Clean Energy Standard Annual Progress Report: 2024 Compliance Year

Final Report | January 2026

NEW YORK STATE

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New York State Energy Research and Development Authority

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Final Report

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Abstract

This “Clean Energy Standard Annual Progress Report: 2024 Compliance Year” summarizes the progress toward New York State’s Clean Energy Standard (CES) as of December 31, 2024. Renewable Energy Certificate (REC) trading closes at the end of June following the compliance year (i.e., REC trading closed at the end of June 2025 for the 2024 compliance year). This annual report is issued in January and covers the most recently completed compliance year. It includes a description of initiatives launched to diversify New York State’s electric energy supply and to build and maintain an energy system that is affordable, reliable, and benefits all New Yorkers.

This report includes procurement results and aggregate load-serving entity (LSE) compliance obligations over the 2024 compliance period and discusses the results of additional means to achieve the expanded CES mandate, including accounting for baseline renewable and distributed solar activity.

This report provides policymakers and interested stakeholders with the information necessary to make informed decisions on the program’s status and effectiveness, and to inform any necessary programmatic adjustments.

Keywords

renewable electricity, clean energy, large-scale renewables, energy programs, Clean Energy Standard, CES, Climate Act

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Acronyms and Abbreviations

ACENY	Alliance for Clean Energy New York
ACP	Alternative Compliance Payment
BESS	battery energy storage system
BOEM	Bureau of Ocean Energy Management
CCA	Community Choice Aggregation
CEEC	Central East Energy Connect
CEF	Clean Energy Fund
CES	Clean Energy Standard
CHPE	Champlain Hudson Power Express
Climate Act	Climate Leadership and Community Protection Act
COP	Construction and Operations Plan
CST	Customer-Sited Tier
DEC	New York State Department of Environmental Conservation
DER	distributed energy resources
DPS	New York State Department of Public Service
EDP	Environmental Disclosure Program
ESCO	energy services company
E-Value	Environmental Value
FERC	Federal Energy Regulatory Commission
LIPA	Long Island Power Authority
LSE	Load-Serving Entity
NEM	net energy metering
NYGATS	New York Generation Attribute Tracking System
NYISO	New York Independent System Operator
NYPA	New York Power Authority
NYSERDA	New York State Energy and Research Authority
OREC	Offshore Wind Renewable Energy Certificate
PSC	New York State Public Service Commission
PV	photovoltaic
RCP	Reference Capacity Price
REACH	Renewable Energy Access and Community Help
REC	Renewable Energy Certificate
RES	Renewable Energy Standard
RPS	Renewable Portfolio Standard
SIR	Standard Interconnection Report
S-SFA	Statewide Solar for All

VDER	Value of Distributed Energy Resources
ZEC	Zero-Emissions Credit

Units of Measurement

GW	gigawatt(s)
GWh	gigawatt-hour(s)
kW	kilowatt(s)
MW	megawatt(s)
MWh	megawatt-hour(s)

Summary and Progress to Date

This "Clean Energy Standard Annual Progress Report: 2024 Compliance Year" (CES progress report) summarizes compliance with the Renewable Energy Standard (RES) and Zero-Emissions Credit (ZEC) requirements for 2024 and reports on cumulative clean energy activities in New York State that contribute to achieving the CES objectives.[1]

The annual CES progress report informs the New York State Public Service Commission (PSC), the Department of Public Service (DPS), market participants, and other interested parties on the progress toward the State's CES objectives. Policymakers and interested stakeholders can use this information, along with other supporting facts, to make informed decisions on the policy's status and effectiveness as well as to inform any necessary programmatic adjustments. Annual progress reporting also provides actionable information to market participants, bolstering the development of a competitive renewable energy market.

The purpose of the CES progress report is to:

- Report on the status of the CES as of December 31, 2024
- Summarize aggregate load-serving entity (LSE) compliance with RES and ZEC obligations
- Inform consumers, policymakers, and stakeholders about the State's electricity fuel mix characteristics
- Describe outcomes of State programs, regulatory obligations, and voluntary market activity
- Describe support for Maintenance Tier 2 at-risk eligible facilities
- Document trends in key measures of renewable energy market activity

S.1 Clean Energy 2024 Status

For the 2024 CES compliance year, contributions from renewable and nuclear energy sources combined supplied approximately 44.5% of the energy used to meet the load served by LSEs. Excluding nuclear, the contribution from renewable energy resources to meet the energy secured by the LSEs to meet customer electric load increased to 23.6%[2]. New York State's electric load served increased by approximately 4.3 million MWh compared to 2023, a 2.9% increase. Several factors vary from year to year that impact the overall percentage, including market-driven forces, weather patterns, and electrical grid performance. The increase in the percent of load served by renewable energy in 2024 was mainly driven

by a 55% increase in generation from Tier 1-eligible renewable energy resources, totaling 2.25 million MWh up from 2023. In addition, generation from net metered renewable resources in the State, including behind-the-meter and distributed solar, increased production by 890,846 MWh.

Highlights from the 2024 CES compliance year include the South Fork Wind Farm, a 132-MW project, becoming fully operational, marking the first utility-scale offshore wind farm in the nation. South Fork Wind is delivering clean, renewable, and reliable energy to Long Island and the Rockaways, with enough energy to power approximately 70,000 homes. According to Ørsted, in its first full year of operation, the project achieved a net capacity factor of 46.4% and, through the first half of 2025, generated electricity 92% of the time.[3] In addition, five Tier 1-contracted large-scale renewable generation projects came online in 2024, totaling 357 MW.

While Tier 1-eligible generation increased significantly in 2024, other countervailing factors impacted the percentage of load served by renewable energy. These include a decrease of in-state baseline renewable contributions to the State's system mix, which dropped by approximately 1.37 million MWh compared to 2023, a decrease of 5.8%. Exports of baseline hydroelectric generation decreased by 66,791 MWh in 2024, an 8.5% reduction. Baseline wind exports increased by 377,541 MWh, an 18.1% increase. In addition, imported renewable energy from adjacent control areas remained low relative to recent years, decreasing by 169,733 MWh in 2024. This follows a decrease in renewable imports by approximately 5.2 million MWh in 2023.

Furthermore, wind and solar generation continued to set new records in New York State this past year, including:

- Solar generation set an all-time peak record on April 17, 2025, generating 4,809 MW at noon.[4]
- Wind generation set an all-time peak record on October 31, 2025, when statewide onshore and offshore wind facilities generated 2,389 MW at 2:00 p.m.[5]

Tier 1 renewable generation continues to grow year-over-year. As the scope of this report is through 2024, the full contribution from the significant new renewable generation that entered service during the 2024 compliance year, further discussed in Section S.2, will not be wholly reflected until the CES progress report for 2025, nor will the contributions from projects under construction as of the date of publication. In the coming years, additional renewable energy projects from recent procurement programs—including annual solicitations for new

land-based renewables, offshore wind, solar incentive programs, and other State procurements—will continue to enter operation, driving significant new generation capacity in the State.

In December 2025, the New York State Department of Environmental Conservation (DEC) published the New York State "Statewide Greenhouse Gas Emissions Report,"[6] which provides a detailed account of greenhouse gas emissions in the State from 1990 to 2023. The report found that energy sector emissions were 24% lower in 2023 than in 1990. (The report classifies the energy sector as emissions associated with the energy system, including electricity, transportation, and buildings/industrial heating.)

S.2 Large-Scale Renewable Tier 1 (Land-based) Projects under Construction and Entering Operation

In 2024, seven large-scale renewable generation projects were under construction in New York State, totaling 1,197 MW. Five of these projects, with a combined capacity of 357 MW and 672 GWh of annual generation, reached commercial operation in 2024, creating over 680 jobs, and are already contributing more than $133 million in incremental economic benefits to the State. Over the next 20 years, these projects are expected to generate enough energy to power over 92,000 homes annually. The remaining two projects, totaling 840 MW and nearly 2,000 GWhh of annual generation, remained in construction through 2025. Ten additional projects began construction in 2025, totaling approximately 683 MW in capacity and 1,590 GWhh in energy generation.

S.3 NY-Sun

In addition to the CES, the NY-Sun initiative was created to expand distributed solar photovoltaic (PV) capacity throughout New York State, strategically using public funds to build a self-sustaining solar market. Initially, the initiative aimed to install 3 GWh of PV capacity by 2023. The Climate Leadership and Community Protection Act (Climate Act) later expanded this mandate to 6 GWh by 2025 to help achieve zero emissions electricity by 2040.[7] In May 2020, the PSC issued an Order approving a petition previously filed by the New York State Energy and Research Authority (NYSERDA), authorizing an additional $573 million to support this expanded goal and to extend NY-Sun through 2025.[8] In December 2021, NYSERDA and DPS filed the 10-GW Distributed Solar Roadmap.[9] In response to the roadmap, the PSC issued an Order expanding NY-Sun, setting a new target of 10 GWh of distributed solar by 2030, enough

to power nearly 700,000 homes annually.[10] By September 2024, NY-Sun met the Climate Act's 6 GWh target more than a year ahead of schedule. In April 2025, the PSC issued an Order expanding NY-Sun's target to 10.5 GWh by 2030, specifying that the final 500 MW should use the Statewide Solar for All (S-SFA) tariff.[11] As of the end of 2024, a cumulative total of 6,579 MW of distributed solar had been installed statewide.

S.4 Long Island Power Authority and New York Power Authority

Long Island Power Authority (LIPA) continues to advance its clean energy initiatives, including its Integrated Resource Plan, transmission enhancements, rate structures, and South Fork Wind. Notably, approved by the LIPA Board of Trustees in 2017, South Fork Wind began construction in February 2022 and became fully operational in 2024.

The New York Power Authority (NYPA) is also coordinating with NYSERDA to implement land-based renewable energy procurement programs and customer-sited distributed energy resources (DERs). NYPA's assets total approximately 6,000 MW, generating 22% of the electricity made in the State, and 83% of NYPA's power generation was clean, renewable hydropower in 2024. The 2023–2024 Enacted State Budget, approved by Governor Hochul in May 2023, provided NYPA with new authority to develop, own, and operate renewable energy-generating projects, either alone or in collaboration with other entities, and to establish the Renewable Energy Access and Community Help (REACH) program to provide renewable energy bill credits to low-income New Yorkers. NYPA's final Updated Strategic Plan, adopted in December 2025, includes 45 individual projects and three portfolios of distributed energy storage projects representing nearly 5,500 MW of solar, wind, and battery storage capacity.[12] NYPA continues to operate the State's two largest hydroelectric power projects, which contribute significantly to New York State's clean energy supply.

S.5 Voluntary Clean Energy Activity

Renewable voluntary activity remained robust in New York State in 2024. At year-end, 45 municipalities participated in Community Choice Aggregation (CCA) programs, 43 of which were electric programs. Of the 43 municipalities with an active electric program, 25 municipalities had a 100% renewable energy default energy services company (ESCO)

supply product, 17 had a 50% renewable energy default ESCO supply product, and one municipality had a standard (0% renewable energy default) ESCO supply product. CCAs are expected to remain a significant driver of voluntary renewable energy purchases.

S.6 New York Generation Attribute Tracking System

Much of the information in this report is obtained through the New York Generation Attribute Tracking System (NYGATS), which uses data provided by the New York Independent System Operator (NYISO) and other market participants to track all electric energy generation in the State, a function that supports the CES program and the voluntary renewable energy market. In addition, NYGATS supports the administration of the Environmental Disclosure Program (EDP),[13] which reports on the environmental characteristics of the electricity consumed in the State.

S.7 Load-Serving Entity Obligations

LSEs achieved significant compliance with the 2024 CES requirements. Statewide, LSEs met 82.8% of the 2024 RES obligation, while PSC-jurisdictional LSEs met 99.9% compliance through NYSERDA purchases, other renewable supply, or alternative compliance payments (ACPs).

For the 2024 ZEC obligation, LSEs statewide achieved 99.9% compliance, while PSC-jurisdictional LSEs achieved nearly 100% compliance (exceeding 99.99%).

Background

On August 1, 2016, the PSC issued its Order Adopting a Clean Energy Standard (2016 CES Order).[14] The CES aims to fight climate change, reduce air pollution, and provide a diverse, reliable, and affordable low-carbon energy supply.

Upon adoption, the CES included RES and ZEC requirements. In July 2018, the PSC established an Offshore Wind Standard to further contribute to the 50% renewable energy requirement.[15] All renewable energy consumed by end-use customers in New York State contributes to the CES.

In July 2019, New York State enacted the Climate Act, which mandates (1) at least 70% of the State's electricity comes from renewable energy sources such as wind and solar by 2030, and (2) the State's power system achieve zero emissions by 2040.

In addition to the CES, the NY-Sun initiative was created to expand distributed solar PV capacity throughout New York State, strategically using public funds to build a self-sustaining solar market. Initially, the program aimed to install 3 GWh of PV capacity by 2023. The Climate Act later expanded this mandate to 6 GWh by 2025 to help achieve zero emissions electricity by 2040.

In September 2019, NYSERDA requested an additional $573 million to support this expanded goal and to extend NY-Sun through 2025. The PSC approved this request on May 14, 2020, by issuing the Order Extending and Expanding Distributed Solar Incentives, authorizing an additional $573 million in funding for NY-Sun.[16] In September 2021, Governor Kathy Hochul announced the expansion of NY-Sun[17] to achieve at least 10 GWh of solar energy by 2030. The expanded program aims to power nearly 1.7 million homes and will be advanced comprehensively, including serving those in disadvantaged communities. In December 2021, NYSERDA and DPS filed the 10-GW Distributed Solar Roadmap.[18] Responding to the roadmap, the PSC issued an Order expanding NY-Sun with a new target of 10 GWh of distributed solar and authorizing $1,473 million in new funding.[19] On June 23, 2023, the PSC issued another Order authorizing further changes to the NY-Sun program.[20] This Order allowed NYSERDA greater flexibility to adjust incentive rates (including the Prevailing Wage Adder), to authorize a new incentive adder for floating PV, and to simplify incentive payment processes for specific projects. The Order also directed NYSERDA to propose a plan for procuring capacity beyond 10 GWh within the existing budget. In May 2024, the PSC approved the S-SFA model, which allows distributed solar and energy storage projects to bypass customer acquisition and

management costs. Instead, a portion of their generated Value of Distributed Energy Resources (VDER) credits will be allocated to utilities, allocating them among a pool of income-eligible households. The S-SFA program will provide significant utility discounts for thousands of low-income households in New York State. On April 24, 2025, the PSC expanded the NY-Sun target to 10.5 GWh, specifying that the incremental 500 MW should be funded with surplus NY-Sun funding and allocated to projects participating in the S-SFA program.[21]

On April 2, 2020, New York State enacted the Accelerated Renewable Energy Growth and Community Benefit Act. The legislation established a streamlined process for siting large-scale renewable energy projects, managed by a new office within the New York State Department of State. The Accelerated Renewable Energy Growth and Community Benefit Act created the Build-Ready Program, which develops underutilized sites into renewable generation projects for private market construction and operation.[22]

To implement the Climate Act, DPS and NYSERDA jointly filed the "White Paper on Clean Energy Standard Procurements to Implement New York State's Climate Leadership and Community Protections Act" on June 18, 2020.[23] In response, the PSC issued the Order Adopting Modifications to the Clean Energy Standard (2020 CES Order) on October 15, 2020, in Case 15-E-0302.[24]

The 2020 CES Order introduced several modifications to align the CES with Climate Act mandates. It also adopted a competitive procurement program under Tier 2 of the CES to ensure the continued availability of existing renewable resources, and it established a new Tier 4 to support renewable energy projects delivering energy to New York City. The Tier 4 procurement ultimately led to contracting with the Champlain Hudson Power Express (CHPE) project, one of New York's largest transmission infrastructure investments in the last 50 years. The project is set to deliver approximately 10.4 million MWh of clean energy annually to the New York Metropolitan Area from Quebec, Canada, and will eliminate an estimated 37 million metric tons of carbon emissions by 2040. Additionally, CHPE is projected to stimulate $3.4 billion in economic investments across Upstate and Downstate communities and create more than 1,400 family-sustaining jobs statewide. The contract was submitted to the PSC in November 2021 for approval, and subsequently approved in April 2022.

On October 15, 2020, the PSC issued the Order Approving the Build-Ready Program.[25] This program endeavored to acquire underutilized properties, prepare them for renewable energy projects, and auction them to private developers to construct and operate renewable energy systems on the properties.

On November 29, 2021, DPS and NYSERDA submitted the 2021 Divergence Test and Target Setting Filing. This evaluation identified a persistent undersupply of renewable energy. Based on these findings, DPS and NYSERDA recommended reducing the LSE percentage obligations for future years. The PSC approved this recommendation on March 16, 2022. Table S-1 provides the updated LSE obligation percentages.

Table S-1. Tier 1 Renewable Energy Certificate Annual Obligations

Year	LSE Tier 1 Obligation	Updated LSE Obligation (03/16/22)
2017	.035%	.035%
2018	.15%	.15%
2019	.78%	.78%
2020	2.84%	2.84%
2021	2.04%	2.04%
2022	5.61%	3.25%
2023	8.20%	6.16%
2024	N/A	6.45%

On April 20, 2023, the PSC issued its Order Modifying Clean Energy Standard Tier 1 Obligations,[26] approving, with modifications, NYSERDA's petition to transition the CES Tier 1 RES compliance obligation for LSEs from the predetermined percentage-based obligation to a load-share obligation similar to other LSE obligations under the CES. Under this new structure, LSEs must procure all Tier 1 RECs made available by NYSERDA, after sales to the voluntary market, in proportion to their share of the State's total electricity load. NYSERDA details this approach in the Phase 5 Implementation Plan, filed on August 30, 2023.[27] The Tier 1 load-share obligation took effect for the 2025 compliance year.

On May 10, 2023, the Federal Energy Regulatory Commission (FERC) approved the NYISO Capacity Accreditation Rules, which take effect in May 2024. These rules better reflect the capacity value of resources based on their marginal contribution to resource adequacy. In response, NYSERDA filed a petition on June 29, 2023, proposing revisions to how future Renewable Energy Certificate (REC) and Offshore Wind Renewable Energy Certificate (OREC) agreements calculate the Reference Capacity Price (RCP) under Index REC and Index OREC pricing mechanisms. On November 20, 2023, the PSC issued its Order Addressing Capacity Accreditation Rules,[28] removing the requirement for resources to include a fixed production factor in their bids. This change ensures that future CES solicitations can accommodate the new NYISO Capacity Accreditation Rules.

On June 7, 2023, the Alliance for Clean Energy New York (ACENY), Sunrise Wind, and Empire Offshore Wind/Beacon Wind filed separate petitions requesting the PSC 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 PSC issued its Order Denying Petitions Seeking to Amend Contracts with Renewable Energy Projects,[29] asserting that competitive solicitations remain the most effective mechanism to ensure just and reasonable rates for renewable generation while advancing Climate Act goals.

Following the denial of these petitions, New York State introduced its 10-Point Renewable Energy Action Plan[30] 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 goals. A key feature of the action plan is the continuation of offshore wind and onshore renewable energy solicitations beyond those conducted in 2022. These solicitations aim to replace terminated contracts and provide a robust, predictable pathway for developers. Additionally, the plan emphasizes completing an Offshore Wind Master Plan 2.0, which focuses on new federal lease areas to ensure energy procurement remains competitive, cost-effective, and beneficial to both ratepayers and the State, among other initiatives. To implement the plan, NYSERDA launched expedited competitive solicitations for the Tier 1 program (RESRFP24-1) and the Offshore Wind program (ORECRFP23-1).

On June 20, 2024, the PSC approved the 2022 Energy Storage Roadmap, aiming to achieve 6 GWh of energy storage capacity by 2030. The approval included issuing the Order Establishing Updated Energy Storage Goal and Deployment Policy,[31] which authorizes NYSERDA to conduct at least three solicitations annually, with the first expected no later than June 30, 2025. The program uses an Index Storage Credit incentive mechanism, modeled on the Index REC and Index OREC used in the Tier 1 and Offshore Wind programs, respectively. This initiative is expected to support the deployment of an additional 3,000 MW of storage by 2030.

On October 17, 2024, in response to a petition from several hydroelectric parties to expand eligibility for the Environmental Value (E-Value) compensation to include DERs, the PSC issued its Order Approving Compensation for Hydroelectric Baseline Generating Facilities.[32] The order grants hydroelectric facilities, in service before January 1, 2015, with a capacity of up to 5 MW, the opportunity to receive "H-Value" compensation, compensation 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.

On July 1, 2024, DPS and NYSERDA jointly filed the 2024 Draft Clean Energy Standard Biennial Review,[33] and on May 15, 2025, the PSC issued its Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings.[34] The order adopted the 2024 Draft Clean Energy Standard Biennial Review and approved several changes to CES procurements and evaluations, including authorizing annual Tier 1 solicitations aimed at procuring 5,600 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.

Following the order, DPS filed a white paper[35] on July 31, 2025, proposing an extension of the ZEC program as well as a proposal[36] to modify repowering requirements specific to hydroelectric resources in Tier 1 solicitations in November 2025. In January 2026, the PSC issued the Order Extending Zero-Emissions Credit Program,[37] approving the 2025 ZEC extension proposal, with modifications, and extending the program through December 31, 2049.

NYSERDA's fifth offshore wind solicitation (ORECRFP24-1) began on July 17, 2024. By September 9, 2024, NYSERDA had received 25 proposals from four developers, totaling 6,870 MW of capacity. On October 18, 2024, NYSERDA received offer pricing for 21 proposals, with Attentive Energy withdrawing its four proposals. NYSERDA will publicly disclose the results of the ORECRFP24-1 solicitation on the completion of contracting.

As of this publication, NYSERDA's ninth annual Tier 1 solicitation (RESRFP25-1), launched in September 2025, is ongoing, and final proposals from eligible participants were submitted in December 2025.

NYSERDA updates data regarding all CES procurements through the large-scale renewables dataset on Open NY.[38] The dataset will reflect the latest solicitation results once all contracts in the award group are finalized.

1. New York State's Clean Energy Standard

Renewable energy consumed by end-use customers in the State contributes to the CES, including energy supported by past, present, and future State renewable energy policies, such as:

- Renewable Energy Standard (RES)
- Renewable Portfolio Standard (RPS)
- NY-Sun initiative
- Clean Energy Fund (CEF)
- Value of Distributed Energy Resources (VDER)
- Offshore Wind
- Renewable energy procurements by Long Island Power Authority (LIPA) and New York Power Authority (NYPA)
- Voluntary renewable energy purchases

Lowering overall demand through energy efficiency also plays a critical role in achieving the CES. The Zero-Emissions Credit (ZEC) requirement ensures the continued operation of certain existing at-risk upstate nuclear power plants, which produce emissions-free generation.

Each component is described in detail in the following sections.

1.1 Renewable Generators

The CES establishes multiple program tiers, enabling eligible renewable energy generators to secure long-term agreements with the New York State Energy and Research Authority (NYSERDA). These include Tier 1, Tier 2 Maintenance, Tier 2 Competitive, Tier 3 (ZECs), Tier 4, and Offshore Wind Renewable Energy Certificate (OREC).

NYSERDA regularly updates data on all CES procurements through the large-scale renewables dataset on Open NY.[39] Open NY will reflect the latest solicitation results once all contracts in the award group have been finalized.

1.1.1 Tier 1, New Renewable Energy Resources

RES Tier 1-eligible Renewable Energy Certificates (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.[40] Only NYSERDA-certified renewable energy Tier 1 projects can issue Tier 1 RECs in the New York Generation Attribute Tracking System (NYGATS), which publicly reports certified projects in the "Operational Eligibility" report.[41]

The 2016 CES Order 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. NYSERDA sells the resulting RECs to obligated load-serving entities (LSEs) for use toward their Tier 1 compliance obligations as well as to the voluntary market, as of 2025. As of this publication, New York State has conducted nine RES Tier 1 solicitations. Appendix A of this report has additional information on specific solicitations.

1.1.1.1 Tier 1 Load-Serving Entity Obligation

Each LSE must demonstrate compliance with the Tier 1 obligation by delivering renewable energy from certified facilities in quantities specified by the Public Service Commission (PSC). LSEs include the investor-owned utilities, energy services companies (ESCOs), jurisdictional municipal utilities, and direct customers of the New York Independent System Operator (NYISO). NYPA and LIPA voluntarily meet RES goals proportional to their respective loads and annually report their contributions toward the Climate Leadership and Community Protection Act (Climate Act) targets (see Section 1.5).

The Tier 1 obligations for LSEs depend on their actual load during the compliance year and the PSC-determined compliance obligation percentage for that year. LSEs can meet their RES Tier 1 obligation by acquiring and retiring Tier 1 RECs. They may purchase Tier 1 RECs from NYSERDA, third-party suppliers, or through self-supply. To retire Tier 1 RECs, LSEs must transfer them into the Environmental Disclosure Program (EDP) subaccount associated with the obligated load in their NYGATS account. In addition, LSEs can achieve compliance by making alternative Compliance Payments (ACPs) to NYSERDA or by combining both ACPs and Tier 1 REC retirements. LSEs with surplus RES Tier 1 RECs beyond their current year obligation can bank the excess for use in meeting RES Tier 1 obligations in either of the following two years, subject to certain limitations.

On April 20, 2023, the PSC issued its Order Modifying Clean Energy Standard Tier 1 Obligations,[42] approving NYSERDA's petition, with modifications, to transition the CES Tier 1 RES compliance obligation for LSEs from the predetermined percentage-based obligation to a load-share obligation. This approach aligns with other existing LSE obligations under the CES. Under the load-share obligation, LSEs must procure all Tier 1 RECs made available by NYSERDA—after completing sales to the voluntary market—in proportion to their share of the State load. This method enables REC sales to the voluntary market and eliminates ACPs as a compliance mechanism. NYSERDA's Phase 5 Implementation Plan,[43] filed on August 30, 2023, details the new approach. The Tier 1 load share obligation will take effect for the 2025 compliance year.

1.1.2 Tier 2, Maintenance and Competitive

Tier 2 provides financial support to maintain the commercial operation of qualifying renewable energy generation facilities operational prior to the Tier 1 eligibility date of January 1, 2015. Tier 2 includes both the Maintenance program and the now-concluded Competitive Tier 2 program as described below.

1.1.2.1 Maintenance

A March 2018 Order[44] refined the Tier 2 eligibility rules for renewable resources to receive maintenance financial support over a standard 3-year contract executed between NYSERDA and the renewable energy facility. The PSC's Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings[45] authorized Tier 2 Maintenance award agreements to have a contract tenor of 10 years. To be eligible for Maintenance Tier 2, the renewable energy facility must have delivered energy to New York State consumers in 2014 as part of the CES renewable energy baseline. Maintenance resources must meet the same eligibility and delivery requirements as Tier 1 resources, except for hydroelectric facilities, which are eligible only up to 10 MW.

Facilities eligible for maintenance support include all non–State-owned, run-of-river hydroelectric plants up to 10 MW; wind resources[46] not currently under contract to sell the environmental attributes associated with the generated energy; and facilities operational prior to January 1, 2015. LSEs have no compliance obligation related to Maintenance Tier 2. In accordance with PSC orders, NYSERDA funded these agreements using previously collected but unspent funds.[47]

1.1.2.2 Competitive

The Competitive Tier 2 program ended in the summer of 2022. For the 2024 compliance period, NYSERDA procured no RECs under the Competitive Tier 2 program and there was no Tier 2 obligation for LSEs.

1.1.3 Tier 4, New York City Renewable Energy

The PSC's Order Adopting Modifications to the Clean Energy Standard (2020 CES Order)[48] established Tier 4[49] within the CES to increase the penetration of renewable energy in New York City and reduce reliance on fossil fuel generation in the State's largest load center.[50] On January 13, 2021, NYSERDA issued a Tier 4 Request for Proposals, evaluating bids from seven proposers.

On September 20, 2021, NYSERDA announced the selection of two projects: Clean Path NY and Champlain Hudson Power Express (CHPE). After contract negotiations, two executed contracts were submitted by petition[51] for PSC approval on November 30, 2021, followed by a public comment period. On April 14, 2022, the PSC issued an Order[52] 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.

NYSERDA's contract with CHPE is to purchase the RECs derived from the clean energy delivered to New York City by Hydro-Quebec. REC purchases will commence once the project: (1) secures all required permits and local approvals, (2) completes construction, and (3) reaches commercial operation and begins delivering power to New York City. Construction on the CHPE project began in late 2022, and operations are expected to start in mid-2026.

The CHPE project is one of New York's largest transmission infrastructure investments in the last 50 years and will add 1,250 MW to the State's grid using high-voltage direct current technology. The project will deliver clean, reliable hydropower from Quebec, supplying more than 10 million megawatt-hours (MWh) of renewable energy annually to NYISO Zone J—nearly 20% of New York City's annual electric consumption—significantly reducing the City's reliance on fossil fuels.

1.1.4 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, later expanding that goal to at least 9,000 MW by 2035 through the Climate Act 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.

In early 2018 NYSERDA published the award-winning New York Offshore Wind Master Plan and the Offshore Wind Policy Options report, which outlined a roadmap for achieving the State's offshore wind goals through cost-effective and responsible development. New York State's 10-Point Renewable Energy Action Plan, released in November 2023, call for the development of an expanded Offshore Wind Master Plan 2.0 to guide future offshore wind development in the State. Since that time, the offshore wind industry has faced continuing headwinds, most recently stemming from federal actions, including stop-work orders on projects under construction, halts on permitting, and tariff volatility. These factors have contributed to a near-term slowdown in development momentum. NYSERDA remains committed to advancing offshore wind as a critical component of the State's clean, reliable, and affordable electric grid. As a result, the Offshore Wind Master Plan 2.0 is being reimagined to best support the State as it navigates this challenging period and prepares the industry for future success.

Since 2018, NYSERDA has issued five offshore wind solicitations. As of the time of publication, New York State has 1,734 MW of offshore wind generation under development through two projects, Empire Wind 1 and Sunrise Wind. In addition, the South Fork Wind Farm, a 132-MW project contracted to LIPA, became fully operational in 2024. Updated data on NYSERDA's offshore wind solicitations are available in the large-scale renewables dataset on Open NY;[53] Appendix A of this report has additional information on specific solicitations.

As a result of New York State's fourth offshore wind solicitation (ORECRFP23-1), new contracts for Empire Wind 1, a planned 810-MW project developed by Equinor, and Sunrise Wind, a planned 924-MW project developed by Ørsted and Eversource, were announced in June 2024. Together, these projects 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, and onshore and offshore construction for both is ongoing. Both projects are currently expected to achieve first power in late 2026 and reach full commercial operation in 2027. Additionally, both projects have been delivering on the economic, social, and educational commitments made to New York State in recent years.

Sunrise Wind completed all major federal and State permitting milestones, receiving approval of its Construction and Operations Plan (COP) from the Bureau of Ocean Energy Management (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 nearly 100% complete. As of publication, overall offshore construction is approximately 45% complete, 44 of the project's 84 offshore foundations have been installed, and onshore work is nearly complete. The operations and maintenance center for all of Ørsted's regional projects, located in East Setauket, NY, is fully operational.

Empire Wind 1 completed most of its federal and State permitting milestones, including COP approval from BOEM in November 2023 and PSC 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 1 during offshore turbine installation, the location of the cable landfall, and the project's operations and maintenance center. As of publication, onshore work is approximately 80% complete. Overall offshore work is approximately 50% complete, and all 48 offshore foundations have been installed.

South Fork Wind, a 12-turbine farm located approximately 35 miles off Montauk, NY, is currently operational and delivering clean, reliable energy into the Long Island electric grid. The South Fork Wind Farm, under contract with LIPA, began construction in late 2022 after receiving federal permits earlier that year. South Fork Wind began delivering clean energy from its first turbine in December 2023, and construction concluded in early 2024. This project became the first commercial-scale offshore wind farm in the U.S., providing 132 MW of offshore wind power to New York State's grid, 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.[54]

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, a premier 60-acre staging and assembly port at South Brooklyn Marine Terminal, and an operations and maintenance port at Port Jefferson on Long Island. 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 construction season. The South Brooklyn Marine Terminal is expected to be completed in 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.

1.2 Renewable Portfolio Standard

In 2004, the PSC adopted regulations to establish New York State's RPS, aiming to increase renewable electricity consumption to 25% by 2013. In January 2010, the PSC expanded the RPS target to 30% and extended the program to 2015. The PSC established two resource tiers:

1. **Main Tier:** Primarily medium- to large-scale electric generation facilities delivering power to the NYISO-administered market.
2. **Customer-Sited Tier (CST):** Smaller, behind-the-meter resources, such as solar photovoltaic (PV) systems, fuel cells, customer-sited wind facilities, anaerobic digester gas, and similar technologies that mostly produce electricity for on-site use.

Under the Main Tier, NYSERDA was the central procurement administrator, awarding long-term contracts to eligible generators through periodic competitive solicitations for REC purchases. Some projects qualified as Tier 1 eligible under the PSC order based on their in-service date, allowing NYSERDA to sell its associated RECs in the same way as other Tier 1 RES projects. Information on RPS agreements is reported in Open NY.[55] NYSERDA's continued support for CST renewables is now housed within the CEF, including the NY-Sun solar resources initiatives.

Separate reporting[56] on installed renewable energy generation capacity supported by the CEF is available on NYSERDA's website, along with quarterly "NY-Sun Performance Reports"[57] providing a comprehensive overview of historic distributed solar support.

The RPS also included a Maintenance Resource program, which was similar to the current Tier 2 program but with different eligibility criteria.

1.2.1 Baseline Generators

A DPS white paper[58] published before the 2016 CES Order used EDP data on renewable energy consumption in 2014 to establish a baseline for measuring progress. NYGATS now calculates the Statewide Fuel Mix for EDP, referred to as the New York System Mix.

The CES Renewable Energy Baseline refers to renewable energy facilities that delivered energy to State consumers in 2014.[59] This baseline includes NYPA hydropower assets, Main Tier and CST facilities, RPS Maintenance Resources, imported renewable energy, voluntary renewable energy purchases, and other independently owned renewable energy generation resources. The 2014 renewable energy baseline was calculated as 41,296,000 MWh, or 25.9% of the 2014 EDP Statewide Fuel Mix. However, after removing biomass and biogas resources that were no longer considered renewable under the Climate Act and 2020 CES Order, the 2014 baseline was adjusted to 40,292,056 MWh or 25.3% of the 2014 EDP Statewide Fuel Mix.

Baseline facilities that generate RECs and are retired in the State count toward CES achievement. Because energy market transactions span borders, the 2024 baseline renewable energy may include or exclude imported renewable generation from the 2014 baseline calculation, and policymakers continue to monitor baseline resource exports. This report summarizes and tracks baseline generation by technology throughout the CES, including the amount of baseline renewable energy exported.

1.3 Value of Distributed Energy Resources and NY-Sun Initiative

In 2017, the PSC established the VDER mechanism to transition distributed energy resources (DER) compensation away from net energy metering (NEM). VDER introduced tariffs designed to encourage the location, design, and operation of DERs to maximize benefits to customers, the electric system, and society, while also ensuring the development of the clean generation needed to meet the CES's ambitious goals. Under VDER, eligible generation resources receive compensation based on the Value Stack, a set of value elements that includes compensation

for the environmental value of the generation. This value is determined by the higher of NYSERDA's latest Tier 1 REC procurement price or the social cost of carbon as calculated by DPS.[60] Since the utility companies implementing VDER tariffs provide environmental value, the PSC directed that Tier 1 RECs created by DER flow to the utility and count toward its Tier 1 compliance obligations.[61]

In April 2019, the PSC released an updated Value Stack Order[62] allowing projects under 750 kW Alternating Current that serve only a host load to choose between Value Stack or Phase 1 NEM. Projects that had opted into the Value Stack by default converted to Phase 1 NEM and lost Tier 1 eligibility. On December 9, 2019, DPS issued a new white paper[63] outlining potential successor tariffs for mass market projects. However, no immediate action followed, and DPS extended Phase 1 NEM for new projects (both mass market and on-site under 750 kW Alternating Current) first until January 1, 2021, and later until January 1, 2022. In early 2022, the Customer Benefit Contribution took effect, requiring new mass-market solar PV customers to pay a new monthly fee based on project size.

Although CST incentive programs and NY-Sun have supported many DER installations, NYSERDA does not claim the environmental attributes of those projects. Through PSC action in the VDER proceeding, NYSERDA relinquished all environmental claims or RECs for NY-Sun and RPS CST projects it had previously claimed under earlier policies.[64]

The NY-Sun initiative was created to expand distributed solar PV capacity throughout New York State. The Climate Act established a mandate to install 6 GWh of distributed solar PV in the State by 2030, and in May 2020, the PSC issued an Order approving a petition previously filed by NYSERDA authorizing additional funding to support this expanded goal and to extend NY-Sun through 2025.

In December 2021, following Governor Kathy Hochul's announced expansion of NY-Sun to achieve at least 10 GWh of solar energy by 2030, NYSERDA and DPS filed the 10-GW Distributed Solar Roadmap. In response, the PSC issued an Order expanding NY-Sun with a new target of 10 GWh of distributed solar by 2030, enough to power nearly 700,000 homes annually. By September 2024, NY-Sun met the Climate Act's 6 GWh target more than a year ahead of schedule. In April 2025, the PSC issued an Order expanding NY-Sun's target to 10.5 GWh by 2030, specifying that the final 500 MW should use the Statewide Solar for All (S-SFA) tariff.

As of the end of 2024, 6,579 MW of distributed solar had been installed statewide. Past "NY-Sun Performance Reports" are available on the NYSERDA website; for the period beginning April 1, 2020, all NY-Sun reporting is maintained in the Clean Energy Dashboard.

Clean energy contributions from DER and the NY-Sun program are reflected in the Statewide Fuel Mix as described in Section 3.

1.4 Build-Ready Program

NYSERDA's Build-Ready Program identifies underutilized sites and advances preconstruction development activities for large-scale renewable energy projects. Afterward, it competitively auctions and transfers the sites and a REC agreement to the private sector for final construction and operation.

Since 2023, Build-Ready has prioritized originating new sites and advancing existing sites through origination, into development, and into auction. Notably, the Build-Ready Program was updated in 2024 through New York State's 2025–2026 budget process, which amended the Accelerated Renewable Energy Growth and Community Benefit Act via the Build-Ready Budget Amendment. Via the Build-Ready Budget Amendment, the Build-Ready Program was updated to:

- Prioritize dormant electricity generation sites alongside previously developed sites
- Prohibit site development on agricultural land, except for interconnection equipment required to connect the project to the electrical grid
- Permit bulk energy storage system projects on Build-Ready sites

Highlights of the Build-Ready Program's activities from January 1, 2024, to June 30, 2025, include:

- **Completed solar PV site origination and development:** In 2024 and 2025, the Build-Ready Program identified, screened, and rescreened 263 sites, including landfills, brownfields, parking lots, dormant electric generators, closed prisons, and existing commercial and industrial properties. However, none of the sites were viable for Build-Ready projects. The program continued its project development efforts, advancing three distributed generation projects through development into auction and completed development of a statewide database and mapping tool that includes all sites identified by Build-Ready since 2020.

- **Developed battery energy storage system (BESS) origination strategy:** In late 2024, Build-Ready launched a standalone BESS origination effort based on the Build-Ready Budget Amendment. This effort included developing a BESS site screening tool, conducting a statewide transfer study and production cost modeling study to inform BESS siting, updating a financial model to evaluate BESS projects, creating a top-ranked BESS sites list, and issuing a request for information to gather feedback on Build-Ready's role in the BESS market.
- **Completed Build-Ready auction:** The Build-Ready Program completed its first auction with the Build-Ready Benson Mines Solar PV Project. In 2025, the Build-Ready Program finalized the award, sale, and transfer of the project to CleanCapital's project company, Five Ponds Solar LLC. Five Ponds Solar entered into a Membership Interest Purchase Agreement to acquire the project, a 20-year agreement to sell Tier 1 RECs generated by the Build-Ready Benson Mines Solar PV Project to NYSERDA.

On October 1, 2025, NYSERDA filed "The Build-Ready Program Five-Year Review: October 2020–September 2025,"[65] noting the program's achievements as well as challenges, including changes in federal policies. The 5-year review details NYSERDA's intent to continue its work encouraging the siting and development of renewable energy and energy storage facilities on previously developed and underutilized sites, as well to realign the Build-Ready program to support the State's prioritized economic development initiatives within the statutory framework set forth in the Accelerated Renewable Energy Growth and Community Benefit Act.

More details on the Build-Ready Program's progress, accomplishments, and proposed future direction can be found in the Build-Ready 2024 annual report[66] and "The Build-Ready Program Five-Year Review: October 2020–September 2025."[67]

1.5 Long Island Power Authority and New York Power Authority

LIPA and NYPA have committed to adopting renewable targets that will achieve the CES mandate and provide annual updates to NYSERDA, as summarized in this section.

1.5.1 Long Island Power Authority

LIPA is the third-largest public power utility in the U.S., serving 1.2 million customers on Long Island and the Rockaway Peninsula in Queens. LIPA serves customers by providing clean, reliable, and affordable energy to Long Island and the Rockaways, empowering communities today and in the future.

The key objectives of LIPA's clean energy and power supply initiatives are to:

- Achieve a zero-carbon electric grid by 2040
- Demonstrate innovation and be recognized among the leading utilities in reducing economywide greenhouse gas emissions through energy efficiency and beneficial electrification
- Improve equity for disadvantaged communities
- Plan for a power supply portfolio that meets or exceeds industry standards for reliability

As of the fourth quarter of 2024, Long Island had 1,130 MW of solar PV installed, representing 151% of Long Island's portion of New York State's 2025 clean energy goals; 42.5 MW of energy storage installed; and achieved an energy efficiency reduction of 6.26 trillion British thermal units.

Long Island has approximately 4,229 MW of clean energy capacity planned for the early 2030s—1,419 MW of solar PV, 754 MW of energy storage, and more than 2,000 MW of offshore wind—which will reduce LIPA's carbon footprint by over 70% compared to 2010 once in service. These emissions reductions will enable LIPA to advance the Climate Act's goals toward achieving economywide carbon neutrality.

In 2024, the South Fork Wind project became fully operational, with all 12 offshore wind turbines constructed and successfully delivering power to Long Island and the Rockaways. The completion and operation of the South Fork Wind project marked a historic milestone as New York State became home to the first utility-scale offshore wind farm in the U.S.

The project is the result of a LIPA-led initiative to meet the growing energy needs of Long Island's South Fork. In January 2017, the LIPA Board of Trustees approved a power purchase agreement to buy energy from the project, marking the first offshore wind farm to be contracted in federal waters. Developed jointly by Ørsted and Eversource, the project was initially proposed at 90 MW, but in November 2018, LIPA agreed to purchase an additional 40 MW of clean energy from the project. BOEM granted final project approval in January 2022,

and commercial operation commenced in December 2023. Located 35 miles east of Montauk Point, the 132-MW fully operational wind farm is generating enough renewable energy to power approximately 70,000 homes. Over its lifespan, it will eliminate up to 6 million tons of carbon emissions, equivalent to taking 60,000 cars off the road for the next 20 years.

In addition to supporting the progress and installation of solar, wind, and battery storage, LIPA's activities to advance New York State's clean energy future include supporting building decarbonization and the electrification of heating, installing heat pumps, promoting electric vehicle adoption, implementing time-of-day rates for residential customers, and investing in reliability.

1.5.2 New York Power Authority

As the largest State public power organization in the nation, NYPA and its customers play a unique role in New York State's clean energy transition. NYPA's assets total approximately 6,000 MW and generate 22% of the electricity made in New York State. In 2024, 83% of NYPA's power generation was clean, renewable hydropower.[68]

NYPA owns and operates three large hydropower generating facilities, two fossil-fuel-powered generating facilities, 11 small natural gas power plants, four small hydroelectric facilities, and one utility-scale battery energy storage system. NYPA operates New York State's largest hydroelectric power projects, the 2,441-MW Niagara Power Project in Lewiston and the 800-MW St. Lawrence–Franklin D. Roosevelt Power Project in Massena. To support its existing generation and ensure the continued reliability of the State's electricity system, NYPA is undertaking efforts to repower its hydroelectric resources so they are available to New Yorkers for decades to come. NYPA is also working to decarbonize its natural gas plants and provide safe, emission-free energy storage facilities to bolster power reliability in New York City.

The 2023–2024 Enacted State Budget, approved by Governor Hochul in May 2023, provided NYPA with new authority to develop, own, and operate renewable energy-generating projects, alone or in collaboration with other entities, and to establish the Renewable Energy Access and Community Help (REACH) program to provide renewable energy bill credits to low-income New Yorkers.

In October 2024, the PSC approved NYPA's proposals to establish REACH, allowing NYPA, either alone or with partners, to develop a portfolio of renewable energy generation projects and distribute a portion of the revenue from these projects to the State's investor-owned

utilities, which will use the funds to generate bill credits for middle- and low-income energy consumers in disadvantaged communities. NYPA's final Updated Strategic Plan, adopted in December 2025, includes a total of 45 projects and three portfolios of distributed energy storage projects representing nearly 5,500 MW of clean renewable resources to serve New Yorkers' growing power needs.[69]

Furthermore, on June 23, 2025, Governor Hochul called on NYPA to develop and construct at least one zero-emission advanced nuclear power plant in Upstate New York to support a reliable and affordable electric grid, while providing the necessary zero-emission electricity to achieve a clean energy economy. NYPA is evaluating technologies, business models, and potential locations for this nuclear power plant. To this end, NYPA issued requests for information to communities interested in hosting nuclear generating projects and to developers interested in partnering with NYPA on those projects.

In addition to generation, NYPA owns and operates more than 1,550 circuit miles of existing high-voltage transmission in New York State. NYPA is also investing further in the transformation of the State's transmission system, with over $2 billion of direct investments in the Central East Energy Connect (CEEC), Smart Path, Smart Path Connect, and Propel NY projects. At the end of 2023, NYPA completed CEEC, an upgrade of transmission assets between Albany and Oneida counties as part of efforts to allow renewable energy to flow to Downstate New York. NYPA completed the Smart Path project in the summer of 2023, and it is modernizing an additional 100 miles of transmission through Smart Path Connect in Northern New York and the Mohawk Valley. NYPA's investments in Smart Path and Smart Path Connect are creating a 345-kV corridor that increases transmission capacity in New York State, enabling delivery of 900 MW of renewable energy to 900,000 homes statewide. NYPA also continues its collaboration with New York Transco (Transco) with the development of the Propel NY project, which will bolster grid reliability and resilience while delivering clean energy into the statewide electric grid through system improvements on Long Island, in New York City, and in Westchester County. The Propel NY project has a projected in-service date of May 2030.

NYPA partners with its customer base to support their energy needs while advancing the State's overall clean energy goals. State and federal regulations shape NYPA's customer base, which includes large and small businesses, not-for-profit organizations, community-owned electric systems, rural electric cooperatives, and government entities. NYPA collaborates closely with its customers to achieve the CES goals in ways that best meet their varying needs.

1.6 Voluntary Renewable Energy Activities

Opportunities for consumers of all types to voluntarily purchase renewable energy emerged during the earliest days of electric industry restructuring in many states, including New York State. Throughout the RPS program, voluntary market activities consistently made small yet meaningful contributions to its renewable energy goals. The 2016 CES Order contemplated voluntary contributions from renewable energy to continue providing a portion of the renewable energy supply to meet the CES goals in tandem with LSE compliance obligations under the RES. Both large and small end users can make voluntary purchases and may derive from green tariffs offered by utilities, renewable energy products offered by competitive LSEs, Community Choice Aggregation (CCA), or customized solutions coordinated directly between large end users and renewable energy generators. Corporate interest in renewable energy purchases has increased globally in recent years and is expected to grow throughout the CES. Participating in behind-the-meter renewable generation projects is another voluntary activity that increases the amount of renewable energy serving the State's electricity needs.

A CCA allows a municipality to aggregate its electrical and/or gas load, resulting in more attractive energy supply terms for opt-out residential and small commercial accounts in the municipality. More important, CCA programs provide substantial opportunities for meaningful and effective local and community engagement on critical energy issues and the development of innovative programs, products, and services that promote and advance achievement of State energy goals. At the end of 2024, 45 municipalities in New York State had active CCA programs, two of which were gas programs. Of the 43 municipalities with an active electric program, 25 municipalities had a 100% renewable energy default ESCO supply product, 17 had a 50% renewable energy default ESCO supply product, and one municipality had a standard (0% renewable energy default) ESCO supply product. Municipal CCA programs collectively purchased approximately 1 million MWh of renewable energy credits for 2024 ESCO supply products.

1.7 Zero-Emissions Credit Requirement

The CES includes a ZEC requirement with a compliance period from April 1 through March 31 each year. The requirement ensures the continued operation of certain existing in-state nuclear power plants. Although part of the CES, the generation represented by ZECs, while carbon-free, is not counted toward the renewable mandate.

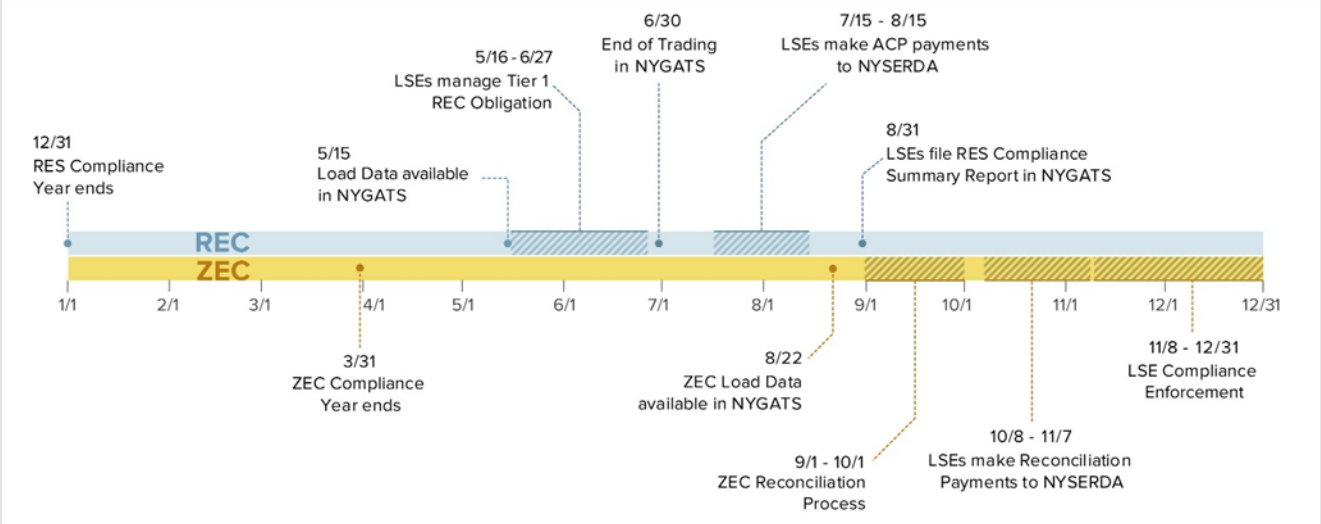
ZEC obligations are satisfied exclusively through purchases from NYSERDA. The ZEC supply is largely fixed according to a maximum quantity included in the 2016 CES Order, and the price at which NYSERDA purchases ZECs from the generators is administratively determined for each 2-year tranche by formula, as defined in Appendix E of the PSC's 2016 CES Order. LSE ZEC obligations are determined by their load share of the total New York State load served by LSEs. The PSC approved the ZEC Implementation Plan,[70] which modified how LSE payments to NYSERDA are determined. Because the number of ZECs is capped and LSEs are required to purchase ZECs from NYSERDA, ongoing adjustments or flexibility mechanisms are unnecessary. As a result, no ACP option exists to fulfill the ZEC obligation, and ZECs may not be banked or traded.

2. System and Timeline

NYGATS is an online certificate-tracking system that records information about electricity generated, imported, and consumed within the State. Using data from NYISO and unique serial numbers, NYGATS issues, tracks, and manages energy attribute certificates and RECs. Registered NYGATS users can trade, retire, or verify and substantiate ownership of RECs to support compliance or voluntary claims. Certificates can be bundled and traded for megawatt-hours of energy, but this is not a requirement in NYGATS.

NYGATS supports reporting of the environmental characteristics of electricity consumed in the State through the EDP[71] and the CES and raises market confidence by preventing double-counting of RECs, providing public reports, and recording a complete audit trail of all transactions to support the integrity of the RECs issued and held in the system. All energy generated, imported, or exported out of the State is tracked and verified through NYGATS. NYGATS also contains data on the load served by State LSEs and is used as the basis for achieving and verifying LSE compliance with CES obligations. NYGATS is this report's primary data source, and much of the source data is publicly available on its website.[72] Figure 1 provides key dates for both REC and ZEC NYGATS timelines.

Figure 1. Clean Energy Standards and NYGATS Timeline



3. Clean Energy Standard Status, 2024

For the 2024 CES compliance year, contributions from renewable and nuclear energy sources combined supplied approximately 44.5% of the energy used to meet the load served by LSEs. Excluding nuclear, the contribution from renewable energy resources to meet the energy secured by the LSEs to meet customer electric load increased to 23.6%.[73] New York State's electric load served increased by approximately 4.3 million MWh compared to 2023, a 2.9% increase. Several factors vary from year to year that impact the overall percentage, including market-driven forces, weather patterns, and electrical grid performance. The increase in the percent of load served by renewable energy in 2024 was mainly driven by a 55% increase in generation from Tier 1-eligible renewable energy resources, totaling 2.25 million MWh, up from 2023. In addition, generation from net metered renewable resources in the State, including behind-the-meter and distributed solar, increased production by 890,846 MWh.

Highlights from the 2024 CES compliance year include the South Fork Wind Farm, a 132-MW project, becoming fully operational, marking the first utility-scale offshore wind farm in the nation. South Fork Wind is delivering clean, renewable, and reliable energy to Long Island and the Rockaways, with enough energy to power approximately 70,000 homes. According to Ørsted, in its first full year of operation, the project achieved a net capacity factor of 46.4% and, through the first half of 2025, generated electricity 92% of the time.[74] In addition, five Tier 1-contracted large-scale renewable generation projects came online in 2024, totaling 357 MW.

While Tier 1-eligible generation increased significantly in 2024, other countervailing factors impacted the percentage of load served by renewable energy. These include a decrease in in-state baseline renewable contributions to the State's system mix, which dropped by approximately 1.37 million MWh compared to 2023, a 5.8% decline. Exports of baseline hydroelectric generation decreased by 66,791 MWh in 2024, an 8.5% reduction. Baseline wind exports increased by 377,541 MWh, an 18.1% increase. In addition, imported renewable energy generation from adjacent control areas remained low relative to recent years, decreasing by 169,733 MWh in 2024. This follows a decrease in renewable imports of approximately 5.2 million MWh in 2023.

Furthermore, wind and solar generation continued to set new records in New York State this past year, including:

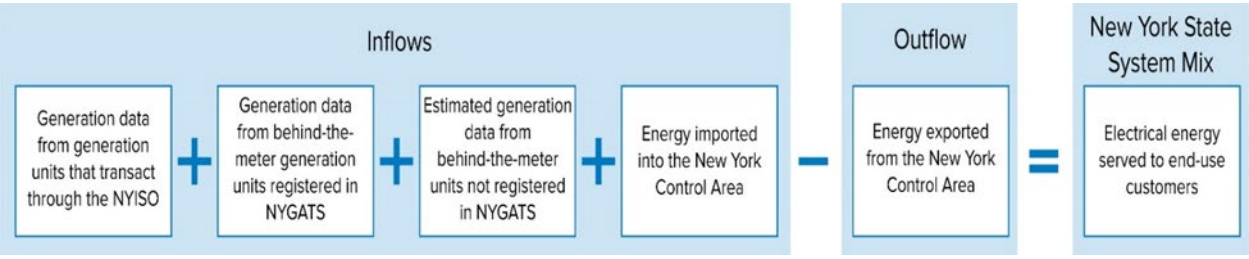
- Solar generation set an all-time peak record on April 17, 2025, generating 4,809 MW at noon.[75]
- Wind generation set an all-time peak record on October 31, 2025, when statewide onshore and offshore wind facilities generated 2,389 MW at 2:00 p.m.[76]

Tier 1 renewable generation continues to grow year-over-year. Because the scope of this report is through 2024, the full contribution from the significant new renewable generation that entered service during the 2024 compliance year will not be wholly reflected until the CES progress report for 2025, nor will the contributions from projects under construction as of the date of publication. In the coming years, additional renewable energy projects from recent procurement programs—including annual solicitations for new land-based renewables, offshore wind, solar incentive programs, and other State procurements—will continue to enter operation, driving significant new generation capacity in the State.

3.1 Statewide Fuel Mix for Electricity Generation

The New York System Mix represents the electric energy served to end-use customers and is based on inputs that include inflows and outflows of energy, as shown in Figure 2. Progress toward the CES objectives is measured by tracking the renewable energy contribution of to the New York System Mix over the years of the CES.

Figure 2. New York System Mix Calculation



NYGATS calculates the average amount of each fuel type used to generate electricity and the associated average emissions by analyzing inputs such as generation data and fuel characteristics. Estimated renewable energy generation from behind-the-meter units not registered in NYGATS is determined using various sources, including the Standard Interconnection Report (SIR) filed by the investor-owned utilities with DPS. It then matches this fuel type and emission information to the electricity customers who consume it. The

resulting New York System Mix represents the average characteristics of the electricity consumed in the State each year, encompassing the unique mixes that electricity providers deliver to their customers. This system mix is a tool for tracking progress toward State energy and emissions goals and assessing the performance of electricity providers, generators, and policies.

Table 1 summarizes the 2024 New York System Mix from NYGATS,[77] displaying data on the types and quantities of fuels used to supply New York State's electric load. The New York System Mix uses NYGATS certificate data for energy that served New York State's load in 2024, including certificates retired for voluntary or compliance purposes or banked for future use. Renewable energy resources contributed 23.2% of the electrical energy consumed in 2024 (see Table 2).

Table 1. Summary of New York System Mix, 2024

Fuel Type[a]	Fuel Type %[b]	MWh
BAT	0.0045	6,839.895
Biomass	0.02	29,959.16
Coal	2.12	3,226,108.91
Fuel Cells, Renewable	0.04	54,282.21
Hydroelectric	16.81	25,567,496.31
Natural Gas	50.46	76,763,699.31
Nuclear	20.95	31,864,887.70
Oil	0.67	1,026,008.50
Renewable Biogas	0.04	64,452.78
Solar	4.47	6,797,810.96
Solid Waste	2.12	3,229,416.70
Wind	2.29	3,489,009.56

a. All table rows are components of the New York System Mix in the NYISO Control Area.
b. Numbers may not add up to 100% due to rounding.

3.2 New York System Mix

Table 2 summarizes New York's system mix in 2014 and 2024,[78] including sources of renewable energy supply (by eligibility) and total electric load. The quantities represent all compliance-year renewable energy supplies settled in the State through NYGATS, including all renewable energy imports and exports. The Climate Act's definition of "renewable energy systems" does not include biomass and biogas. Because early eligibility determinations previously allowed biomass and biogas resources to align with policy established through the Climate Act and for future reporting, 2014 has been adjusted to classify these fuel types as nonrenewable.[79]

Table 2. Summary of New York System Mix, 2014 and 2024

	2014	2024
Generation from Baseline Renewable Energy (MWh)	40,292,056	29,521,562[c]
Generation from Tier 1-eligible Energy (MWh)[a]	N/A	6,683,613[d]
Total Renewable Energy (MWh)	40,292,056	35,854,317
Total Load (MWh)[b]	159,146,663	152,119,972
% Renewable Energy Serving Load (%)	25.3%	23.6%

[a] Tier 1 Energy includes generation from fuel cells that use natural gas as a fuel source, which were previously eligible under Tier 1. Because these generation projects run on natural gas, the New York System Mix reports their megawatt-hours as natural gas, aligning with the 2014 Statewide Fuel Mix reporting. Therefore, the sum of the Baseline Renewable Energy and Tier 1-eligible energy does not equal the Total Renewable Energy.

[b] Includes LSEs, municipal utilities, and direct customers. According to NYGATS operating rules, load calculation uses NYISO version 2 settlement data and incorporates generation from load modifiers used by distribution utilities. The load modifier data adjusts the total load and the total load served by each LSE using the load modifier(s). To determine the percentage of total load served by each LSE, the adjusted total load served by each LSE is divided by the adjusted total statewide load. The total quantity of renewable energy serving the State load includes baseline and Tier 1 energy supply.

[c] Excludes biogas, biomass, and fuel cells.

[d] Includes fuel cell and biogas.

Figure 3 represents the total load, the percentage associated with renewable energy, and the portion of the renewable generation from Tier 1 resources for 2014 and 2024.

Figure 3. New York System Mix, Total Load and Renewable Energy, 2014 and 2024

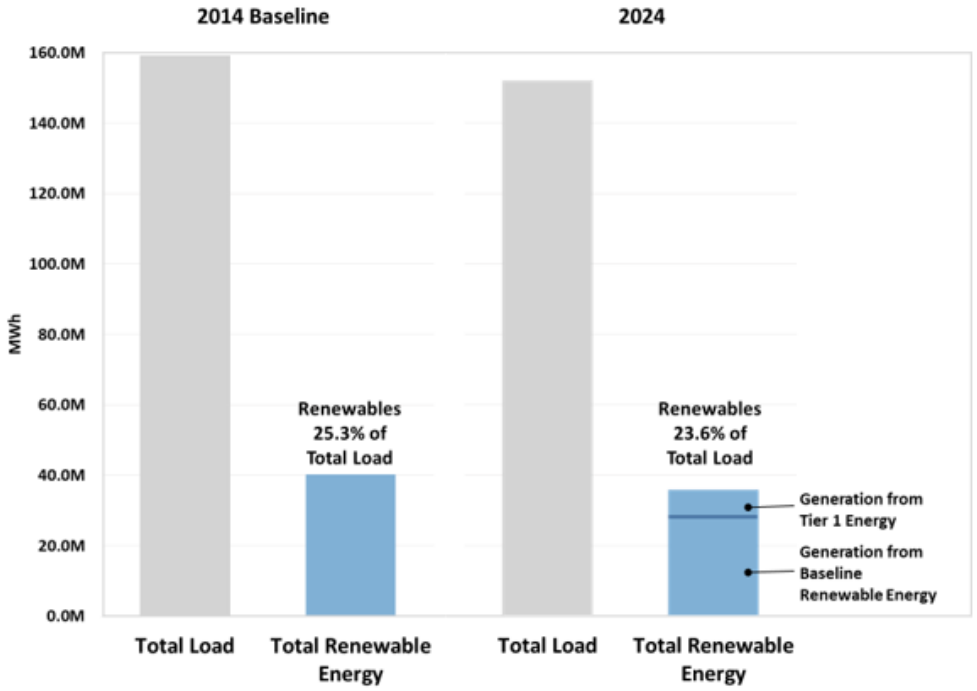


Figure 4 breaks down the renewable portion of the 2024 New York System Mix by type.[80] This figure shows that baseline renewables, including generation from NYPA hydroelectric facilities,[81] comprised the largest share of renewable energy in the 2024 New York System Mix.

Figure 4. Renewables in the New York System Mix, 2024

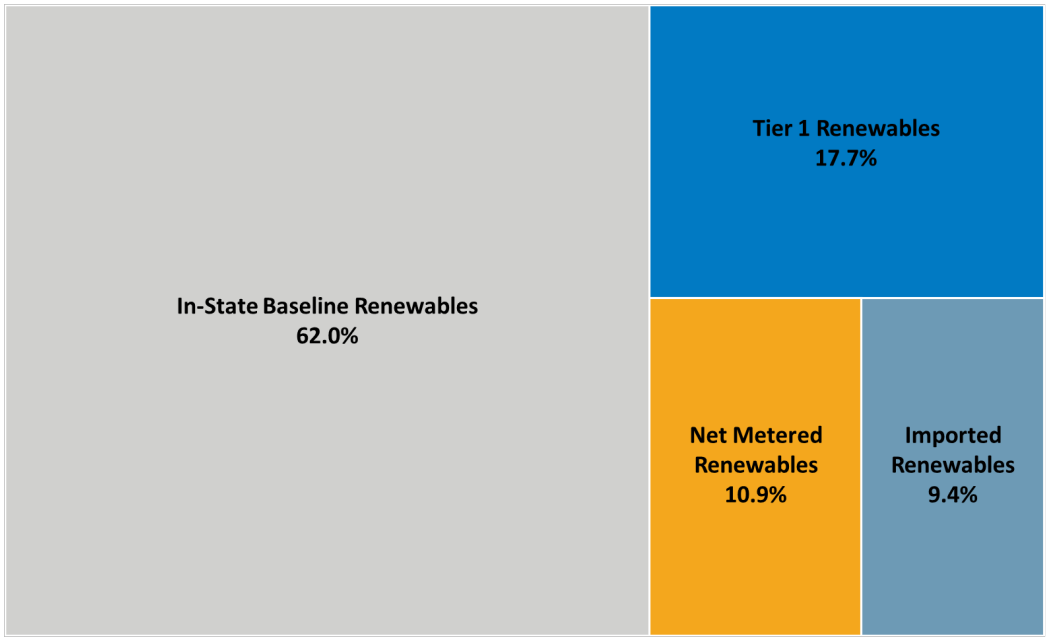


Table 3 shows renewable energy in the New York System Mix by technology and the differential contribution between 2014 and 2024.[82] Contributions from solar increased, while those from hydroelectric and wind technologies decreased. Variations in climatic conditions in a given year can increase or decrease generation from renewable resources because they depend on the weather.

Table 3. New York System Mix, Renewable Energy by Technology

Fuel Type[a]	2014 MWh	2024 MWh[b]	MWh Change
Hydroelectric	35,834,762	25,567,496	-10,267,266
Solar	681,610	6,797,811	6,116,201
Wind	3,775,684	3,489,010	-286,674
Total	**40,292,056**	**35,854,317**	**-4,437,739**

a. The Climate Act's definition of "renewable energy systems" does not include biomass and biogas.

b. Due to the nature of energy market transactions across borders, the 2024 baseline renewable energy may include or exclude imported renewable generation that was part of the 2014 baseline calculation. Differences between years may also be attributable to variations in climatic conditions because generation from renewable resources is weather-dependent.

3.3 Composition of Baseline Renewable Energy

Table 4 shows the contribution of technology to baseline renewable energy generators and the changes between 2014 and 2024.[83] Table 4 is intended to specifically show changes in baseline generation. The contribution from the baseline renewable energy generators includes all the non–Tier 1-certified energy in the New York System Mix. The baseline generation contributions do not include Tier 1 renewable energy because that concept was established by the CES and, by definition, is not part of the baseline. Table 4 demonstrates that the overall contribution from baseline renewable energy resources decreased from 2014 to 2024.[84]

Table 4. New York System Mix, Baseline Generation Contribution, 2014 and 2024

Energy Source	2014[a]		2024 (New York System Mix)	
	CES Baseline MWh	Percentage	Non–Tier 1 MWh	Percentage
Battery Storage[b]	—	—	6,840	0.0%
Biogas	394,314	0.2%	63,119	0.0%
Biomass	609,293	0.4%	29,959	0.0%
Coal	7,205,000	4.5%	3,226,109	2.3%
Natural Gas[c]	58,454,000	36.7%	76,475,545	53.3%
Nuclear	49,409,000	31.0%	31,864,888	22.2%
Oil	708,000	0.4%	1,026,008	0.7%
Solid Waste	2,075,000	1.3%	3,229,417	2.3%
Nonrenewable Energy	**118,854,607**	**74.7%**	**115,921,885**	**80.9%**
Hydroelectric	35,834,762	22.5%	25,505,164	17.8%
Solar	681,610	0.4%	3,106,946	2.2%
Wind	3,775,684	2.4%	909,452	0.6%
Renewable Energy[d]	**40,292,056**	**25.3%**	**29,521,562**	**20.6%**
Total (Baseline)	**159,146,663**	**100.0%[e]**	**145,443,447**	**100.0%[e]**

a. The Climate Act's definition of "renewable energy systems" excludes biomass and biogas; therefore, 2014 has been adjusted to classify these fuel types as nonrenewable.

b. Nonrenewable projects include LIPA, Montauk, and East Hampton Storage Center, with commercial operation dates in February and April 2022, respectively. The megawatt-hours represent the energy injected into the grid.

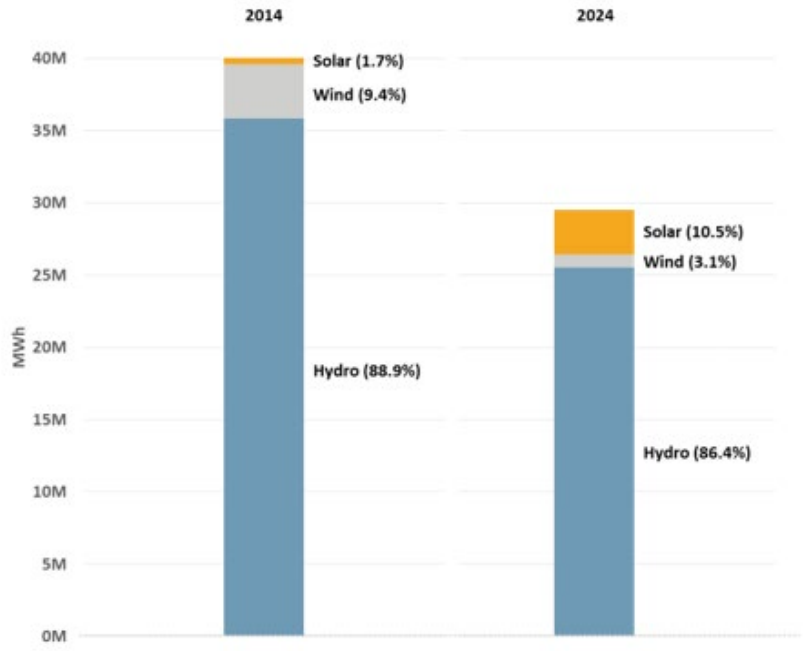
c. Tier 1 energy from fuel cells is included in "Natural Gas."

d. Tier 1 energy includes generation from fuel cells powered by natural gas because this technology qualifies under Tier 1. Because these generation projects use natural gas, their megawatt-hours are reported as natural gas in the New York System Mix, consistent with the 2014 Statewide Fuel Mix fuel reporting. Therefore, the sum of Baseline Renewable Energy plus Tier 1 Energy will not equal the Total Renewable Energy.

e. Numbers may not add up to 100% due to rounding.

Figure 5 depicts baseline renewable energy generation by technology for 2014 and 2024.

Figure 5. New York System Mix, Baseline Renewable Generation Energy Comparison, 2014 and 2024



3.3.1 Baseline Renewable Energy Exports

Table 5 aggregates the number of RECs exported from baseline renewable generation units (generation units installed prior to January 1, 2015) in the State during the compliance year.[85] Because no tracking system existed when the CES baseline was calculated, a comparison to the level of renewable energy exports in the CES baseline year of 2014 is not possible. Compared to 2023, hydroelectric and wind generator exports increased in 2024, resulting in a net export increase of 310,750 MWh.

Table 5. Renewable Energy Exports by Baseline New York State Generators, 2018–2024

Technology	2018 REC Exports	2019 REC Exports	2020 REC Exports	2021 REC Exports	2022 REC Exports	2023 REC Export	2024 REC Exports	MWh Change 2023 to 2024
Hydroelectric[a]	178,056	433,611	483,963	641,165	651,970	789,584	722,793	-66,791
Wind	949,885	1,480,582	2,109,533	1,965,922	1,927,037	2,085,914	2,463,455	377,541
Total Baseline Renewable Energy Exports[b]	1,127,941	1,914,193	2,593,496	2,607,087	2,579,007	2,875,498	3,186,248	310,750

a. Excludes exports from NYPA hydroelectric facilities.

b. Excludes biogas for 2020–2024.

4. Tier 1

As noted, 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.[86] Only NYSERDA-certified renewable energy Tier 1 projects can issue Tier 1 RECs in NYGATS, which publicly reports certified projects in the "Operational Eligibility" report.[87]

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

4.1 Tier 1 Annual Compliance Summary

Table 6 summarizes the results of the NYSERDA and DPS review of Tier 1 compliance for 2024. It presents Tier 1 compliance mechanisms aggregated across all jurisdictional LSEs, LIPA, and NYPA. A complete list of LSEs active during the year is available via the NYGATS EDP Label Reports.[88]

The data include NYSERDA's Tier 1 REC activities. In 2024, NYSERDA purchased Tier 1 RECs through long-term contracts and offered them for sale to jurisdictional LSEs for Tier 1 compliance. The 2024 Tier 1 REC obligation percentage for all LSEs participating in the CES was 6.45%.

As of this report's issuance, jurisdictional LSEs achieved 99.9% compliance using a combination of current and banked vintage Tier 1 RECs and ACPs. LIPA used 679,196 vintage 2024 Tier 1 RECs to reach 63.8% RES Tier 1 compliance for 2024.

Table 6. Summary of Tier 1 Renewable Energy Standard Compliance Status, 2024

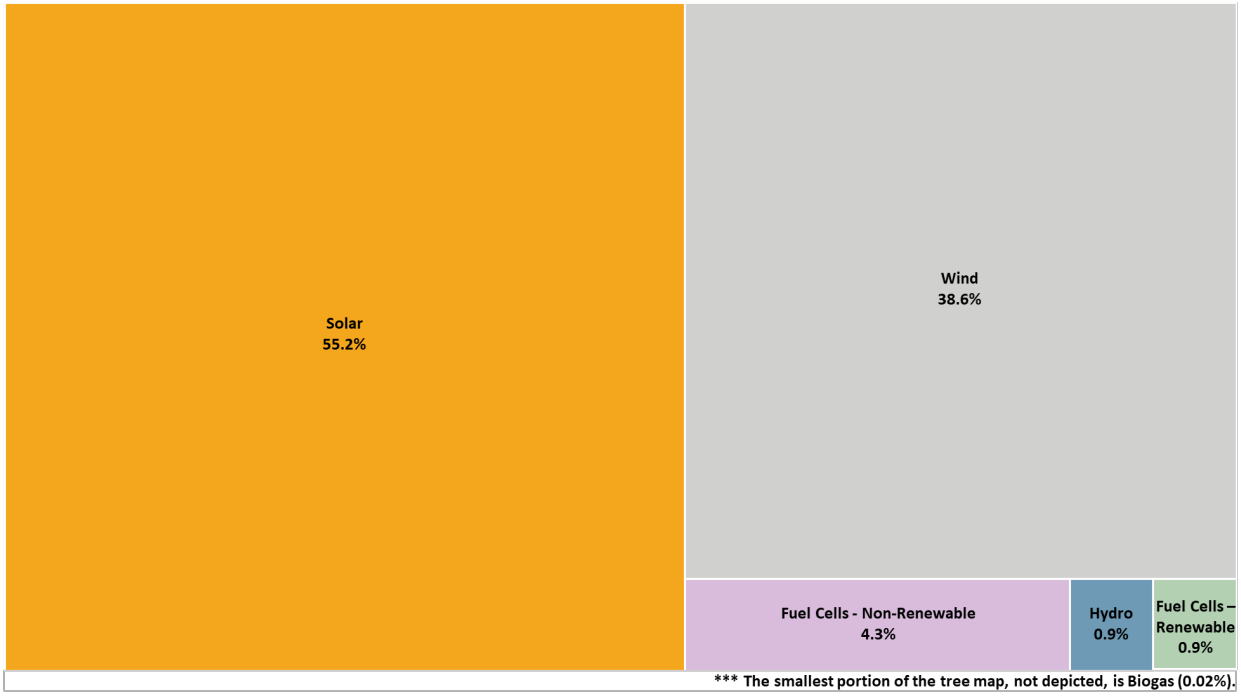
Category	Jurisdictional	LIPA	NYPA	Total
Tier 1 Obligated Load (MWh)	114,320,637	18,530,912	19,268,423	152,119,972
Tier 1 Compliance Obligation (MWhs) (6.45% of Obligated Load)	7,373,619	1,195,243	1,242,813	9,811,675
2024 Tier 1 RECs Used for Compliance	2,691,181	679,196	—	3,370,377
2024 VDER Tier 1 RECs Used for Compliance	3,002,070	83,227[b]	—	3,085,297
2024 Imported Tier 1 RECs Used for Compliance	44,566	—	—	44,566
Banked Tier 1 RECs Used for Compliance	256,731	—	—	256,731
Banked VDER Tier 1 RECs Used for Compliance	487,143	—	—	487,143
Total Tier 1 RECs Used for 2024 Compliance[a]	6,481,691	762,423	—	7,244,114
Number of ACPs Used for 2024 Compliance	884,818	—	—	884,818
Total 2024 Compliance	7,366,509	762,423	—	8,128,932
Total Compliance	**99.9%**	**63.8%**	**0.0%**	**82.8%**

[a.] As outlined in section 1.5, NYPA remains fully committed to meeting the goals and requirements of the PSC's 2016 CES Order. Under the New York Public Authorities Law, NYPA's rates, services, and practices related to power generation and sales are not subject to the New York Public Service Law or its regulations. NYPA continues collaborating with its customers to ensure its power supply contracts align with the 2016 CES Order's requirements for REC and ZEC procurement. NYPA is amending its power contracts to authorize the purchase of RECs and ZECs in proportions corresponding to the load served under these contracts and recover the costs through supplemental charges to customers.

[b.] Through LIPA's adoption of the VDER framework, projects completed in 2024 generated VDER RECs.

Figure 6 summarizes Tier 1 RECs created in 2024 by technology.[89] This figure includes Tier 1 RECs minted in the State but exported.

Figure 6. Tier 1 Renewable Energy Certificate by Technology, 2024



4.2 Tier 1 Renewable Energy Certificate Banking Activity

The PSC orders allow LSEs and NYSERDA to bank excess Tier 1 RECs from the current compliance year for use in the next two compliance years. This flexibility mechanism enhances market liquidity and reduces REC price volatility by enabling the use of renewable energy surpluses (if applicable) for compliance. Banking applies only to Tier 1 RECs and is limited to NYSERDA or obligated LSEs that have met RES compliance for all previous periods.

Excess NYGATS certificates must not have been previously used for RES compliance or transferred to other parties to be eligible for banking. An LSE may bank up to 60% of its REC obligation for the current compliance year. However, the PSC suspended this 60% banking cap for VDER resources through 2022 in response to a Joint Utilities of New York petition.[90]

Table 7 categorizes banked Tier 1 RECs, including LSE banked RECs, VDER Tier 1 banked RECs, and NYSERDA's Tier 1 banked balance. NYSERDA banks unsold Tier 1 RECs from its quarterly sales and makes them available in subsequent sale events.[91] LSEs with excess Tier 1 RECs must bank them before certificate trading ends in NYGATS. For 2024 vintage RECs, trading closed on June 30, 2024.

Table 7. Tier 1 Renewable Energy Certificate Banking Summary, 2024

LSE Tier 1 REC Banking (Non-VDER Tier 1 RECs)	
Aggregate LSE Tier 1 Bank Balance 6/30/2023	116,155
Aggregate LSE Tier 1 Bank Balance 6/30/2024	95,883
Aggregate LSE Tier 1 Bank Balance 6/30/2025	43
2022 Tier 1 RECs	116,155
2023 Tier 1 RECs	95,883
2024 Tier 1 RECs	43
VDER Tier 1 REC Banking	
Aggregate VDER Tier 1 Bank Balance 6/30/2023	551,013
Aggregate VDER Tier 1 Bank Balance 6/30/2024	487,143
Aggregate VDER Tier 1 Bank Balance 6/30/2025	—
NYSERDA Tier 1 REC Banking	
NYSERDA Bank Balance 6/30/2023	11,893
NYSERDA Bank Balance 6/30/2024	145,941
NYSERDA Bank Balance 6/30/2025	—
Total Balance of Banked Tier 1 RECs	**43**

5. Compliance with Zero-Emissions Credit Obligations

At the time of this report's issuance, LSEs have purchased 99.87% of the ZECs from NYSERDA to meet their ZEC obligation. Table 8 summarizes the progress in meeting CES obligations for the 2024 compliance year.[92]

Table 8. Summary of Zero-Emissions Credit Compliance, 2024

ZEC Compliance Year	Jurisdictional	LIPA	NYPA	Total
Total Obligated Load (MWh)[a]	115,394,651	18,624,101	19,096,789	153,115,541
ZEC Obligation	20,646,341	3,332,213	3,416,786	27,395,340
Total ZECs Purchased for 2024 Compliance	20,646,288	3,332,213	3,381,409	27,359,911
Compliance with ZEC Obligation	**100.00%**	**100.00%**	**98.96%**	**99.87%**

a. The ZEC compliance year is from April 1 to March 31, which causes differences in the number of obligated LSEs and the obligated load compared to RES compliance year reporting.

6. Contribution of Voluntary Renewable Energy Activities to Clean Energy Standard Progress

The 2016 CES Order acknowledges that many market participants choose to purchase renewable energy beyond regulatory compliance requirements. This voluntary market activity is encouraged and tracked, and does not alter existing LSE obligations.

Table 9 provides information on 2024 RECs retired for voluntary purposes.[93] These voluntary actions include, but are not limited to, green power products sold by LSEs, customer-sited DER generation retirements, and corporate or individual retirements. NYGATS account holders may retire RECs without the associated energy for corporate or individual renewable energy claims. However, the reported retirements include only RECs retired with the related energy because REC-only do not contribute to CES progress, measured by the energy consumed in the State.

The reported LSE voluntary activity reflects REC retirements by LSEs for EDP label purposes. The total excludes RECs retired from NYPA hydroelectric facilities made by NYPA and municipal utilities with long-term hydropower contracts and Tier 1 RECs retired for RES compliance. The resulting number represents RECs retired by LSEs for retail renewable energy products delivered to customers in 2024.

The customer-sited DER retirements reflect RECs from NEM projects retired in NYGATS. Generation from customer-sited DER projects not registered in NYGATS is estimated annually using information from the New York State SIR inventory reporting.[94] NYSERDA enters this information into NYGATS and retires the resulting RECs on behalf of the project owner.

Table 9. Voluntary Activity in NYGATS

REC Activity	2024 RECs[a]
Total Voluntary Activity in LSE EDP Subaccounts	4,680,621
Corporate or Individual Retirements	476,454
Customer-sited DER Retirements	3,826,435
Non-Tier 1 RECs Banked	722,982

[a.] Data is not static. Refer to public reports for current figures.

7. Key References and Links

The CES Orders, reports, and filings can be found on NYSERDA's website:

> https://www.nyserda.ny.gov/All-Programs/Clean-Energy-Standard/Clean-Energy-Standard-Resources/Filings-Orders-and-Reports

Information on NYSERDA-funded large-scale renewable projects can be found on the Open NY website:

> https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye

An overview of the State's progress toward meeting the Climate Act goals can be found on the Climate Act Dashboard:

> https://climate.ny.gov/dashboard

Appendix A. Clean Energy Standard Solicitations

A.1 Tier 1 Solicitations

The New York State Energy Research and Development Authority (NYSERDA) issued its first Renewable Energy Standard (RES) solicitation in June 2017 and announced awards in March 2018.[95] This solicitation resulted in agreements with 26 facilities that, once operational, are expected to generate more than 3.2 million MWh of renewable electricity annually. The weighted-average award price for the 2017 solicitation was $21.71 per MWh production over 20 years.

In June 2018, NYSERDA issued its second RES solicitation and announced awards in January 2019.[96] This round secured agreements with 20 facilities that, once operational, are expected to generate more than 3.8 million MWh of renewable electricity annually. The weighted average award price for this 2018 solicitation was $18.77 per MWh over 20 years.

The third RES solicitation, issued in April 2019, led to agreements with 21 facilities that, once operational, are expected to generate more than 2.6 million MWh of renewable electricity annually. The weighted average price for these agreements was $18.59 per MWh over 20 years.

In July 2020, NYSERDA launched the fourth RES solicitation—the first to use the innovative Index REC pricing structure. This round resulted in 22 agreements that, once operational, will contribute 4.1 million MWh of renewable electricity annually. Under this structure, projects receive variable REC payments that are inversely correlated with an index of zonal market energy and capacity prices. When market prices rise, the REC payments decrease, and vice versa. In August 2020, NYSERDA petitioned for authorization to offer developers with existing Fixed REC Tier 1 Renewable Energy agreements (not yet operational) a one-time option to switch to Index REC pricing. A November 2020 Commission Order granted this petition, and 60 of 62 eligible projects accepted the offer in 2021.[97]

The fifth RES solicitation, issued in April 2021, is the first to target 4.5 million RECs annually, aligning with the CES white paper's procurement trajectory to support the Climate Act. This solicitation awarded contracts to 22 facilities that, once operational, are expected to generate 4.5 million MWh annually. The weighted average strike price for these awards was $63.08 per MWh over 20 years.

On September 21, 2022, NYSERDA issued the sixth RES solicitation, awarding contracts to 22 solar, wind, and hydroelectric projects to develop 2,410 MW of new and repowered renewable energy capacity throughout New York State. The agreements also support the development of 20 MW of utility-scale energy storage. These projects will generate enough renewable capacity to power over 560,000 households. The weighted-average strike price for awarded projects is $60.93 per MWh in 2023 dollars, equivalent to a nominal weighted-average strike price of $80.96 per MWh. These strike prices remain subject to specific contract terms and price index adjustments.

In late 2023, NYSERDA issued the seventh annual RES request for proposals (RESRFP23-1),[98] with bids due January 31, 2024. In November 2024, NYSERDA announced contracts for 23 projects to support the continued development of large-scale onshore wind and solar resources in New York State. These contracts total more than 2.3 GWh of new renewable energy capacity.

Launched in June 2024, NYSERDA's eighth Tier 1 solicitation (RESRFP24-1) under the CES garnered a significant level of competitive interest from the private market and resulted in contracts for 26 solar, wind, and hydroelectric projects, to develop 2,566 MW of new renewable energy capacity throughout New York State. The State's investment in these new land-based renewable energy projects is expected to spur over $6 billion in direct private investment.

As of publication, NYSERDA's ninth annual Tier 1 solicitation (RESRFP25-1), launched in September 2025, is ongoing, with final proposals from eligible participants submitted in December 2025.

A.2 Offshore Wind Solicitations

NYSERDA issued its first Offshore Wind Request for Proposals (ORECRFP18-1) in November 2018.[99] In October 2019, NYSERDA finalized contracts for its first two offshore wind projects: Empire Wind (816 MW, Equinor US Holdings, Inc., a joint venture with bp) and Sunrise Wind (880 MW Sunrise Wind LLC, a joint venture at the time of Ørsted A/S and Eversource Energy), making the largest competitive procurement for offshore wind in the nation at that time.[100]

In pursuit of its nation-leading goal of at least 9,000 MW of offshore wind energy, NYSERDA petitioned the PSC in January 2020, requesting authority to conduct a 2020 solicitation for at least 1,000 MW of ORECs, with flexibility to accept bids up to 2,500 MW. On April 23, 2020, the

PSC issued an Order approving NYSERDA's petition. In July 2020, NYSERDA issued the second solicitation (ORECRFP20-1)[101] to procure ORECs associated with 1,000 MW or more of offshore wind energy, coordinated with a potential $200 million investment in public and private port infrastructure.

In January 2021,[102] NYSERDA selected two offshore wind projects for contract negotiation under its second solicitation: Empire Wind 2 and Beacon Wind from Equinor Wind US LLC (a joint venture with bp). The projects total nearly 2,500 MW and leverage almost $3 of private funding for every $1 of public financing, with a combined $644 million investment in resilient port facilities.

In July 2022, NYSERDA issued its third solicitation (ORECRFP22-1), seeking a minimum of 2,000 MW of offshore wind energy. The third solicitation included the first phase of a nation-leading $500 million investment in offshore wind ports, manufacturing, and supply chain infrastructure. Proposals were received on January 26, 2023, with updated offer prices due on August 24, 2023.[103] In November 2023, New York State announced awards totaling 4,032 MW of offshore wind energy to Attentive Energy One (1,404 MW), Community Offshore Wind (1,314 MW), and Excelsior Wind (1,314 MW). However, technical and commercial complexities arose between the provisional awardees and their partners after the announcement of the provisional awards, and the projects were unable to finalize agreements. A change in GE Vernova's offshore wind turbine product, from the initially proposed 18 MW Haliade-X turbine platform to a 15.5/16.5 MW platform, caused material changes to the proposed projects. Given these developments, NYSERDA announced in April 2024 that the solicitation was concluded, with no final awards made.

On November 30, 2023, as part of New York State's 10-Point Renewable Energy Action Plan, NYSERDA issued its fourth offshore wind solicitation (ORECRFP23-1) on an accelerated timeline. After the solicitation, mutual termination agreements were reached between NYSERDA and the Empire Wind 2 and Beacon Wind 1 projects, selected under the second offshore wind solicitation (ORECRFP20-1). The projects that were selected in the first solicitation (ORECRFP18-1), Empire Wind 1 and Sunrise Wind, both rebid their projects into the fourth solicitation (ORECRFP23-1), along with a new project, Community Offshore Wind 2, a joint venture of RWE and National Grid.

On February 29, 2024, Governor Hochul announced the conditional award of two offshore wind projects from the fourth offshore wind solicitation—a planned 810-MW project, Empire Wind 1 (developed by Equinor ASA), and Sunrise Wind, a planned 924-MW project (developed by Ørsted and Eversource). Both contracts were executed by June 2024. Once operational, these projects, totaling over 1,700 MW of clean energy, will be the largest power generation projects in New York State in more than 35 years, advancing the goal to develop 9 GWh of offshore wind energy by 2035.[104]

On April 23, 2024, NYSERDA issued a request for information (OSWRFI24-1) to gather industry feedback to inform the development of the State's fifth offshore wind solicitation (ORECRFP24-1). NYSERDA also sought input on issuing a parallel request for proposals to make available at least $300 million for offshore wind supply chain investments, repurposing the funds that were previously provisionally awarded to GE Vernova and LM Wind Power as part of the State's third offshore wind solicitation.

NYSERDA launched its fifth offshore wind solicitation on July 17, 2024. On September 9, 2024, NYSERDA received 25 proposals from four developers, totaling 6,870 MW in capacity. On October 18, 2024, NYSERDA received offer pricing for 21 proposals, with Attentive Energy withdrawing its four proposals. NYSERDA will publicly disclose the results of the ORECRFP24-1 solicitation on the completion of contracting.

On December 18, 2024, NYSERDA issued a request for information (OSWRFI24-2) to solicit industry feedback to inform the development of the State's sixth OREC solicitation (NY6), seeking to optimize coordination between offshore wind generation projects and transmission projects selected through an open NYISO solicitation. Additionally, NYSERDA released a request for information (RFI 5929: Inform Transmission Pre-Development Research) to invite stakeholders involved in or impacted by offshore wind transmission development to identify ways to develop New York City offshore wind transmission projects more efficiently. Specifically, NYSERDA sought information on activities that could reduce transmission project permitting costs and timelines.

Endnotes

[1] The requirement for this CES Annual Progress Report was set forth in the 2016 CES Order; subsequent CES Implementation Plans and Orders further defined the content and structure, along with reporting requirements.
New York State Public Service Commission (PSC). 2017. Case 15-E-0302: *Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Approving Phase 1 Implementation Plan* (February 22).
PSC. 2017. Case 15-E-0302: *Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Approving Phase 2 Implementation Plan* (November 17).
PSC. 2018. Case 15-E-0302: *Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Approving Phase 3 Implementation Plan* (December 14).
PSC. 2020. Case 15-E-0302: *Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard* (October 15).

[2] Total load represents MWh in 2023 as reported in the New York Generation Attribute Tracking System (NYGATS).

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

[4] New York Independent System Operator (NYISO). 2026. "Operations Performance Metrics Monthly Report: A Report by the New York Independent System Operator, December 2025." Accessed January 28, 2026. https://www.nyiso.com/operating-committee-oc.

[5] NYISO. "Operations Performance Metrics Monthly Report: A Report by the New York Independent System Operator, December 2025."

[6] New York State Department of Environmental Conservation (DEC). 2024. "New York State Statewide Greenhouse Gas Emissions Report." Accessed January 28, 2026. https://www.dec.ny.gov/energy/99223.html.

[7] New York State Senate. 2019. "NY State Senate Bill 2019-S6599." Accessed January 28, 2026. https://legislation.nysenate.gov/pdf/bills/2019/S6599.

[8] PSC. 2020. 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* (May 14).

[9] New York Department of Public Service (DPS) and New York State Energy and Research Authority (NYSERDA). 2020. "New York's 10 GWh Distributed Solar Roadmap: Policy Options for Continued Growth in Distributed Solar (10 GWh Distributed Solar Roadmap)." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b4C42AAFF-0EB9-4890-AA0D-21C70B088F4B%7d.

[10] PSC. 2022. Case 21-E-0629: *In the Matter of the Advancement of Distributed Solar*; Case 19-E-0735: *Petition of New York State Energy Research and Development Authority Requesting Additional NY-Sun Program Funding and Extension of Program through 2025;* Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources;* Case 14-M-0094: *Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Expanding NY-Sun Program (*April 14).

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

[12] NYPA. 2025. "NYPA Renewables Updated Strategic Plan." Accessed January 28, 2026. https://edge.sitecorecloud.io/newyorkpowe85b6-nypad19c-prod795c-a32e/media/Feature/nypa-sites/Renewables-Media/2025-Updated-Strategic-Plan---12092025.pdf.

[13] DPS. N.d. "Environmental Disclosure Labels by Load Serving Entity." Accessed January 28, 2026. https://dps.ny.gov/environmental-disclosure-labels-load-serving-entity.

[14] PSC. 2016. Case 15-E-0302: *Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard* ("2016 CES Order") (August 1). See Appendix A for eligible technologies.

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

[16] PSC. 2020. 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*. (May 14).

[17] New York State, Office of the Governor. 2021. "Governor Hochul Announces Expanded NY-Sun Program to Achieve at Least 10 Gigawatts of Solar Energy by 2030." Accessed January 28, 2026. https://www.governor.ny.gov/news/governor-hochul-announces-expanded-ny-sun-program-achieve-least-10-gigawatts-solar-energy-2030.

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[19] DPS and NYSERDA. "10 GWh Distributed Solar Roadmap."

[20] PSC. 2023. Case 21-E-0629: *In the Matter of the Advancement of Distributed Solar, Order Adopting NY-Sun Mid-Program Modifications* (June 23).

[21] PSC. 2025. Case 21-E-0629: *In the Matter of the Advancement of Distributed Solar, Order Approving NY-Sun Program Modifications* (April 24).

[22] NYSERDA. 2020. "Accelerated Renewable Energy Growth and Community Benefit Act." Accessed January 28, 2026. https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Fact-Sheets/Accelerated-Renewables-Fact-Sheet.pdf.

[23] DPS and NYSERDA. 2020. "White Paper on Clean Energy Standards Procurements to Implement New York's Climate Leadership and Community Protections Act." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E6A3B524-6617-4506-A076-62526F8EC4CB}.

[24] PSC. 2020. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard* ("2020 CES Order") (October 15).

[25] PSC. 2020. Case 15-E-0302. *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Approving Build-Ready Program* (October 15).

[26] PSC. 2023. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard;* Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources, Order Modifying Clean Energy Standard Tier 1 Obligations* (April 20).

[27] NYSERDA. 2023. "Phase 5 Implementation Plan." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={C0B3478A-0000-C512-B8A3-08608162BC90}.

[28] PSC. 2023. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard;* Case 18-E-0071: *In the Matter of Offshore Wind Energy, Order Addressing Capacity Accreditation Rules* (November 20).

[29] PSC. 2023. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard;* Case 18-E-0071: *In the Matter of Offshore Wind Energy, Order Denying Petitions Seeking to Amend Contracts With Renewable Energy Projects*. (October).

[30] NYSERDA. 2023. "New 10-Point Renewable Energy Action Plan Announced to Expand the Renewable Energy Industry and Support High-Quality Jobs Clean Jobs in New York State." Accessed January 28, 2026. https://www.nyserda.ny.gov/About/Newsroom/2023-Announcements/2023-10-12-Governor-Hochul-Announces-New-10-Point-Action-Plan-to-Expand.

[31] PSC. 2024. Case 18-E-0130: *In the Matter of Energy Storage Deployment Program, Order Establishing Updated Energy Storage Goal and Deployment Policy* (June 20).

[32] PSC. 2024. Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources;* Case 15-E-0082: *Proceeding on Motion of the Commission as to the Policies, Requirements and Conditions for Implementing a Community Net Metering Program, Order Approving Compensation for Hydroelectric Baseline Generating Facilities* (October 17).

[33] DPS and NYSERDA. 2024. "Draft Clean Energy Standard Biennial Review." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A0019490-0000-C313-A126-877CFFAA2B0C}.

[34] PSC. 2025. 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* (May 15).

[35] DPS. 2025. "Department of Public Service Staff Zero-Emissions Credit Program Extension Proposal." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={20FE6198-0000-CF2B-A36D-8B6869CF6E5E}&DocTitle=Department%20of%20Public%20Service%20Staff%20Zero%20Emissions%20Credit%20Extension%20Proposal.

[36] DPS. 2025. "Department of Public Service Staff Proposal: Staff Proposal RE Tier 1 Repowering Requirements." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B0A7789A-0000-C116-8EFD-964700D0B82C}&DocTitle=Staff%20Proposal%20RE%20Tier%201%20Repowering%20Requirements.

[37] PSC. 2026. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard*, *Order Extending Zero-Emissions Credit Program* (January 22).

[38] Open NY. 2025. "Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004." Accessed January 28, 2026. https://data.ny.gov/Energy-Environment/Large-scale-Renewable-Projects-Reported-by-NYSERDA/dprp-55ye.

[39] Open NY. "Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004."

[40] NYSERDA. N.d. "RES Tier 1 Eligibility." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Eligibility.

[41] NYGATS. N.d. "Operational Eligibility." Accessed January 28, 2026. https://nygats.ny.gov/ng/Report/getdto_view_Report_PublicOperationalEA.

[42] PSC. 2023. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard*; Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources, Order Modifying Clean Energy Standard Tier 1 Obligations* (April 20).

[43] NYSERDA. 2023. "Phase 5 Implementation Plan." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={C0B3478A-0000-C512-B8A3-08608162BC90}&DocTitle=NYSERDA%20Tier%201%20Transition%20Phase%205%20Implementation%20Plan.

[44] PSC. 2018. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Adopting Measures for the Retention of Existing Renewable Baseline Resources* (March 16).

[45] PSC. 2025. 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* (May 15).

[46] The Climate Act, and in turn the PSC, revised the list of resources that qualify as renewable for purposes of the CES.

[47] The PSC authorized the financial backstop to recover these costs from delivery customers. The most recent agreements have used uncommitted funds.

[48] PSC. 2020. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard* ("2020 CES Order") (October 15).

[49] NYSERDA. N.d. "Tier 4—New York City Renewable Energy." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/Tier-Four.

[50] Eligible Tier 4 resources included electricity generated through the use of the following technologies: solar thermal, solar PV, on-land wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells that do not use a fossil fuel resource in the process of generating electricity. Nonhydroelectric resources must have entered commercial operation on or after October 15, 2020, and hydroelectric resources must have existed or already been under construction as of October 15, 2020. All eligible resources must have either been located in New York City, or their energy must be delivered through a new transmission interconnection to the City.

[51] DPS and NYSERDA. 2021. "Petition Regarding Agreements for Procurement of Tier 4 Renewable Energy Certificates." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={53E0EA24-8E90-43A3-8E59-987592006F2D}.

[52] PSC. 2022. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Approving Contracts For The Purchase Of Tier 4 Renewable Energy Certificates* (April 14).

[53] Open NY. "Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004."

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

[55] Open NY. "Large-scale Renewable Projects Reported by NYSERDA: Beginning 2004."

[56] NYSERDA. N.d. "Clean Energy Fund Reports." Accessed January 28, 2026. https://www.nyserda.ny.gov/About/Publications/Program-Planning-Status-and-Evaluation-Reports/Clean-Energy-Fund-Reports.

[57] NYSERDA. N.d. "NY-Sun Performance Reports." Accessed January 28, 2026. https://www.nyserda.ny.gov/About/Publications/Program-Planning-Status-and-Evaluation-Reports/NY-Sun-Performance-Reports.

[58] DPS. 2016. "Staff White Paper on Clean Energy Standard: Case 15-E-0302." Accessed January 28, 2026. http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b930CE8E2-F2D8-404C-9E36-71A72123A89D%7d.

[59] DPS. 2016. "Staff White Paper on Clean Energy Standard: Case 15-E-0302."

[60] Social cost of carbon is an estimate of the societal benefits of reducing greenhouse gas emissions. VDER uses the value published annually by the U.S. Environmental Protection Agency, which represents, in dollars, the long-term damage done by a ton of carbon dioxide emissions in a given year.

[61] PSC. 2017. Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources*; Case 15-E-0082: *Proceeding on Motion of the Commission as to the Policies, Requirements, and Conditions for Implementing a Community Net Metering Program, Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters* (March 9).

[62] PSC. 2019. Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources, Order Regarding Value Stack Compensation* (April 18).

[63] DPS. 2019. "Staff Whitepaper on Rate Design for Mass Market Net Metering Successor Tariff." Accessed January 28, 2026. https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={67DC3354-F3D6-4618-AB75-F098A2906E12}.

[64] PSC. 2017. Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources*; Case 15-E-0082: *Proceeding on Motion of the Commission as to the Policies, Requirements, and Conditions for Implementing a Community Net Metering Program, Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters* (March 9).

[65] NYSERDA. 2025. "The Build-Ready Program Five-Year Review: October 2020–September 2025." Accessed January 28, 2026. https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/PPSER/NYSERDA/LSR-BRP-5-year-Review.pdf.

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[70] DPS and NYSERDA. 2019. *Clean Energy Standard Final Zero Emissions Credit (ZEC) Implementation Plan.* Accessed January 28, 2026. https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Clean-Energy-Standard/2019/Case-15-E-0302-Final-ZEC-Implementation-Plan.pdf.

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[72] NYGATS. N.d. "Active Projects." Accessed January 28, 2026. https://nygats.ny.gov/ng/Report/getdto_view_Report_PublicProjectsAll.

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

[75] NYISO. 2025. "Operations Performance Metrics Monthly Report: A Report by the New York Independent System Operator, April 2025." Accessed January 28, 2026. https://www.nyiso.com/operating-committee-oc.

[76] NYISO. 2025. "Operations Performance Metrics Monthly Report: A Report by the New York Independent System Operator, October 2025." Accessed January 28, 2026. https://www.nyiso.com/operating-committee-oc.

[77] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[78] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[79] PSC. 2020. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard* ("2020 CES Order") (October 15).

[80] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[81] Hydroelectric generation facilities owned by NYPA, including the Niagara Power Project and the St. Lawrence–Franklin D. Roosevelt Power Project.

[82] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[83] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[84] Due to the nature of energy market transactions across borders, the 2024 baseline renewable energy may include or exclude imported renewable generation that was part of the 2014 baseline calculation. Differences between years may also be attributable to the variations in climatic conditions in a given year as generation from renewable resources is weather-dependent.

[85] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[86] NYSERDA. N.d. "RES Tier 1 Eligibility." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Eligibility.

[87] NYGATS. N.d. "Operational Eligibility." Accessed January 28, 2026. https://nygats.ny.gov/ng/Report/getdto_view_Report_PublicOperationalEA.

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[89] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[90] PSC. 2018. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard*; Case 15-E-0751: *In the Matter of the Value of Distributed Energy Resources, Order Providing Limited Modification to Certificate Banking Restrictions* (July 16).

[91] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[92] NYSERDA completed the ZEC reconciliation process and issued statements to LSEs in October 2020 with payment due to NYSERDA by November 2020. LSEs whose load share ratio decreased from their historical amount received a refund from NYSERDA, those LSEs whose load share increased received an invoice to purchase the additional ZECs necessary to meet their obligation.

[93] Information for the table was gathered from various NYGATS reports (as of January 26, 2026), which may be found in the Reports section of the NYGATS website at: https://nygats.ny.gov.

[94] DPS. N.d. "NYS Standardized Interconnection Requirements (SIR)." Accessed January 28, 2026. https://dps.ny.gov/distributed-generation-information.

[95] NYSERDA. N.d. "2017 Solicitation." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Solicitations-for-Long-term-Contracts/2017-Solicitation.

[96] NYSERDA. N.d. "2018 Solicitation." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Solicitations-for-Long-term-Contracts/RFP-Resources.

[97] PSC. 2020. Case 15-E-0302: *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Authorizing Voluntary Modification of Certain Tier 1 Agreements* (November 20).

[98] NYSERDA. N.d. "Solicitations for Large-Scale Renewables." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Solicitations-for-Long-term-Contracts.

[99] NYSERDA. N.d. "2018 Solicitation (Closed)." Accessed January 28, 2026. https://www.nyserda.ny.gov/offshore-wind-2018-solicitation.

[100] NYSERDA. "2018 Solicitation (Closed)."

[101] NYSERDA. N.d. "2020 Offshore Wind Solicitation (Closed)." Accessed January 28, 2026. https://www.nyserda.ny.gov/offshore-wind-2020-solicitation.

[102] New York State, Office of the Governor. 2021. "Governor Cuomo Outlines 2021 Agenda: Reimagine, Rebuild, Renew." Accessed January 28, 2026. https://www.governor.ny.gov/news/governor-cuomo-outlines-2021-agenda-reimagine-rebuild-renew-1.

[103] NYSERDA. N.d. "2022 Offshore Wind Solicitation (Closed)." Accessed January 28, 2026. https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations/2022-Solicitation.

[104] New York State, Office of the Governor. 2024. "Governor Hochul Announces the Finalization of New Contracts for Empire Wind 1 and Sunrise Wind." Accessed January 28, 2026. https://www.governor.ny.gov/news/governor-hochul-announces-finalization-new-contracts-empire-wind-1-and-sunrise-wind.

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New York State Energy Research and Development Authority

17 Columbia Circle
Albany, NY 12203-6399

toll free: 866-NYSERDA
local: 518-862-1090
fax: 518-862-1091

info@nyserda.ny.gov
nyserda.ny.gov

State of New York
Kathy Hochul, Governor

New York State Energy Research and Development Authority
Charles Bell, Acting Chair | Doreen M. Harris, President and CEO