



NYSERDA

New York State Renewable Portfolio Standard

**Annual Performance Report
through December 31, 2014**

Final Report

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Executive Summary

This report summarizes activities conducted through December 31, 2014, by the New York State Energy Research and Development Authority (NYSERDA) and the New York State Department of Public Service (DPS) in implementing the New York State Renewable Portfolio Standard (RPS). The report includes background on the RPS; objectives and performance targets; and a summary of outcomes, funding, and expenses.

New York State's Renewable Portfolio Standard

New York State, through regulations adopted by the Public Service Commission (Commission), first enacted its RPS in 2004 with the goal of increasing the amount of renewable electricity used by consumers.¹ In an April 2, 2010 Order, the Commission established NYSERDA Main Tier and Customer-Sited Tier program targets for supporting the production of approximately 10.4 million megawatt-hours (MWh) of renewable energy annually by 2015.²

Unlike most states with an RPS, New York State uses a central procurement model whereby NYSERDA administers programs that are responsible for the majority of the RPS goals. Specifically, NYSERDA is responsible for obtaining the Main Tier (larger, utility-scale resources) and Customer-Sited Tier (smaller, behind-the-meter resources) targets with the remainder as established at the time of the commencement of the RPS to be made up by the Voluntary Market, purchases made by State agencies under the now expired Executive Order 111 (EO 111), and the activities of PSEG Long Island.³

In an April 2014 Order, the Commission authorized NYSERDA to allocate \$960.6 million to support the Customer-Sited Tier solar electric programs (also known as photovoltaic or PV) through 2023 as part of Governor Andrew M. Cuomo's NY-Sun initiative, which supports RPS goals. NY Sun is a commitment to protect the environment, grow the clean energy economy, lower energy costs for all New Yorkers, and move the State closer to having a sustainable, self-sufficient solar industry. NYSERDA was also authorized to use up to \$13 million to support participation by the low to moderate income customers in the solar electric programs.

NYSERDA has conducted nine Main Tier solicitations in pursuit of the Main Tier renewable energy procurement target. From the nine completed solicitations, NYSERDA currently has contracts with electricity generators for 65 large-scale projects. These projects will add more than 2,035 megawatts (MW) of new renewable capacity to the State's energy mix.

The Customer-Sited Tier 2015 target was increased by 40% in 2012, a substantial increase that was largely a result of the NY-Sun initiative. The Customer-Sited Tier program made significant progress in 2014 toward the RPS targets and its expanded goal. Through December 31, 2014, Customer-Sited Tier programs have supported the installation of more than 14,500 on site generation systems, which represents nearly 230 MW of installed capacity.

RPS Program Highlights

- Progress⁴ toward the NYSERDA Main Tier and Customer-Sited Tier 2015 combined target of 10.4 million MWh is approximately 56%. This number includes committed and pending contracts.
- Total new renewable capacity supported by the Main Tier and Customer-Sited Tier installed through 2014 was nearly 2,084 MW, of which more than 2,036 MW (98% of total capacity) was located in New York State.
- Under the Main Tier component of the program, 56 projects representing approximately 1,854 MW were operating as of December 31, 2014. The remaining nine projects, representing approximately 181 MW, are in development. All of these projects include two biomass facilities, 10 landfill biogas operations, two anaerobic digester biogas facilities, 25 hydroelectric facilities, 23 wind farms, and three fuel cell facilities.
- As of December 31, 2014, Customer-Sited Tier projects have installed approximately 14,500 projects representing 230 MW of capacity, with an additional 204 MW of capacity under contract but not yet installed and 214 MW of capacity from applications that have been accepted but not yet contracted. With more than 647 MW of capacity committed or pending, the CST program is on a trajectory to exceed the 2015 Customer-Sited Tier target of 510.8 MW, as set forth in the 2012 Customer-Sited Tier Program Operating Plan.

NY-Sun

NY-Sun is part of Governor Cuomo's commitment to protect the environment, grow the clean energy economy, and lower energy costs for all New Yorkers. The plan involves using public funds in a strategic manner to drive industry to scale and reduce burdens on ratepayers. NY-Sun brought together and expanded existing programs administered by NYSERDA, PSEG Long Island, and New York Power Authority (NYPA). NYSERDA's contribution to NY-Sun is achieved through two means: (1) expansions of the existing Standard Offer and the Competitive PV Program and subsequent development of the Megawatt Block incentive program, which are administered within the RPS Customer-Sited Tier and supplemented with Regional Greenhouse Gas Initiative funding; and (2) expansion of contractor soft-cost reduction efforts, including training of local officials and emergency responders, administered through the Technology & Market Development portfolio. NY-Sun expects to add more than 3,000 MW of installed solar capacity in the State by 2023.

The solar electric market on Long Island has seen tremendous growth and installed cost reductions over time, and is considered the most mature market for solar electric technology statewide. The Long Island Power Authority (LIPA), and now its System Operator, PSEG Long Island, have offered programs over the years to spur the development of solar electric locally. The Solar Pioneer program, which provided incentives to homeowners, and the Solar Entrepreneur program, which provided incentives

to small businesses, served systems up to 50 kW in capacity. Both programs have seen high demand, resulting in rapidly declining incentives. Both programs have now been merged into the statewide NY-Sun Incentive program. Through a feed-in tariff program, LIPA also acquired a total of 150 MW of solar electric technology, which will result in systems larger than 50 kW also being constructed throughout Long Island.

As of December 31, 2014, more than 589 MW of solar electric capacity has been installed or is under development through NY-Sun, including the territory served by PSEG Long Island⁵. The amount of solar electric capacity installed in 2014 alone was three times as much as what was installed cumulatively through 2010. Approximately 216,000 tons of greenhouse gas emissions will be avoided with the installation of these projects, which is equivalent to removing more than 42,000 cars from the road.

Background on the RPS

The 2002 State Energy Plan (SEP) noted the possible consequences of New York State's heavy dependence on fossil fuels⁶. The SEP stated that the State's fossil fuel resources (gas, coal, and oil) are largely imported from abroad or out-of-state and have significant long-term negative environmental impacts. Recognizing the need for a proactive approach to the State's energy and environmental challenges, in February of 2003, the Commission initiated a proceeding to explore the development of an RPS. On September 24, 2004, following an extensive stakeholder process, the Commission issued an Order adopting an RPS with a goal of increasing the proportion of renewable energy used by New York State consumers from 19.3% then (considered the baseline resources) to at least 25% by the end of 2013.⁷

As part of the September 24, 2004 Order, the Commission designated NYSERDA as the central procurement administrator for the RPS program. In doing so, the Commission noted an expectation that voluntary renewable purchases by retail customers (the "Voluntary Market") would contribute at least 1% toward the 25% goal. That would leave baseline resources, State agencies' purchases under Executive Order 111 and NYSERDA procurements to realize the remaining 24%. In the same Order, the Commission directed the major investor-owned utilities to collect funds from ratepayers to be administered by NYSERDA for the purpose of supporting NYSERDA's implementation responsibilities.



High Sheldon Wind Farm, Wyoming County, NY

NYSERDA, through Main Tier contracts, pays a production incentive to renewable electricity generators selected through competitive solicitations for the electricity they deliver for end use in New York. In exchange for receiving the production incentive, the renewable generator transfers to NYSERDA all rights and/or claims to the RPS Attributes⁸ associated with each megawatt hour of renewable electricity generated, and guarantees delivery of the associated electricity to the New York State ratepayers. For all RPS Main Tier Facilities, the electricity associated with the RPS Attributes must be:

- Delivered into a market administered by the New York Independent System Operator (NYISO) for end-use in New York State.
- Delivered through a wholesale meter under the control of a utility, public authority, or municipal electric company such that it can be measured, and such that consumption within New York State can be tracked and verified by such entity or by the NYISO.
- Delivered through a dedicated generation meter, which shall be approved by and subject to independent verification by NYSERDA, to a customer in New York State (excluding customers in the service territory of the Long Island Power Authority) whose electricity was obtained through the NYISO/utility system as of January 20, 2011.

The RPS Attributes include any and all reductions in harmful pollutants and emissions, such as carbon dioxide and oxides of sulfur and nitrogen. By acquiring the RPS Attributes, rather than the associated electricity, the program ensures that increasing amounts of renewable electricity will be injected into the State's power system while minimizing interference with the State's competitive wholesale power markets.

The Commission specifies eligible resources and technologies for both the Main Tier and Customer-Sited Tier.⁹ The RPS also includes a process for evaluating new resources and technologies for eligibility in the program as it progresses.



Buffalo BioEnergy Anaerobic Digester Gas, Erie County, NY

Tiered Approach to Implementing the RPS

The Commission established two tiers of resource types under the RPS. The Main Tier consists primarily of medium- to large-scale electric generation facilities that deliver their electrical output into the wholesale power market administered by the NYISO. The Commission established the Customer-Sited Tier because of the importance of accelerating the development of emerging technologies, associated environmental benefits, and ability to site technologies in urban, heavily-loaded areas. The Customer-Sited Tier consists of smaller, “behind-the-meter” resources, such as solar electric systems, fuels cells, small wind facilities, anaerobic digester gas, and similar technologies that for the most part produce electricity for use on-site.¹⁰

The Main Tier program currently operates through the issuance of periodic competitive solicitations; the Customer-Sited Tier resources are supported through first-come/first-served open enrollment programs that provide a combination of standard offer incentives for the “buy-down” of capital costs and/or energy production. In 2014 and early 2015, the Customer-Sited Tier Standard Offer and Competitive Solar PV programs were transitioned to a MW Block structure under which the solar electric markets would continue to grow while NYSERDA steadily reduces and eventually will eliminate cash incentives in a transparent and predictable manner.



Mill Street Dam Hydroelectric, Cayuga County, NY

Maintenance Resource Participation

Only renewable energy systems installed on or after January 1, 2003, or existing facilities that generate renewable energy that is incremental to historical levels of renewable energy generation are eligible to participate in the Main- and Customer-Sited Tiers. However, in creating the RPS Program, the Commission recognized that 19.3% of the energy sold at retail in New York was being generated by renewable resources that existed prior to the RPS being adopted in 2004 (baseline resources). For the purpose of ensuring the continuing operation of these valuable existing resources, the Commission's September 24, 2004 Order¹¹ established an additional Maintenance Resource program that was reaffirmed in an April 2010 Order.¹² To be eligible to receive RPS program funding as a Maintenance Resource, a baseline resource is required to demonstrate financial hardship through a formal request to the Commission. The Commission then determines the existence and degree of hardship and makes a determination as to the eligibility of the facility for Maintenance Resource treatment.

During the reporting period from January 1, 2014 to December 31, 2014, two facilities were granted Maintenance Resource status. In an August 20, 2014 Order, the Commission authorized NYSERDA to enter into a Maintenance Resource contract with Battenkill Hydro Associates at an incentive rate of \$2.80/MWh delivered, for a term of three years for renewable energy attributes associated with electricity generated at its hydroelectric

facility located in Greenwich (Washington County).¹³ In a November 19, 2014 Order, the Commission authorized NYSERDA to enter into a new Maintenance Resource contract with ReEnergy Lyonsdale at an incentive rate of \$33.49/MWh delivered, for a term of three years, for renewable energy attributes associated with electricity generated at its biomass-fired facility located in Lyons Falls (Lewis County).¹⁴

NYSERDA has current contracts with three Maintenance Resources: the ReEnergy Lyonsdale Biomass plant in Lyons Falls, the ReEnergy Chateaugay Power Plant in Chateaugay, and the Azure Mountain Power Company Hydroelectric Facility in St. Regis Falls.¹⁵ In combination, these contracts will support the retention of approximately 42.8 MW of in-state renewable capacity and involve 261,738 MWh of annual energy production. The total current funding committed to these multi-year contracts is approximately \$45.2 million. These maintenance resource quantities do not count toward Main Tier incremental energy targets, but serve to maintain the 19.3% baseline of renewable resources previously described.

Customer-Sited Tier

For the Customer-Sited Tier evaluation, NYSERDA filed a market evaluation, program expectations, and funding considerations report¹⁶ as well as a report that evaluated impact.¹⁷

The Customer-Sited Tier program market evaluation report presented program progress through December 31, 2012, forecasted achievable megawatts by technology (measured in terms of installed capacity and energy production for the period through 2015), and proposed potential program changes for consideration. Market research was conducted to assess the current financing landscape, including the types of financing available, underwriting criteria, and general financing terms.

The market evaluation resulted in several recommended program improvements. A number of these improvements were incorporated in a petition filed by NYSERDA on September 5, 2013,¹⁸ requesting the Commission to:

- Authorize a funding source for the NY-Sun 2014-2015 program years.
- Eliminate the 40% of installed cost rule for the Standard Offer PV program.
- Allow NYSERDA the flexibility to lower the Standard Offer PV incentive level, as measured regionally based on megawatts under contract (MW Block design).
- Allow NYSERDA the flexibility to transition the Competitive PV program to a performance-based, standard offer program also using a MW Block approach.

Intervening Commission Orders and Activities

Since the September 24, 2004 Order establishing New York State's RPS, a series of Commission Orders and other activities ensued that have resulted in programmatic changes. A series of new orders issued in 2014 and Orders associated with comprehensive program reviews conducted in 2009 and 2013 are described in the following sections; other intervening Orders and activities are summarized in Appendix A. A separate NY-Sun Operating Plan is under development and will be filed with DPS in 2015.

2014 Commission Orders

In an April 2014 Order, the Commission authorized NYSERDA to allocate \$960.6 million to support the Customer-Sited Tier solar electric programs through 2023. In consultation with DPS, NYSERDA was required to develop a Customer-Sited Tier Operating Plan as a compliance filing, which set forth general program specifications, capacity, and generation targets, and associated budgets for the MW Block Program through 2023. NYSERDA was also authorized to use up to \$13 million of the program funds to support participation by the low to moderate income customers in the solar electric programs.

In July 2014, the Commission authorized NYSERDA to increase the maximum length of RPS Main Tier contracts to a term not to exceed 20 years with the flexibility to set maximum contract terms of less than 20 years for select types of technologies and facilities. NYSERDA was directed to issue one Main Tier solicitation in 2014 and at least one in 2015, with the ability to issue additional solicitations if NYSERDA determined that market conditions were appropriate. In addition, the Commission authorized NYSERDA to reallocate unencumbered RPS Customer-Sited Tier 2013 program funds to 2014 budgets as follows: \$11,600,000 specifically to the Anaerobic Digester Gas-to-Electricity Program (ADG Program) and \$9,225,594 to be placed in a newly-created Customer-Sited Tier General Funding Pool.

In August 2014, NYSERDA, in consultation with DPS, issued the 2014-2023 Addendum to the Customer-Sited Tier Operating Plan,¹⁹ which set forth general program specifications, capacity and generation targets, and associated budgets for the MW Block Program, and represented a transition of the solar electric programs currently administered by NYSERDA under the RPS Customer-Sited Tier.

In 2014, the Commission authorized NYSERDA to develop and submit for Commission consideration a proposal for a comprehensive Clean Energy Fund (CEF) to ensure continuity of the State's clean energy programs after 2015. NYSERDA's proposal, one key pillar of New York State's Reforming the Energy Vision (REV) initiative, is a 10-year, \$5 billion funding request to support clean energy market development and innovation. It would combine funding sources, including the RPS, into one fund to provide flexibility to allow the State to be more responsive to market conditions and to increase the impact of public funds. To be administered by NYSERDA starting in 2016, the CEF proposes to deliver market-enabling strategies to:

- Reduce greenhouse gas emissions through energy efficiency and renewable generation.
- Increase private investment and accelerate growth in the State's clean energy economy.
- Reduce customer energy bills and provide more value to customers.

On September 24, 2014, NYSERDA filed the Clean Energy Fund Proposal seeking a 10-year program from 2016 through 2025 that will work in coordination with other State efforts to advance cleaner, more resilient, and more affordable energy infrastructure. The groundwork for the Clean Energy Fund was established under Case 14-M-0094, Proceeding on Motion of the Commission to Consider a Clean Energy Fund. The Clean Energy Fund Proposal was filed pursuant to the Order Commencing the Proceeding issued on May 8, 2014 by the Commission.



Rio Hydroelectric Bypass Flow Unit, Sullivan County, NY

New York Generation Attribute Tracking System

The New York State Legislature amended the Public Authorities Law to require NYSERDA to establish a generation attribute tracking system that records electricity generation attribute information within the State. NYSERDA will partner with DPS and New York Independent System Operator (NYISO), the administrator of the New York wholesale electricity market, and engage stakeholders to create a Web-based electronic information system called the New York Generation Attribute Tracking System (NYGATS). NYSERDA issued an RFP for a vendor to design, build, implement, operate, maintain, and administer NYGATS in early 2015 and anticipates that the system will be operational in 2016.

NYGATS will issue and track electronic certificates recording the generation attributes associated with each megawatt-hour of electricity generated within the State and for electricity imported into and consumed in New York State, in part to support the market for tradable Renewable Energy Certificates (RECs). NYGATS will be designed to interface and exchange information with other certificate tracking systems.

NYGATS will also support New York's Environmental Disclosure Program (including fuel mix and emissions for electricity consumed in the State), the RPS, and voluntary green power or renewable energy certificate transactions (among other policies and programs). Through the development of NYGATS, entities with accounts in NYGATS will be able to verify and substantiate ownership of RECs to support compliance or voluntary market claims.



Marsh Hill Wind Farm, Steuben County, NY

Renewable Energy Targets

In its April 2, 2010 Order, the Commission established NYSERDA Main Tier and Customer-Sited Tier program targets to support production of approximately 10.4 million MWh of renewable energy annually by 2015.²⁰ Including changes in the allocations of these targets based on the 2012 Customer-Sited Tier Program Operating Plan,²¹ the targets consists of approximately 9.5 million MWh from the Main Tier and 0.9 million MWh from the Customer-Sited Tier. These calculations assume: (1) a reduction, due to energy efficiency efforts, including those supported by the Commission-established Energy Efficiency Portfolio Standard program, of electricity consumption by 15% over a business-as-usual growth forecast for the year 2015, and (2) renewable electricity purchases made through a variety of initiatives including the Main Tier and Customer-Sited Tier, voluntary market activity, Executive Order 111, and PSEG Long Island contributions as depicted in Figure 1.

Voluntary Market

Several program design features have been incorporated into the Main Tier in an effort to support the ultimate program goal of transitioning to the voluntary market. For example, as a result of a Commission Order and beginning with the second Main Tier solicitation, NYSERDA instituted a limitation that caps bids at 95% of a facility's attributes, thus guaranteeing that a minimum of 5% of the renewable energy generated by contracted resources is available for voluntary sales. Also, an increasing percentage of Main Tier projects have taken advantage of a program design feature that permits partial bidding, thus leaving additional output available for non-RPS sales including the voluntary market in New York State. In addition, NYSERDA provides flexibility for contractors to suspend deliveries to NYSERDA in order to make sales to the New York voluntary green market. As of December 31, 2014, three facilities have exercised this option.²²

In 2012, 353,404 MWh were purchased by 24 energy service companies, six Investor-owned utilities, one public authority, one educational institution, one electric cooperative, and one village-owned municipal electric association, according to DPS. (Visit <http://www3.dps.ny.gov/e/energylabel.nsf> for additional information.) This generation excludes Long Island Power Authority transactions and those associated with baseline (pre-existing) resources. The total voluntary market purchases including Long Island Power Authority and baseline resources for 2012 was 1,845,842 MWh. This total does not include bilateral contractual purchases of renewable energy by load serving entities.



Rio Hydroelectric Bypass Flow Unit, Sullivan County, NY

Progress and Results

Introduction

The NYSERDA program target, established in the Commission's April 2, 2010 Order, for the combined Main Tier and Customer-Sited Tier, is approximately 10.4 million MWh by 2015. In response to an April 24, 2012 Order, NYSERDA published the 2012-2015²³ Customer-Sited Tier Program Operating Plan on June 29, 2012, which revised the Customer-Sited Tier targets based on increased funding allocations for some programs.²⁴ The plan set forth the program goals and implementation strategies for the Customer-Sited Tier program for the 2012 through 2015 period.

As shown in Table 1, progress²⁵ through December 31, 2014, in both the Main Tier and the Customer-Sited Tier, is approximately 5.9 million MWh. This amount represents progress of about 56% toward the NYSERDA portion of the RPS target. Current Customer-Sited Tier contracts and accepted applications are anticipated to support the installation of systems capable of producing 843,878 MWh, which represents 96% of the total Customer-Sited Tier portion of the NYSERDA RPS target.²⁶ Expected energy production associated with Main Tier facilities under contract as of December 31, 2014 is 5.0 million MWh or 53% of the Main Tier target.²⁷

Executive Order 111

Executive Order 111 required New York State agencies to procure 20% of their electricity from renewable sources by 2010. Executive Order 88 was issued in December 2012, and revoked and superseded Executive Order 111. Executive Order 88 does not continue the New York State agency renewable purchasing targets, instead focusing on energy efficiency targets for the affected State agencies.

Figure 1. RPS 2015 Renewable Energy Target Components

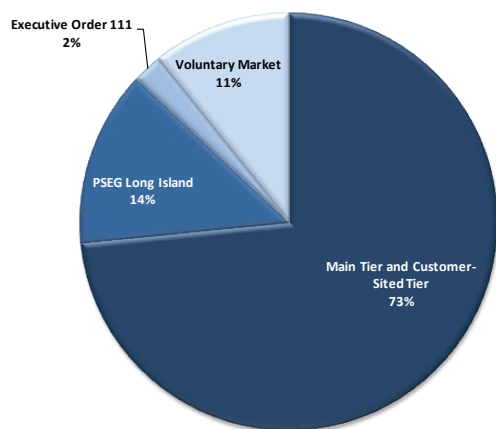


Table 1. NYSERDA 2015 RPS Procurements and Energy Targets (in MWh) and Progress as of December 31, 2014

	Target	Progress ²⁸	Progress as % of Target
Customer-Sited Tier	878,089	843,878	96%
Main Tier	9,519,765	5,015,003	53%
Total	10,397,854	5,858,881	56%



Mill Street Dam Hydroelectric, Cayuga County, NY

Although approximately 5.9 million MWh are currently under an existing or pending contract, actual production will likely vary from time to time. Renewable resources are by nature intermittent making it difficult for facility operators to estimate their annual electricity production with a high degree of accuracy. In addition, financing and construction-related impediments can cause delays in facility construction. Project development delays and underperformance of operating projects impact annual reporting of program progress and results. As such, data being reported at any given time may reflect unexpected variations in performance.²⁹

Underproduction, project delays, and setbacks have not been overlooked in Main Tier program and contract design. To ensure that the Main Tier target is met and other projects are afforded timely opportunities for funding, NYSERDA contractually requires that each project deliver at least a minimum percentage of the quantity of energy associated with its bid during each year. If a project fails to meet this percentage for a specified number of consecutive years, the annual quantity of RPS Attributes that NYSERDA is obligated to purchase from that project may be reduced for the remaining years of the contract.³⁰ The funding associated with this reduction in the RPS Attribute commitment is then disencumbered.

If a project overproduces, no contract modification is made; NYSERDA is not obligated to purchase more RPS Attributes than were bid. Considering that the majority of RPS resources are intermittent, it is likely that additional contract adjustments will be implemented in future years.

Main Tier

NYSERDA has conducted nine competitive Main Tier solicitations in pursuit of the Main Tier target. The ninth competitive Main Tier Solicitation (RFP 2985) awards were made in October 2014, and facilities are expected to be operational by July 31, 2017. The solicitation was issued on August 25, 2014. The solicitation was conducted in concurrence with a Commission Order dated July 2, 2014, wherein the Commission authorized NYSERDA to increase the maximum length RPS Main Tier contracts to a term not to exceed 20 years with the flexibility to set maximum contract terms of less than 20 years for select types of technologies and facilities. In addition, NYSERDA was directed to issue at least one additional solicitation in 2015.³¹

The ninth solicitation (RFP 2985) resulted in four awards that represent 164 MW of new renewable energy capacity from which NYSERDA could provide production incentives for approximately 448,805 MWh per year. The total funding commitment associated with RFP 2985 was approximately \$206 million, and the weighted average price for these contracts was \$22.96 per RPS Attribute (MWh) over the 20-year term of the awarded contracts. Summaries of the results of each of the prior Main Tier solicitations are included in Appendix B, and an update of the solicitation contracts is included in Appendix C.

As discussed in previous sections, changes may arise after the announcement of solicitation awards. For example, awarded contracts may not be signed, facilities may not be built as proposed, and contractual adjustments may be instituted based on repeated underperformance or other contractual nonperformance. Contractual adjustments reflecting these inevitable circumstances occur regularly. Data presented in Appendix E and F of this report include any adjustments that have been instituted through December 31, 2014.

As of December 31, 2014, NYSERDA has existing contracts to procure RPS Attributes from 65 large-scale electricity generation projects, including facility upgrades or facility repowering.³² Three projects are located outside of New York State: one project is located in Quebec (Canada) and two projects are located in Pennsylvania. The remaining projects are located in New York State. When all of the projects reach commercial operation, 2,035 MW of new renewable capacity will be added,³³ of which 1,988 MW will be located in New York State.

Wind power is the predominant generating technology in the Main Tier, representing 1,851 MW of new renewable capacity under contract, of which 1,673 MW was in operation at the end of 2014. The balance of new capacity is comprised of hydroelectric upgrades, biogas (landfill gas to electricity), anaerobic digestion to electricity, fuel



Buffalo BioEnergy Anaerobic Digester Gas, Erie County, NY

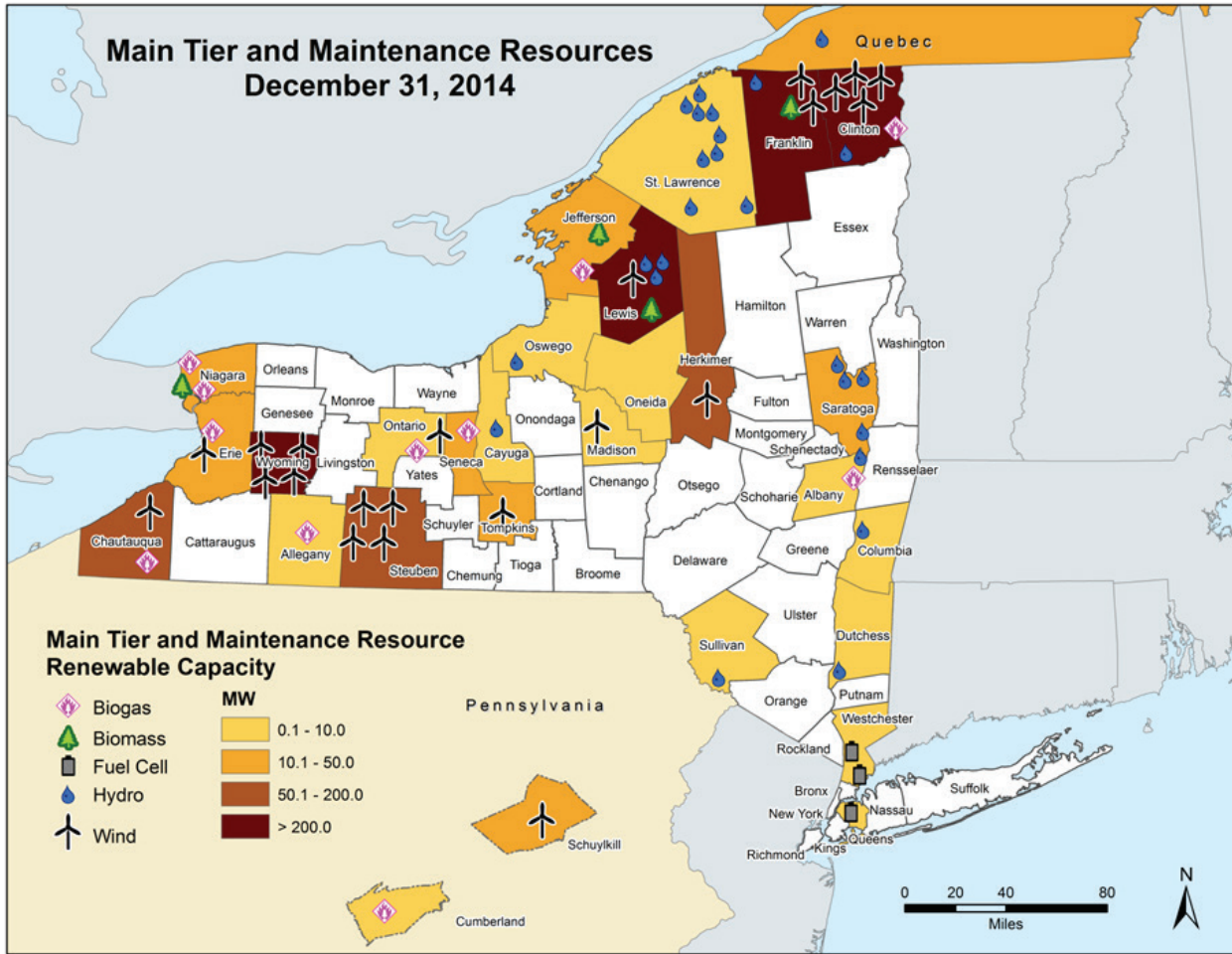
cells, and biomass (direct and co-fired) facilities. As of December 31, 2014, 56 projects representing approximately 1,854 MW are operating, with the remaining nine projects representing approximately 181 MW and expected to be in operation by July 31, 2017. Table 2 provides further details on the status of Main Tier projects.

The Main Tier facilities with active RPS contracts are owned by or affiliated with 38 different entities. Figure 2 identifies the location of each Main Tier and Maintenance Resource facility either under contract or having a pending contract with NYSERDA. Appendix C provides additional details about each Main Tier and Maintenance Resource facility currently participating in the RPS.

Table 2. Project Development Status For Active Main Tier Projects

	MW Operating	MW in Development/Construction	Total MW	Number Operating	Number in Development/Construction	Total Number
Wind	1,672.9	178.0	1,850.9	19	4	23
Hydroelectric	51.6	0	51.6	25	0	25
Biomass	69.3	0	69.3	2	0	2
Biogas	60.1	2.2	62.3	10	2	12
Fuel Cell	0	1.3	1.3	0	3	3
Total	1,853.9	181.4	2,035.3	56	9	65

Figure 2. RPS Main Tier and Maintenance Resources by County



Main Tier Weighted Average Award Price Trends

The eighth solicitation (RFP 2554) yielded the highest weighted average price per MWh (\$34.95) whereas the third solicitation resulted in the lowest (\$14.75). Figure 3 illustrates that average contract award prices for the second (RFP 1037) through the sixth (RFP 2226) Main Tier solicitation were lower than the first Main Tier solicitation (RFP 916). Prices for the seventh (RFP 2389) and eighth (RFP 2554) trended higher, despite increased funding commitments.

The weighted average award price of \$22.96 in the ninth Main Tier solicitation reflects the bid price as awarded over a 20 year contract term, which is double the maximum contract length that was awarded in the first through eighth Main Tier solicitations. Therefore, care should be taken in comparing the award prices across multiple solicitations.

New York Wind Power Capacity Additions

More than 16 MW of wind power capacity associated with the Main Tier RPS program entered commercial operation during 2014. The cumulative installed wind capacity in New York State through the end of 2014 is approximately 1,750 MW, which is over 36 times the capacity that existed in New York State prior to having an RPS program. This result ranks New York State in 12th place in the United States in installed wind power capacity.³⁴ Figure 4 shows the wind power capacity additions to New York State by year.

Figure 3. Main Tier Solicitation Timeline and RPS Attribute Price Trends

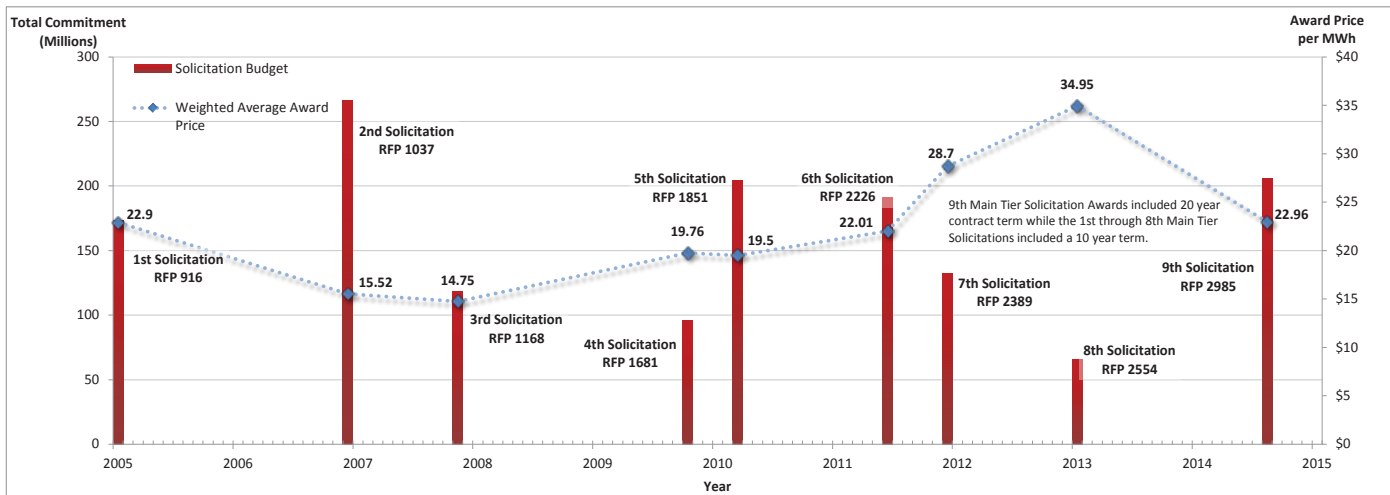
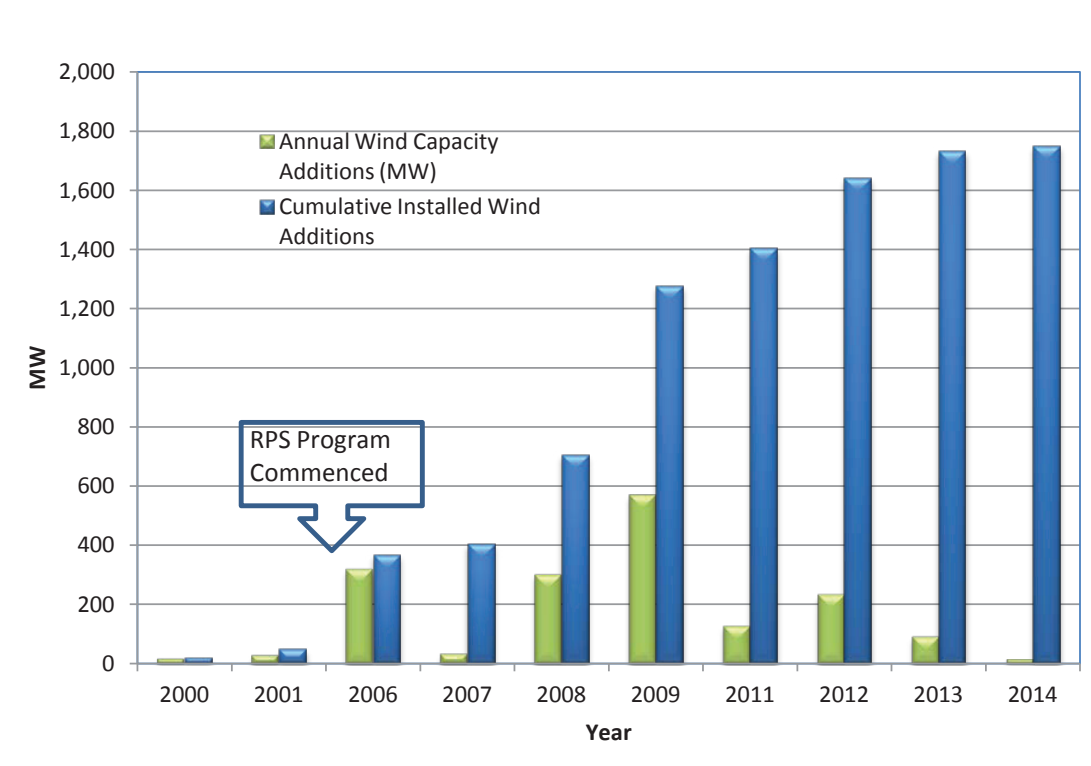


Figure 4. New York State Wind Power Capacity Additions (in MW)



Main Tier Economic and Environmental Impacts

In its September 2004 Order, the Commission identified economic benefits to New York State as one of the formal objectives of the RPS Program. Progress in the program through December 31, 2014, in meeting the RPS targets has yielded, and is expected to yield, significant economic benefits to the State of New York and its associated locales. Economic benefits accrue from the planning, development, construction, and operation of renewable energy facilities. These economic benefits come in the form of long and short term jobs, property tax or payment-in-lieu of tax benefits to local governments and school districts, biomass fuel purchases, as well as from lease and/or royalty payments to landowners.

A study conducted as part of the 2013 RPS program evaluation analyzed the verified direct investments in New York State associated with a subset of 18 Main Tier and Maintenance Resource RPS contracts, and estimated direct investments associated with the remaining projects with current Main Tier contracts as of December 31, 2012.³⁵ The resulting data was then used to project New York State-specific direct investments attributable to all current RPS projects.

This analysis only considered the direct impacts of the portfolio of Main Tier RPS contracts as of December 31, 2012, without consideration of multiplier or induced effects, or net impacts. These investments were then compared with the value or cost of RPS contracts for a direct benefit-cost analysis of current projects in the Main Tier RPS program.

Key findings of this analysis included:

- Approximately \$2.7 billion of direct investments in New York State are expected over the projected life of the portfolio of Main Tier RPS facilities as of December 31, 2012, as measured in jobs, payments to public entities, in-state purchases and land leases.
- For every \$1 spent on the acquisition of RPS Attributes for the portfolio of Main Tier RPS projects under contract with NYSERDA as of December 31, 2012, New York State is expected to capture on average approximately \$3 in direct investments associated with project spending over project lifetime on a Net Present Value basis.³⁶
- Overall, for every 1 MWh of renewable energy that is generated under the RPS, approximately \$27 is directly invested in New York State by RPS facilities.

The new renewable generation capacity from contracts awarded under the nine completed Main Tier competitive solicitations and future solicitations will provide environmental benefits to New York State. The environmental benefits of having electricity generated by the RPS facilities from 2006 through 2014, as opposed to the State's "system-mix," amounts to approximately 6,700 tons of nitrogen oxides; 12,200 tons of sulfur dioxides; and 6.4 million tons of carbon dioxide in reduced emissions over this time period.³⁷

Customer-Sited Tier

NYSERDA, in consultation with the DPS, issued the 2012-2015 Customer-Sited Tier Operating Plan on June 29, 2012, which sets forth general program specifications, capacity and generation targets, and associated budgets.³⁸ The targets and associated budgets were significantly increased in 2012 primarily as a result of the NY-Sun initiative.

In a May 22, 2013 Order, the Commission authorized NYSERDA to reallocate \$29,032,535 in unencumbered RPS Customer-Sited Tier 2012 program funds to 2013 program budgets.³⁹ Additionally, in the December 19, 2013 Order, the Commission authorized NYSERDA to reallocate \$108 million of unencumbered Main Tier funds to support the Customer-Sited Tier solar electric programs in 2014 and 2015. The Commission also granted NYSERDA, in consultation with DPS, flexibility in allocating solar electric funds between the Standard Offer PV and Competitive PV programs based on market conditions and other factors.⁴⁰

In July 2014, the Commission authorized NYSERDA to reallocate unencumbered RPS Customer-Sited Tier 2013 program funds to 2014 budgets as follows: \$11,600,000 specifically to the Anaerobic Digester Gas-to-Electricity Program (ADG Program) and \$9,225,594 to be placed in a newly-created Customer-Sited Tier General Funding Pool.

Table 3 shows the Customer-Sited Tier Funding Budget by program through 2015 as of December 31, 2014. Budgets provided in Table 3 are for program costs only. Costs for program administration and evaluation were provided for separately in the April 24, 2012 Order.⁴¹

These budgets are through 2015 as established originally in the 2012 Customer-Sited Tier operating plan and adjusted to reflect subsequent reallocations made in 2013 and 2014 resulting from Commission orders.

Table 3. Customer-Sited Tier Funding Budget by Program (Millions of Dollars)⁴²

Customer-Sited Tier Program	Total
Standard Offer PV	\$343.3
Competitive PV	\$258.3
Fuel Cells	\$18.0
Anaerobic Digester Biogas	\$70.9
On-Site Wind	\$17.0
Solar Thermal	\$14.1
General Pool	\$9.2
Total	\$730.8

The 2015 goal established for the Customer-Sited Tier program funding under the 2012 Customer-Sited Tier Operating Plan was estimated at 510.8 MW and 878,089 MWh, respectively as outlined in Table 4.⁴³ According to the 2012 Customer-Sited Tier Operating Plan, the numbers illustrate expectations and are not intended as hard targets.⁴⁴ Actual rates of achievement are expected to vary somewhat from these numbers.

Table 4. Customer-Sited Tier Expected Results by 2015 (Under the 2012 Customer-Sited Tier Operational Plan)

Customer-Sited Tier Program	Capacity in MW Encumbered by 12/31/15	Annual Generation in MWh Encumbered by 12/31/15
Standard Offer PV	157.0	184,279
Competitive PV	252.7	300,381
Fuel Cells	8.6	66,075
Anaerobic Digester Biogas	31.9	225,490
On-Site Wind	25.5	61,910
Solar Thermal	35.1	39,954
Program Total	510.8	878,089

Progress toward program targets, measured in terms of capacity and energy associated with contract commitments and pending contracts as of December 31, 2014 are presented in Table 5. General descriptions and 2014 updates for the Customer-Sited Tier programs are presented in the following sections.

Table 5. RPS-Funded Customer-Sited Tier Actual and Expected Installed Capacity (MW) and Energy Production (MWh) as of December 31, 2014

		Total MWh progress	MW
SolarPV	Accepted Applications but not yet Contracted	11,469	9.77
	Capacity Under Contract but not yet Installed	128,122	109.15
	Cumulative Capacity Installed	183,635	156.44
	Total	323,226	275.36
Competitive PV	Accepted Applications but not yet Contracted	235,046	200.24
	Capacity Under Contract but not yet Installed	90,402	89.47
	Cumulative Capacity Installed	56,891	54.76
	Total	382,339	344.47
Fuel Cells	Accepted Applications but not yet Contracted	2,521	0.32
	Capacity Under Contract but not yet Installed	2,187	0.29
	Cumulative Capacity Installed	28,305	3.59
	Total	33,013	4.19
Anaerobic Digester Biogas	Accepted Applications but not yet Contracted	4,159	0.63
	Capacity Under Contract but not yet Installed	17,982	2.74
	Cumulative Capacity Installed	64,503	8.46
	Total	86,644	11.83
On-Site Wind	Accepted Applications but not yet Contracted	5,324	1.99
	Capacity Under Contract but not yet Installed	2,264	1.46
	Cumulative Capacity Installed	5,229	2.90
	Total	12,817	6.34
Solar Thermal	Accepted Applications but not yet Contracted	797	0.68
	Capacity Under Contract but not yet Installed	829	0.71
	Cumulative Capacity Installed	4,214	3.59
	Total	5,840	4.97
Grand Total		843,878	647.16



Skidmore College, Saratoga County, NY

Standard Offer PV Program

The Standard Offer PV Program was initiated in March 2008 to replace the similar System Benefits Charge (SBC)-funded solar electric incentive program, and was designed to provide incentives to encourage the development of a sustainable solar electric market in New York State. The program incentivized both residential systems up to 25 kW and commercial systems up to 200 kW. The program design allowed for adjustments to incentive levels in response to consumer demand and other market factors in a way that will avoid program starts and stops and enabled solar electric installation businesses to continue to grow in New York State. An electric energy efficiency assessment for homes and businesses receiving solar electric systems, performed by the solar installation company, became a requirement for participating in the program.

Significant changes were approved for the program in 2014. In April 2014, the Public Service Commission issued an Order authorizing funding of the solar electric MW Block Programs, in response to NYSERDA's September 2013 petition requesting funding through 2023 to allocate funds to support, implement, and administer the MW Block programs.

The MW Block approach allocates MW targets to specific regions of the State and sectors within those regions; breaks those targets into blocks to which incentives are assigned; awards incentives to applications based on the block in effect at the time of application submission; and then moves to the next block and incentive level when a MW Block is fully subscribed. Once all of the blocks within a region/sector are fully subscribed, an incentive is no longer offered in that region/sector.

The MW Block approach provides allocations based on historical demand, market penetration, installed cost per watt, and equity on a regional basis. The approach provides the solar electric industry and their customers with certainty and transparency regarding incentive levels and accounts for regional market differences.



Cornell Snyder Road, Tompkins County, NY

The regional MW Blocks established for the program are:

- The region served by Con Edison (Con Edison).
- The region served by PSEG Long Island as the LIPA System Operator (Long Island).⁴⁵
- The balance of the State (Upstate).

Sectors established for the program are:⁴⁶

- Residential systems (up to 25 kW in nameplate capacity).
- Small nonresidential systems (up to 200kW in nameplate capacity).

Incentives for NYPA customers⁴⁷ are based on their sector and the region in which they are located. Ideally, the block structures will not require modification over the course of the program. However, NYSERDA will monitor market conditions and MW Block subscription and will make adjustments to the MW Block design, if necessary. Stakeholders will be notified at least one full block in advance of any planned changes. Visit nyserdera.ny.gov/pv-dashboard for information on the MW Block design, including real-time data on the current incentive levels.

During the first half of 2014, NYSERDA staff worked with stakeholders and DPS staff to design the MW Block structure for the residential and small commercial sectors. The MW Block program, called the NY-Sun Incentive Program, was launched in August 2014, although all applications received into the program starting January 1, 2014, were rolled into the first block (relevant region and sector). The first block in each sector and region was sized to accommodate the large number of applications associated with the first part of 2014, and still remain open for a reasonable time after program launch.

The current Program Opportunity Notice (PON 2112) opened on July 1, 2010, and will remain in effect through December 31, 2023, or until funds are expended, whichever occurs first. During 2014, program staff continued to refine the Standard Offer PV application and contracting process, with the goal of further reducing the project application review and approval time, by for example, removing redundant information and combining forms. The cumulative installed capacity through 2014 totaled 156.44 MW. Project applications representing an additional 118.92 MW of capacity have either been contracted but not installed, or received but not contracted. Demand in the program is expected to remain strong, and it is anticipated that both number of applications and submitted MWs will increase in 2015.

In 2014, the Standard Offer PV program experienced significant growth across a number of metrics. The number of project applications received in 2014 (10,499) more than doubled the number received in 2013 (4,436). Figure 5 compares the annual project application activity in 2012, 2013, and 2014.

The Standard Offer PV program continued to see a modest shift in the market sector distribution of project applications in 2014. In 2013, the project application breakdown by market sector was 83% residential and 17% nonresidential. In 2014, the distribution changed slightly to 92% residential and 8% nonresidential. Figure 6 depicts this comparison, and Figure 7 shows overall capacity installed by year. However, nonresidential projects still encompass a sizable percentage of the program’s MWs, with 44% of the MW associated with 2014 applications representing this sector

Figure 5. RPS-Funded Standard Offer PV Annual Project Application Activity

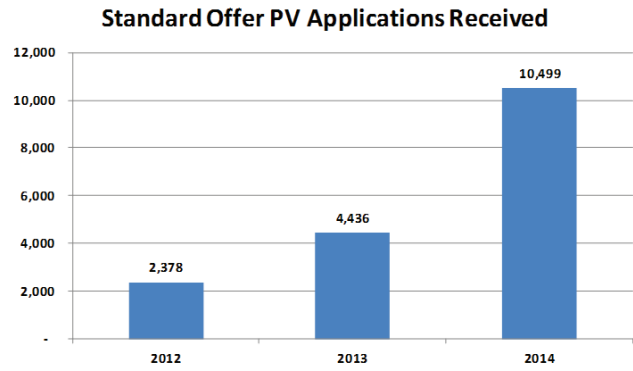


Figure 6. RPS-Funded Standard Offer PV Applications by Market Sector Comparison

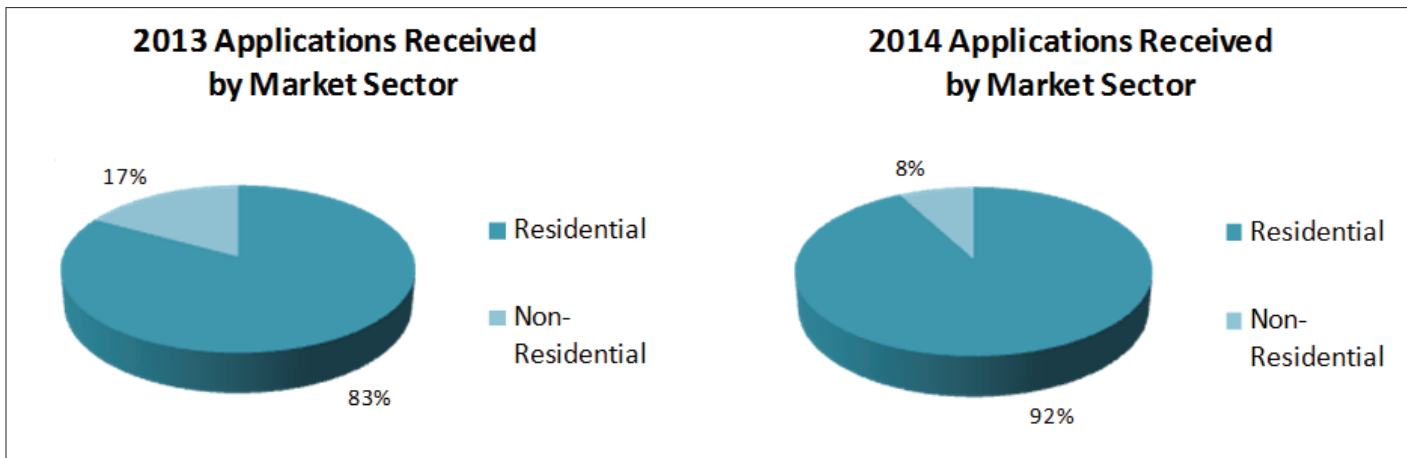
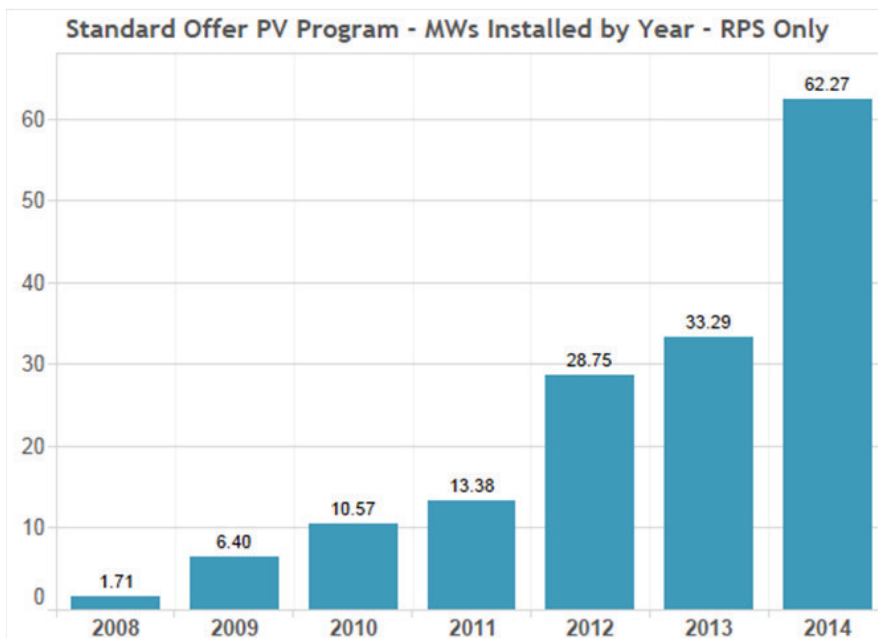


Figure 7. RPS-Funded Standard Offer PV Megawatts Installed by Year



Competitive PV Program

NY-Sun Commercial/Industrial (>200 kW) Program

2014 also marked a transition year for this program. It includes the final competitive solicitation (PON 2956) and the development and stakeholder process needed to support the launch of the MW Block structure for the NY-Sun Commercial/Industrial (>200 kW) program. The MW Block structure builds on and incorporates lessons-learned in the success of the RPS Customer-Sited Tier Competitive PV Program for large-scale projects by providing a long-term commitment and open application process to support a sustained solar electric market in New York State.

This work fosters a competitive solar electric market, which leads to improved project economics and system benefits, with expanded customer choice. Since the Competitive PV Program was launched, five competitive solicitations have been released. Projects awarded under PON 2956 represent a continued downward trend in project costs, percentage of project costs supported by incentives, and incentive dollars per watt. For instance, the statewide aggregate incentive for these large solar projects has dropped from \$0.75/W in 2013 to \$0.46/W in 2014. At the same time, the scale of market activity has stepped up, with growing activity in the region served by Con Edison and robust competition in the rest-of-state region.

In an Order issued and effective April 24, 2014, the Public Service Commission authorized NYSERDA to implement the NY-Sun Incentive Program and added funds to the existing solar electric budgets, across residential/small commercial and commercial/industrial (>200kW), reflecting a continuation of the existing annual budget for 2016-2023. The Order also required that NYSERDA preserve a balance of the funding for projects in NYISO Zones G and H (\$5 million /year) and Zones I and J (\$25 million/year), consistent with previous Geographic Balance Orders.

The MW Block structure's long term framework of declining incentives is intended to provide reasonable certainty to developers and to ratepayers. Over time, it is expected to drive to a sustained and large-scale market where projects provide value to the grid and choices for customers that offer grid parity without incentives. In aggregate, the plan is to install 1.5 GW of new solar electric capacity, with additional installed capacity as an outgrowth of the incentives combined with other complementary initiatives, including balance of system, K-Solar, and Community Solar.

The design of the Commercial/Industrial MW Block platform has been based on a combination of Competitive PV Program history (e.g., installation and incentives cost trends), program staff recommendations and consultant models and forecasts, and an active stakeholder process. The design effort also included discussion and review



Whole Foods Market, King County, NY

with regulators, utilities, and NYSERDA staff in various programs. The MW Block structure was shared with stakeholders in draft form in December 2014 to allow developers time to establish customer relationships, projects details, and interconnection applications that are required as part of the project application package. Registration for contractors wishing to participate in the >200 kW Commercial and Industrial program began in February 2015. At the time of this report, the >200 kW Commercial and Industrial program does not have a firm opening date (the date when the program will begin accepting project applications). In December 2014 the PSC issued an Order affecting remote net metering. Since that time the Public Service Commission (PSC) has been working toward its stated policy goals while minimizing market disruption. Anticipated potential Commission action on these issues could impact the solar market. Therefore, NYSERDA will be delaying the launch of the >200 kW MW Block program until after a PSC Order on the net metering issues. NYSERDA remains committed to launching the MW Block program and accepting project applications as soon as possible.

The MW Block structure allocates MW targets to specific regions of the State; breaks those MW targets into blocks to which incentives are assigned; awards incentives to project applications based on the block in effect at the time of project application submission; and then moves to the next block with a lower incentive level when the MW Block in that region is fully subscribed. To maintain budgets and avoid oversubscription in any one MW Block, if a submitted incentive application exceeds the remaining capacity in a block, then the block will be closed and the incentive application and excess capacity will be moved to the next available block. Once all of the blocks within a region are fully subscribed, an incentive will no longer be offered in that region.

Incentive payments are provided in four increments: one payment at time of commercial operation (upon demonstration of meter-data transfer, Investor-Owned Utility [IOU] approval of interconnection, and field verification) with the remaining three payments provided over three years on a performance basis (metered annual kWh output). In addition to the commercial operation and performance-based incentives previously described, the MW Block structure includes additional incentives for project installations in IOU-identified strategic locations as well as projects that integrate energy storage or comprehensive energy efficiency. Funding for strategic location and integration incentives are offered on a first-come, first-served basis until funds are exhausted or IOUs implement PSC-approved Reforming the Energy Vision tariffs that supplant these incentives with price signals embedded in electric rates.

A predictable and transparent incentive phase-out schedule will be provided via a publicly accessible MW Block Dashboard. (<http://ny-sun.ny.gov/>). The Dashboard shows real-time status in the current blocks and provides incentive levels and MW targets for subsequent blocks. An incentive estimator will also be made available to provide developers and customers with information on projected total incentive and cash flows for the three-year performance period.

Figure 8 illustrates the trends in total project cost per watt and aggregate base incentives awarded per watt over time. A table of the projects awarded under the Competitive PV Program that have been installed from 2011 through 2014, listing the solar electric developer companies that served as the prime applicant, the host sites, and additional details about each facility currently participating in the RPS is available in Appendix D

Figure 8. RPS-Funded Total Project Cost and Aggregate Base Incentives Awarded per Watt

Total Cost per Watt for Competitive PV Program

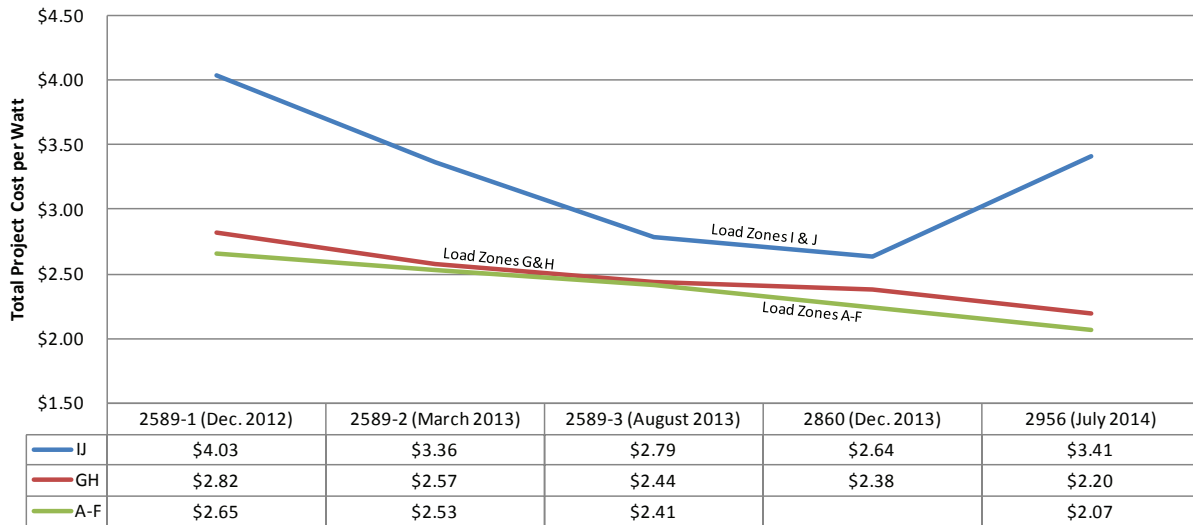
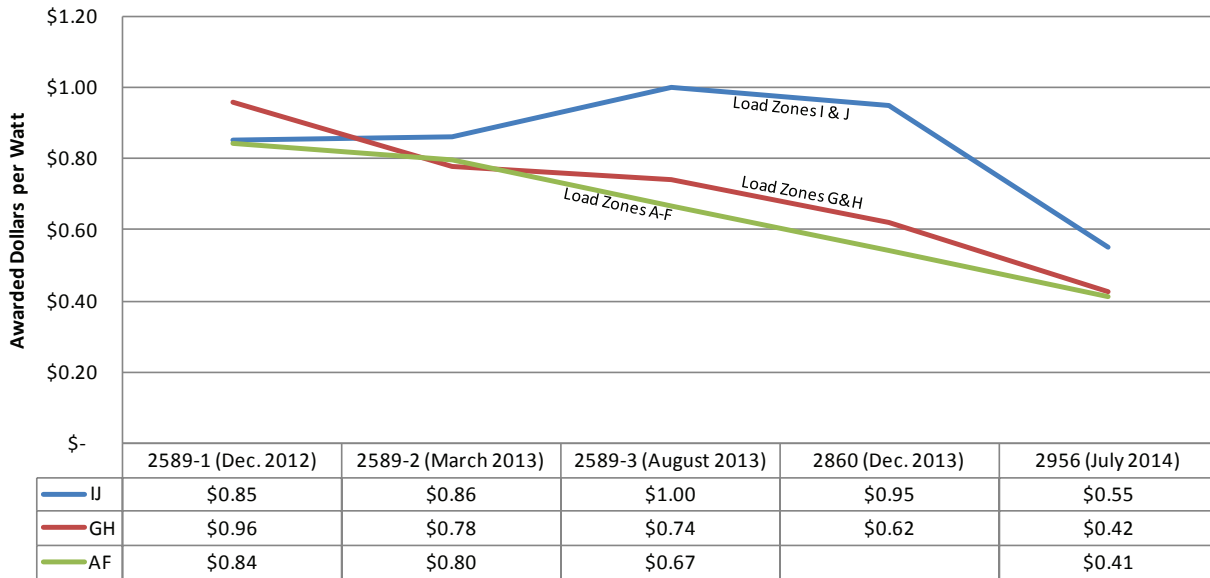


Figure 8. continued

Aggregate Base Incentives Awarded Dollars per Watt for Competitive PV Program



Fuel Cell Program

The Fuel Cell Program was released in December 2007. Incentives are provided in the form of capacity buy-down and performance-based payments for commercially mature fuel cell modules. During part of this time, experimental fuel cells were supported through the System Benefits Charge programs. Program payments are differentiated by the scale and type of application of fuel cell system. There are only a few original equipment manufacturers (OEMs) of large fuel cell modules, and their business practices dictate the uptake of large fuel cells in the marketplace. The projects active in NYSERDA's program include systems from both Doosan Fuel Cell America, Inc., which purchased Clear Edge Power in 2014, and Bloom Energy.

Seven large fuel cell systems are currently installed at customer sites comprising 3.6 MW of installed capacity and 28,305 MWh of annual electricity production. Two applications are in the contracting phase, which comprise 0.3 MW of capacity with an expected annual output of 2,521 MWh.

The Fuel Cell Program also supports small fuel cell systems when installed for continuous duty operation. However, there were no applications for such projects in 2014.

Anaerobic Digester Gas-to-Electricity Program

The Anaerobic Digester Gas-to-Electricity Program (ADG) has a relatively high capacity factor. This technology is targeted to deliver about one-quarter of all megawatt-hours of renewable generation pursued by the collection of all Customer-Sited Tier programs. The first solicitation (PON 1146) was released in August 2007 and ran through September 2010. Thirty-three projects applied, of which 18 are now operational with a total capacity of 5.3 MW and generate more than 42,000 MWh per year.

Subsequently, NYSERDA offered funding for the ADG program via PON 2138, which opened in late November 2010 and closed December 31, 2010. During this brief time, 19 applications, representing 8 MW of new generating capacity and requesting \$18 million of incentives were received. Three projects have been built with total capacity of 1.7 MW and generate more than 12,000 MWh per year. Sixteen projects have been withdrawn by the applicants or had their award rescinded by NYSERDA for lack of timely progress.

In 2011, NYSERDA engaged stakeholders and DPS staff to explore implications for revising the ADG Program's payment structure and other details. The ADG Program was re-issued in December 2011 as PON 2276. It was open until mid-December 2012 with a similar structure that incorporated nuanced revisions but was not radically different from previous PONs. It provided capacity and performance incentives for ADG systems installed at farms treating manure and other agricultural waste products, wastewater treatment plants (WWTPs), and businesses that treat organic wastes. During the 12 months that PON 2276 was open, two applications were received. Both projects are now operational with total capacity of 0.9 MW and generate 6,000 MWh per year.

In view of the limited response to PON 2276, a revised solicitation (PON 2684) was developed to replace it in mid-December 2012. Market feedback on the program sought to guide this revision was gained through numerous interactions with the marketplace stakeholders, including the March 2012, three-day conference in Syracuse, NY, entitled "Got Manure? Enhancing Environmental and Economic Sustainability." NYSERDA co-hosted the 300-attendee conference with Cornell Pro-Dairy, EPA AgStar, and United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Various options for improving the program were considered as part of the preparation for the Governor Cuomo's first Yogurt Summit in 2012. With the impetus of the Summit and some bridge funding available from the NYPA, NYSERDA secured approval to increase the incentive cap from \$1 million to \$2 million per project.

PON 2684 also established a menu-based approach for computing incentives, offering higher incentives for expensive styles of digester construction/ refurbishment. Bonus incentives were awarded to projects that include high-quality gas clean-up equipment, black-start capability for generator operation during a utility grid

outage, design and operation with substantial amounts of food wastes, and other provisions. Enhanced incentives were also being provided for interconnection costs and to offset operating costs over a 10-year period so as to provide an adequate cash flow to ensure proper long-term operation and maintenance. To encourage quick responses, PON 2684 was only open from mid-December 2012 through the end of January 2013. PON 2684 received 16 applications. Two applications were deemed ineligible, but the remaining 14 applications represented a high level of interest totaling 6.4 MW. At the end of 2014, one project is operational with a capacity of 0.4 MW and generates 2,667 MWh per year. Two additional projects are under construction.

Proposals received in response to PON 2684 continued to show the pattern typical of the previous PONs.

About half of the proposals resulted in installations that typically took a few years, and the other half of the proposed projects stalled and did not proceed. In some of the stalled cases, it appears that the applicants had not completely determined if the ADG system they proposed was what they wanted or would be feasible for their sites. In other cases, project pursuit ceased when the refined forecasts of the costs for interconnection were found to be higher than previously anticipated. To deal with such issues, PON 2828 was developed and will require applicants to have proceeded with project development to the point where their application for interconnection has received preliminary review by their utility. Particular emphasis was placed on hydrogen sulfide removal systems for new and existing systems to improve system performance. At the end of 2014, 14 projects totaling approximately 2.97 MW in additional capacity had applied for funding under the program. Of those applications, six existing projects requested funding for the installation of a hydrogen sulfide reduction process.

In 2013, in an effort supported by NYPA with assistance from NYSERDA, an ADG Ombudsman Technical Assistance Contractor began offering ADG assistance services to help prospective farms consider their options for pursuit of ADG-to-electricity systems. NYSERDA management has approved funding for up to three additional years of this ADG development assistance. In 2014, NYSERDA issued an RFP to fund a similar role called the Anaerobic Digester Assistance Initiative and received three proposals.



Buffalo BioEnergy Anaerobic Digester Gas, Erie County, NY

On-Site Wind Program

The first solicitation of the On-Site Wind Program (PON 1098) was released in April 2007 and closed in December 2009 after all funds had been committed, and then reissued using \$300,000 in bridge funding from April 2010 through June 2010. Through PON 1098, 56 projects were awarded a total of more than \$1.6 million. All of the projects are currently installed with a total of 0.55 MW in capacity and 487 MWh in annual energy output.

Following stakeholder input, a revised solicitation was issued as PON 2097 at the beginning of October 2010 with a closing date of June 30, 2011, which was later extended to December 31, 2011. The major revision was to change the incentive structure from nameplate rating of the wind turbine to computer-model-predicted output. Through PON 2097, 65 projects were awarded a total of over \$3.8 million. All of the projects are currently installed with a capacity of 1.86 MW and generate 3,933 MWh per year.

In September 2011, Commission Order⁴⁸ raised the maximum capacity of on-site wind turbines from 600 kW to 2 MW. NYSERDA engaged with stakeholders to explore how best to support larger turbines relative to the new program cap, while still ensuring that funds would be available to the smaller turbines. As a result, PON 2439, issued in March 2012 with a closing date of December 31, 2015, included a split pool of funding: a dedicated “set-aside” pool for small turbines and a “general” pool for turbines with capacity up to 2 MW. PON 2439 first provided an incentive up to \$400,000 per host site, and then increased it up to \$1 million per host site pursuant to the February 2013 Commission Order.⁴⁹ Through PON 2439, 80 projects applied, of which 75 projects have been approved for a total of more than \$5.5 million. These projects represent 3.92 MW in capacity and 8,389 MWh in annual energy output. At the end of 2014, 37 projects are installed representing 0.48 MW in capacity and 801 MWh in annual energy output. For PON 2439, over 25% of the applications were for turbines with a rated capacity of greater than 10 kW. By comparison, for PON 1098, less than 9% of the applications were for these larger turbines.

NYSERDA helped create the Interstate Turbine Advisory Council (ITAC), which was established under the Clean Energy States Alliance in 2011. ITAC has created the Unified List of Wind Turbines, which is used by multiple state incentive programs. For turbines within the size range covered by the Unified List (currently 100 kW and smaller), only those turbines on the List are approved to receive funds from the program. PON 2439 was revised to reference the ITAC Unified List as the listing for program eligibility for turbines within that size range. The program won a prestigious State Leadership in Clean Energy award in 2012 from the Clean Energy States Alliance in recognition of it being an exemplary program.

Solar Thermal Program

The Solar Thermal Program, launched in December 2010, is an open enrollment program that provides incentives for solar hot water systems that displace electrically heated domestic hot water. The program is available for both residential and nonresidential systems. The program includes a requirement that an electric energy efficiency assessment be conducted as a component of the program. The program incentivizes residential systems up to \$4,000 and nonresidential systems up to \$25,000. Only electrical energy savings associated with solar hot water heating will contribute to program targets.

Funding for the Solar Thermal program is available under PON 2149, and remains available through December 31, 2015 or until funds are expended, whichever occurs first. Since the program’s launch through December 31, 2014, NYSERDA has received 133 installer applications and 1,438 project applications for all funding sources. The project applications received in 2014 for RPS funding represent incentive commitments of \$2,869,168, which is 67% of the overall 2014 program’s budget of \$4.3 million.

During 2014, program staff refined the Solar Thermal application and contracting process with the goal of further reducing the project application review and approval time.

In October 2014, a revision to PON 2149 was released. In addition to new forms, the revision included a new credential path that allows journeymen who have completed an approved New York State Department of Labor Apprenticeship Program through the United Association of Plumbers, Fitters, Welders, and HVAC Service Techs Apprentice Program including UA-approved solar thermal training the ability to apply and become a NYSERDA Eligible Installer/Contractor. NYSERDA continued to leverage the 2013 marketing campaign activities in 2014.

A large installation project of solar thermal technology under PON 2149 began in 2014. Burdeck Street Netzero Apartment project will install a total of 27 solar hot water systems at NetZero Village in Rotterdam, NY. Twelve of these systems will be installed during the 2014-2015 Phase 1 construction period. Each of these systems will displace approximately 16,503 kWh.

Figure 9, Figure 10, Figure 11, Figure 12, and Figure 13 summarize the installation progress in the Customer-Sited Tier through December 31, 2014.

As described in the 2010 Customer-Sited Tier Operating Plan, the budget and associated funding authorized by the Commission for program administration did not specifically account for necessary expenses for QA/QC associated with implementing Customer-Sited Tier programs, inflationary increases, accurate costs assessments under Public Authorities Law Section 2975, nor for marketing and outreach that might be necessary to deliver new or expanded programs. As NYSERDA provided in the Operating Plan, QA/QC expenses are necessary to ensure that the Customer-Sited Tier program supports systems that are safe, reliable, and effective.

In accordance with the 2010 Customer-Sited Tier Plan, and as a part of a January 2011 filing made in accordance with the Commission’s April Order, NYSERDA submitted for Commission approval, a petition requesting adjustments to program budgets to address the above-noted matters.⁵¹

In an April 2014 Order, the Commission authorized NYSERDA to allocate \$960.6 million to support the Customer-Sited Tier solar electric programs through 2023 as part of the NY-Sun initiative, which supports RPS goals. Beginning in 2016, \$829.1 million in RPS funds are being allocated to the NY-Sun initiative. The remainder of the funds are anticipated to come from the Clean Energy Fund authorized collections. NYSERDA was also authorized to expend up to \$13 million of the program funds to support participation by low to moderate income customers in the solar electric program.

The Commission authorized NYSERDA to reallocate unencumbered Customer-Sited Tier 2013 program funds to 2014 Program Budgets as follows: \$11.6 million, specifically,

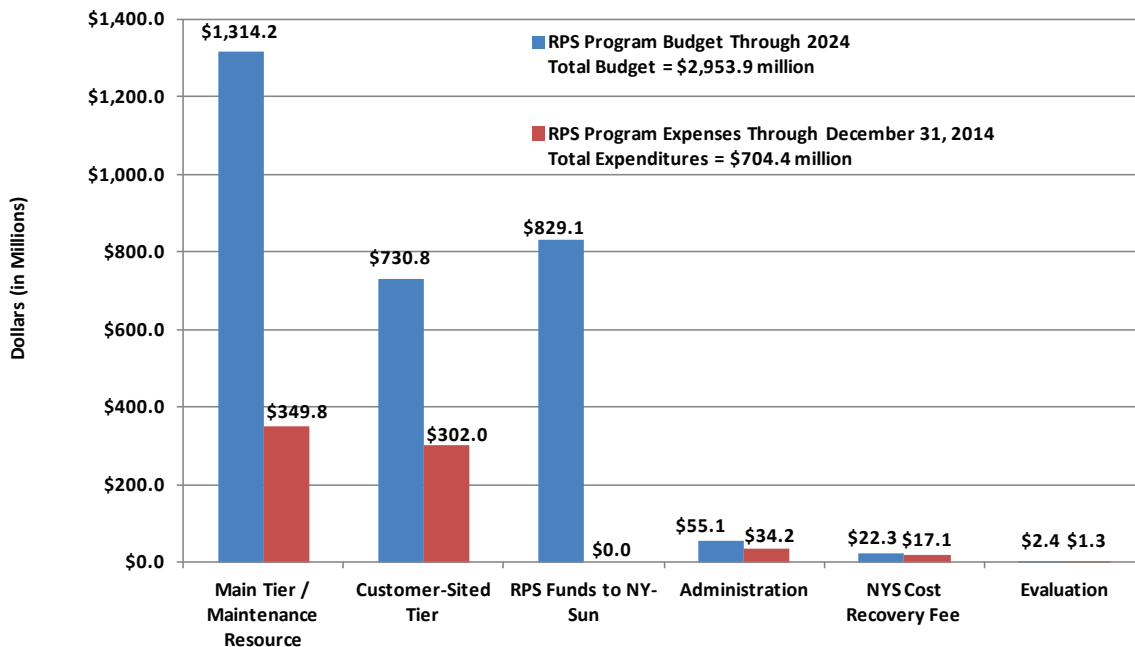
to the Anaerobic Digester Gas-to-Electricity Program and \$9.2 million to be placed in a newly created CST General Funding Pool.

The major categories and amounts of funding by each category, based on Commission decisions rendered through the close of 2014 are presented in Figure 14.⁵²

Funding Commitments and Expenses

As of December 31, 2014, \$1.8 billion, or roughly 61% of the total approved RPS funding, has been expended, committed or is pending for achieving NYSERDA’s 2015 targets (inclusive of administration and New York State fees). This amount includes \$1,128.4 million for program resource acquisition costs in the Main Tier, inclusive of Maintenance resource obligations and \$621.7 million for the Customer-Sited Tier. Appendix E presents the program’s detailed budgets, expenditures, and funding commitments from contracts and/or pending contracts and applications through December 31, 2014. NYSERDA’s actual expenses through December 31, 2014, have totaled \$704.4 million, or approximately 24% of the total RPS budget. The large majority of these expenses, \$651.8 million have resulted from payments for Main Tier and Maintenance resource contracts as well as Customer-Sited Tier incentives. Figure 14 illustrates NYSERDA’s major expenses through December 31, 2014. Appendix F provides actual program collections and costs as well as projected future revenues and program costs.

Figure 14. RPS Program Budget Through 2024 and Program Expenses Through December 31, 2014 (in Millions)



Endnotes

- ¹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Establishing New RPS Goal and Resolving Main Tier Issues;” issued and effective January 8, 2010.
- ² Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS;” issued and effective April 2, 2010.
- ³ PSEG Long Island operates the Long Island Power Authority’s transmission and distribution system under a 12-year contract. PSEG Long Island is a subsidiary of Public Service Enterprise Group Incorporated (NYSE:PEG), a publicly traded diversified energy company with annual revenues of \$11 billion.
- ⁴ Progress is defined as energy production and installed capacity associated with funding that is “encumbered/contracted” or “pending contracting” as of December 31, 2014.
- ⁵ The 589 MW figure includes all solar electric projects currently installed or under development as of December 31, 2014 from all funding sources, not just RPS-funded projects. The figure also includes solar electric capacity installed by PSEG Long Island through December 2014. The figure does not include projects that are under development by PSEG Long Island.
- ⁶ New York State. 2002. State Energy Plan. June, page 1–1.
- ⁷ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Regarding Retail Renewable Portfolio Standard;” issued and effective September 24, 2004.
- ⁸ RPS Attributes include any and all reductions in harmful pollutants and emissions, such as carbon dioxide and oxides of sulfur and nitrogen. RPS Attributes are similar to Renewable Energy Certificates that are commonly used in other RPS programs to catalog and recognize environmental attributes of generation.
- ⁹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Approving Implementation Plan, Adopting Clarifications, and Modifying Environmental Disclosure Program,” Appendix B, issued and effective April 14, 2005; and “Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS Program;” issued and effective April 2, 2010.
- ¹⁰ As a result of a Commission decision, customer-sited generators can choose to compete for long-term contracts via the Main Tier program component.
- ¹¹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Regarding Retail Renewable Portfolio Standard;” issued and effective September 24, 2004.
- ¹² Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS;” issued and effective April 2, 2010.
- ¹³ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Approving Request for Funding as a Maintenance Resource;” issued and effective August 20, 2014 Order .
- ¹⁴ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Approving Request for Funding as a Maintenance Resource for a second maintenance resource contract;” issued and effective November 19, 2014.
- ¹⁵ The Maintenance Resource contract with Battenkill Hydro Associates was not executed in 2014.
- ¹⁶ NYSERDA. 2013. “Customer-Sited Tier Program Market Evaluation, Program Expectations and Funding Considerations,” September 6. <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/1008ED2F934294AE85257687006F38BD?OpenDocument>
- ¹⁷ NYSERDA. 2013. “NYSERDA Renewable Portfolio Standard Customer-Sited Tier Impact Evaluation Report,” April 25. <http://www.nyserdadps.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2013ContractorReports/2013-Cadmus-RPS-Solar-PV.pdf>
- ¹⁸ The petition also included a request for the flexibility, in consultation with DPS Staff, to establish and to periodically adjust the allocation of funds between the Standard Offer and Competitive PV Programs.
- ¹⁹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, is an Operating Plan Addendum to supplement the Renewable Portfolio Standard Customer-Sited Tier Operating Plan (2012-2015), filed August 7, 2014. <http://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=123383&MatterSeq=17612>
- ²⁰ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS;” issued and effective April 2, 2010.
- ²¹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2012-2015), filed June 29, 2012. <http://www.nyserdadps.gov/-/media/Files/EDPPP/Energy-and-Environmental-Markets/RPS/RPS-Documents/NYSERDA-RPS-operating-plan.pdf>
- ²² Contractors are not obligated to serve the New York State voluntary market with any output not under contract with NYSERDA, but contractors who suspend delivery to NYSERDA are required to make sales into the New York State voluntary market.
- ²³ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Customer-Sited Tier Program through 2015 and Resolving Geographic Balance and Other Issues Pertaining the RPS Program,” issued and effective April 2, 2010.
- ²⁴ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2012-2015), filed June 29, 2012. <http://www.nyserdadps.gov/-/media/Files/EDPPP/Energy-and-Environmental-Markets/RPS/RPS-Documents/NYSERDA-RPS-operating-plan.pdf>

- ²⁵ Progress is defined as energy production and installed capacity associated with funding that is “encumbered/contracted” or “pending contracting” as of December 31, 2014.
- ²⁶ The Customer-Sited tier target was increased by more than 40% in 2012 from 625,390 MWh in 2011 to 878,089 MWh, largely as a result of the NY-Sun initiative.
- ²⁷ Progress is defined as energy production and installed capacity associated with funding that is “encumbered/contracted” or “pending contracting” as of December 31, 2014.
- ²⁸ The achievement of the targets set forth in Table 1 will be measured on the basis of energy productions associated with funding that is “encumbered/contracted” or “pending contracting” as of the end of program year 2015.
- ²⁹ Changes may arise after the announcement of solicitation awards. For example, awarded contracts may not be signed, facilities may not be built as proposed, and contractual adjustments may be instituted based on repeated underperformance or other contractual nonperformance. Contractual adjustments reflecting these inevitable circumstances occur regularly. Data presented in Appendix D and E of this report includes any adjustments that have been instituted through December 31, 2014.
- ³⁰ Percentages and number of years vary by RFP and facility type (wind, hydro, etc.).
- ³¹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Modifying Renewable Portfolio Standard Program Eligibility Requirements,” issued and effective May 22, 2013.
- ³² RFP 916 permitted contract delivery terms of less than 10 years.
- ³³ New Renewable Capacity generally refers to the Nameplate Capacity of facilities under contract in the RPS that did not exist prior to the start of the RPS program, including any portion not under contract with NYSERDA.
- ³⁴ American Wind Energy Association. 2014. “U.S. Wind Industry Fourth Quarter 2014 Market Report.” <http://awea.files.cms-plus.com/4Q2014%20AWEA%20Market%20Report%20Public%20Version.pdf>
- ³⁵ NYSERDA. 2013. “NYSERDA Renewable Portfolio Standard Main Tier 2013 Program Review, Final Report,” September 5. <http://www.nyserda.ny.gov/-/media/Files/EDPPP/Energy-and-Environmental-Markets/RPS/RPS-Documents/2013/2013-RPS-investments-NYS.pdf>
- ³⁶ Net Present Value refers to the difference between the present value of cash inflows and the present value of cash outflows. Net Present Value is used in capital budgeting to analyze the profitability of an investment or project.
- ³⁷ Emission factors are updated during the process of developing the New York State Energy Plan. Therefore, with the release of the 2014 Draft State Energy Plan emission factors changed in 2013.
- ³⁸ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2012-2015), filed June 29, 2012.
- ³⁹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Reallocation of Unencumbered 2012 Customer-Sited Tier Program Funds,” issued and effective May 22, 2013.
- ⁴⁰ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing the Redesign of the Solar Photovoltaic Programs and the Reallocation of Main Tier Unencumbered Funds,” issued and effective December 19, 2013.
- ⁴¹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing the Expansion of the Solar Photovoltaic and Geographic Balance Programs from 2012 through 2015 and the Reallocation of Main-Tier Unencumbered Funds,” issued and effective April 24, 2012.
- ⁴² Unlike the other programs described in the Table, the Competitive PV program incentives and implementation service budget are not restricted to supporting one technology.
- ⁴³ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2012-2015),” filed June 29, 2012.
- ⁴⁴ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing the Expansion of the Solar Photovoltaic and Geographic Balance Programs from 2012 through 2015 and the Reallocation of Main-Tier Unencumbered Funds,” issued and effective April 24, 2012.
- ⁴⁵ Incentives for this region are funded through the Regional Greenhouse Gas Initiative.
- ⁴⁶ Note that a sector was also established in the MW Block structure for systems larger than 200kW, which will replace the Competitive Bid program in 2015.
- ⁴⁷ Incentives for NYPA customers are funded through the Regional Greenhouse Gas Initiative.
- ⁴⁸ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Reallocation of Unencumbered Customer-Sited Tier Program Funds Through 2010 and Resolving Other Issues,” issued and effective September 19, 2011.
- ⁴⁹ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing an Increase in the Maximum Project Incentive for the On-Site Wind Program in the Customer-Sited Tier,” issued and effective February 14, 2013.
- ⁵⁰ Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, “Order Authorizing Customer-Sited Tier Program through 2015 and Resolving Geographic Balance and Other Issues Pertaining the RPS Program,” issued and effective April 2, 2010.
- ⁵¹ Find NYSERDA’s January 31, 2011 Petition to the Commission at <http://documents.dps.ny.gov/public/Common/SearchResults.aspx?MC=0&CBR=03-E-0188&CI=0>
- ⁵² The funding commitments do not include solicitation pre-encumbered funds for which awards were not made by December 31, 2014.

Appendix A. Orders and Activities

Orders and Activities	Date	Description
Commission Order Instituting Proceeding with Renewable Portfolio Standard	February 2003	This order was instituted under the guidance of the Office of Hearings and Alternative Dispute Resolution to facilitate the formulation of a policy statement on retail Renewable Portfolio Standards in New York State.
Commission Order Concerning Draft Generic Environmental Impact Statement for RPS	April 2004	The Commission provided a Notice of Completion of Draft Generic Environmental Impact Statement.
Commission Order Adopting and Approving Issuance of Final Generic Environmental Impact Statement for RPS	August 2004	The Commission adopted and approved issuance of the Final Generic Environmental Impact Statement for the proposed action of adoption and implementation of a Renewable Portfolio Standard policy.
Commission Order Regarding Renewable Portfolio Standard	September 2004	The Commission approved the Renewable Portfolio Standard policy. The order identified the Commission's renewable energy policy and provided definitions and targets for carrying out the policy. The Commission also directed that an Implementation Plan be developed and approved to guide the program through 2013.
Commission Order Regarding Petitions for Clarification and Reconsideration	December 2004	The Commission granted a petition for clarification filed by the New York State Energy Research and Development Authority. The petitions for clarification and/or reconsideration filed by the Small Hydro Group and Ridgewood Renewable Power, LLC were denied.
Commission Order Authorizing Fast Track Certification and Procurement	December 2004	The Commission authorized NYSERDA to develop facility self-certification procedures and forms for use in the initial Renewable Portfolio Standard procurement solicitation. NYSERDA was authorized to use a Request For Proposal procurement method containing security guarantees, milestones, contract duration, and a constant fixed price per megawatt hour factor in the initial RPS procurement solicitation according to a schedule and in a manner designed to allow it to award and execute contracts at a reasonable cost no later than the end of January 2005. This action was taken on an emergency basis pursuant to Section 202(6) of the State Administrative Procedure Act.
Retail Renewable Portfolio Standard, Confirming December 2004 Order	December 2004 January 2005	The Commission extended and confirmed the deadline for completion of revisions to billing systems and bill formats.
Commission Order Adopting Emergency Rule as Permanent Rule for RPS	March 2005	The Commission approved the Main Tier Fast-Track Certification and Procurement on an emergency basis, pursuant to SAPA §202(6), finding that such approval of facility certification and procurement solicitation methods would allow the RPS program to take advantage of the extension of the Production Tax Credit.
Commission Order Approving Implementation Plan, Adopting Clarifications, and Modifying Environmental Disclosure Program	April 2005	The Commission approved the Implementation Plan which identified the procedures for determining eligibility, establishing future procurements, and monitoring the program. The order also identified other actions that were needed for the program in the future.
Commission Order Approving Request for RPS Program Funding as a Maintenance Resource	August 2005	This order approved Lyonsdale Biomass, LLC for RPS program funding as a maintenance resource.
Commission Order Approving Request for Inclusion of Methane Digester Systems as Eligible Technologies in the Customer-Sited Tier	November 2005	The Commission added methane digestion systems as an eligible Customer-Sited Tier resource.
Commission Order Authorizing Additional Main Tier Solicitations and Directing Program	January 2006	The Commission approved the continuation of several contractual provisions: the pricing approach would pay fixed payments per MWh, the contract would require winning proposers to post security in the form of cash or a letter of credit, and NYSERDA would offer contract durations of a maximum term of 10 years and a minimum term of three years. The Commission requested that NYSERDA and Staff consider the development and implementation of an attribute accounting system, including its implications for the administration of the current environmental disclosure program, and to report back on their findings.

Orders and Activities	Date	Description
Commission Order Approving Request for RPS Program Funding as a Maintenance Resource	February 2006	The Commission authorized NYSERDA to enter into a maintenance resource contract with Boralex for the Chateaugay biomass facility.
NYSERDA issues Biomass Power Guide	May 2006	The Biomass Power Guide is revised to reflect Commission authorization to allow the use of non-source separated biomass fuels and incorporate new safeguards for fuel quality.
Commission Order on Customer-Sited Tier Implementation	June 2006	The Commission authorized the creation of a plan for solicitation of Customer-Sited Tier resources.
Commission Order on Delivery Requirements for Imports from Intermittent Generators	June 2006	The Commission replaced the Main Tier RPS program's current monthly matching delivery requirement with an hourly matching delivery requirement.
Commission Order Recognizing Environmental Attributes and Allowing Participation of Projects with Physical Bilateral Contracts	June 2006	The Commission modified the RPS program to recognize the unbundling of attributes from energy, to allow projects with physical bilateral contracts to participate in the program, and to eliminate the requirement that participating generators must sell into the wholesale markets administered by the New York State Independent System Operator. The Commission authorized DPS Staff to work with NYSERDA to develop a certificate-based tracking system, as well as to develop recommendations for modifying the environmental disclosure program in advance of the 2009 review.
Commission Order Authorizing Solicitation Methods and Consideration of Bid Evaluation Criteria and Denying Request for Clarification	October 2006	The Commission provided authorization and guidance to NYSERDA and Staff for the issuance of solicitations for Main Tier RPS attributes, and allowed use of evaluation criteria to ensure that economic benefits to New York are given appropriate value. The Commission authorized two proposal scoring categories: the "bid price" category was to be weighted at 70%, while the "economic benefits to New York" category would receive a 30% weight.
NYSERDA Files Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2007)	February 2007	NYSERDA, in consultation with the DPS, issued the 2007 CST Operating Plan, which set forth general program specifications, capacity and generation targets, and associated budgets.
Commission Order Concerning Modification of Funding for the Customer-Sited Tier	October 2008	The Commission authorized the reallocation of and increased funding for specific programs of the Customer-Sited Tier in response to changing market needs for specific eligible renewable energy technologies.
Commission Order Concerning Further Modification of Funding for the Customer-Sited Tier	June 2009	The Commission adopted changes to the RPS by reallocating and increasing funding for the solar photovoltaic program of the Customer-Sited Tier.
Commission Order Authorizing an Additional Main Tier Solicitation and Setting Solicitation Guidelines	August 2009	The Commission authorized an additional Main Tier solicitation to enable generation facility developers to leverage funds temporarily available in federal grants under the American Recovery and Reinvestment Act of 2009. The order also specified that the ten-year contracts with fuel-based renewable energy generators shall have an escape clause actionable every two and one-half years so that the generator may drop out of the program if it is unable to secure a continuous fuel supply at a price that supports its contract with NYSERDA.
Commission 2009 Mid-Course Report	September 2009	This report provided a review of the current status of the program, including a review of the NYSERDA Evaluation Report, and presented the Staff's proposals for the RPS Program going forward.
Commission Order Establishing New RPS Goal and Resolving Main Tier Issues	January 2010	This order adopted a goal of 30% renewable energy by 2015 and set MWh program targets. It also authorized an additional Main Tier solicitation, consistent with the results of a previous solicitation and the megawatt-hour trajectory needed to meet the revised goal. The order also specified 2013 Program Review Requirements.
Commission Order Addressing the Scope and Cost of Administration of the RPS program, and the Collection of Costs from Utility Customers	April 2010	The order modified collections for 2010-2013 to meet the expectations of the revised RPS program following the program review. The Commission authorized a schedule of collections estimated to be sufficient to support current Main Tier contract and maintenance contract costs through 2024, future Main Tier contract costs, current and future Customer-Sited Tier costs including the Geographic Balance component, costs of administration and program evaluation by NYSERDA for the Main Tier and Customer-Sited Tier, and the payment by NYSERDA of the New York State Cost Recovery Fee.
Commission Order Clarifying NYSERDA Main Tier RPS Target and Resolving Main Tier Eligibility Issues	April 2010	This order addressed a number of issues regarding the Main Tier arising out of the 2009 review. It dictated which technologies were eligible, reserved the right to revise the vintage date, clarified that projects can only be under contract for a total of 10 years, and denied some suggestions that arose as part of the program review, such as a proposal to include waste-to-energy.

Orders and Activities	Date	Description
NYSERDA Files Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2010)	June 2010	NYSERDA, in consultation with the DPS, issued the 2010 CST Operating Plan, which set forth general program specifications, capacity and generation targets, and associated budgets.
Commission Order Regarding Acceptance of Permanent Tariff Levels for RPS Collections	October 2010	In response to the April 2010 order authorizing the CST through 2015 and resolving other RPS issues, the Commission directed the Utilities to file tariff amendments and/or statements incorporating the revisions and increasing collections of RPS costs described in the April 2010 Order, to become effective on a temporary basis on July 1, 2010. This order allows the tariff amendments to become effective on a permanent basis.
Commission Order Allowing Main Tier "Behind The Meter" Contracts and Wholesale Delivery to Utility/Municipal Utility/Public Authority Entities, Applicable to Future Solicitations Only	November 2010	The Commission modified the Main Tier eligibility rules to allow certain "behind-the-meter" bilateral energy contracts or installations to qualify for RPS incentives, and to allow the energy in previously allowed bilateral contracts to be delivered through a wholesale meter under the control of a utility, public authority or municipal electric company such that it can be measured, and such that consumption within New York State can be tracked and verified by one of those entities or by the NYISO.
Commission Order Authorizing Additional Main Tier Solicitation and Setting Future Guidelines for NYSERDA to conduct Solicitations at least annually	December 2010	The Commission authorized an additional Main Tier solicitation and provided guidance in issuing future Main Tier solicitations including the authorization that NYSERDA could conduct future solicitations, without Commission approval, for RPS Main Tier resources, after consultation with Staff and approval by the OEEE Director prior to each solicitation. Future contract awards were directed to be for a 10-year term. The contracts with fuel-based renewable energy generators were directed to have an escape clause actionable every two and one-half years so that the generator is able to drop out of the program if unable to secure a continuous fuel supply at a price that supports its contract with NYSERDA.
NYSERDA issues Revised Biomass Power Guide	May 2011	The Biomass Power Guide is revised to reflect Commission authorization to allow the use of non-source separated biomass fuels and incorporate new safeguards for fuel quality.
Commission Order Declining to Make Elevator Regenerative Drives an Eligible Technology in the Customer-Sited Tier	August 2011	The Commission declined to consider regenerative elevator drive technology as an eligible technology in the Customer-Sited Tier.
Commission Order Authorizing Reallocation of Unencumbered Customer-Sited Tier Program Funds Through 2010 and Resolving Other Issues	September 2011	The Commission authorized NYSERDA to (a) reallocate unencumbered 2010 Customer-Sited Tier program; (b) allow the monthly cap on incentive payments in the Solar Photovoltaic category to exceed \$2 million; (c) modify the equipment size cap for the on-site wind category; and (d) use accumulated unencumbered interest earnings and unencumbered administration funds to pay any New York State Cost Recovery Fee amount that exceeds the amount previously budgeted for such fee.
Commission Order Authorizing Reallocation of Unencumbered 2011 Customer-Sited Tier Program Funds and Resolving Other Issues	April 2012	The Commission authorized NYSERDA to reallocate unencumbered Renewable Portfolio Standard Customer-Sited Tier 2011 program funds to enhance program funding in 2012 for the Solar Photovoltaic and Small Wind program categories; and furthermore, implement revisions to the manner in which caps on funding and equipment size were implemented for Solar Photovoltaic incentives.
Commission Order Approving Request for Modification of Funding as a Maintenance Resource	April 2012	The Commission authorized NYSERDA to modify the Maintenance Resource Contract Agreement between NYSERDA and ReEnergy (as successor to Boralex New York LP) to reflect a decision to offer an incremental RPS production incentive of \$11.00 per MWh produced at its Chateaugay facility and begin making payments subject to the modifications for the electricity produced on or after April 1, 2012.
Commission Order Authorizing the Expansion of the Solar Photovoltaic and Geographic Balance Program From 2012 Through 2015 and the Reallocation of Main-Tier Unencumbered Funds	April 2012	The Commission authorized a four-year expansion of the Solar Photovoltaic and Geographic Balance Programs from 2012 through 2015. The Commission established that the sources of additional funding for this authorized expansion would be determined within the context of the 2013 overall RPS program review. NYSERDA also was instructed to develop a revised Customer-Sited Tier Operating Plan which would define the budgets and programs to be implemented through 2015.
NYSERDA Files Renewable Portfolio Standard Customer-Sited Tier Program Operating Plan (2012-2015)	June 2012	NYSERDA, in consultation with the DPS, issued the 2012-2015 Customer-Site Tier Operating Plan, which set forth general program specifications, capacity and generation targets, and associated budgets.
Commission Order Denying Request for Restructuring of a Contract	August 2012	The Commission denied a request to restructure the price terms of Niagara Generation, LLC's April 17, 2007 Renewable Portfolio Standard Main Tier contract.
Commission Order Authorizing the Increase of Maximum Project Incentive for the Anaerobic Digester Gas-to-Electricity Program	January 2013	The Commission authorized NYSERDA to increase the maximum incentive available under the Anaerobic Digester Gas-to-Electricity Program in the Customer-Sited Tier from \$1 million up to \$2 million per installation.

Orders and Activities	Date	Description
Commission Order Authorizing an Increase in the Maximum Project Incentive for the On-Site Wind Program in the Customer-Sited Tier	February 2013	The Commission authorized NYSERDA to modify the on-site wind program in the Customer-Sited Tier to increase in the funding cap applicable to the on-site wind program and instructed NYSERDA to work with DPS Staff to implement a new megawatt block structure for the existing program.
Commission Order Authorizing Reallocation of Unencumbered 2012 Customer-Sited Tier Program Funds	May 2013	The Commission authorized NYSERDA to reallocate unencumbered RPS CST 2012 Program funds to 2013 budgets for the solar electric, anaerobic digester gas to electricity, fuel cell, and on-site wind programs.
Commission Order Modifying Renewable Portfolio Standard Program Eligibility Requirements	May 2013	The Commission authorized NYSERDA to limit its solicitation and procurement of RPS attributes from Main Tier renewable energy projects to those located within New York State, including offshore generating facilities directly interconnected to New York State's electrical grid.
Commission Order Authorizing Transfer of Solar Photovoltaic Funding in the Customer-Sited Tier among New York Independent System Operation Load Zone Groups	June 2013	The Commission authorized NYSERDA to modify the Customer-Sited Tier Competitive PV program to help meet the goals of the NY-Sun initiative.
Commission Order Approving Request for Funding as a Maintenance Resource	June 2013	The Commission authorized NYSERDA to enter into a 10-year maintenance resource contract with Azure Mountain Power Company at an incentive rate of \$20.00/MWh delivered, for a term of 10 years.
Commission Order Authorizing Modifications of the Solar Photovoltaic Program in the Customer-Sited Tier	July 2013	The Commission authorized NYSERDA to make additional modifications to the Customer-Sited Tier solar electric programs to help meet the goals of the NY-Sun initiative.
Renewable Portfolio Standard Main Tier 2013 Program Review, Final Report	September 2013	In support of the Main Tier 2013 evaluation, NYSERDA filed reports on September 5, 2013, which included a summary and three separate volumes. The reports included an evaluation of the benefits and costs associated with the portfolio of currently contracted Main Tier resources as of December 31, 2012, and also presented an assessment of the prospects for meeting Main Tier targets using available uncommitted funds.
Customer-Sited Tier Program Market Evaluation, Program Expectations and Funding Considerations, NYSERDA Renewable Portfolio Standard Customer-Sited Tier Impact Evaluation Report	September 2013	For the Customer-Sited Tier 2013 evaluation, NYSERDA filed on September 6, 2013 a market evaluation, program expectations and funding considerations report as well as a report that evaluated impact.
Commission Order Authorizing the Redesign of the Solar Electric Programs and the Reallocation of Main Tier Unencumbered Funds	December 2013	The Commission authorized NYSERDA to reallocate \$108 million of unencumbered Main Tier funds to support the Customer-Sited Tier solar PV programs through 2015. The Commission also expressed support for NYSERDA's proposal to redesign and transition the solar PV programs to a megawatt block structure with declining incentives with the goal of reducing and ultimately eliminating RPS incentives for PV systems. The Commission encouraged NYSERDA to work with the Long Island Power Authority and the New York Power Authority to identify the potential merits of a statewide approach to the solar programs and define how those benefits might be captured in the design and administration of such a revised program.
Order Establishing New York Green Bank and Providing Initial Capitalization (Case 13-M-0412)	December 2013	The Commission granted NYSERDA's proposal to establish and fund the operations of a new clean energy financing entity called NY Green Bank. Through its Petition, NYSERDA requested that the Commission reallocate \$165.6 million in uncommitted NYSERDA Energy Efficiency Portfolio Standard (EEPS) I and System Benefits Charge (SBC) III funds, uncommitted utility EEPS funds, and \$50 million in NYSERDA Main Tier RPS funds for this purpose.
Commission Order Granting in Part and Denying in Part a Petition for Rehearing	December 2013	The Commission granted Hydro Quebec's petition for rehearing of the Commission order "Modifying Renewable Portfolio Standard Program Eligibility Requirements", in part, for the limited purpose of considering additional information and arguments presented regarding the role of the RPS Main Tier in the market for energy generation attributes. The Commission otherwise denied Hydro Quebec's petition for rehearing and affirmed the determination of its May 2013 Order.

Orders and Activities	Date	Description
Commission Order Authorizing Funding and Implementation of the Solar Electric MW Block Programs	April 2014	The Commission authorized NYSERDA to reallocate \$960.6 million of unencumbered Main Tier funds to support the Customer-Sited Tier solar electric programs through 2023 and approved the design criteria for the MW Block approach to administer the solar electric programs. The Commission required NYSERDA, in consultation with DPS, to develop a Customer-Sited Tier Operating Plan as a compliance filing, which sets forth general program specifications, The Commission authorized NYSERDA to expend up to \$13 million of \$864 million of program funds to support participation by low to moderate income (LMI) customers in the solar electric programs, capacity and generation targets, and associated budgets for the MW Block program through 2023.
Commission Order on Proceeding with Motion to develop a New York State Clean Energy Fund and Reforming the Energy Vision.	May 2014	The Commission authorized NYSERDA to develop and submit to the Commission considerations proposal for a comprehensive Clean Energy Fund.
Commission Order Authorizing the Reallocation of Unencumbered 2013 Customer-Sited Tier Program Funds and the creation of a General Funding Pool	July 2014	The Commission authorized NYSERDA to reallocate unencumbered in Renewable Portfolio Standard Customer-Sited Tier 2013 program funds to 2014 budgets as follows: \$11,600,000 specifically to the Anaerobic Digester Gas-to-Electricity Program (ADG Program) and \$9,225,594 to be placed in a newly-created Customer-Sited Tier General Funding Pool.
Commission Order Authorizing Modifications to the Main Tier Solicitation Contract Term	July 2014	The Commission authorized NYSERDA to increase the maximum length of Renewable Portfolio Standard Main Tier contracts to a term not to exceed 20 years with the flexibility to set maximum contract terms of less than 20 years for select types of technologies and facilities. NYSERDA was directed to issue one Main Tier solicitation in 2014 and at least one in 2015, with the ability to issue additional solicitations if it determines that market conditions are appropriate.
Commission Order Authorizing Funding and Implementation of the Solar Electric MW Block Program	August 2014	Order Authorizing Funding and Implementation of the Solar Photovoltaic MW Block Programs (issued April 24, 2014). In addition, the Commission offered clarification to the April 2014 Order as requested by PosiGen pertaining to the allocation of 1.5% of program funds not to exceed \$13 million, to increase LMI customer participation in and to leverage RPS funds already collected to help provide greater access to solar for the LMI market, however, the Order does not authorize NYSERDA to allocate additional money beyond the \$13 million, furthermore, NYSERDA has the flexibility to submit a supplemental petition requesting additional funding in the future, proceeding to be continued.
NYSERDA Files RPS CST Operating Plan Addendum (2014-2023) for the Megawatt Block Program	August 2014	NYSERDA, in consultation with DPS, issued an Addendum to the CST Operating Plan for 2014 through 2023, which sets forth general program specifications, capacity and generation targets, and associated budgets for the Megawatt Block Program, and represents a transition of the Solar Photovoltaic Program currently administered by NYSERDA under the Renewable Portfolio Standard Customer-Sited Tier.
Order Approving the Request for Funding as a Maintenance Resource	August 2014	The Commission authorized NYSERDA to enter into a maintenance resource contract with Battenkill Hydro Associates at an incentive rate of \$2.80/MWh delivered, for a term of 3 years.
Commission Order Authorizing Funding and Implementation of the Solar Electric MW Block Program	August 2014	Order Authorizing Funding and Implementation of the Solar Photovoltaic MW Block Programs (issued April 24, 2014). In addition, the Commission offered clarification to the April 2014 Order as requested by PosiGen pertaining to the allocation of 1.5% of program funds not to exceed \$13 million, to increase LMI customer participation in and to leverage RPS funds already collected to help provide greater access to solar for the LMI market, however, the Order does not authorize NYSERDA to allocate additional money beyond the \$13 million, furthermore, NYSERDA has the flexibility to submit a supplemental petition requesting additional funding in the future, proceeding to be continued.
NYSERDA Files Clean Energy Fund Proposal	September 2014	The Clean Energy Fund was established under Case 14-M-0094, Proceeding on Motion of the Commission to Consider a Clean Energy Fund. Pursuant to the Order Commencing Proceeding issued on May 8, 2014 by the Commission, NYSERDA filed the Clean Energy Fund Proposal seeking a 10-year program from 2016 through 2025 that will work in coordination with other State efforts to advance cleaner, more resilient, and more affordable energy infrastructure.
Resolution Accepting Draft Generic Environmental Impact Statement as Complete	October 2014	The Commission provided a Notice of Completion of Draft Generic Environmental Impact Statement which analyzed potential environmental impacts associated with Reforming the Energy Vision and establishing a Clean Energy Fund. After reviewing and considering the draft generic EIS, the Commission concluded that it was acceptable and complete and directed the Secretary to issue it for public comment.
Order Approving the Request for Funding as a Maintenance Resource	November 2014	The Commission authorized NYSERDA to enter into a maintenance resource contract with ReEnergy Lyonsdale at an incentive rate of \$33.49/MWh delivered, for a term of three years.

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Appendix B. Main Tier Solicitation Results Through December 31, 2014

First Main Tier Solicitation

NYSERDA's first competitive Main Tier solicitation (RFP 916) awards were announced in January 2005 with an expected facility online date of January 1, 2006. The solicitation was issued as a sealed bid, pay-as-bid Request for Proposal (RFP). In this solicitation, bidders were awarded contracts based on the price bid for RPS Attributes alone. No other factors were taken into account to determine selection and the ultimate award of a contract. The first Main Tier solicitation resulted in contracts for the development of 254 MW of renewable capacity at five facilities (two wind and three hydroelectric upgrades), from which NYSERDA would provide production incentives for 865,582 MWh per year. At the timing of the award, the total funding commitment associated with this solicitation was approximately \$173.6 million, and the weighted average production incentive awarded was \$22.90 per RPS Attribute (MWh).

Second Main Tier Solicitation

The second competitive Main Tier solicitation (RFP 1037) awards were announced in February 2007 with an expected facility online date of January 1, 2008. Unlike the first Main Tier solicitation, awards were based on two evaluation components: the bid price, weighted at 70%; and the ability of the bidder to demonstrate economic benefits to New York State created by the development, construction and operation of the bid facility, weighted at 30%. The solicitation was designed as a two-step process, consisting of an application step that prequalified bidders and a competitive bid proposal submission step. Only those bidders found prequalified through the Step 1 application process, were permitted to submit bid proposals in Step 2.

The second solicitation resulted in NYSERDA awarding contracts to provide production incentives to 20 new or upgraded facilities, all located in New York State. One facility, Noble Chateaugay Wind Park, was split into two contracts at the request of the contractor for reasons related to physical substation configurations and interconnection, creating two wind parks: Noble Bellmont Wind Park and Noble Chateaugay Wind Park. The Noble Bellmont Wind Park was only partially constructed and its contract was terminated in 2011.

Under the awarded contracts, 671 MW of new renewable capacity were selected, from which NYSERDA could provide production incentives for approximately 1.8 million MWh per year. At the time of the award, the total funding commitment associated with this solicitation was approximately \$266.3 million, and the weighted average price awarded was \$15.52 per RPS Attribute (MWh).

Third Main Tier Solicitation

The third competitive Main Tier solicitation (RFP 1168) was completed in early 2008 with facilities expected to be operational by January 1, 2009. Awards were announced in January 2008. The solicitation followed the same two-step bid evaluation process used for the previous solicitation.

The third solicitation resulted in the award of contracts for 11 new or upgraded facilities, representing approximately 824,550 MWh per year. At the time of award, the total funding commitment associated with this solicitation was approximately \$118.6 million, and the weighted average price awarded was \$14.75 per RPS Attribute (MWh).

Fourth Main Tier Solicitation

The fourth competitive Main Tier Solicitation (RFP 1681) awards were announced in December 2009 with the facilities expected to be operational by July 1, 2011 for non-fuel based facilities, and July 1, 2012 for fuel-based facilities. This solicitation was issued in response to an August 2009 PSC Order.

The fourth solicitation resulted in the award of contracts to five new or upgraded facilities. Under those contracts, contractors were obligated to build 142 MW of renewable capacity, from which NYSERDA could provide production incentives for 578,656 MWh per year. At the time of award, the total funding commitment associated with this solicitation was approximately \$96 million, and the weighted average price awarded was \$19.76 per RPS Attribute (MWh).

Fifth Main Tier Solicitation

The fifth competitive Main Tier Solicitation (RFP 1851) awards were made in March 2010, with facilities expected to be operational by December 31, 2011. This solicitation was issued in response to a January 2010 PSC Order.

The fifth solicitation resulted in the award of contracts to provide production incentives to eight new or upgraded facilities. Under these contracts, contractors were obligated to build 318 MW of renewable capacity, from which NYSERDA could provide production incentives for approximately 1.1 million MWh per year. The total funding commitment associated with this solicitation was approximately \$204 million, and the weighted average price awarded was \$21.17 per RPS Attribute (MWh).

Following the announcement of the awards for RFP 1851, one bidder's award was rescinded and contract awards were made to the next highest ranked bidders that could be funded with the approved solicitation budget. These awards included two hydroelectric facilities and one wind farm. In addition, an agreement awarded as a result of this solicitation for the Marble River Wind Farm was combined with an agreement awarded under a subsequent solicitation to reflect an increase in the size of the facility. The combined capacity under contract for this facility is reflected in Appendix B under the Sixth Main Tier Solicitation but the committed funding remains separated in the respective solicitation balances shown in Appendix D.

Sixth Main Tier Solicitation

The sixth competitive Main Tier Solicitation (RFP 2226) awards were made in April 2011, with facilities expected to be operational by July 31, 2012. This solicitation was issued by NYSERDA per the December 2010 Order by which PSC authorized NYSERDA to conduct Main Tier competitive solicitations at least annually, and with DPS concurrence, as frequently as deemed necessary and advisable in pursuit of program targets without further or individual authorizations by PSC.

The sixth solicitation resulted in the award of contracts to provide production incentives to 17 new or upgraded facilities. Under those contracts, contractors are obligated to build 315 MW of renewable capacity, from which NYSERDA could provide production incentives for more than 1.1 million MWh per year. At the time of award, the total funding commitment associated with this solicitation was approximately \$191 million, and the weighted average price awarded was \$22.01 per RPS Attribute (MWh).

Seventh Main Tier Solicitation

The seventh competitive Main Tier Solicitation (RFP 2389) awards were made in December 2011, with facilities expected to be operational by December 31, 2012. This solicitation was issued by NYSERDA per the December 2010 Order in which PSC authorized NYSERDA to conduct Main Tier competitive solicitations at least annually, and with the concurrence of the Department of Public Service, as frequently as is deemed necessary and advisable in pursuit of program targets without further or individual authorizations by PSC.

The seventh solicitation resulted in the award of contracts to provide production incentives to seven new or upgraded facilities. Under those contracts, contractors are obligated to build more than 88 MW of renewable capacity, from which NYSERDA could provide production incentives for approximately 460,000 MWh per year. At the time of award, the total funding commitment associated with this solicitation was approximately \$132 million, and the weighted average price awarded was \$28.70 per RPS Attribute (MWh).

Eighth Main Tier Solicitation

The eighth competitive Main Tier Solicitation (RFP 2554) awards were made in June 2013, with facilities expected to be operational by December 31, 2014. The solicitation was issued on December 20, 2012, and reissued on January 4, 2013. The solicitation was conducted in concurrence with a NYSERDA petition and ensuing Commission Order dated May 22, 2013 Order, wherein NYSERDA was authorized to limit Main Tier bids and Main Tier contracts to bidders proposing to meet their RPS obligations with renewable resource energy generated inside the State or through an offshore generating facility directly interconnected to New York's electrical grid.

The eighth solicitation resulted in 17 contracts representing 50 MW of new renewable energy capacity from which NYSERDA could provide production incentives for approximately 190,000 MWh per year. The total funding commitment associated with RFP 2554 was approximately \$66 million, and the weighted average price for these contracts was \$34.95 per RPS Attribute (MWh).

Ninth Main Tier Solicitation

The ninth Main Tier Solicitation (RFP 2985) awards were made in October 2014, with facilities expected to be operational by July 31, 2017. The solicitation was issued on July 24, 2014. The solicitation was conducted in concurrence with a July 2, 2014 Commission Order, which directed NYSERDA to conduct an immediate 2014 solicitation and at least one in 2015. The Order also authorized NYSERDA to offer Contract Tenors of up to 20 years.

The ninth solicitation resulted in four contracts representing 164 MW of new renewable energy capacity. The total funding commitment associated with RFP 2985 was approximately \$206 million, and the weighted average price for these contracts was \$22.96 per RPS attribute over the 20 year awarded contract term. The contracted facilities include wind power projects at Arkwright Summit Wind Farm in Chautauqua County, and Jericho Rise Wind Farm in Franklin County; hydroelectric projects at the City of Watervliet's Delta Hydroelectric Project, Oneida County, and Village of Wappingers Falls, Hydroelectric Project in Dutchess County.

Appendix C. Main Tier Contracts as of December 31, 2014

Facility	Resource Type	Location	County	New Renewable Capacity (MW)	Bid Capacity (MW)	Maximum Annual Contract Quantity (MWh)	Contract Duration (years)	Project Status
1st Main Tier Solicitation								
Spier Falls	Hydro	NY	Saratoga	0.8	0.8	3,582.0	10	Operating
Higley Falls ^a	Hydro	NY	St. Lawrence				1	n/aa
Browns Falls ^a	Hydro	NY	St. Lawrence				1	n/aa
Maple Ridge	Wind	NY	Lewis	321.0	231.0	605,820.0	10	Operating
Bear Creek ^b	Wind	PA	Luzerne	22.0			4	n/ab
Total for RFP 916				343.8	231.8	609,402.0		
2nd Main Tier Solicitation								
Norfolk	Hydro	NY	St. Lawrence	1.5	1.5	7,504.2	10	Operating
Oswego Falls	Hydro	NY	Oswego	0.6	0.6	2,957.0	10	Operating
Browns Falls	Hydro	NY	St. Lawrence	0.4	0.4	1,277.0	10	Operating
Raymondville	Hydro	NY	St. Lawrence	0.7	0.7	5,044.0	10	Operating
Colton	Hydro	NY	St. Lawrence	0.7	0.7	4,851.0	10	Operating
East Norfolk	Hydro	NY	St. Lawrence	0.9	0.9	6,207.0	10	Operating
Allens Falls	Hydro	NY	St. Lawrence	0.3	0.3	1,675.0	10	Operating
Eagle	Hydro	NY	Lewis	0.5	0.5	3,181.0	10	Operating
Higley Falls	Hydro	NY	St. Lawrence	1.9	1.9	11,648.0	10	Operating
Norwood	Hydro	NY	St. Lawrence	0.5	0.5	4,628.0	10	Operating
Dutch Hill Wind Farm ^c	Wind	NY	Steuben	37.5	4.3	8,513.0	10	Operating
Cohocton Wind Farm ^c	Wind	NY	Steuben	87.5	8.3	23,372.0	10	Operating
Niagara Generating Facility	Biomass	NY	Niagara	26.0	26.0	189,525.0	10	Operating
Clinton Windpark I	Wind	NY	Clinton	100.5	95.5	180,747.0	10	Operating
Ellenburg Windpark	Wind	NY	Clinton	81.0	77.0	167,381.0	10	Operating
Bliss Windpark	Wind	NY	Wyoming	100.5	95.5	191,720.0	10	Operating
Altona Windpark	Wind	NY	Clinton	102.0	96.9	188,282.0	10	Operating
Chateaugay Windpark I	Wind	NY	Franklin	106.5	101.2	215,058.0	10	Operating
Total for RFP 1037				649.5	512.7	1,213,570.2		
3rd Main Tier Solicitation								
AES Greenidge, LLC	Biomass	NY	Yates	4.0			3	n/a ^d
Piercefield Hydro	Hydro	NY	St. Lawrence	0.1	0.1	385.0	10	Operating
Sherman Island	Hydro	NY	Saratoga	4.7	4.5	19,292.0	10	Operating
Effley Hydro	Hydro	NY	Lewis	0.3	0.3	1,399.0	10	Operating
High Falls	Hydro	QC	N/A	14.7	14.0	26,410.0	10	Operating
Wethersfield Windpark	Wind	NY	Wyoming	126.0	119.7	314,572.0	10	Operating
Dutch Hill Wind Farm ^c	Wind	NY	Steuben		11.3	28,200.0	10	Operating
Cohocton Wind Farm ^c	Wind	NY	Steuben		26.3	65,700.0	10	Operating
Total for RFP 1168				149.8	176.2	455,958.0		

Facility	Resource Type	Location	County	New Renewable Capacity (MW)	Bid Capacity (MW)	Maximum Annual Contract Quantity (MWh)	Contract Duration (years)	Project Status
4th Main Tier Solicitation								
Hardscrabble ^e	Wind	NY	Herkimer	74.0	43.7	121,508.0	10	Operating
School Street Hydro	Hydro	NY	Albany	5.2	4.9	21,885.0	10	Operating
Stewarts Bridge Hydro (Upgrade)	Hydro	NY	Saratoga	2.9	2.7	11,609.0	10	Operating
Total for RFP 1681				82.1	51.3	155,002.0		
5th Main Tier Solicitation								
Hardscrabble ^e	Wind	NY	Herkimer		26.6	74,141.0	10	Operating
Steel Winds II	Wind	NY	Erie	15.0	14.3	37,430.0	10	Operating
Albany Energy LLC	Biogas	NY	Albany	0.9	0.9	6,790.0	10	Operating
Taylorville Hydro	Hydro	NY	Lewis	0.1	0.1	684.0	10	Operating
Wappingers Falls Hydro	Hydro	NY	Dutchess	0.1	0.1	474.0	10	Operating
Mechanicville Hydro	Hydro	NY	Saratoga	4.5	4.3	19,000.0	10	Operating
Stuyvesant Falls Hydro	Hydro	NY	Columbia	6.0	5.7	14,250.0	10	Operating
High Sheldon Wind Farm	Wind	NY	Wyoming	112.5	106.9	228,200.0	10	Operating
Total for RFP 1851				139.1	158.9	380,969.0		
6th Main Tier Solicitation								
Albany 2	Biogas	NY	Albany	3.2	3.0	22,340.0	10	Operating
Marble River Wind Farm ^e	Wind	NY	Clinton	215.3	204.5	581,510.0	10	Operating
DANC LFGE	Biogas	NY	Jefferson	4.8	4.0	32,141.0	10	Operating
Hyland LFGE	Biogas	NY	Allegany	4.8	2.2	15,396.0	10	Operating
Chautauqua LFGE	Biogas	NY	Chautauqua	8.0	2.1	13,111.0	10	Operating
Stewarts Bridge Hydro (Expansion)	Hydro	NY	Saratoga	2.6	2.5	10,491.0	10	Operating
Seneca Energy	Biogas	NY	Seneca	12.8	5.9	46,664.0	10	Operating
Modern LFGE	Biogas	NY	Niagara	6.4	3.0	20,306.0	10	Operating
Black Brook Hydro	Hydro	NY	Clinton	0.6	0.6	1,900.0	10	Operating
Orangeville Wind Farm	Wind	NY	Wyoming	92.8	88.2	279,103.0	10	Operating
Howard Wind Farm	Wind	NY	Steuben	51.3	46.1	115,184.0	10	Operating
Ontario LFGE	Biogas	NY	Seneca	6.4	3.0	23,978.0	10	Operating
Total for RFP 2226				409.0	365.1	1,162,124.0		
7th Main Tier Solicitation								
Cumberland County (Community Refuse)	Biogas	PA	Cumberland	6.4	6.1	47,402.0	10	Operating
Mill Street Dam Hydroelectric Generation Facility	Hydro	NY	Cayuga	0.2	0.2	986.0	10	Operating
Locust Ridge Wind Farm, LLC	Wind	PA	Schuylkill	26.0	24.7	54,093.0	10	Operating
Clinton Co. Landfill	Biogas	NY	Clinton	6.4	1.3	9,755.0	10	Operating
Black River Facility	Biomass	NY	Jefferson	43.3	41.1	324,045.0	10	Operating
Howard Wind Farm (Expansion)	Wind	NY	Steuben	4.1	3.9	9,849.0	10	Operating
Total for RFP 2389				86.4	77.3	446,130.0		

Facility	Resource Type	Location	County	New Renewable Capacity (MW)	Bid Capacity (MW)	Maximum Annual Contract Quantity (MWh)	Contract Duration (years)	Project Status
8th Main Tier Solicitation								
Zotos International Wind Production Generating Facility	Wind	NY	Ontario	3.3	3.1	3,847.0	10	Operating
Marsh Hill Wind Farm	Wind	NY	Steuben	16.2	15.4	52,526.0	10	Operating
Howard Wind Farm	Wind	NY	Steuben		2.6	6,359.0	10	Operating
Black Oak Wind Farm	Wind	NY	Tompkins	12.6	12.0	40,894.0	10	Under Construction
Cody Road Wind Farm	Wind	NY	Madison	10.0	9.5	27,463.0	10	Under Construction
Rio Hydroelectric Bypass Flow Unit	Hydro	NY	Sullivan	0.8	0.8	5,071.0	10	Operating
Niagara BioEnergy	Biogas	NY	Niagara	0.9	0.8	4,750.0	10	Under Construction
Buffalo BioEnergy	Biogas	NY	Erie	1.3	1.2	4,750.0	10	Under Construction
401 Fieldcrest Dr. Elmsford, NY 10523	Fuel Cell	NY	Westchester	0.8	0.8	6,325.0	10	Under Construction
Stop and Shop Clean Energy Project - Mt. Vernon	Fuel Cell	NY	Westchester	0.3	0.3	2,112.0	10	Under Construction
ATT Clean Energy Project - Rego Park	Fuel Cell	NY	Queens	0.2	0.2	1,606.0	10	Under Construction
Total for RFP 2554				46.3	46.7	155,703.0		
9th Main Tier Solicitation								
Arkwright Summit	Wind	NY	Chautauqua	77.7	73.8	229,873.0	20	Under Construction
Jericho Rise	Wind	NY	Franklin	77.7	73.8	206,272.0	20	Under Construction
Total for RFP 2985				155.4	147.6	436,145.0		
PROGRAM TOTAL				2,061.4	1,767.6	5,015,003.2		
Maintenance Resources								
Boralex Chateaugay Biomass Plant	Biomass	NY	Franklin		20.0	128,000.0	10	Operating
Lyonsdale Biomass ^f	Biomass	NY	Lewis		22.0	131,238.0	7	Operating
Azure Mountain	Hydro	NY	Franklin		0.8	2,500.0	10	Operating
Lyonsdale Biomass ^f	Biomass	NY	Lewis				3	Operating
Total					42.8	261,738.0		

^a Higley and Browns Falls had one-year agreements, thus enabling participation in RFP 1037. Only Contract quantities from RFP 1037 will be used when calculating progress toward 2015 targets.

^b Bear Creek windfarm had a four-year contract that expired on January 31, 2010. Only Contract quantities from active contracts will be used when calculating progress toward 2015.

^c These facilities were awarded contracts for a percentage of output under multiple RFPs. The total new facility capacity is listed once.

^d AES Greenidge had a three-year contract that expired on July 31, 2012. Only Contract quantities from active contracts will be used when calculating progress toward 2015.

^e An agreement awarded as a result of the 5th solicitation for the Marble River Wind Farm was combined with an agreement awarded under the 6th solicitation to reflect an increase in the size of the facility. The committed funding remains separated in the respective solicitation balances shown in Appendix E.

^f Lyonsdale Biomass was authorized by the PSC to participate as a Maintenance Resource; therefore it is not included with "new renewables". In an order dated November 19, 2014 the Commission authorized NYSERDA to enter into a second maintenance resource contract for a term of 3 years and total of 10 Years for both contracts.

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Appendix D. Competitive PV Installed Systems as of December 31, 2014

PON	Solar Developer	Site Name	County	Installed kW	Reported kW	Expected Generation kWh	Operation Date	Status	Sector
2156-1	SunEdison	Kohl's #782 Staten Island	Richmond	334	334	439,047	12/05/2012	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop New City #0596	Rockland	162	162	213,197	01/22/2013	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop Rhinebeck #0536	Dutchess	214	214	281,419	01/29/2013	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop Monroe #0523	Orange	243	243	319,801	02/08/2013	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop Ossining #2502	Westchester	260	260	341,114	06/09/2013	Installed	Retail trade
2156-1	Solar Energy Systems, LLC	Forest City Enterprises	Queens	319	319	419,153	09/13/2012	Installed	Real estate and rental and leasing
2156-1	Solar Energy Systems, LLC	Bed Bath and Beyond	Richmond	709	709	931,534	09/30/2013	Installed	Retail trade
2156-1	Solar Energy Systems, LLC	Sims Metal Management	Kings	591	591	777,047	11/27/2013	Installed	Fabricated metal product manufacturing
2156-1	Solar Energy Systems, LLC	Macy's Furniture Store	Richmond	386	386	506,573	12/13/2013	Installed	Retail trade
2156-1	Ross Solar Group	Linear Lighting	Queens	261	261	343,191	02/22/2012	Installed	Electrical equipment and appliance manufacturing
2156-1	Ross Solar Group	Felix Storch, Inc.	Bronx	148	148	194,262	08/10/2012	Installed	Electrical equipment and appliance manufacturing
2156-1	Ross Solar Group	Compass Forwarding - Sedgwick LLC	Queens	89	89	116,933	01/17/2013	Installed	Transportation and warehousing
2156-1	Ross Solar Group	Jetro Cash and Carry 1	Bronx	654	654	859,356	10/25/2013	Installed	Wholesale trade
2156-1	Ross Solar Group	Carter, Milchman and Frank, Inc.	Queens	97	97	127,182	12/24/2013	Installed	Miscellaneous manufacturing
2156-1	Solartech Renewables	Bard College	Dutchess	275	275	361,350	12/02/2013	Installed	Educational services
2156-1	Alteris Renewables Inc.	Stop & Shop - Tarrytown #599	Westchester	178	178	234,523	03/18/2013	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop Yonkers #522	Westchester	276	276	362,427	10/30/2013	Installed	Retail trade
2156-1	OnForce Solar	Rite Lite	Kings	172	172	226,008	12/07/2012	Installed	Wholesale trade
2156-1	OnForce Solar	Victory Food Service	Bronx	340	340	446,629	05/03/2013	Installed	Wholesale trade
2156-1	SolarCity Corp.	GAL Manufacturing	Bronx	237	237	311,576	10/18/2012	Installed	Machinery manufacturing
2156-2	SunRay Power, LLC	80 Don Bosco Place	Westchester	55	55	72,257	08/01/2013	Installed	Retail trade
2156-2	SunRay Power, LLC	20 Don Bosco Place	Westchester	82	82	108,379	08/05/2013	Installed	Retail trade
2156-2	SunRay Power, LLC	19 Don Bosco Place	Westchester	241	241	317,121	10/07/2013	Installed	Retail trade

PO#	Solar Developer	Site Name	County	Installed kW	Reported kW	Expected Generation kWh	Operation Date	Status	Sector
2156-2	Solar Energy Systems, LLC	Maspeth Solar	Queens	282	282	370,745	11/29/2012	Installed	Miscellaneous manufacturing
2156-2	Solar Energy Systems, LLC	359 Kingsland Avenue	Kings	282	282	370,745	01/24/2013	Installed	Other services, except public administration
2156-2	Solar Energy Systems, LLC	Architectural Grille	Kings	313	313	410,783	11/14/2013	Installed	Miscellaneous manufacturing
2156-2	Bright Power	1948 Troutman St.	Queens	353	353	463,264	12/18/2012	Installed	Miscellaneous manufacturing
2156-2	SolarCity Corp.	WalMart #2104	Orange	440	440	578,055	10/10/2012	Installed	Retail trade
2156-2	SolarCity Corp.	Walmart #6356	Dutchess	240	240	315,675	10/25/2013	Installed	Retail trade
2484	EnterSolar, LLC	Dykes Lumber	Queens	196	196	189,203	12/27/2012	Installed	Retail trade
2484	Ross Solar Group	Jetro Cash and Carry 2	Bronx	903	903	869,668	10/25/2013	Installed	Wholesale trade
2484	Safari Energy, LLC	ESM Inc. Brooklyn	Kings	126	126	121,414	10/03/2013	Installed	Real estate and rental and leasing
2484	EmPower Solar, LLC	Big Geyser, Inc. (Office)	Queens	201	201	193,867	08/09/2013	Installed	Transportation and warehousing
2484	EmPower Solar, LLC	Big Geyser, Inc. (Truck Room)	Queens	175	175	168,852	08/09/2013	Installed	Transportation and warehousing
2589-1	Hudson Solar/Hudson Valley Clean Energy, Inc.	Triform Enterprises	Columbia	187	187	180,386	10/18/2013	Installed	Health care and social assistance
2589-1	SolarCity Corp.	Walmart #2097	Columbia	393	393	378,810	10/31/2013	Installed	Retail trade
2589-1	SolarCity Corp.	Walmart #2405	Erie	494	494	476,018	11/25/2013	Installed	Retail trade
2589-1	SolarCity Corp.	Walmart #1781	Cortland	540	540	519,862	12/26/2013	Installed	Retail trade
2589-1	Solatage LLC	VulCraft of NY	Chemung	2,080	2,080	2,004,288	11/15/2013	Installed	Miscellaneous manufacturing
2589-1	Sealing Devices Inc.	Sealing Devices	Erie	251	251	241,787	10/09/2013	Installed	Miscellaneous manufacturing
2589-1	Constellation New Energy Inc.	Owens Corning	Albany	2,705	2,705	2,606,923	10/09/2013	Installed	Miscellaneous manufacturing
2589-1	EnterSolar, LLC	Mountain Service Distributors	Sullivan	387	387	372,720	12/27/2013	Installed	Transportation and warehousing
2589-1	EnterSolar, LLC	Target Corp - Glenville	Schenectady	689	689	663,920	12/30/2013	Installed	Retail trade
2589-1	EnterSolar, LLC	Target Corp - Williamsville	Erie	390	390	375,804	12/18/2013	Installed	Retail trade
2589-1	EnterSolar, LLC	Stewart Shop	Saratoga	598	598	576,483	09/23/2013	Installed	Transportation and warehousing
2589-1	Hudson Solar/Hudson Valley Clean Energy, Inc.	Watchtower Bible Walkill	Ulster	457	457	440,365	10/01/2013	Installed	Health care and social assistance
2589-1	Paradise Energy Solutions	Village of Wappingers Falls	Dutchess	239	239	230,686	10/30/2013	Installed	State and local government
2589-1	Carlisle Construction Materials	Carlisle Construction Materials	Orange	954	954	918,985	12/19/2013	Installed	Construction

PON	Solar Developer	Site Name	County	Installed kW	Reported kW	Expected Generation kWh	Operation Date	Status	Sector
2589-1	EnterSolar, LLC	King Zak Industries	Orange	330	330	317,988	12/18/2013	Installed	Miscellaneous manufacturing
2156-1	Solar Energy Systems, LLC	Macy's Main Store	Richmond	508	508	666,881	11/16/2013	Installed	Retail trade
2156-2	MS Solar	MS Harrison, LLC	Westchester	823	823	1,081,422	12/09/2013	Installed	Finance and insurance
2484	SunEdison	Whole Foods Market	Kings	307	307	295,440	12/20/2013	Installed	Retail trade
2589-1	Spear Point Energy	Seneca County Sheriffs Office	Seneca	845	845	814,049	11/19/2013	Installed	State and local government
2589-1	SunEdison	Kohl's #770 Greece	Monroe	331	331	318,942	09/19/2013	Installed	Retail trade
2589-1	SunEdison	Kohl's #1079 Auburn	Cayuga	310	310	298,909	09/30/2013	Installed	Retail trade
2589-1	SunEdison	Kohl's #1203 Ithaca	Tompkins	308	308	297,059	08/30/2013	Installed	Retail trade
2589-1	SunEdison	Kohl's #35 Horseheads	Chemung	270	270	260,432	09/25/2013	Installed	Retail trade
2589-1	SunEdison	Kohl's #963 North Amherst	Erie	313	313	301,241	08/19/2013	Installed	Retail trade
2589-1	Lighthouse Solar	Nice Pak	Rockland	855	855	823,637	12/31/2013	Installed	Miscellaneous manufacturing
2589-1	SunEdison	Kohl's #1048 Newburgh	Orange	283	283	273,046	12/03/2013	Installed	Retail trade
2589-1	SunEdison	Kohl's #988 Kingston	Ulster	451	451	434,641	09/11/2013	Installed	Retail trade
2589-2	SunEdison	Kohl's #1306 Buffalo	Erie	365	365	351,377	11/08/2013	Installed	Retail trade
2589-2	SunEdison	Kohl's #1113 Amherst	Erie	337	337	324,348	12/03/2013	Installed	Retail trade
2589-2	SunEdison	Kohl's #1411 Hudson	Columbia	299	299	288,579	11/27/2013	Installed	Retail trade
2484	OnForce Solar	Clarkstown Landfill	Rockland	2,316	2,316	2,231,852	12/19/2014	Installed	Utilities - Water, sewage, and other systems
2484	Ross Solar Group	Display Systems, Inc.	Queens	327	327	315,097	04/29/2014	Installed	Computer and electronic product manufacturing
2484	Safari Energy, LLC	ESM Inc. Bronx	Bronx	189	189	182,120	07/29/2014	Installed	Real estate and rental and leasing
2484	Safari Energy, LLC	ESM Inc. West Street Mt. Vernon	Westchester	63	63	60,707	12/31/2014	Installed	Real estate and rental and leasing
2484	Safari Energy, LLC	ESM Inc. Macquesten Pkwy Mt. Vernon	Westchester	94	94	90,578	12/31/2014	Installed	Real estate and rental and leasing
2484	Mercury Solar Systems	LADS Associates	Kings	341	341	328,906	03/20/2014	Installed	Real estate and rental and leasing
2484	Solar Energy Systems, LLC	FedEx Ground	Queens	538	538	518,417	12/31/2014	Installed	Transportation and warehousing
2484	SunEdison	Anheuser-Busch Distributors of New York, Inc.	Bronx	711	711	685,476	11/13/2014	Installed	Wholesale trade
2484	Dynamic Solar	Bloomingdale's	Westchester	400	400	385,055	04/20/2014	Installed	Retail trade
2156-1	Alteris Renewables Inc.	Stop & Shop - White Plains #501	Westchester	251	251	329,551	01/21/2014	Installed	Retail trade
2156-1	OnForce Solar	Manhattan Beer Distributor	Bronx	1,059	1,059	1,391,920	06/03/2014	Installed	Wholesale trade
2156-2	SunRay Power, LLC	194 Market Street Building B	Westchester	68	68	89,037	08/06/2014	Installed	Retail trade

PON	Solar Developer	Site Name	County	Installed kW	Reported kW	Expected Generation kWh	Operation Date	Status	Sector
2156-2	SunRay Power, LLC	74 Market Street Building E	Westchester	120	120	158,206	08/06/2014	Installed	Retail trade
2156-2	SunRay Power, LLC	193 Market Street Building C	Westchester	123	123	161,885	08/06/2014	Installed	Retail trade
2156-2	SunRay Power, LLC	22 Market Street Building I	Westchester	225	225	295,440	08/19/2014	Installed	Retail trade
2156-2	Solar Energy Systems, LLC	FedEx Ground Phase 1	Queens	348	348	457,114	12/31/2014	Installed	Transportation and warehousing
2589-1	RER Energy Group	Fesko Dairy Farm	Onondaga	303	303	292,019	01/01/2014	Installed	Farm (crop and animal production)
2589-1	OnForce Solar	Price Master	Queens	395	395	380,622	03/14/2014	Installed	Wholesale trade
2589-1	OnForce Solar	Sequins	Queens	231	231	222,592	03/12/2014	Installed	Textile mills
2589-1	Dynamic Solar	Skidmore College	Saratoga	2,085	2,085	2,009,106	07/30/2014	Installed	Educational services
2589-1	Green Power Developers, LLC	PV System @ Yeshiva Kehilath Yakov	Westchester	383	383	369,512	12/24/2014	Installed	Other services, except public administration
2589-2	Absolutely Energized Solar Electric Inc.	SunLight Clinton Realty, LLC	kings	220	220	211,992	05/28/2014	Installed	Real estate and rental and leasing
2589-2	Community Energy Solar, LLC	Clarkson University	St. Lawrence	2,311	2,311	2,227,072	11/14/2014	Installed	Educational services
2589-2	SoCore Energy, LLC	Cinemark	Monroe	312	312	300,768	08/18/2014	Installed	Arts, entertainment, and recreation
2589-2	SunConnect	Macy's (Albany)	Albany	744	744	717,256	10/06/2014	Installed	Retail trade
2589-2	SunConnect	Macy's (Victor)	Ontario	516	516	497,189	12/16/2014	Installed	Retail trade
2589-2	SunConnect	Macy's (McKinley)	Erie	493	493	474,727	09/15/2014	Installed	Retail trade
2589-2	SunConnect	Macy's (Cheektowaga)	Erie	386	386	371,526	07/18/2014	Installed	Retail trade
2589-2	SunConnect	Macy's (Middletown)	Orange	525	525	505,688	09/28/2014	Installed	Retail trade
2589-2	Solar Liberty Energy Systems, Inc.	Wegman's	Monroe	536	536	516,788	06/18/2014	Installed	Retail trade
2589-2	Sustainable Energy Developments, Inc.	Marshall Farms Group- Butler Facility	Wayne	650	650	626,340	01/01/2014	Installed	Farm (crop and animal production)
2589-2	Sustainable Energy Developments, Inc.	Town of Williamson Landfill	Wayne	1,507	1,507	1,451,856	12/16/2014	Installed	State and local government
2589-2	SolarCity Corp.	Manheim Remarketing Clifton Park Smaller	Saratoga	111	111	106,478	01/23/2014	Installed	Professional and technical services
2589-2	Safari Energy, LLC	Diamond-North Bedford 2019	Westchester	950	950	915,420	12/31/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-North Bedford 0006	Westchester	125	125	120,450	12/31/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-North Bedford 0009	Westchester	750	750	722,700	12/31/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-North Bedford 0003	Westchester	86	86	82,561	12/31/2014	Installed	Real estate and rental and leasing
2589-2	SunConnect	Macy's (Poughkeepsie)	Dutchess	455	455	438,611	09/28/2014	Installed	Retail trade

PON	Solar Developer	Site Name	County	Installed kW	Reported kW	Expected Generation kWh	Operation Date	Status	Sector
2589-2	SolarCity Corp.	Manheim Remarketing Newburgh Smaller	Orange	117	117	112,741	01/08/2014	Installed	Professional and technical services
2589-2	SolarCity Corp.	Manheim Remarketing Newburgh Larger	Orange	748	748	720,291	06/10/2014	Installed	Professional and technical services
2589-2	Safari Energy, LLC	Diamond-Saw Mill-0023	Westchester	68	68	65,361	09/18/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-Saw Mill-0016	Westchester	129	129	123,842	09/18/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-Saw Mill-0000	Westchester	132	132	127,282	09/18/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-Saw Mill-0049	Westchester	61	61	58,481	09/18/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-Virginia-0013	Westchester	249	249	239,580	10/21/2014	Installed	Real estate and rental and leasing
2589-2	National Grid Energy Management LLC	SI Showplace LLC aka Pennrock Ind Inc.	Kings	116	116	111,296	11/11/2014	Installed	Arts, entertainment, and recreation
2589-2	National Grid Energy Management LLC	Dundy Glass & Mirror Corp.	Kings	99	99	95,396	10/27/2014	Installed	Miscellaneous manufacturing
2589-2	National Grid Energy Management LLC	Morrel and Co	Kings	125	125	120,835	12/03/2014	Installed	Retail trade
2589-2	Safari Energy, LLC	Diamond-North Bedford 0002	Westchester	63	63	60,707	12/31/2014	Installed	Real estate and rental and leasing
2589-2	Safari Energy, LLC	Diamond-North Bedford 3017	Westchester	89	89	86,001	12/31/2014	Installed	Real estate and rental and leasing
2589-2	SunEdison	Cornell University	Tompkins	2,067	2,067	1,991,761	09/25/2014	Installed	Educational services
2589-3	Advanced Solar Products, Inc.	Bausch & Lomb	Monroe	1,100	1,100	1,060,056	11/25/2014	Installed	Miscellaneous manufacturing
2589-3	American Solar & Alternative Power, LLC	1 Zeiss Drive, Thornwood, NY	Westchester	530	530	510,775	12/08/2014	Installed	Miscellaneous manufacturing
2589-3	Hudson Solar/ Hudson Valley Clean Energy, Inc.	Watchtower Bible and Tract Society	Orange	286	286	275,204	08/05/2014	Installed	Health care and social assistance
2589-3	Solar Energy Systems, LLC	PV System at PearlGreen Corp.	Westchester	419	419	403,748	12/31/2014	Installed	Other services, except public administration

Appendix E. Financial Status Report as of December 31, 2014

Program	Total Budget	Expended ^a	Encumbered ^b
Main Tier^d			
RFP 916	\$128,686,752	\$113,260,848	\$15,425,904
RFP 1037	\$162,847,161	\$89,608,715	\$73,238,446
RFP 1168	\$67,939,313	\$33,260,182	\$34,679,131
RFP 1681	\$21,983,298	\$7,093,586	\$14,889,712
RFP 1851 ^e	\$164,614,903	\$41,882,238	\$122,732,665
RFP 2226 ^e	\$149,859,262	\$22,012,582	\$127,846,680
RFP 2389	\$126,140,671	\$17,361,405	\$108,779,266
RFP 2554	\$59,924,443	\$463,266	\$59,461,177
RFP 2985	\$201,068,035	\$-	\$201,068,035
Boralex- Maintenance Resource	\$17,261,070	\$10,605,020	\$6,656,050
Azure- Maintenance Resource	\$500,000	\$75,840	\$424,160
Lyonsdale - Maintenance Resource	\$27,443,737	\$14,118,917	\$13,324,820
Battenkill - Maintenance Resource	\$20,605	\$-	\$20,605
Generation Attributes Tracking System	\$152,371	\$74,348	\$78,023
Available Main Tier/Maintenance Resource Funding ^f	\$185,725,879	\$-	\$-
Subtotal - Main Tier	\$1,314,167,500	\$349,816,947	\$778,624,674
Customer-Sited Tier			
Open Enrollment PV (with NY-Sun ^g through 2016)	\$343,331,470	\$254,671,682	\$83,407,517
Fuel Cells	\$18,007,210	\$1,572,500	\$7,077,500
Anaerobic Digesters	\$70,864,136	\$14,482,400	\$14,684,382
Small Wind	\$16,965,304	\$8,584,947	\$1,053,114
Solar Thermal	\$14,063,299	\$6,154,639	\$1,070,281
Competitive PV (with NY-Sun ^g through 2016)	\$258,317,987	\$16,518,792	\$107,404,402
General Funding Pool	\$9,225,594	\$-	\$-
Subtotal - Customer-Sited Tier	\$730,775,000	\$301,984,960	\$214,697,196
RPS Funds to NY-Sun	\$829,135,850	\$-	\$-
Subtotal - Program Funding	\$2,874,078,350	\$651,801,907	\$993,321,870
Administration			
Administration - Staff/Overhead	\$49,877,278	\$26,544,788	\$102,247
Quality Assurance/Quality Control - CST Anaerobic Digesters	\$-	\$676,132	\$1,537,381
Quality Assurance/Quality Control - CST Fuel Cells	\$-	\$40,305	\$-
Quality Assurance/Quality Control - CST PV & Small Wind	\$-	\$3,536,617	\$1,461,017
Quality Assurance/Quality Control - CST On-Site Wind	\$-	\$-	\$-
Quality Assurance/Quality Control - CST Solar Thermal	\$-	\$141,455	\$78,761
Quality Assurance/Quality Control - CST Geo Balancing	\$-	\$-	\$-
Administration-Consultant Support	\$5,218,895	\$3,267,120	\$412,669
NYS Cost Recovery Fee ^h	\$22,274,972	\$17,054,600	\$-
Evaluation - Staff/Overhead & Consultant Support	\$2,432,827	\$1,334,734	\$30,686
Subtotal - Administration	\$79,803,972	\$52,595,752	\$3,622,761
TOTAL RENEWABLE PORTFOLIO STANDARD	\$2,953,882,322	\$704,397,659	\$996,944,631

^a Expended funds include contractor invoices processed for payment by NYSERDA.

^b Encumbered funds include remaining funds obligated under a contract, purchase order, or incentive award.

^c Pre-Encumbered funds include planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.

^d Main Tier RFP Budgets include Contract Commitments as of December 31, 2014 and include contracted funds yet to be disencumbered as a result of Main Tier facility underperformance in 2014.

^e An agreement awarded as a result of RFP 1851 for the Marble River Wind Farm was combined with an agreement awarded under RFP 2226 to reflect an increase in the size of the facility. The committed funding remains separated in the respective solicitation balances shown.

Expended ^a + Encumbered ^b	Expended ^a + Encumbered ^b as % of Total Budget	Pre-encumbered ^c Contracts & Applications Pending	Pre-encumbered ^c Solicitation Balance	Expended ^a + Encumbered ^b + Pre-encumbered ^c	Expended ^a + Encumbered ^b + Pre-encumbered ^c as % of Total Budget
\$128,686,752	100.0%	\$-	\$-	\$128,686,752	100.0%
\$162,847,161	100.0%	\$-	\$-	\$162,847,161	100.0%
\$67,939,313	100.0%	\$-	\$-	\$67,939,313	100.0%
\$21,983,298	100.0%	\$-	\$-	\$21,983,298	100.0%
\$164,614,903	100.0%	\$-	\$-	\$164,614,903	100.0%
\$149,859,262	100.0%	\$-	\$-	\$149,859,262	100.0%
\$126,140,671	100.0%	\$-	\$-	\$126,140,671	100.0%
\$59,924,443	100.0%	\$-	\$-	\$59,924,443	100.0%
\$201,068,035	100.0%	\$-	\$-	\$201,068,035	100.0%
\$17,261,070	100.0%	\$-	\$-	\$17,261,070	100.0%
\$500,000	100.0%	\$-	\$-	\$500,000	100.0%
\$27,443,737	100.0%	\$-	\$-	\$27,443,737	100.0%
\$20,605	100.0%	\$-	\$-	\$20,605	100.0%
\$152,371	100.0%	\$-	\$-	\$152,371	100.0%
\$-		\$-	\$-	\$-	
\$1,128,441,621	85.9%	\$-	\$-	\$1,128,441,621	85.9%
\$338,079,199	98.5%	\$5,252,271	\$-	\$343,331,470	100.0%
\$8,650,000	48.0%	\$1,543,816	\$-	\$10,193,816	56.6%
\$29,166,782	41.2%	\$4,653,388	\$-	\$33,820,170	47.7%
\$9,638,061	56.8%	\$1,582,779	\$-	\$11,220,840	66.1%
\$7,224,920	51.4%	\$1,081,258	\$-	\$8,306,178	59.1%
\$123,923,194	48.0%	\$90,903,407	\$-	\$214,826,601	83.2%
\$-	0.0%	\$-	\$-	\$-	0.0%
\$516,682,156	70.7%	\$105,016,919	\$-	\$621,699,075	85.1%
\$-	0.0%	\$-	\$-	\$-	0.0%
\$1,645,123,777	57.2%	\$105,016,919	\$-	\$1,750,140,696	60.9%
\$26,647,035	68.4%	\$272,276	\$-	\$26,919,311	69.0%
\$2,213,513		\$-	\$-	\$2,213,513	
\$40,305		\$-	\$-	\$40,305	
\$4,997,634		\$-	\$-	\$4,997,634	
\$-		\$-	\$-	\$-	
\$220,216		\$-	\$-	\$220,216	
\$-		\$-	\$-	\$-	
\$3,679,790	70.5%	\$-	\$-	\$3,679,790	70.5%
\$17,054,600	76.6%	\$-	\$-	\$17,054,600	76.6%
\$1,365,420	56.1%	\$-	\$-	\$1,365,420	56.1%
\$56,218,513	70.4%	\$272,276	\$-	\$56,490,789	70.8%
\$1,701,342,290	57.6%	\$105,289,195	\$-	\$1,806,631,485	61.2%

^f Available Main Tier/Maintenance Resource Funding calculated as the difference between total available funding less RPS funds to NY-Sun.

^e The NY-Sun program is also operated in service territories of the State where ratepayers are not assessed the RPS surcharge. In those geographic areas, NY-Sun is funded via NYSERDA's allocation of Regional Greenhouse Gas Initiative (RGGI) auction proceeds collected. NYSERDA has committed to funding NY-Sun from RGGI proceeds in the amount of \$20 million for NYPA customers and \$60M for customers served by PSEG Long Island residents (LIPA/PSEG customers). The RPS budget and actual results on this RPS Financial Status report exclude any aforementioned RGGI funded activity. RGGI Program Status Quarterly Reports are available on NYSERDA's web at <http://www.nyserd.org/Publications/Program-Planning-Status-and-Evaluation-Reports/RGGI-Reports.aspx>

^h A September 19, 2011 Order authorized Interest and/or Letter of Credit proceeds to fund the NYS Cost Recovery Fee Allocations for 2011 - 2013 in excess of the budgeted amounts for those annual periods. Therefore, the actual costs for 2011 - 2013 and the future projected expenses differ from the amounts approved in the April 2010 Order and are presumed to be funded from program revenues or will require reallocation of other program budget funding.

Appendix F. Projected Cash Flow Estimates as of December 31, 2014

	Revenues			Estimated Costs				
	Specified Collections	Interest	Ltr of Credit proceeds	Administration ^a	Evaluation	Customer Tier QA/QC ^b	NYS Fees ^c	Current Main Tier RFPs ^d
2006	\$24,072,908	\$308,826	\$192,107	(\$2,389,174)	(\$59,348)	\$0	(\$460,820)	(\$8,216,756)
2007	\$43,143,017	\$1,247,056	\$662,256	(\$1,365,207)	(\$138,865)	(\$1,618)	(\$511,003)	(\$14,407,485)
2008	\$62,136,526	\$1,553,439	\$50,000	(\$1,512,760)	(\$557,133)	(\$197,897)	(\$683,502)	(\$16,097,030)
2009	\$82,639,913	\$1,585,877	\$1,026,981	(\$2,157,256)	(\$273,806)	(\$499,070)	(\$1,514,582)	(\$29,539,663)
2010	\$108,591,164	\$1,474,084	\$0	(\$2,543,218)	\$3,739	(\$696,222)	(\$1,583,684)	(\$33,786,251)
2011	\$170,450,215	\$2,409,458	\$351,520	(\$3,891,999)	\$0	(\$427,188)	(\$2,250,656)	(\$36,240,904)
2012	\$202,989,832	\$2,719,927	\$712,833	(\$4,191,375)	(\$11,571)	(\$633,792)	(\$2,626,641)	(\$45,535,412)
2013	\$243,944,012	\$2,702,102	\$0	(\$5,475,871)	(\$288,494)	(\$779,759)	(\$3,590,350)	(\$62,146,598)
2014	\$281,544,226	\$3,402,253	\$102,198	(\$6,285,076)	(\$9,256)	(\$1,158,963)	(\$3,833,362)	(\$79,032,311)
2015	\$321,157,588	\$3,340,474		(\$3,925,112)	(\$549,047)	(\$2,944,878)	(\$6,622,695)	(\$97,033,358)
2016	\$228,263,205	\$2,574,137		(\$2,305,010)	(\$549,047)	(\$3,483,374)	(\$4,224,031)	(\$83,825,677)
2017	\$227,102,205	\$1,757,242		(\$2,197,818)		(\$3,687,968)	(\$4,161,465)	(\$88,014,598)
2018	\$202,053,759	\$1,090,196		(\$2,082,982)		(\$3,900,138)	(\$3,915,412)	(\$81,430,788)
2019	\$193,930,273	\$490,024		(\$1,813,019)		(\$1,540,000)	(\$3,152,269)	(\$63,931,937)
2020	\$193,730,273	\$257,177		(\$1,210,422)		(\$1,530,000)	(\$2,246,898)	(\$62,362,836)
2021	\$159,543,392	\$566,968		(\$1,064,025)		(\$1,530,000)	(\$1,815,210)	(\$57,870,047)
2022	\$125,007,151	\$1,075,288		(\$941,397)		(\$1,400,000)	(\$1,519,398)	(\$46,255,785)
2023	\$80,977,385	\$1,480,830		(\$565,288)		(\$1,400,000)	(\$909,876)	(\$24,289,636)
2024	\$42,201,172	\$1,702,009		(\$437,604)		(\$1,400,000)	(\$721,763)	(\$16,862,576)
2025		\$1,672,181		(\$385,175)		(\$750,000)	(\$579,462)	(\$11,850,087)
2026		\$1,505,840		(\$385,175)		(\$750,000)	(\$579,462)	(\$11,850,087)
2027		\$1,342,573		(\$260,619)		(\$750,000)	(\$551,460)	(\$11,850,087)
2028		\$1,185,382		(\$235,619)			(\$532,163)	(\$11,850,087)
2029		\$1,033,835		(\$235,619)			(\$507,263)	(\$11,850,087)
2030		\$884,994		(\$235,619)			(\$507,263)	(\$11,850,087)
2031		\$735,037		(\$235,619)			(\$507,263)	(\$11,850,087)
2032		\$583,955		(\$235,619)			(\$507,263)	(\$11,850,087)
2033		\$431,741		(\$235,619)			(\$507,263)	(\$11,850,087)
2034		\$278,384		(\$235,619)			(\$507,263)	(\$11,850,087)
2035		\$123,878		(\$235,619)			(\$507,263)	(\$11,850,087)
2036		\$23,168		(\$87,607)			(\$151,223)	(\$5,985,603)
	\$2,993,478,216	\$41,538,335	\$3,097,895		(\$81,251,836)		(\$52,288,227)	(\$1,083,216,209)

2006 through 2014 data represent actual revenues and expenditures

^a Future Administration expenses include projected expenses which are not fully funded through currently authorized funding.

^b Future QA/QC expenses include projected expenses which are not fully funded through currently authorized funding.

^c A September 19, 2011 Order authorized Interest and/or Letter of Credit proceeds to fund the NYS Cost Recovery Fee Allocations for 2011 -2013 in excess of the budgeted amounts for those annual periods. Therefore, the actual costs for 2011-2013 and the future projected expenses differ from the amounts approved in the April 2010 Order and are presumed to be funded from program revenues or will require reallocation of other program budget funding.

^d Total includes \$152,371 for generation attribute tracking system fees.

Estimated Costs				Customer Tier ^{g,h,i}	Total Estimated Costs	Annual Cash Flow	Cash Balance
Future Main Tier/ Maintenance Resource Funding ^e	Maintenance Resources	RPS Funds to NY-Sun	RPS Funds to Green Bank ^f				
	\$0			\$0	(\$11,126,098)	\$13,447,743	\$13,447,743
	(\$3,104,220)			(\$6,735)	(\$19,535,133)	\$25,517,196	\$38,964,939
	(\$3,666,751)			(\$10,740,400)	(\$33,455,473)	\$30,284,492	\$69,249,431
	(\$3,329,669)			(\$30,396,323)	(\$67,710,369)	\$17,542,402	\$86,791,833
	(\$3,847,114)			(\$38,050,975)	(\$80,503,725)	\$29,561,523	\$116,353,356
	(\$2,899,242)			(\$29,732,613)	(\$75,442,602)	\$97,768,591	\$214,121,947
	(\$3,031,580)			(\$47,020,963)	(\$103,051,334)	\$103,371,258	\$317,493,205
	(\$2,794,633)		(\$50,000,000)	(\$58,716,108)	(\$183,791,813)	\$62,854,301	\$380,347,506
	(\$2,141,328)			(\$87,320,943)	(\$179,781,239)	\$105,267,438	\$485,614,944
(\$5,000,000)	(\$11,270,554)	(\$129,000,000)		(\$145,248,747)	(\$401,594,391)	(\$77,096,329)	\$408,518,615
(\$13,286,294)	(\$4,445,160)	(\$185,000,000)		(\$61,745,255)	(\$358,863,848)	(\$128,026,506)	\$280,492,109
(\$13,286,294)	(\$4,445,160)	(\$148,200,000)		(\$55,495,255)	(\$319,488,558)	(\$90,629,111)	\$189,862,998
(\$13,286,294)	(\$50,000)	(\$129,900,000)		(\$56,495,255)	(\$291,060,868)	(\$87,916,914)	\$101,946,085
(\$8,286,294)	(\$50,000)	(\$137,400,000)		(\$50,975,885)	(\$267,149,404)	(\$72,729,107)	\$29,216,978
(\$8,286,294)	(\$50,000)	(\$91,100,000)		(\$16,797,320)	(\$183,583,770)	\$10,403,680	\$39,620,658
(\$8,286,294)	(\$50,000)	(\$12,877,925)		(\$4,099,640)	(\$87,593,141)	\$72,517,219	\$112,137,877
(\$8,286,294)	(\$50,000)			(\$4,086,541)	(\$62,539,416)	\$63,543,023	\$175,680,901
(\$8,286,294)				(\$2,000,000)	(\$37,451,094)	\$45,007,121	\$220,688,022
(\$8,286,294)				(\$2,000,000)	(\$29,708,237)	\$14,194,944	\$234,882,966
(\$8,286,294)				(\$2,000,000)	(\$23,851,018)	(\$22,178,837)	\$212,704,129
(\$8,286,294)				(\$2,000,000)	(\$23,851,018)	(\$22,345,178)	\$190,358,951
(\$8,286,294)				(\$1,000,000)	(\$22,698,461)	(\$21,355,888)	\$169,003,063
(\$8,286,294)				(\$1,000,000)	(\$21,904,163)	(\$20,718,781)	\$148,284,283
(\$8,286,294)					(\$20,879,263)	(\$19,845,428)	\$128,438,854
(\$8,286,294)					(\$20,879,263)	(\$19,994,269)	\$108,444,585
(\$8,286,294)					(\$20,879,263)	(\$20,144,226)	\$88,300,360
(\$8,286,294)					(\$20,879,263)	(\$20,295,308)	\$68,005,052
(\$8,286,294)					(\$20,879,263)	(\$20,447,522)	\$47,557,529
(\$8,286,294)					(\$20,879,263)	(\$20,600,879)	\$26,956,651
(\$8,286,294)					(\$20,879,263)	(\$20,755,385)	\$6,201,265
					(\$6,224,433)	(\$6,201,265)	\$0
(\$185,725,879)	(\$45,225,412)	(\$833,477,925)	(\$50,000,000)	(\$706,928,958)	(\$3,038,114,446)	(\$0)	

^e Future Main Tier procurement funding assumes 20 year fixed price contracts awarded under a 2015 Main Tier and additional Maintenance Resource Funding Commitments.

^f A December 19, 2013 Order granted NYSERDA's proposal to transfer \$50 million of uncommitted Main Tier RPS funds to the NY Green Bank.

^g In January 2014, NYSERDA made its fourth annual filing to the Commission with regard to recommended allocations of unencumbered CST program funding balances as of end-of-year 2013. The CST estimated costs as shown in this Appendix assume Commission acceptance of the allocations recommended in the petition.

^h A December 19, 2013 Order authorized NYSERDA to reallocate \$108 million of unencumbered Main Tier funds to support the Customer-Sited Tier solar PV programs through 2015, which is reflected in the Customer Tier expenditures. This analysis does not include additional expenditures for the NY-Sun program for 2014-2026 included in NYSERDA's January 6, 2014 Petition.

ⁱ Based on current market activity it is anticipated that approximately \$21.5 million of the Customer-Sited Tier budget will remain unspent.

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