop Collections (EDC) [3]	-	-	-	-	-	-
Total	402,743	199,103	179	3,602	18,247	623,874
Expenses/Use of Funds						
Program Administration	695	7,742	192	1,126	5,248	15,003
Program Support	-	2,223	6	804	5,713	8,746
System Development Costs	132	628	-	143	292	1,195
ZEC Payments & Accrued Expense to Nuclear Generating Facilities	335,001	-	-	-	-	335,001
REC Payments & Accrued Expense to Generating Facilities	-	62,086	-	-	-	62,086
Renewable Portfolio Standard Resources (Returned)	-	-	-	-	-	-
NYS Cost Recovery Fee	2,525	415	1	17	88	3,046
Uncollectible Load Amount [4]	-	-	-	-	-	-
Total	338,353	73,094	199	2,090	11,341	425,077
Surplus/(Deficit)	64,390 [5]	126,009	(20)	1,512	6,906	198,802
Cumulative Surplus/(Deficit)	74,425	252,141	881	4,779	30,978	363,205
Cash Balances [6]	$ 60,872	279,586	916	4,794	37,598	383,766

[1] Pursuant to the December 20, 2024 Order approving the 2025 Clean Energy Standard administrative budgets, NYSERDA is authorized to use previously collected revenues including bid fees, forfeited contract security funds, Alternative Compliance Payments received, and interest income to fund the 2025 Clean Energy Standard compliance period of the Renewable Energy Standard, and in this manner reduce the relative need for ratepayer collections. The ZEC program is authorized to utilize an administrative adder to fund administrative costs.

[2] 2024 was the last year that Alternative Compliance Payments (ACP) were part of the Tier 1 Obligation. This ACP revenue is the result of the 2024 ACP requirement and no additional ACP revenue will be collected in future years.

[3] Pursuant to the June, 23, 2023 Order "Approving Financial Backstop Collection Mechanism," NYSERDA is approved to collect from the EDCs the accumulated ZEC Deficit of $33,295,904 through year five of the ZEC program ending March 31, 2022. Commencing December 15, 2023, NYSERDA invoiced the EDCs quarterly, in four equal amounts equal in the aggregate to the cumulative deficit amount of $33,295,904.

[4] Uncollectible amounts as a result of LSE's going out of business, leaving the New York market, bankruptcy discharges, or similar.

[5] The ZEC cumulative surplus stems from the federal nuclear production tax credit (PTC) enacted in 2022 for which the first tax savings were realized by nuclear generators in 2025. Under the program, any benefits received from the federal nuclear production tax credit (PTC) are required to be passed along to ratepayers and this surplus will be applied to reduce future obligations.

[6] Excludes cash balances for refundable deposits.

Table 13. CES Financial Status Report for Calendar Year 2024 (In Thousands)

CES Financial Status Report for calendar year 2024
(In Thousands)

	ZEC	Tier 1	Tier 2	Tier 4	OREC	Total
Revenues/Sources of Funds						
Zero-Emission Credit Assessments (Includes Administrative Adder)	$ 502,025	-	-	-	-	502,025
Renewable Energy Credit Proceeds	-	82,636	-	-	-	82,636
Tier 2 Energy Credit Proceeds	-	-	(195) [1]	-	-	(195)
Alternative Compliance Payments	-	89,538	-	-	-	89,538
Voluntary Compliance Payments		357	-	-	-	357
Intra-Fund Transfer for Operating Costs [2]	-	(16,282)	496	2,219	13,567	-
Contract Security forfeitures, Bid Fees	-	7,502	-	-	16,460	23,962
Interest Earnings	1,996	6,796	16	38	1,221	10,067
Electric Distribution Company Backstop Collections (EDC) [3]	33,296	-	-	-	-	33,296
Total	537,317	170,547	317	2,257	31,248	741,686
Expenses/Use of Funds						
Program Administration	604	7,151	337	567	4,775	13,434
Program Support	15	1,986	50	444	6,790	9,285
System Development Costs	146	555	2	9	43	755
ZEC Payments & Accrued Expense to Nuclear Generating Facilities	495,175	-	-	-	-	495,175
REC Payments & Accrued Expense to Generating Facilities	-	96,029	211	-	-	96,240
Renewable Portfolio Standard Resources (Returned)	-	-	-	-	12,935 [4]	12,935
NYS Cost Recovery Fee	4,344	791	5	9	102	5,251
Uncollectible Load Amount [5]	669	-	-	-	-	669
Total	500,953	106,512	605	1,029	24,645	633,744
Surplus/(Deficit)	36,364	64,035	(288)	1,228	6,603	107,942
Cumulative Surplus/(Deficit)	10,035	126,132	901	3,267	24,072	164,407
Cash Balances [6]	$ 85,674	148,724	936	3,267	24,662	263,263

[1] Negative revenue reflected in the Tier 2 program is the result of the 2023 compliance period reconciliation refunds. This is in-part offset by collections for the 2024 compliance period.

[2] Pursuant to the December 18, 2023 Order approving, with modification the 2024 Clean Energy Standard administrative budgets, NYSERDA is authorized to use previously collected revenues including bid fees, forfeited contract security funds, Alternative Compliance Payments received, and interest income to fund the 2024 Clean Energy Standard compliance period of the Renewable Energy Standard.

[3] Pursuant to the June, 23, 2023 Order "Approving Financial Backstop Collection Mechanism," NYSERDA is approved to collect from the EDCs the accumulated ZEC Deficit of $33,295,904 through year five of the ZEC program ending March 31, 2022. Commencing December 15, 2023, NYSERDA invoiced the EDCs quarterly, in four equal amounts equal in the aggregate to the cumulative deficit amount of $33,295,904.

[4] Per CASE 18-E-0071 – In the Matter of Offshore Wind Energy, transfer of OREC bid fees to RPS to offset previous transfers of RPS uncommitted funds to OREC for administrative funding.

[5] Uncollectible amounts as a result of LSE's going out of business, leaving the New York market, bankruptcy discharges, or similar.

[6] Excludes cash balances for refundable deposits.

Table 14. CES Financial Status Report for Calendar Year 2023 (In Thousands)

CES Financial Status Report for calendar year 2023
(In Thousands)

	ZEC	Tier 1	Tier 2	Tier 4	OREC	Total
Revenues/Sources of Funds						
Zero-Emission Credit Assessments (Includes Administrative Adder)	$ 531,946	-	-	-	-	531,946
Renewable Energy Credit Proceeds	-	18,558	-	-	-	18,558
Tier 2 Energy Credit Proceeds	-	-	342	-	-	342
Alternative Compliance Payments	-	42,371	-	-	-	42,371
Voluntary Compliance Payments		3,092	-	-	-	3,092
Intra-Fund Transfer for Operating Costs [1]	-	(15,231)	989	1,410	12,832	-
Contract Security forfeitures, Bid Fees	-	3,696	-	-	6,450	10,146
Investment Income	2,118	4,971	-	16	599	7,704
Electric Distribution Company Backstop Collections (EDC)	-	-	-	-	-	-
Total	534,064	57,458	1,331	1,426	19,881	614,159
Expenses/Use of Funds						
Program Administration	532	5,755	405	483	3,659	10,834
Program Support	35	6	78	221	5,833	6,174
System Development Costs	576	2,075	10	-	-	2,661
ZEC Payments & Accrued Expense to Nuclear Generating Facilities	523,923	-	-	-	-	523,923
REC Payments & Accrued Expense to Generating Facilities	-	50,388	208	-	-	50,596
Clean Energy Fund Resources (Returned)	-	-	-	-	6,450 [2]	6,450
NYS Cost Recovery Fee	4,994	520	7	7	89	5,617
Uncollectable Load Amount [3]	239	-	-	-	-	239
Total	530,299	58,744	708	710	16,032	606,493
Surplus/(Deficit)	3,765	(1,286) [4]	623	716	3,849	7,666
Cumulative Surplus/(Deficit) [5]	(26,329)	62,097	1,189	2,039	17,469	56,464
Ordered Backstop Collection	33,296					
Cash Balances [6]	$ 39,708	73,899	1,215	2,039	17,557	134,418

[1] Pursuant to the December 15, 2022 Order approving, with modification the 2023 Clean Energy Standard administrative budgets, NYSERDA is authorized to use previously collected revenues including bid fees, forfeited contract security funds, Alternative Compliance Payments received, and interest income to fund the 2023 Clean Energy Standard compliance period of the Renewable Energy Standard.

[2] Per CASE 18-E-0071 – In the Matter of Offshore Wind Energy, transfer of OREC bid fees to RPS to partially offset previous transfers of RPS uncommitted funds to OREC for administrative funding.

[3] Uncollectible amounts as a result of LSE's going out of business, leaving the New York market, bankruptcy discharges, or similar.

[4] The Tier 1 deficit for 2023 is funded through previously collected revenues including bid fees, forfeited contract security funds, Alternative Compliance Payments received, and interest income from previous years.

[5] The Zero Emission Credit program shows a cumulative deficit, which results from unpaid ZEC assessments associated with certain electric load of the New York Power Authority (NYPA) and unpaid ZEC assessments from certain other Load Serving Entities that have ceased operations, offset in part by program revenues, and administrative expenses which were less than funded. See footnote "a" to Table #6 in The Clean Energy Standard Annual Progress Report: 2022 Compliance Year for a discussion of NYPA's approach with respect to the CES Order. The October 15, 2020 Order Adopting Modifications to the Clean Energy Standard directed NYSERDA and DPS staff to exclude any future NYPA "uncollectible" portion of load when determining the various LSE obligations. The cumulative program deficits incurred to date through the compliance year ending March 31, 2022, plus any future program compliance year deficits, would ultimately require funding through the Electric Distribution Company (EDC) backstop charge or other funding authorization by the Public Service Commission to provide funding to cure these deficits. NYSERDA will temporarily use available Clean Energy Funds through the "Bill-As-You-Go" funding mechanism to satisfy cash flow needs and to continue to make ZEC payments when due. NYSERDA will monitor cumulative program deficits and will utilize the investor-owned utility backstop mechanism as approved in the October 15, 2020 Order for the purpose of collecting the amounts necessary to cure the ZEC deficit. Pursuant to the June, 23, 2023 Order NYSERDA is approved to collect from the EDCs the accumulated ZEC Deficit of $33,295,904 through year five of the ZEC program ending March 31, 2022. Commencing December 15, 2023, NYSERDA shall invoice the EDCs quarterly, in four equal amounts equal in the aggregate to the cumulative deficit amount of $33,295,904.

[6] Excludes cash balances for refundable deposits.

Appendix B: Incremental Economic Benefits as of April 30, 2026

This Appendix summarizes key findings from review of the Incremental Economic Benefits to New York State (economic benefits) of the Tier 1, Tier 4, and Offshore Wind programs as of April 30, 2026, with economic benefits defined as the dollar amount that accrues to New York as a result of the development, construction, modification, and operation of each project (each renewable energy project as bid to NYSERDA). While most projects proceed through economic benefits verification, the Tier 2 Maintenance program does not require economic benefit verification with associated agreements. Total New York State economic benefits for Tier 1, Tier 4 and Offshore Wind are estimated at $12.3 billion. Note that most projects are expected to have at least a 20- to 25-year useful life, and the data presented here only captures expected ongoing economic benefits to the State from the qualifying start date in each program through the first three years of operation.

Executive Summary

Tier 1:

- Total New York State economic benefits are estimated at $2.9 billion for 90 RPS and RES awards through the subject projects' first three years of operation.[138]
- By technology, 46% of the expected economic benefits are attributed to land-based wind projects, 53% to solar, and 1% to other technologies.
- The RES procurements conducted to date are expected to result in projects that create more than 6,999 full-time equivalent (FTE) positions and more than 7,639 unique jobs.
- Local long-term benefits for RES and RPS contracts are expected to be substantial:
    - Municipalities will benefit from payment in lieu of taxes (PILOTs) and host community agreements (HCAs), estimated to be at least $219 million, with additional payments after the projects' first three years of operations (essentially,

[138] This accounts for awarded projects that were operational with verified economic benefits but that have since attritted.

payments continue for the additional 17 years of operations not included in this report).

- Local landowners will benefit from payments for land leases from project developers, estimated at $255 million, with additional payments expected in years four of operation and beyond.

Tier 4:

- The CHPE project, the competitively selected project from T4RFP21-1, is expected to deliver more than $3.4 billion in economic investment across New York State over the project's 25-year contract term, including over $1.3 billion in direct economic benefits by year three of operation.
    - The project's economic benefits include creating more than 1,400 unique union construction jobs, host community benefits such as PILOTs and capital improvement funds, support for nonprofits serving disadvantaged communities (DACs) and a $40 million Green Economy Fund to retrain workers and build the clean energy economy workforce.
- The CHPE project is expected to result in the creation of approximately 700 FTEs over the life of the contract.

Offshore Wind:

- Empire Wind, including the South Brooklyn Marine Terminal (serving as the staging and marshalling port for Empire Wind and the operations center) has created over 2,000 jobs to date.
- Sunrise Wind scopes have created one million union labor hours across more than 1,000 local union workers, resulting in over $97 million in prevailing wages and benefits.
- Both projects are investing nearly $2 billion in near-term enhanced economic development statewide including port activities, manufacturing, onshore transmission scopes, as well as educational and workforce activities.
- In total, these projects are set to create over 7,500 direct and indirect U.S. jobs in shipbuilding, construction, operations, steel manufacturing, and related activities and spur

over $6 billion of in-state spending over the course of their 25-year contracts. This includes developer-committed investments of:

- $32 million for community-focused investments in New York's DACs
- $117 million supporting minority and women-owned business enterprises (MWBEs) and service-disabled veteran-owned businesses (SDVOB)
- Over $43 million in workforce development investments to support DACs;
- $16.5 million towards regional wildlife and fisheries monitoring; and
- Purchasing a minimum of $188 million of U.S. iron and steel, supporting U.S. manufacturing and the New York Buy American Act.

Economic Benefits/Impacts

New York State's RES aims to encourage direct in-state investments by renewable energy generators as well as financial support by offshore wind developers for regional environmental science collaboratives to monitor marine wildlife and fisheries.

This section summarizes economic benefits reported by Tier 1-eligible projects awarded contracts under four RPS solicitations,[139] seven RES solicitations,[140] one Tier 4 solicitation (T4RFP21-1), and one OREC solicitation (ORECRFP23-1) released by NYSERDA. Reported dollar values are in nominal U.S. dollars.

Tier 1 Program

For the RES large-scale renewable procurements to date, NYSERDA has assigned 10% of the total scoring weight to economic benefits. To earn evaluation points, bidders may include an economic benefit claim in their bid proposals. Unless otherwise specified, the analysis in this section is based on the claimed incremental benefits data provided by the bidders as accepted by

[139] RPS solicitations include 2554, 2985, 3084, and 3257.

[140] RES solicitations include RESRFP17-1, RESRFP18-1, RESRFP19-1, RESRFP20-1, RESRFP22-1, RESRFP23-1, and RESRFP24-1.

the Technical Evaluation Panel (TEP) for each solicitation. Once awarded under the RES, the accepted claims are included in NYSERDA's agreements with each project and, once the agreements are executed, the bidders become Sellers to NYSERDA. NYSERDA requires Sellers to track the eligible economic benefits claims throughout the project development process and early operation of each applicable generation facility. Indirect benefits are not admissible.

Following the third anniversary of commercial operation, Sellers must submit to NYSERDA an economic benefits report supported by independent audit and verification comparing (i) the project's actual spend on incremental economic benefits through the first three years of operation against (ii) the claimed incremental economic benefits in the bid proposal and agreement. NYSERDA has the right in the Standard Form Agreement to reduce contractual REC payments should developers fail to demonstrate that they have spent at least 85% of their claimed economic benefits.

NYSERDA's RPS Main Tier 2013 Program Review[141] noted that all 18 facilities whose economic benefits had been verified at that time "were determined to be at or above their contract compliance obligation." Based on that verified economic benefits data, the 2013 Program Review estimated those projects would produce $27 in direct investment for every MWh of production over the projects' operating life.

Since the RPS Main Tier 2013 Program Review, NYSERDA has completed 38 additional verifications for a total of 56 verifications, comprising 48 non-Tier 1 RPS projects and eight Tier 1 projects. The results show $1.3 billion in verified economic benefits accruing to New York through the first three years of operation of each project, or 95% of the amount claimed in those projects' solicitation bids. Due to the adjustment rights NYSERDA retains under the Standard Form Agreement, bidders to date have taken a conservative approach to claiming these economic

[141] New York State Energy Research and Development Authority, Renewable Portfolio Standard Main Tier 2013 Program Review: Direct Investments in New York State (2013), available at: https://www.nyserda.ny.gov/-/media/Files/EDPPP/Energy-and-Environmental-Markets/RPS/RPS-Documents/2013/2013-RPS-investments-NYS.pdf

benefits. Future verifications of projects selected in RES solicitations are expected to produce similar results.

Tier 4 Program

The Tier 4 solicitation (T4RFP21-1) resulted in an approved REC contract for the CHPE project, which reached commercial operation in May 2026. The contract includes the verification of direct economic benefits accrued to New York State valued at $1,342,764 (expected total dollars). Eligible benefits were to accrue between January 1, 2021, and the third anniversary of the start of the Contract Delivery Term (June 1, 2029) as a result of the development, construction, modification, interconnection, and operation of the project. A report must be submitted to NYSERDA by an independent Certified Public Accountant (CPA) for verification of the economic benefits within 120 days of June 1, 2029.

Offshore Wind Program

Through an Economic Benefits Plan submitted at the time of solicitation proposal, offshore wind developers provided details for investments for in-state supply chain and support infrastructure, purchase commitments for the use of U.S. iron and steel, commitments to foster the economic development of New York MWBE and SDVOB suppliers, plans for building career pipelines for job growth in New York State, identifying partnerships with workforce partners, and making investments in DACs per the requirements outlined under the State's Climate Act and Climate Scoping Plan.

The two offshore wind projects currently contracted under NYSERDA as a result of ORECRFP23-1, Empire Wind and Sunrise Wind, are currently realizing near-term economic benefits commitments (made from 2024-2026) as onshore and offshore construction scopes proceed.

Tier 1 Expected Economic Benefits

This section looks at incremental economic benefits to New York State as claimed and expected to accrue through the first three years of a project's operation. As of April 30, 2026, of the 90 Tier 1 contracts with Economic Benefit commitments, 73 were awarded through RES solicitations, one was awarded through the Build Ready solicitation and 16 through RPS solicitations.[142] A total of 82 projects with economic benefit claims have yet to be verified (see Table 15 below, which summarizes the claimed economic benefits).

A total of eight projects have been in operation long enough to have verified economic benefits (Table 16). Eight Tier 1-eligible projects commenced commercial operation, have been generating renewable energy for at least three years, and have submitted economic benefit documentation and reports to NYSERDA. These eight projects have had their economic benefits verified. The eight Tier 1-eligible projects with verified economic benefits yielded $102 million in total verified economic benefits to New York State through the first three years of operation and averaged $439,745 per MW.

Note that most projects are expected to have at least a 20-year useful life, and the numbers presented here only capture expected ongoing economic benefits to the State through the first three years of operation. Additional economic benefits are expected to continue throughout the useful life of the projects, from the fourth year of commercial operation through the useful life of the project or later. For example, HCAs, PILOTs, and land lease payments will continue past the first three years of operation.

Analysis of claimed economic benefits indicates that 90 Tier 1 projects active as of April 30, 2026, are expected to generate at least $2.8 billion in direct benefits to New York State through their first three years of operation, with approximately 90% of these benefits stemming from RES contracts. With regard to technology, 54% of the expected economic benefits are attributed to solar and 46% to land-based wind projects. On a dollar-per-MW basis, projects are expected

[142] This accounts for awarded projects that were operational with verified economic benefits but that have since attrited.

to produce economic benefits averaging $402,048 per MW (see Table 17, which indicates the average claims by technology for projects claiming economic benefits).

Table 15. Total Economic Benefits Claimed Through Year 3

Total Benefits Claimed	Number of Projects	Bid Capacity (MW)	Average Wind and Solar Economic Benefits ($/MW)
$2,735,390,598	90	6,804	$402,048

Table 16. Total Economic Benefits Verified Through Year 3

Total Benefits Verified	Number of Projects	Average Wind and Solar Economic Benefits ($/MW)
$102,086,853	8	$439,745

Table 17. Economic Benefits Claimed Through Year 3 By Technology

Technology	Average Economic Benefit Claimed ($/MW)
Land Based Wind	$502,918
Solar	$361,884

Tier 1 Expected Economic Benefits by Category

For this analysis, both short-term and long-term benefits are included. Generally, short-term, or non-recurring, benefits occur i) before commercial operation and ii) include most project development and construction costs. Long-term benefits are typically recurring annual benefits and may continue beyond the first three years of operation through the project's useful life. Examples of long-term benefits include permanent (non-construction) jobs, PILOT and HCA payments to local municipalities, and land lease payments.

Bidders quantified the proposed project's expected economic benefits when submitting their bid proposal to NYSERDA. During the Tier 1 project bid selection process, NYSERDA evaluates economic benefit claims in various categories, with long-term benefits and jobs weighted more heavily across multiple past solicitations. This section summarizes job claims as well as two

categories of long-term economic benefits claims with the greatest local impact: payments to local governments, and land lease payments.

Tier 1 Jobs

Bidders submitted claims describing the extent to which local and state economic activity will increase because of direct employment of New York workers as a result of Tier 1 project development. In this analysis, long-term jobs refer to those that last for three years or longer. Typical long-term jobs include operations and maintenance providers such as wind turbine technicians, solar operators and technicians, vegetation management, and snow plowing. Typical short-term jobs include construction, rail and port workers, contractors and laborers, engineering or environmental service providers, consultants, financial service advisors, and legal service providers associated with the development and construction or modification of the project. As with other economic benefits, proposers claim the number of jobs to be created through the third year of commercial operation.

Table 18 provides a summary of jobs expected to be created by Tier 1 projects under the RES solicitations (jobs data was not collected for RPS solicitations). More than 7,639 unique jobs are expected to be created. About 53% of the total FTE is expected to occur in the solar industry, with 46% resulting from wind projects and the remaining from hydro projects.

Table 18. Expected Total Jobs from RES Tier 1 Projects

Job Type	Jobs to be Created
Long-Term FTE	606
Short-Term FTE	7,040
Total Full Time Equivalent (FTE) Jobs	**7,646**

Tier 1 Local Long-Term Benefits

As noted above, this analysis looks at two categories of long-term economic benefits claims with the greatest local impact: payments to local governments and land lease payments. Payments to

local governments are usually made in the form of multi-year PILOTs and HCAs and typically support the host town(s), school district(s), and county(ies) in whose jurisdiction the project is sited. Land lease payments are made directly to local landowners from the commencement of development activities through the project lifetime and include lease options, easements, and leases. Note that the analysis presented here includes expected benefits through the first three years of commercial operation, though payments will continue well beyond that date. Also note that short-term economic benefits during construction, such as expenditures on food, lodging, equipment sales, and rentals can be substantial but are not presented here.

Table 19 summarizes these local long-term benefits through the first three years of commercial operation, indicating that the average local benefit from a renewable energy project would be greater than $69,000 per MW annually. As introduced above, benefits are typically provided to host communities by renewable project owners through negotiated agreements, including PILOTs, HCAs, direct landowner lease payments, easement agreements with residents or municipalities, and other compensatory agreements. NYSERDA includes all eligible local long-term benefits and payments to local governments within this category; therefore, Table 19 is a combination of all qualifying local long-term benefits. Under NYSERDA's solicitations, developers are required to submit a comprehensive Community Engagement Plan, and NYSERDA expects developers will engage actively, transparently, and systematically with respect to community collaboration throughout the development lifecycle, including benefit negotiations/administration throughout the duration of the projects. This engagement necessitates host community participation to ensure that renewable energy developers are working with community leaders to identify benefit structures that align with local priorities to direct social impact funding where it is most urgently needed within the host community and its region. Note that there are material differences between projects and technology types. For example, for the wind projects analyzed, while providing equivalent average land lease payments to the solar projects analyzed, wind projects have a 90% higher average PILOT/HCA payment per MW. As a comparison, a 100 MW solar project may be expected to provide approximately $5.4 million of local long-term benefits annually while a typical 100 MW wind project may be expected to provide approximately $7.8 million. It is important to note that wind projects have higher net

capacity factors and generate more renewable energy per MW of capacity installed as compared to solar projects.

Table 19. Expected Long-Term Local Economic Benefits from RES Tier 1 Wind and Solar Projects (Cumulative Through Year 3)

Total Expected Payments to Local Governments		Expected Payments for Land Leases		Total Local Benefit
Total	**Average** $/MW	**Total**	**Average $/MW**	**Average $/MW**
$219,301,231	32,233	$254,836,985	$37,456	$69,689

Tier 1 Host Community Benefit Program

The Accelerated Renewables Act established ORES through which all new large-scale renewable energy projects 25 MW or larger are required to seek a permit. The Accelerated Renewables Act also directed the Commission to establish a program whereby renewable project owners will fund a discount or credit on the utility bills of the utility's customers in a renewable host community.[143]

On February 11, 2021, through the Order Adopting a Host Community Benefit Program in Case 20-E-0249,[144] the Commission established the Host Community Benefit Program in line with the Accelerated Renewables Act. Residents of communities hosting new large-scale renewable energy projects greater than 25 MW will receive a credit on their utility bills for the first 10 years the facility is operating. To this end, the program aims to provide tangible benefits while ensuring administrative feasibility and fairness in distribution. However, it complements, not replaces, the benefits that are separately provided to host communities, primarily municipal governments, by renewable project owners through existing pathways, such as PILOTs, HCAs,

[143] Case 20-E-0249, In the Matter of a Renewable Energy Facility Host Community Benefit Program, Order Adopting a Host Community Benefit Program (issued February 11, 2021).

[144] Id.

and other compensatory agreements. Projects that received NYSERDA REC agreements prior to April 3, 2020, are exempted from the Host Community Benefit program.

The Host Community Benefit program provides annual bill credits to residential electric utility customers within host communities where major renewable energy facilities are operational for applicable projects. Solar and wind project developers are required to pay an annual fee of $500 per MW for solar and $1,000 per MW for wind facilities through the first 10 years of each project's operation. The bill credit will be allocated evenly among all residential electric utility customers in each host municipality, regardless of project proximity.

Program Features

Host Community Benefit Program features include:

- Residential electric utility customers residing in a host community will receive an annual bill credit for each of the first ten years that the facility operates in that community. Should more than one facility be located in a given host community, residential electric utility customers will receive an annual bill credit for each facility.
- The bill credit will be applied after all other adjustments to the bill have been made to ensure that the Program does not interfere with any other programs, such as the Energy Affordability Program, Community Choice Aggregation, Budget Billing, or Community Distributed Generation programs.
- The Commission's directive for program fees to increase with the size of the facility ensures proportional compensation. Larger facilities, likely with greater impacts on host communities, will provide larger bill credits, aligning with the principles of fairness and equity.
- NYSERDA shall require each facility to provide documentation that appropriate and sufficient program fees have been transferred to the administrating utility(ies) prior to purchasing RECs.

Program Status

On April 30, 2025, the DPS Staff filed the Implementation and Effectiveness of the Host Community Benefit Program.[145] At that time, no applicable large-scale renewable generation facilities had commenced operation since the Host Community Benefit Program was adopted in 2021. This status remains the same in 2026 (with one project expected to be online before November 2026), therefore no data is yet available to assess the Host Community Benefit Program's impact to customers or to analyze how the developer fee is a cost to operating the CES.

The Host Community Benefit program does not apply to LIPA customers, as LIPA will establish a program in its service territory to achieve the same objectives.

Tier 1 Disadvantaged Community (DAC) Benefits

The CLCPA directs the Commission to design the programs for achieving the renewable energy targets "in a manner to provide substantial benefits for disadvantaged communities…including low to moderate income consumers, at a reasonable cost while ensuring safe and reliable electric service."[146] The CLCPA defines "disadvantaged communities" as "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households, as identified pursuant to section 75-0111 of the Environmental Conservation Law.

RESRFP22-1, RESRFP23-1, and RESRFP24-1 awards are prioritizing benefits to DACs in line with the State's CLCPA. Table 20 below outlines planned benefits to DACs.

[145] Case 20-E-0249, Department of Public Service Staff Report on the Implementation and Effectiveness of the Host Community Benefit Program (filed June 1, 2023).

[146] PSL §66-page 7.

Table 20. Total Tier 1 Disadvantaged Community Benefits Claimed Through Year 3

Solicitation	DAC Benefits (Million $)
RESRFP22-1	$51
RESRFP23-1	$232
RESRFP24-1	$149
Total	**$432**

Tier 4 Claimed Economic Benefits and Jobs

Table 21 shows the economic benefits claimed by the awarded and currently contracted Tier 4 project, CHPE, as accepted by the TEP for T4RFP21-1.

Table 21. Tier 4 Total Economic Benefits Claimed Through Year 3

Tier 4 Project	Economic Benefits Claimed
CHPE	$1,342,764,000

Table 22 shows the FTE short- and long-term positions that are expected to be created as a result of the CHPE project's Tier 4 contract.

Table 22. Tier 4 Total Short- and Long-Term FTE Positions

Tier 4 Project	Short- and Long-Term FTE
CHPE	708

Offshore Wind

The two competitively selected projects as a result of ORECRFP23-1, Empire Wind and Sunrise Wind, will realize a total near-term investment of $2 billion in economic development statewide

through 2026 including NYS labor dollars and guarantees of prevailing wage expenditures. Over the contract tenor developer-committed investments of over $32 million in DACs; $117 million supporting MWBEs and SDVOBs; over $43 million in workforce development to support DACs; $16.5 million towards regional wildlife and fisheries monitoring; and commitments to purchasing a minimum of $188 million of U.S. iron and steel, supporting U.S. manufacturing and the New York Buy American Act.

These projects are approximately 50% complete in total and with nearly fully-constructed onshore scopes including onshore cabling and substations, permanent operations and maintenance hubs, and workforce training and education centers. As part of the offshore wind projects, investments in ports, manufacturing, and grid upgrades have also been realized. Under the ORECRFP23-1 solicitation award, the construction and operation of the South Brooklyn Marine Terminal assembly and staging port is nearly complete, employing over 2,000 New York union and skilled laborers. This initiative has transformed a previously inactive 70-acre waterfront site into a vibrant, state of the art, active waterfront within a DAC. Currently, Industry City – located adjacent to the South Brooklyn Marine Terminal – is host to Windscape, Equinor's successfully established offshore wind education center.

Additionally, Ørsted completed an $80 million investment in construction and manufacturing associated with advanced foundation components at the Port of Coeymans. The components have been shipped offshore and installed on turbine foundations for the Sunrise Wind project. Orsted's regional wind operations and maintenance center in East Setauket, NY is completed and operational employing over 100 permanent FTEs. The National Offshore Wind Training Center in Suffolk County, NY has trained workers in safety programs to work on the offshore scope of the project. Together, Sunrise Wind has created one million union labor hours across more than 1,000 local union workers, resulting in over $97 million in prevailing wages and benefits.

The Offshore Wind Sellers will continue to make investments, totaling $135 million in electric grid infrastructure on Long Island and $200 million in transmission related investments, backed

by Project Labor Agreements with Long Island skilled tradespeople, including heavy equipment operators, electricians, and line workers, and for operations and maintenance services.

Table 23. Sunrise Wind Economic Benefits

Category	Contractual Commitment
Expected Total Dollars (25-year term)	$875,338,800
Expected Near Term Dollars (1/1/24-12/31/26)	$626,238,400
Expected Labor Dollars	$279,443,200
Expected MWBE Dollars	$17,220,000
Expected DAC Efforts	5 efforts identified, including those under Brookhaven Town Host Community package
Expected Supply Chain Efforts	6 efforts listed advanced foundation components and operations and maintenance and workforce centers on Long Island
Expected U.S. Iron and Steel	$95,760,000

Table 24. Empire Wind Economic Benefits

Category	Contractual Commitment
Expected Total Dollars	$1,765,019,500
Expected Near Term Dollars (1/1/24-12/31/26)	$1,370,572,400
Expected Labor Dollars	$253,194,300
Expected MWBE Dollars	$100,000,000
Expected DAC Efforts	9 efforts identified
Expected Supply Chain Efforts	2 efforts via building and operating South Brooklyn Marine Terminal
Expected U.S. Iron and Steel	$923,400,000

Near term economic commitments make up the majority of the total expected dollar commitment as investments made in the State during the development and construction phases (years 2024-2026) and during the first three years of contract execution (approx. 2027-2030) Infrastructure, materials, labor, and other supply services spending in New York State will be realized over the next few years as offshore installation proceeds in 2026 and 2027 and quayside services continue as projects enter operations and maintenance phases. The remainder of the Total Economic Benefits to the State include funds to DACs, local communities, and via workforce training programming to occur over the 25-year contract tenor; included are taxes, PILOTs, rents, land easements, and investments outlined in Host Community Benefit Agreements. Decommissioning is not an eligible state expenditure, as it occurs after the contracted energy delivery timeframe.

Subsequent OREC solicitations in 2024 did not result in additional offshore wind awards. However, NYSERDA has adapted and re-purposed supply chain solicitations to align with the needs of the offshore wind industry while also ensuring New York remains competitive in the global marketplace. In 2026, NYSERDA is reviewing proposals for $300 million of available Supply Chain Investment Plans (SCIPs) for maritime port development and improvement projects that will increase the capability for New York to support the offshore wind industry while also having multi-use purposes. These investments will strengthen New York's offshore wind industry and the broader economy by supporting and leveraging additional investing in infrastructure, manufacturing, and services capable of supporting energy projects in New York and throughout the United States.