

Green Jobs - Green New York 2022 Annual Report

Final Report | October 2022



NYSERDA

NYSERDA's Promise to New Yorkers:

NYSERDA provides resources, expertise, and objective information so New Yorkers can make confident, informed energy decisions.

Our Vision:

New York is a global climate leader building a healthier future with thriving communities; homes and businesses powered by clean energy; and economic opportunities accessible to all New Yorkers.

Our Mission:

Advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.

Green Jobs - Green New York 2022 Annual Report

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Albany, NY

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1 Introduction

Increasing access to and adoption of building efficiency and electrification upgrades across sectors will reduce energy costs, create local jobs, reduce greenhouse gas emissions, improve indoor air quality, and help achieve New York State's nation-leading greenhouse gas emission reduction targets set forth in the Climate Leadership and Community Protection Act (Climate Act) of 2019. Prioritizing the achievement of these objectives and delivering the associated benefits to disadvantaged communities and energy burdened households is imperative.

On October 9, 2009, the Green Jobs - Green New York Act of 2009 (GJGNY Act) was signed into law. Pursuant to Title 9-A of New York State Public Authorities Law Section 1890, the Green Jobs - Green New York Program directs the New York State Energy and Research Development Authority (NYSERDA) to accomplish the following:

- Establish a revolving loan fund to finance the cost of approved qualified energy efficiency services for residential, multifamily, and nonresidential structures.
- Pursue the feasibility of innovative financing mechanisms.
- Issue one or more competitive opportunities to solicit applications from partnerships or consortia composed of constituency-based organizations (CBO) that can connect community members to Green Jobs - Green New York (GJGNY). Give preference to applicants that include significant participation by minority- and women-owned business enterprises and/or to applications intended to serve economically distressed communities.
- Target communities in areas where energy costs are particularly high in relation to median household income, as determined by NYSERDA, or those designated as a nonattainment area for one or more pollutants pursuant to Section 107 of the federal Clean Air Act.
- Establish standards for energy assessments based on building type and other relevant considerations.
- Establish a schedule of fees for energy assessments, including a sliding scale by which assessment fees will be waived for residential applicants based on median county income.
- Enter into contracts to provide employment and training services to support GJGNY.
- Establish an advisory council.
- Provide annual reports to the New York State Governor and U.S. Senate and Assembly.

The Power NY Act of 2011 established an On-Bill Recovery Financing Program (OBR) for GJGNY project financing and increased the maximum loan limits for residential and small business/not-for-profit GJGNY loans, subject to certain project payback criteria. NYSERDA worked with the utilities and Department of Public Service staff to implement OBR Loans for residential consumers commencing

January 30, 2012—four months earlier than required by the law. In April 2012, an amendment to the GJGNY law—Public Authorities Law § 1896(5)—made additional changes to improve the OBR financing mechanism.

An additional amendment to the GJGNY Act of 2009 was signed into law on October 22, 2013, which extended the availability of financing to net-metered technologies, enabling residential solar electric installations through GJGNY loans.

The 2015–2016 enacted New York State budget (A.3008-B/S.2008-B, Part SS), Chapter 58 of the laws of 2015, included requirements for NYSERDA related to GJGNY as follows:

- Provide a report to the executive, Temporary President of the Senate, Speaker of the Assembly, Chair of the Senate Committee on Energy and Telecommunications, and Chair of the Assembly Committee on Energy regarding the financial status of the GJGNY program.
- Continue to offer financing through the GJGNY program for qualified energy efficiency services to all applicants who were eligible on January 1, 2015 through March 31, 2016.
- Develop standards and/or criteria that will encourage and increase participation of, and issuance of, loans to low- to moderate-income (LMI) households statewide for qualified energy efficiency services under the GJGNY program.
- Convene a working group to assist in developing these standards and/or criteria that includes individual representatives of CBOs.
- Consult with and solicit information and recommendations from the working group as to how to increase participation and issuance of loans to LMI households seeking qualified energy efficiency services.
- Report the results of consultations with and solicitations of the working group to the New York State Governor, Senate Majority Leader, and Speaker of the Assembly within six months of the March 31, 2015 effective date of the legislation.

In December 2017, the GJGNY Act was amended to include the purchase and installation of geothermal systems as qualified energy efficiency services.

In July 2019, the Climate Leadership and Community Protection Act (Climate Act) was signed into law. The Climate Act establishes nation-leading climate action targets for New York State which include reducing emissions economy-wide at least 85% below 1990 levels by 2050. NYSERDA continues to adapt GJGNY programs to better align with and deliver the environmental and equity outcomes set forth in the Climate Act.

In January 2022, as part of the 2022 State of the State, Governor Kathy Hochul announced a plan to achieve 2 million climate-friendly homes by 2030—1 million electrified homes and up to 1 million electrification-ready homes—and ensure more than 800,000 low- to moderate-income households can secure clean energy upgrades. The announcement directed NYSERDA, Homes and Community Renewal (HCR), Department of Public Service (DPS), and Department of State (DOS) to deliver an executable plan to achieve this goal with a funding proposal and strategies to leverage private capital.

In furtherance of New York State’s building decarbonization agenda, this year NYSERDA updated its residential assessment, LMI incentive, and financing programs to phase out certain fossil fuel heating equipment and phase in electrification of heating and hot water in the case of certain use cases where electrification upgrades are demonstrated to preserve or even improve energy affordability for the customer.

This twelfth Annual Report submitted for GJGNY was prepared pursuant to Section 1899 of the GJGNY Act and provides an update on the progress and achievements of the GJGNY initiative from July 1, 2021 through June 30, 2022.

1.1 Advisory Council

The Advisory Council generally meets, at minimum, once per year but will hold additional meetings as needed to discuss significant program changes or in response to Advisory Council requests. Advisory Council meetings are open to the public and documentation of the meetings are posted on NYSERDA’s website.¹ NYSERDA also publishes GJGNY-related data sets including NYSERDA’s low- to moderate-income projects and the Residential Loan Portfolio on Open NY on a periodic basis.²

The Advisory Council consists of nine ex-officio members and 20 appointed members who represent constituency-based community groups; consumer advocates on utility and housing issues; community-based workforce development groups; unions, including building trades and property services; home performance contractors; large-scale construction contractors; and investment market experts. Members of the Advisory Council are listed in Table 1. In the coming year, NYSERDA may pursue changes and additions to the Advisory Council to include expertise and knowledge to expand the stakeholder involvement and effectiveness of GJGNY programs.

Table 1. GJGNY Advisory Council Members

Name	Organization
Doreen Harris	President and CEO, NYSERDA (Chair)
Hope Knight	President and CEO, Empire State Development
Daniel W. Tietz	Commissioner, New York State Office of Temporary and Disability Assistance
Thomas Falcone	Chief Executive Officer, Long Island Power Authority
Basil Seggos	Commissioner, New York State Department of Environmental Conservation
Robert J. Rodriguez	Secretary of State
Justin E. Driscoll	Interim President and CEO, New York Power Authority
Roberta Reardon	Commissioner, Department of Labor
RuthAnne Visnauskas	Commissioner and CEO, New York State Homes and Community Renewal
James Barry	Service Employees International Union 32BJ
Charles Bell	Consumers Union
Les Bluestone	Blue Sea Development Company, LLC
Tria Case	City University of New York
Sammy Chu	Edgewise Energy
Stephan Edel	NY Renews
Kate Fish	Adirondack North Country Association (retired)
Clarke Gocker	People United for Sustainable Housing—Buffalo
Ross Gould	Business Network for Offshore Wind
Dave Hepinstall	Association for Energy Affordability
Alan Higgs	Housing Assistance Program of Essex County (retired)
David Johnson	Laborers International Union of North America
Jennifer Keida	Standard Insulation Co. Inc.
Jason Kuflik	Green Street Power Partners
Conrad Metcalfe	Building Performance Contractors Assoc. (formerly; now retired)
Jackson Morris	Natural Resource Defense Council
Ellen Redmond	International Brotherhood of Electrical Workers (retired)
Hal Smith	Home Energy Performance by Halco
Lisa Tyson	Long Island Progressive Coalition
Michael Weisberg	Hudson Valley Bank

In addition to meeting with and seeking guidance from the Advisory Council, NYSERDA works with utility representatives, Department of Public Service staff, and program implementation contractors to support the implementation of financing and other programs. NYSERDA meets regularly with stakeholders in the residential energy efficiency sector through its Residential Market Advisory Group and by engaging contractors, trade organizations, industry partners, consumer advocates, and outreach organizations to refine program offerings and inform the development of new initiatives.³

1.2 Funding

The GJGNY Act allocated \$112 million in funding from New York State's share of the Regional Greenhouse Gas Initiative (RGGI) to support GJGNY. In consultation with the GJGNY Advisory Council, NYSERDA sub-allocated the funding across the various program components prescribed by the GJGNY Act. Over time, NYSERDA further allocated interest earnings and additional RGGI funds. In addition to the RGGI funds, NYSERDA received a United States Department of Energy (DOE) Better Buildings grant in the amount of \$40 million, of which \$18.6 million was used to support GJGNY financing or outreach. NYSERDA supplemented the initial GJGNY program funding with \$107,025,275 in additional RGGI funds and \$1,779,747 in interest earnings to date to ensure continuity in program services where needed.

Table 2 provides a summary of the GJGNY budget, including interest earnings and subsequent additions of RGGI funds, as of June 30, 2022. To enable continued implementation of GJGNY activities, NYSERDA included elements of GJGNY in the planning and implementation of the Clean Energy Fund (CEF).⁴ NYSERDA worked with stakeholders to incorporate lessons learned from GJGNY into the CEF and continue to deliver benefits from GJGNY initiatives, particularly for LMI households. During this reporting cycle, the CEF supported LMI programs, energy audits, community-based outreach, and workforce development initiatives.

Table 2. GJGNY Budget Summary—From Inception through June 30, 2022

Program Area	Budget	Expended	Committed	Balance
Workforce Development	\$7,339,532	\$7,230,829	\$11,092	\$0
Outreach and Marketing	\$15,843,351	\$15,843,351	\$0	\$0
Energy Audits and Implementation				
One-to-Four-Family Residential Buildings	\$26,946,225	\$26,946,225	\$0	\$0
Multifamily Buildings	\$4,697,574	\$4,697,574	\$0	\$0
Small Commercial and Not-for-Profit	\$8,431,856	\$8,152,702	\$279,154	\$0
Energy Audits and Implementation Total	\$40,075,655	\$39,796,501	\$279,154	\$0
Revolving Loan Fund				
One-to-Four-Family Residential	\$192,744,619	\$158,171,493	\$1,599,648	\$32,973,478
Multifamily	\$557,738	\$148,439	\$0	\$1,046,162
Small Commercial and Not-for-Profit	\$1,977,386	\$1,340,523	\$0	
Revolving Loan Fund Total	\$195,279,743	\$159,660,455	\$1,599,648	\$34,019,640
Loan Loss Reserve Initiative	\$10,000,000	\$86,234	\$9,572,071	\$341,695
Pre-Development Financing	\$4,050,000	\$666,508	\$807,257	\$2,576,235
Program Evaluation	\$5,600,000	\$3,875,505	\$4	\$1,724,491
Program Administration	\$17,272,730	\$15,706,660	\$39,000	\$1,527,070
NYS Cost Recovery Fee	\$2,980,985	\$2,798,888		\$182,097
TOTAL	\$298,441,996	\$245,664,931	\$12,405,837	\$40,371,228

^a The table includes certain loans which were issued and subsequently pledged to bonds. The proceeds from bonds are used to finance the pledged loans.
Expended: Contractor Invoices and loans processed for payment by NYSERDA. Expended amount is net of loan repayments made through reporting period for program area sectors One- to Four-Family, Multifamily, and Small Commercial and Not-for-Profit, and includes bond proceeds, less bond issuance cost.
Committed: Funding for contracts, purchase orders, incentive award and loans that are encumbered, awarded and under negotiation.

By far the greatest demand for GJGNY funding has been from the residential revolving loan fund, which issued loans totaling its original allocation in less than three years. The residential revolving loan fund is now maintained primarily through proceeds from the sale of bonds, and to some extent more recently through loan participation sales:

- August 2013: Residential Energy Efficiency Financing Revenue Bonds sold as Qualified Energy Conservation Bonds (QECB), \$24.3 million.
- September 2015: Residential Energy Efficiency Financing Revenue Bonds to Environmental Facilities Corporation (EFC), in connection with AAA-rated State Revolving Fund bonds issued by EFC, \$46.23 million.

- October 2015: Residential Solar Loan Revenue Bonds issued to M&T Bank, \$48.5 million.
- September 2016: Residential Energy Efficiency Financing Revenue Bonds to EFC, in connection with AAA-rated SRF bonds issued by EFC, \$23.2 million.
- March 2018: Residential Solar Financing Green Revenue Bonds, \$18.5 million.
- March 2019: Residential Solar and Energy Efficiency Financing Green Revenue Bonds, \$15.5 million.
- October 2020: Residential Solar and Energy Efficiency Financing Green Revenue Bonds, \$16.69 million.
- June 2021 to February 2022: participation sale of GJGNY loans, \$45.55 million.

Section 3 provides more details regarding the bonds issued and the participation sales during the reporting period.

Even though NYSERDA has had success using bonds to support the residential revolving loan fund, because of the difference between the interest rate offered on GJGNY loans and the interest rate paid on bonds and the requirements to pledge excess revenues to cover expected loan losses, the program requires additional RGGI fund allocations to supply loans not funded through bond proceeds or other means, which are recovered through excess pledged loan repayments collected after the bonds mature. NYSERDA has historically made changes to program loan interest rates in an effort to manage the annual amount of RGGI funds required and available to support the program. Section 3 further details interest rate change and its impact.

To enable continued implementation of GJGNY activities, NYSERDA included elements of GJGNY in the programs and services supported by the Clean Energy Fund (CEF).⁵ Also, through a Memorandum of Understanding with the Long Island Power Authority (LIPA), certain aspects of GJGNY are delivered by Public Service Enterprise Group (PSEG) Long Island, LIPA's system operator. Table 3 outlines expenditures for individual components of GJGNY from all funding sources.

Table 3. GJGNY Expenditures as of June 30, 2022 (Multiple Funding Sources)

Program Area	Expended July 1, 2021-June 30, 2022	Expended Cumulative to Date
Workforce Development	\$9,539,457	\$27,956,126
Outreach and Marketing	\$1,053,183	\$21,527,070
One- to Four-Family Residential Buildings Audits	\$1,747,999	\$41,882,059
Multifamily Buildings Audits	\$0	\$4,697,574
Small Commercial and Not-for-Profit Audits	\$139,227	\$8,152,702
Combined Financing	\$20,651,965	\$159,660,455
Loan Loss Reserve Initiative	\$86,234	\$86,234
Pre-Development Financing	\$666,508	\$666,508
Program Evaluation	\$53,504	\$3,875,505
Program Administration	\$1,223,190	\$15,706,660
NYS Cost Recovery Fee	\$124,404	\$2,798,888
TOTAL	\$35,285,672	\$287,009,781

NOTE: Discrepancies between Table 1-2 GJGNY Budget Summary and Table 1-3 GJGNY Expenditures occur because the expenditures in Table 1-3 account for multiple funding sources—GJGNY, CEF, and RGGI.

1.3 Overall Progress and Outcomes

Table 4 provides a summary of program performance metrics. Although this table reports primarily on the assessments and projects completed, it is important to note there are many other indicators of program success not captured. Some of these additional indicators include the growth of participation in the programs active in underserved communities, the creation of quality jobs within those same communities, improved participation of LMI households in energy efficiency projects, and improved access to financing for households typically unable to qualify for financing. Other indicators of program success are seen in new, up-skilled, and higher-waged employment opportunities resulting from the GJGNY program. Some of these program characteristics are reported in other sections of this report.

A continued priority is the refinement of the residential loan fund to overcome barriers limiting participation by households who would have otherwise undertaken an energy efficiency or renewable energy project.

Table 4. Summary of Performance Metrics—July 1, 2021 through June 30, 2022

Metric	One- to Four-Family Residential Buildings	Small Commercial and Not-for-Profit Energy Efficiency
Assessment Applications Received (number) ¹	5,821	109
Assessments Completed (number) ²	9,651	241
Projects completed (units) ³	5,241	
Loan applicants (number)	5,202	8
On-Bill Recovery Loans Issued (number)	886	2
Smart Energy Loans Issued (number)	2,270	0
Participation Loans Issued (number)		1
Bridge Loans Issued (number)	206	
Total Value of Loans	\$45,822,777	\$96,439
Participation Loans		\$1,165,468
Average Loan Amount	\$13,630	\$32,146
Average Project Cost (Estimate) of Projects Receiving Loans ⁵	\$17,949	\$49,027
1st Year Net kWh Savings from Projects Receiving Loans ^{4, 6}	5,764,794	1,200
1st Year Net MMBtu Savings from Projects Receiving Loans ^{4, 6}	18,217	10.95
Number of loan defaults ⁷	288	10
Number of OBR loan recipients who are in arrears on their utility accounts for electric and/or gas service.	743	10
Number of OBR loan recipients who are in arrears in their OBR loan payment.	1942	13
Number of OBR loan recipients whose utility service has been terminated for non-payment.	2	0
Number of OBR loan recipients whose utility service have been reconnected.	1	0

¹ The column One- to Four-Family Residential Buildings and row Assessment Applications Received reflects the Assisted Home Performance with ENERGY STAR program only, NYSERDA’s moderate-income efficiency program. Does not include the EmPower Program or the Residential Energy Audit Program, which do not have an audit application component. It also does not include PSEG-Long Island.

² The column One- to Four-Family Residential Buildings and row Assessments Completed reflects Assisted Home Performance with ENERGY STAR, the Residential Energy Audit Program, and PSEG-Long Island.

³ Reflects only Assisted Home Performance with ENERGY STAR and PSEG-Long Island completed projects.

⁴ Energy and bill savings represents installed to date saving for the One- to Four-Family sector and the Multifamily sector, and an estimated 44% project installation rate, based on historical performance for the Small Commercial and Not-for-Profit sector.

⁵ In cases where the total project cost is not known, the loan amount is used as a proxy.

⁶ The savings from projects with loans are included in the savings from projects receiving audits.

⁷ A loan default is defined as a loan that has been charged-off due to exceeding 120 days of delinquency, or in cases where the obligor has filed for bankruptcy, died, or reached a settlement due to hardship.

⁸ As of 2018, the Multifamily GJGNY audits pipeline is complete. All GJGNY funds have been committed and spent. Technical assistance for multifamily buildings is available under the CEF.

Note: projects that receive GJGNY audits and/or financing may have also received incentives through Energy Efficiency Portfolio Standard (EEPS), Regional Green House Gas Initiative (RGGI), Clean Energy Fund (CEF), utility programs and/or other organizations such that projects’ energy savings may not all be attributable solely to GJGNY.

1.4 Improvements to Program Offerings

NYSERDA is committed to the principle of continuous improvement, particularly focused on the customer's experience and reducing administrative burden on companies and organizations serving the customer. Beginning in 2014, NYSERDA worked with stakeholders on a targeted effort to improve both customer and contractor experience with residential programs and GJGNY financing, resulting in process improvements and faster loan and project approvals. Process improvements continue to be a priority for NYSERDA, with additional improvements under development.

With respect to loan transfers upon sale of an improved property, the current GJGNY statute requires property owners with OBR loans to provide written notice to a prospective buyer of the property regarding the OBR loan. In addition, the statute requires NYSERDA to record a declaration of the OBR loan in the municipal recording office and to record the loan's satisfaction when paid off. The declaration does not place a lien on the property. It is intended to notify a prospective buyer of the property that an OBR loan is associated with the building's utility meter and the outstanding balance of the loan will transfer to the new property owner unless satisfied prior to the sale or transfer of the property. To accomplish this, NYSERDA pays fees to a title company to perform a title search to verify the property owner and to record the declaration and its satisfaction in the municipal recording office, including municipal fees. Unfortunately, the loan transfer process is not working effectively. Based on the number of loans that have transferred to successor utility customers compared to OBR loans paid off early (assumed to have occurred through property sale/transfer), it appears that transfer of the loan is only utilized about 20% of the time. The current recording process led to some confusion for mortgagees, title companies, and attorneys that sometimes disrupts the property transfer process. In some cases, property transfers have occurred without written notice by the seller or purchaser notification through the title search process.

The additional fees associated with issuing an OBR loan, including the required declarations and associated title search, are also costly (ranging from \$135 to \$1,695 per loan, depending on county) and are paid from GJGNY program funds. The GJGNY residential OBR loans currently offer consumers the same interest rate as the GJGNY residential Smart Energy Loan, despite the payment of these additional costs.

In the 2021–2022 Legislative session, a proposal to amend the requirements for transferability and recording of OBR loans was advanced (S.6612). The proposed change would allow the loan to either be voluntarily assumed by a subsequent purchaser of a property through a written agreement or for the loan to be satisfied by the existing owner through ongoing payments directly to the loan servicer (not through the utility bill), therefore, eliminating the need for recording a declaration. This amendment to the statute was intended to eliminate the confusion and other issues that have arisen with property transfers.

1.5 Acknowledgement of COVID-19 Impact

While NYSERDA program activity has resumed, contractors, service providers, and other market partners continue to face challenges to maintain full-staffing capacity. Supply chain disruptions and inflationary effects continue to drive up project costs and lengthen project cycle times or postpone new development. NYSERDA is continuously assessing market conditions to inform potential adjustments to better meet market needs while ensuring optimal and efficient use of public funds.

2 Audits and Implementation

For residential customers, free and reduced cost residential energy audits are provided by contractors participating in the Home Performance with ENERGY STAR[®] and the Assisted Home Performance with ENERGY STAR program through December 31, 2019.⁶ Starting January 1, 2020, residential audits became free for all one- to four-family residential customers. If a customer is deemed to be income-eligible, that customer is offered additional services through NYSERDA's low- to moderate-income programs. Energy audits are provided by contractors participating in NYSERDA's Assisted Home Performance with ENERGY STAR and EmPower NY programs.⁷

In addition, NYSERDA provides subsidized audits for small businesses and not-for-profit organizations, and affordable multifamily buildings through NYSERDA's Flexible Technical Assistance (FlexTech) program. Financing may also be available to a customer that receives an assessment from a utility or other source if the assessment meets NYSERDA's standards.

2.1 Residential Sector

2.1.1 Target Audience

The primary target audience for GJGNY residential audits are owners of one- to four-family residential buildings. Building owners whose incomes are equal to or less than 80% of the State or area median income, considered LMI households, are of particular interest in GJGNY and may be eligible for a discount of 50% of the cost of the eligible work, up to \$5,000, or up to \$10,000,⁸ for buildings with two to four units through the Assisted Home Performance program (AHP). Effective July 13, 2020, following the COVID-19 work pause, NYSERDA raised the 80% Assisted HPwES income threshold to 120% and the caps for the Assisted HPwES were raised to \$5,000 for a single-family home and up to \$10,000 for a 2–4 family home. The Assisted HPwES income threshold reverted to 80% Area Median Income effective September 1, 2021.

2.1.2 Implementation Approach

NYSERDA's programs prioritize building science and support a comprehensive approach for identifying energy efficiency improvements. Programs are designed to reduce the energy use in existing one- to four-family homes while also addressing indoor air quality and other energy-related health and safety issues. Energy efficiency improvements through NYSERDA's programs include building shell measures, high-efficiency heating and cooling measures, and ENERGY STAR appliances and lighting.

The programs are delivered through a statewide network of contracting firms who provide energy assessment and install energy-efficient improvements. The energy assessment includes taking an inventory of the current home energy systems and energy-related health and safety conditions and developing a work scope and a cost and energy-savings estimate for proposed improvements. The energy assessment report is provided to the homeowner and allows the contractor to recommend and discuss options for improvements that maximize energy savings and meet the household budget considerations. In addition to the energy savings offered, the program addresses residential health and safety issues pertaining to indoor air pollutants, focusing on carbon monoxide and other pollutants associated with combustion appliances, ventilation, and moisture control.

The contractor tests the house when work is complete to ensure a safe and healthy environment after installation of energy efficiency measures. Participating households typically reduce their total energy use by 15–20% after work on the home is complete. Quality assurance inspections are performed on an average of 10–15% of projects to ensure contractor work meets program and industry standards.

The Residential Energy Assessment program is available to customers who are not income qualified for NYSERDA's Assisted Home Performance with ENERGY STAR or EmPower New York Programs and offers a more streamlined approach, reducing administrative burden on contractors and expediting the energy audit and sales process. Auditors are qualified to participate using a variety of industry credentials. In addition, the audit process is customizable to fit the contractor's and customer's needs, while ensuring that the criteria set under GJGNY is met. NYSERDA continues to work closely with contractors, solution providers, and utilities to test remote audit strategies via a series of demonstration projects. Successful implementation of remote and virtual energy audit strategies will enable further streamlining of the process, reduce costs, and create broader access to energy audits for all New York State homeowners.

2.1.3 Energy Assessment Fees

In January 2020, NYSERDA made assessments free to all residential customers. These services are offered through a variety of NYSERDA residential programs. In addition, NYSERDA offers Residential GJGNY Financing for customers that receive a residential energy audit through a NYSERDA program. With the transition to a no-cost audit model for all residential customers, NYSERDA maintained a higher reimbursement rate for households with annual income at or below 80% of area median income who went forward with making energy efficiency upgrades through the Assisted Home Performance program to help offset the costs associated with the diagnostic work necessary to develop the energy efficiency work scope. Table 5 provides the audit reimbursement rates, based on customer income thresholds.

Table 5. Residential Assessment Fee as of July 2022

Household Income	Single Unit		Two-four	
	Cost to Customer	Program Payment to Contractor	Cost to Customer	Program Payment to Contractor
≤80% Area Median Income-(AMI) AHPwES Audit	\$0	\$250	\$0	\$250/unit
>80% AMI Residential-Energy Audit Program	\$0	\$150	\$0	\$ 150/unit

2.1.4 Residential Energy Audits

NYSERDA found that the conversion rate from audit to project completion through a NYSERDA program is approximately 33% since program inception. A 2012 NYSERDA evaluation indicated aspects of the recommended work proceeded outside a NYSERDA program, either with the benefit of utility rebates or by the homeowner on their own. Among individuals surveyed in the evaluation who had an audit application approved, or audit completed, but did not have work performed through a NYSERDA incentive program, nearly 38% of respondents reported they installed program eligible energy-efficient measures outside of the program.⁹ These evaluation findings indicate an overall conversion rate greater than 70%.

2.1.5 Implementation and Support Contracts

External contracts related to the implementation of the GJGNY Program in the residential sector during the reporting period are detailed in Table 6.

Table 6. Implementation and Support Contracts—Residential

Identification Number	Contractor	Description
106225	Kelliher Samets Volk	Marketing Support
107771	CLEAResult	Shared Services Provider
116844	CLEAResult	Implementation/Technical Services
117927	EME Consulting Engineering Group LLC	Quality Assurance
121807	Uplight	EmPower/Assisted Home Performance Software
127558	Honeywell International, Inc	Quality Assurance
113649	Honeywell International, Inc	Quality Assurance
113501	Institute for Building Technology and Safety	Quality Assurance
127604	Institute for Building Technology and Safety	Quality Assurance

In addition, NYSERDA has a Memorandum of Understanding with LIPA, through which PSEG Long Island, LIPA's system operator, provides GJGNY free audits and services to their customers.

2.2 Multifamily Sector

NYSERDA offers a portfolio of programs and incentives for owners, facility managers, developers, and condo/co-op boards of multifamily buildings with five or more units in the State. NYSERDA's programs facilitate assessments, funding, and implementation of energy efficiency upgrades that improve building performance and save money. Implementation of the GJGNY Multifamily Buildings initiative began in the third quarter of 2010. The GJGNY audit funds were fully expended in 2018. NYSERDA continues to support audits and other forms of technical assistance for the multifamily sector through its offerings under the Clean Energy Fund. These include FlexTech and the Low Carbon Capital Planning Support. NYSERDA also provides technical assistance to affordable housing community through direct partnerships with New York City Housing Preservation and Development and NYS Homes and Community Renewal.

2.2.1 Target Audience

The needs of the multifamily residential sector are addressed by working with State and local housing agencies, developers, building owners, and their representatives to improve the energy efficiency, health, safety, and security of affordable multifamily buildings. The programs identify and target those potential participants who are committed to the implementation of energy-related improvements. As part of GJGNY marketing and outreach efforts, provisions have been made to encourage referrals through community-based outreach.

2.2.2 Coordination with Other Program Administrators

In April 2022, NYSERDA and New York State utilities filed a updated joint implementation plan for the statewide portfolio of programs and offerings for low- to moderate-income customers and communities in New York State.¹⁰ NYSERDA worked closely with utility partners to support the design and delivery of the utilities' Affordable Multifamily Energy Efficiency Program, which provides incentives for single measure or comprehensive energy efficiency projects in the affordable housing sector and took the place of NYSERDA's Multifamily Performance Program in the market. AMEEP launched in November 2021. In February 2022, after a planned overlap of program availability to give the market time to adjust to new offering, NYSERDA's Multifamily Performance Program was closed to new applications. NYSERDA continues to manage a sizable portfolio of MPP projects to completion.

In addition, NYSERDA continues to coordinate closely with NYS Homes and Community Renewal and the federally funded Weatherization Assistance Program, NYC Housing Preservation and Development, U.S. Housing and Urban Development, and others to leverage additional funding, including federal funding, to serve more LMI customers, streamline access to clean energy upgrades, and meet customers' needs.

2.3 Small Commercial and Not-for-Profit Sector

NYSERDA's Small Commercial and Not-for-Profit Energy Efficiency Program provides access to audits and financing to help small businesses and not-for-profit organizations improve their efficiency and reduce energy costs.

2.3.1 Target Audience

The target audiences for the program are small businesses and not-for-profit organizations within State boundaries. Consistent with the GJGNY Act, "small business" has the same meaning as that of "Section 131" of the New York State Economic Development Law, which states "one which is resident in this State, independently owned and operated, not dominant in its field and employs one hundred or less persons; not-for-profit means a corporation defined in subdivision five of paragraph (a) of Section 102 of the New York State not-for-profit corporation law."

2.3.2 Implementation Approach

Loans are provided for qualified energy efficiency services based on recommendations contained in Qualified Energy Assessment or other audit meeting NYSERDA's standards.¹¹

Applicants may be eligible to receive a subsidized energy audit via NYSERDA's FlexTech program.¹² Additionally, NYSERDA is reviewing ways to provide recommended measure lists for specific building types that will include cost and payback information enabling customers to make informed decisions about common clean energy upgrades.

2.3.3 Implementation and Support Contracts

Consultants competitively selected to provide services through the FlexTech Program are located on NYSERDA's web site.¹³

3 Financing

This section provides information related to various financing activities that enable owners of one- to four-family residential buildings, multifamily buildings, and buildings occupied by small businesses and not-for-profit organizations to invest in energy efficiency improvements.

3.1 Revolving Loan Fund

NYSERDA established a Revolving Loan Fund to support energy efficiency financing for owners of one- to four-family residential buildings, multifamily buildings, and buildings occupied by small businesses or not-for-profit organizations. The GJGNY Act requires the initial balance of the residential account to be at least 50% of the total balance. Current allocation and funding status of the loan fund across sectors is represented in Table 7.

Table 7. Revolving Loan Fund Status by Sector as of June 30, 2022

Program Area	Funding Allocation	Loans Issued and Implementation Expenses	Loan Repayments and Bond Proceeds	Committed	Balance*
One- to Four-Family Residential Buildings	\$192,744,619	\$454,885,137	(\$296,713,644)	\$1,599,648	\$32,973,478
Multifamily Performance	\$557,738	\$4,011,422	(\$3,862,983)	\$0	\$409,299
Small Commercial Energy Efficiency	\$1,977,386	\$3,182,158	(\$1,841,635)	\$0	\$636,863
TOTAL	\$195,279,743	\$462,078,717	(\$302,418,262)	\$1,599,648	\$34,019,640

* Balance is calculated as “Funding Allocation” less all other categories.

Pursuant to the GJGNY Act, loans were initially limited to \$13,000 per applicant for one- to four-family residential structures and \$26,000 per applicant for small business and not-for-profit structures. The Power NY Act of 2011 allows loans up to \$25,000 for residential structures and up to \$50,000 for small business and not-for-profit structures, provided that the project payback is 15 years or less. NYSERDA established programmatic limits for multifamily structures, not to exceed \$5,000 per unit and \$500,000 per building.

To pursue financing through the Revolving Loan Fund, a customer must have a qualified energy audit that identifies energy services to be undertaken. Subject to the loan caps, the amount eligible for financing will be the total project cost minus any NYSERDA, utility, or other available incentives, grants, or rebates. The total cost of the project may include the (1) removal of equipment or systems and (2) purchase and installation of new systems or equipment and any required ancillary equipment and related services, including necessary health and safety improvements.

3.2 Residential Financing

GJGNY offers three types of loans for one- to four-family residential energy improvements. An unsecured consumer loan financing product was launched on November 15, 2010. This loan, referred to as the Smart Energy Loan, requires the consumer to make monthly loan payments directly to NYSERDA's loan servicer, Concord Servicing Corporation (Concord). On January 30, 2012, NYSERDA launched OBR Loans, as authorized by the Power NY Act of 2011. The OBR Loan allows consumers to repay through an installment charge on a bill from one of the involved electric or gas utilities (Central Hudson, Con Edison, Long Island Power Authority, National Grid—Upstate, New York State Electric and Gas Corporation, Rochester Gas and Electric Corporation, or Orange and Rockland Utilities). The utilities then remit repayments to Concord, who coordinates data communications with each utility. The third type of loan is the Residential Renewable Energy Tax Credit Bridge Loan, which was launched in January 2021. The Bridge Loan is used to finance tax credits for applicable projects and has a term of two years. A balloon payment of principal and interest is due from the customer at maturity. The Bridge Loan is a Smart Energy Loan and must be paid by check or automatic withdrawal (ACH).

The residential loans are originated statewide through Slipstream, a not-for-profit energy efficiency lending organization competitively selected by NYSERDA to provide residential financing services. Slipstream reviews applications and originates loans on behalf of NYSERDA pursuant to underwriting criteria established by NYSERDA. Slipstream closes on the loan, disburses proceeds to the contractor from a cash advance pool provided by NYSERDA to Slipstream, and then submits the closed loan to Concord. NYSERDA then replenishes the cash advance pool for the loan disbursement on a weekly basis. Concord is responsible for all aspects of servicing the loan portfolio, including borrower billing, collections, and monitoring the origination processes on a sample basis to ensure conformance to standards.

To qualify for GJGNY financing, a project must meet cost-effectiveness requirements. For Smart Energy Loans, estimated energy savings over the anticipated life of the improvements must be at least 80% of the total loan payments. However, OBR loans must meet the bill neutrality rules established pursuant to the GJGNY Act. ProForma tools (spreadsheets) have been developed to standardize the process of verifying cost-effectiveness of the projects seeking financing.

Projects seeking financing must also be based on recommendations contained in an energy audit. As described in Section 2.1 Residential Sector, an energy audit can be provided through NYSERDA's residential energy efficiency programs. The NY-Sun program requires an analysis of the site to ensure proper sizing and installation of the PV system, but also requires a clipboard energy efficiency audit to make consumers aware of opportunities to reduce their energy consumption and demand. Likewise, a site assessment (audit) is required for other renewable energy systems to be financed through a GJGNY loan. Though not required, households seeking to install a renewable energy system are encouraged to have a home energy assessment done, as undertaking energy efficiency improvements prior to installing a renewable energy system may result in the installation of a smaller, lower cost renewable energy system. The reduction in energy bills associated with the energy efficiency project may offset some costs of the renewable energy system. Assuming the project meets the cost-effectiveness, requirements and can be installed within the loan cap amount, loans may be made available for a combination of energy efficiency and renewable energy work.

3.2.1 Loan Eligibility Requirements

3.2.1.1 Energy Efficiency

To be eligible for financing, resident energy efficiency projects must meet cost-effectiveness requirements as previously described. However, within certain defined parameters, many energy efficiency measures are prequalified for Smart Energy Loans, meaning they have been found to generally meet the cost-effectiveness test and require no additional screening for the Smart Energy Loan. Loans for systems that do not meet the parameters for prequalification can be screened for cost-effectiveness on an individual basis. In addition, up to 50% of the project cost, related to associated health and safety measures and qualified accessories, can be financed as long as the loan meets the cost-effectiveness criteria.

Provided the work performed to participate in a utility rebate program meets NYSERDA's residential program requirements and is completed by a participating contractor, the GJGNY loan may be used in coordination with the utility rebate, just as the GJGNY loan may be used in coordination with NYSERDA incentives.

3.2.1.2 Solar PV and Other Net Metered Technologies

The amendment to the GJGNY Act of 2009, dated October 22, 2013, made the installation of energy technologies eligible for net energy metering pursuant to Section 66-j or 66-l of the Public Service Law eligible for GJGNY financing. The only such technology likely to be installed at a residence is solar electric.

To be eligible for a GJGNY loan, Solar PV systems must be installed by a participating contractor in good standing with the NY-Sun program. The contractor must submit the project package to the NY-Sun program for approval, even if there is no NY-Sun incentive available for the project. At a minimum, the project package must include a project application form signed by the customer with a certification statement that the clipboard energy efficiency audit has been performed; site plan; site photos; one- or three-line drawing; shading report and estimate of annual output; and cost-effectiveness pro forma.

Consumers purchasing solar electric systems may use the loan in addition to receiving federal and State tax incentives and incentives offered through the NY-Sun program,¹⁴ where available.¹⁵ The loan may also be combined with NYSERDA's Affordable Solar incentive, which targets households with a total income of up to 80% of the State or county median income.¹⁶

3.2.1.3 Wood Heating Systems

Renewable Heat NY provided incentives toward the installed cost of high-efficiency, low-emission wood heating systems until August 2021, when the program expended available funding. In the residential sector, the program supported efficient wood pellet stoves, wood pellet boilers with thermal storage, and advanced cordwood boilers with thermal storage. To be eligible for a GJGNY loan, the system had to be installed by a participating contractor in good standing with NYSERDA's programs.

Consumers purchasing eligible residential wood heating systems could use the loan in addition to having had received incentives offered through the Renewable Heat NY program,¹⁷ where available. The loan could also be combined with NYSERDA's income-eligible pellet stove, wood pellet boiler, and cordwood boiler incentives, which were available for households with a total income up to 80% of the State or county median income. Currently, customers that are eligible for Assisted Home Performance and EmPower may receive an incentive for qualified pellet stoves.

3.2.1.4 Heat Pumps

NYSERDA provides financing for residential ground source heat pumps and air source heat pumps on a standalone basis. Within certain defined parameters, these heat pumps are prequalified for Smart Energy Loans, meaning they have been found to meet the cost-effectiveness test. Loans for systems that do not meet the parameters for pre-qualification can be screened for cost-effectiveness on an individual basis. To be eligible for a GJGNY loan, the system must be installed by a participating contractor in good standing in the NYS Clean Heat Statewide Incentive Program (“NYS Clean Heat”), administered by the New York State Electric Utilities. The participating contractor is responsible for submitting necessary supporting documentation to the loan originator for review and approval. The loan may be used in addition to receiving applicable tax incentives and/or incentives offered through the NYS Clean Heat Program.¹⁸

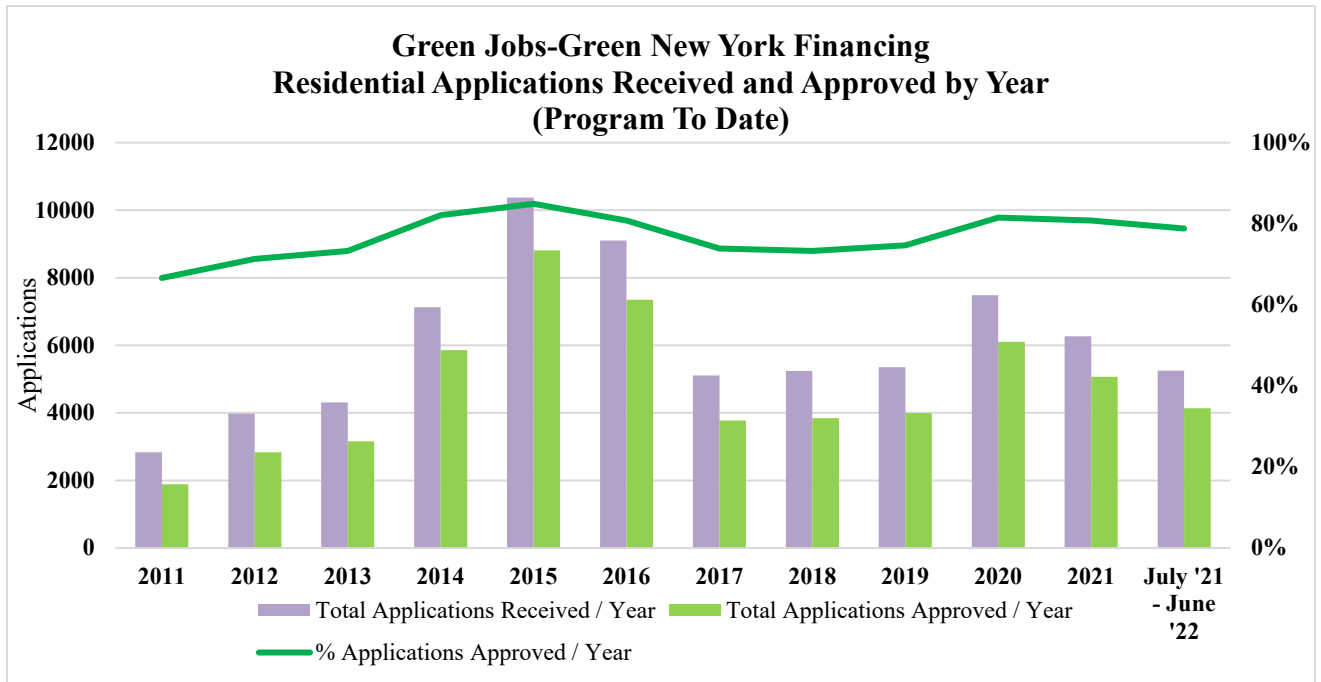
3.2.2 Residential Loan Fund Performance

From October 2010 through June 2022, 21,443 energy efficiency loans closed valued at more than \$196 million. Approximately 5.5% of Assisted HPwES projects completed in the 12 months ending on June 30, 2022 were financed through a GJGNY loan. From February 2014 through June 2022, 12,102 solar electric loans closed totaling more than \$207 million. Approximately 12.7% of residential solar electric projects completed in the 12 months ending on June 30, 2022 were financed through a GJGNY loan. In addition, 1,103 loans closed for solar thermal, wood heating systems, ground source and air source heat pump projects totaling over \$17.5 million.

The Smart Energy Loan consistently represents most loans closed on a monthly basis; over the last 12 months Smart Energy Loans represented more than 65% of loans closed.

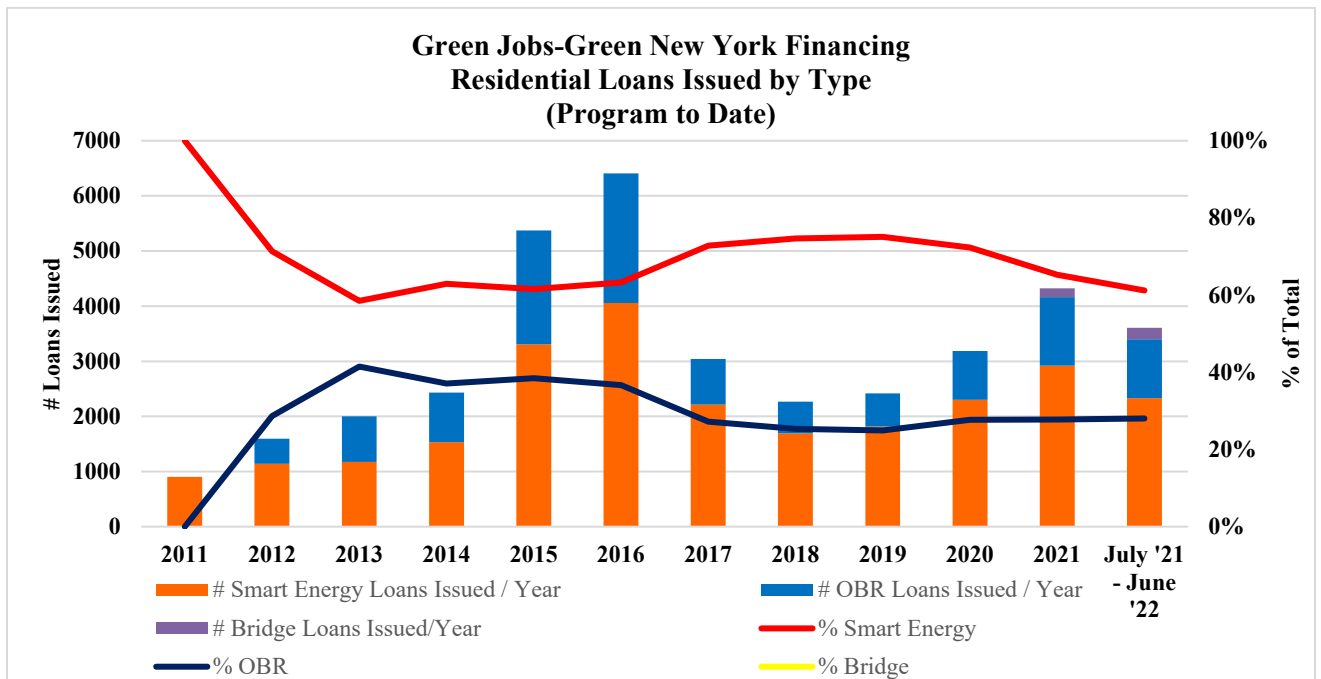
Figures 1 and 2 illustrate financing applications submitted and Smart Energy and OBR and loans issued since the launch of the program.

Figure 1. Financing Applications Received and Approved per Year (Program to Date)



NOTE: Columns on the far right represent the current reporting period and partially overlap with data from the previous calendar year.

Figure 2. Smart Energy Loans and OBR Loans Issued by Financing Type (Program to Date)



NOTE: Columns on the far right represent the current reporting period and partially overlap with data from the previous calendar year.

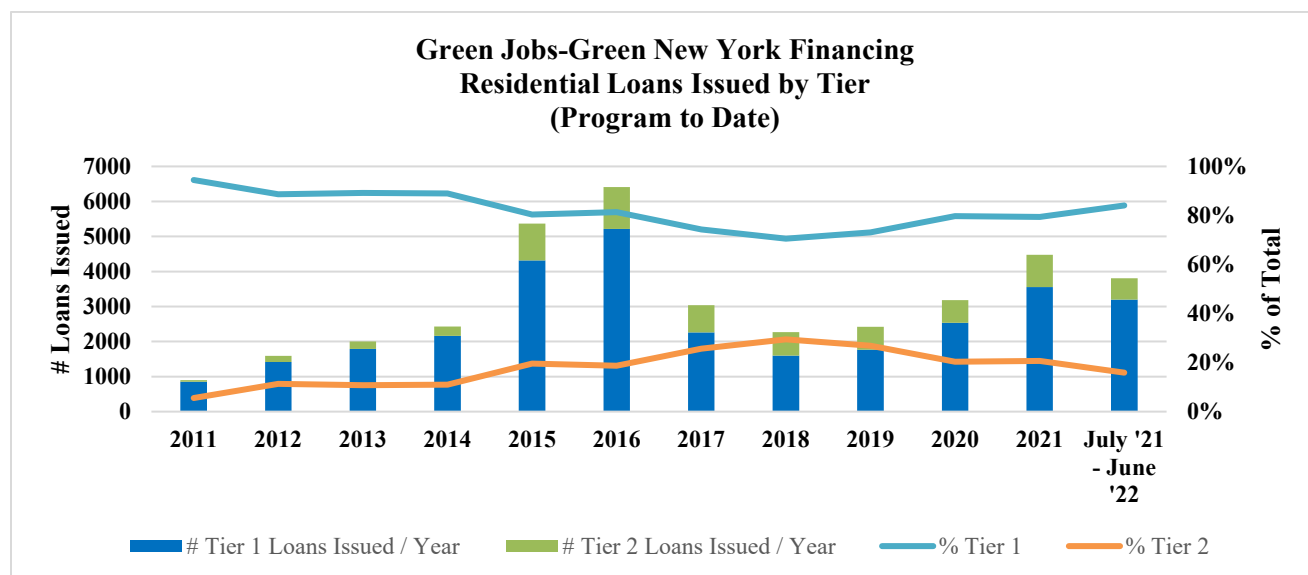
Table 8 summarizes loan underwriting standards used for both the Smart Energy and OBR Loans. NYSERDA modified loan underwriting standards eight times since the launch of the program in an effort to address loan application denials and responsibly improve the penetration of financing to consumers who would not qualify using traditional underwriting standards.

Tier 1 loans use standard underwriting criteria relying primarily on FICO scores and debt-to-income ratio. Tier 2 expands the number of people who can qualify by substituting mortgage payment history for the FICO score as a primary qualifier. In 2014, changes were made to allow considerably higher debt-to-income (DTI) for applicants with might have lower FICO scores. The change was adopted assuming there would be material savings from the measures implemented. In 2021, analysis of the GJGNY Loan portfolio determined that the criteria for the DTI requirements for applicants with lower FICO scores was too broad and could result in higher cumulative net losses to the GJGNY Loan Fund, a reduction in liquidity, and an increase in more borrowers being subjected to default collection efforts including judgement collections by the NYS Attorney General’s Office. On July 1, 2021, the underwriting criteria was updated to tighten requirements and to align with practices in the industry.

Table 8. GJGNY Residential Loan Underwriting Standards as of June 30, 2022

LOAN UNDERWRITING STANDARDS		
Standard	Tier 1 Loans	Tier 2 Loans
Minimum FICO	640	540
Mortgage Payment History	None	As reported on the credit report, current on all mortgage payments for the past 12 months. No mortgage payments more than 60 days late during the past 24 months.
Max Debt-to-Income Ratio	50% for FICO 640-719 No limit for FICO 720+	40% if FICO 540-599 45% if FICO 600-639 50% if FICO 640-679 60% if FICO 680-719 No limit if FICO 720+
Bankruptcy	No bankruptcy, foreclosure, or repossession within last seven years	No bankruptcy, foreclosure, or repossession within last two years
Judgments	No combined outstanding collections, judgments, charge-offs, or tax liens > \$2,500	

Figure 3. GJGNY Loans Issued by Tier (Program to Date)



NOTE: Columns on the far right represent the current reporting period and partially overlap with data from the previous calendar year.

3.2.3 Bond Financing

As previously noted, the program has issued seven program structured bond issues to capitalize the GJGNY residential loan fund. In June 2021, NYSERDA offered the initial sale of a participation interest of the principal balance of eligible GJGNY Program residential consumer loans to community banks or credit unions through a syndication platform offered by a third-party provider, LoanStreet, for the sale of participation interest in GJGNY residential loans. The loan participations can sell up to 90% participation interest in the loan pools, with NYSERDA and the purchasers sharing pro-rata/pari-passu in all loan repayments, prepayments, and losses. As of June 30, 2022, NYSERDA sold a total of 76.3% participation interests in the offered loans and received \$42.2 million in proceeds. Additional sales of participation are expected to occur on a periodic basis with the goal of achieving a target of 90% participation.

Performance information about the GJGNY loan portfolio is reported semi-annually through the Municipal Securities Rulemaking Board (MSRB) Electronic Municipal Market Access (EMMA) system, which provides information to municipal bond investors and to the public free of charge. Traditional asset-backed security bond issuers provide portfolio performance information to bond investors, but do not generally report the information to the public, or it requires users to have some kind of paid service to obtain access to this information.

3.2.4 Residential Loan Fund Subsidization

NYSERDA has been successful in using bonds and participation sales to support the residential revolving loan fund; however, because of the difference between interest rates offered on GJGNY loans and the interest rate paid on bonds, excess revenues to cover expected loan losses are needed. The program requires additional RGGI fund allocations to support the loan originations not funded through bond proceeds (which are recovered through excess pledged loan repayments collected after the bonds mature) or participation sales. NYSERDA has historically made changes to program loan interest rates in order to manage the annual amount of RGGI funds required and available to support the program. Interest rates are now based on the household income and loan type. The interest rates are shown in Table 9.

Table 9. GJGNY Residential Loan Fund Interest Rates

Income as Percentage of Area Median Income	Loan Type		
	On-Bill Recovery	Smart Energy and Bridge (Auto Pay)	Smart Energy and Bridge (Direct Bill/Pay by Mail)
Less than or equal to 120%	3.49%	3.49%	3.99%
Greater than 120%	6.99%	6.99%	7.49%

On January 1, 2020, NYSERDA launched geographic eligibility for lower interest rates to streamline and simplify the loan application process. Traditionally, applicants had to provide documentation of household income to prove they had income of less than or equal to 120% of AMI to qualify for the lower interest rate. Using the Housing and Urban Development (HUD) Income Block Data, NYSERDA identified Census Block Groups where census data reports that 50% or more of the population of the Census Block Group have a household income less than or equal to 120% (designated areas). If an applicant's address is located within a designated area, the applicant is deemed eligible for the 3.49%/3.99% interest rate and does not have to provide documentation of household income. If the applicant's address is outside of a designated area, the applicant will have the opportunity to apply for the lower rate by documenting household income as less than or equal to 120% of the AMI.

Many contractors and installers have established relationships with third-party lenders and offer their products to customers with higher incomes and good credit ratings. Lower-income households and those without access to reasonable credit options continue to take advantage of the GJGNY loans. As a result, it is anticipated that with the occasional addition of limited RGGI funds, the residential loan fund can be sustained.

3.2.5 Residential Loan Fund Advance Payment Program

The target population for the GJGNY Loan Fund is lower-income households and those without access to reasonable credit options, but the Loan Fund is underutilized by this target population. Many residential energy efficiency and renewable energy contractors in NYSERDA's programs offer third-party financing products (e.g., Enerbank, GreenSky), sometimes referred to as home improvement loans, that include a dealer fee the contractor pays to the financing company. These fees vary based on the amount and term of financing and the interest rate the contractor proposes to offer the consumer. However, these dealer fees are not included in the consumer's financing document in Truth in Lending disclosures as a financing charge (and shown as part of their APR).

One reason contractors are using these third-party funding sources is that the sources offer advance payments for cashflow purposes, unlike the GJGNY Loan Fund which pays the contractor when construction is complete. This is beneficial to the contractor but detrimental to the customer who ends up paying higher monthly payments because of the dealer fees. To encourage contractors to use the GJGNY Loan Fund for LMI customers, on January 1, 2020, NYSERDA launched the Contractor Advance Payment Program. This program is available to contractors that are in good standing in their NYSERDA or utility program(s) for projects where customers qualify for the 3.49%/3.99% interest rate. Contractors that participate in this program receive 50% of the customer's loan when the customer signs the loan documents and the remaining 50% at construction completion.

3.3 Multifamily Building Financing

GJGNY Multifamily Financing is available to multifamily building owners with an approved assessment through a Participation Loan. Building owners may work with a commercial lender of their choice; NYSERDA contracts directly with the lender. NYSERDA provides 50% of the loan principal to support the improvements contained in the preapproval document the Wall Street Journal Prime Rate of Interest + 200 basis points, fixed at closing, not to exceed \$50,000. The lender provides the remaining principal of the loan at market rate, collects all loan payments, and remits to NYSERDA its share of the loan. The participating lender is responsible for loan underwriting pursuant to its standards, and NYSERDA and the lender share in a pro-rata basis on any loan defaults.

To help stimulate the economy as the State was opening following the COVID 19 pandemic, on June 1, 2020, NYSERDA offered 0% financing for the term of NYSERDA's loan made in the Multifamily Building Financing program. The rate was available until allocated funds were encumbered or May 31, 2021, whichever came first, after which, the rate reverted to the Wall Street Journal Prime Rate of Interest + 200 basis points, fixed at closing.

Eligible multifamily building owners are also allowed to finance the installation of the purchase of solar electric systems, as approved under NYSERDA's NY-Sun Incentive Program; and air source heat pumps and ground source heat pumps, as approved under the NYS Clean Heat Program through lenders participating in the Participation Loan product.

3.4 Small Commercial and Not-for-Profit Financing

GJGNY offers two types of loans for energy efficiency improvements in small business and not-for-profit structures: A Participation Loan and an OBR Loan. Eligible small business and not-for-profit customers are allowed to finance the installation of energy efficiency upgrades, such as the purchase of (1) insulation, variable speed motors, lighting upgrades, boilers, and furnaces, among other measures; (2) solar electric systems under 200 kilowatts (kW), as approved under NYSERDA's NY-Sun Incentive Program; and (3) air source heat pumps and ground source heat pumps as approved under the NYS Clean Heat Program.

3.4.1 Participation Loans

Through Participation Loans, NYSERDA provides 50% of the loan principal, up to \$50,000 at an interest rate of the Wall Street Journal Prime Rate of Interest + 200 basis points, fixed at closing, for up to 10 years. The lender provides the remaining loan principal at market rate. Participating lenders collect loan payments from the customer and remit to NYSERDA its share of the loan. NYSERDA will use these funds to continue further lending activities. The Participation Loan Program is currently open to banks, credit unions, local development corporations, community development financial institutions, and unregulated not-for-profit investment funds and lenders. As of June 30, 2022, 37 Participation Loans have been closed with a total value of \$4,954,012, of which NYSERDA's loan value is \$1,210,115. These include 31 energy efficiency loans totaling \$4,704,869 and six solar electric loans totaling \$249,143.

3.6 Expenditures for Financing Implementation and Administration

NYSERDA continues to use competitively selected contractors to support the loan fund implementation, including loan origination, loan servicing, property title searches, and declaration/satisfaction filings. NYSERDA also continues to receive services from several other competitively selected organizations to assist with bond issuance, and to provide financial and legal advice. In addition, NYSERDA pays fees to utilities for the administration of the OBR program. Expenditures are detailed in Table 10.

Table 10. Expenditures for Financing Implementation and Administration

Purpose	Expenditures 7/1/21-6/30/22	Expenditures Program to date
Origination	\$793,325	\$10,124,959
Servicing	\$1,673,366	\$10,328,828
Title Searches, Declaration and Satisfaction Filing (contractor services), Filing Fees (counties)	\$736,325	\$5,619,731
Bond Issuance, Financial and Legal Advice and Support	\$91,046	\$5,061,305
Fees to Utilities	\$269,644	\$2,605,484
TOTAL	\$3,563,706	\$33,740,308

4 Workforce Training and Development

The Workforce Training and Development (WFD) initiative was designed to build on existing NYSERDA and New York State Department of Labor (DOL) programs targeted at preparing individuals for energy efficiency and renewable energy careers in the State. Specifically, WFD efforts under GJGNY were designed to expand energy-specific content in NYS Registered Apprenticeship and third-party accredited building trades programs. The efforts are meant to increase access to technical training for skill enhancement and certification as well as to bridge the gap between training and employment through on-the-job training incentives for businesses seeking to hire and train new workers. Implementation of the GJGNY WFD initiative began in mid-2010; future contracts supporting GJGNY workforce development initiatives will be funded through the CEF.

From the program's inception, over 4,184 New Yorkers were trained in a range of energy efficiency and renewable energy courses.

NYSERDA issued the On-the-Job Training (OJT) for Energy Efficiency and Clean Technology Program Opportunity Notice, which includes approximately \$520,000 in GJGNY workforce training funds that will be made available to eligible NYS employers outside of the System Benefits Charge (SBC) service territory. This program supports wages for new hires on a first-come, first-served basis for eligible clean energy businesses. The program includes higher wage subsidies for employers that hire workers with additional barriers to employment. NYSERDA added six OJT companies, bringing the total number of GJGNY businesses to 15 for a total investment of approximately \$432,097 of GJGNY funds in the OJT program. To date, 67 people have been hired by these businesses under the OJT program.

Participants in NYSERDA's OJT for Energy Efficiency and Clean Energy Program sponsored with CEF and GJGNY funding are listed by technology type and region in Table 11.

Table 11. On-the-Job Training Program Participants by Technology Type and Region

Technology Type	Capital Region	Central NY	Finger Lakes	Long Island	Mid-Hudson	Mohawk Valley	New York City	North Country	Southern Tier	Western NY	Total
High Efficiency HVAC	3	8	19	6	5	18	22		4		85
Energy Efficiency /Weatherization	11	65	86	28	43	33	25	7	47	40	385
Heat Pump	15	15	126	18	69	56	66	4	6	4	379
Lighting and Controls	8		2		1	23	12				46
Smart Grid	1		7		1		8		15		32
Energy Storage	8				21		4		18		51
Building Automation and Controls			1		2		11				14
Other			2	1	1		8	15		1	28
Solar Electric	3	2	6	4			24				39
EV Charging Stations	9						5				14
Total	58	90	249	57	143	130	185	26	90	45	1073

5 Community Engagement

GJGNY provided community-based outreach to deliver services in underserved communities, enabling one-to-one assistance with the process of participating in the program. GJGNY provided these outreach services in targeted communities delivered by constituency-based organizations (CBO), which located and encouraged residents, businesses, not-for-profits, multifamily building owners, and potential workforce candidates to participate in the program. Combined with statewide marketing, this approach increased the reach of the program in a more targeted manner. The Community Energy Engagement Program (CEEP) incorporated and built upon the success of previous engagement efforts, including the GJGNY Outreach Initiative. Historically, outreach and engagement were conducted as part of the CBO program funded by GJGNY. While the initial GJGNY funding allocated for outreach activities has been exhausted, NYSERDA continued locally based outreach and engagement efforts through CEEP with funding provided via the CEF and Regional Greenhouse Gas Initiative (RGGI).

Through CEEP, NYSERDA awarded approximately \$5.5 million to deploy Community Energy Advisors (CEA) to conduct engagement activities to NYS residents, small businesses, and multifamily building owners, with an emphasis on LMI households and communities. These Community Energy Advisors focus on improving energy affordability and increasing deployment of distributed energy resources for community members of all income levels. The CEEP program ended on June 30, 2022, and many of the services provided by the program will be taken over by the newly established Clean Energy Hubs program.

5.1 Outreach Services through Locally Based Organizations

Locally based organizations encourage participation in energy efficiency programs and assist residents, small businesses, and multifamily building owners with applications for clean energy solutions. These organizations also help customers identify and access financing options for energy efficiency and renewable energy projects, while educating households and communities to (1) increase energy literacy, (2) understand the benefits of clean energy solutions, (3) enable informed energy decision-making, (4) facilitate action in completing clean energy projects, and (5) decrease energy consumption.

CEEP expanded the reach of NYSERDA programs throughout the State to incorporate a regional approach, thus providing geographic alignment with other State efforts and full statewide coverage. Ten locally based and constituency-based organizations were deployed statewide. Finally, although CEEP efforts primarily serve LMI communities and households, locally based engagement services were expanded to include assistance to market-rate customers to assist with more effective outreach in mixed-income, neighborhood engagement settings.

Organizations providing outreach services as CEEP contractors are listed in Table 12.

Table 12. Organizations Under Contract to Provide Community Energy Engagement Program Outreach Services—July 1, 2021 through June 30, 2022

Program Name	Target Region	Contractor Name	Contract Amount
CEEP	Capital	Affordable Housing Partnership of the Capital Region Inc.	\$796,739.00
CEEP	Central New York	Cornell Cooperative Extension Tompkins County	\$288,822.00
CEEP	Finger Lakes	PathStone	\$531,081.00
CEEP	Long Island	United Way of Long Island	\$431,888.00
CEEP	Mid-Hudson	Cornell Cooperative Extension Dutchess County	\$932,696.41
CEEP	Mohawk Valley	Mohawk Valley Economic Development District	\$505,719.50
CEEP	New York City	The Center for New York City Neighborhoods	\$ 1,209,755.17
CEEP	North Country	Cornell Cooperative Extension Tompkins County	\$219,967.00
CEEP	Southern Tier	Cornell Cooperative Extension Tompkins County	\$ 688,945.81
CEEP	Western New York	People United for Sustainable Housing, Inc.	\$600,000.00

NOTE: The Adirondack North Country Association (ANCA) contract term ended February 28, 2019 and was funded \$176,305. The Cornell Cooperative Extension Tompkins County (CCETC), with subcontractors from locally based Cornell Cooperative Extensions (St. Lawrence and Jefferson Counties) and ANCA support outreach in the North Country as of June 2019.

Home Headquarters' contract ended November 13, 2019 and was funded \$74,385. The CCETC, with subcontractors from locally based Cornell Cooperative Extensions (Cortland, Madison, and Onondaga Counties), support outreach in the Central New York region as of April 2020.

The following highlights activities that were undertaken during the reporting period, as self-reported by the Community Energy Advisors:

- In Q1 and Q2 of 2022, some CEEP contractors resumed in-person gatherings.
- As the program began to wind down, CEEP Finger Lakes implemented a “braided funding source” strategy to best meet the needs of customers. This included cost-sharing between funding from NYSERDA, Rochester Energy Efficiency and Weatherization (RENEW), Empower, Assistance Home Performance, PathStone LMI Heat Pump Grant, NY Solar, NYSEG/RG&E LMI Grant, GJGNY Loans, Rochester Area Community Foundation, NCS Community Development Corp, ESL Federal Credit Union, etc.) to assist customers with finishing projects.
- Advisors continued to leverage social media platforms and other channels (e.g., email blasts, newsletters, etc.) to conduct outreach and engagement. Examples of these strategies include:
 - CEEP Mid-Hudson completed a Roundtable for Energy Affordability in Low Income Groups & Neighborhoods (REALIGN) in which four virtual roundtable meetings were completed to operationalize a “no wrong door” referral process in the region.
 - CEEP Western NY engaged in live Q&A sessions with contractors; completed virtual WNY Energy Tours and other video content such as PUSH Green Presents and were continuously promoting their e-newsletter and online intake surveys.
- Community Energy Advisors have conducted outreach to approximately 7,000 potential customers regarding clean energy opportunities, resulting in 9,906 opportunities for clean energy programs. Opportunities are referrals to NYSERDA or non-NYSERDA clean energy programs that are self-reported by the Community Energy Advisors.
- Community Energy Advisors continued targeted program outreach focused on key residential programs such as Assisted Home Performance with ENERGY STAR® and Empower New York.
- Advisors promoted the Solar for All program for low- to moderate-income customers to receive a no-cost solar subscription and the Green Jobs - Green New York (GJGNY) Energy Study Program for small businesses and nonprofits to obtain a reduced cost, energy efficiency study and an energy study report detailing recommended energy efficiency measures.

6 Evaluation

Since the introduction of GJGNY, NYSERDA engaged its third-party evaluation contractors to develop and implement evaluation plans for GJGNY programs. Each evaluation activity is designed to assess the effectiveness, progress, and outcomes related to each of the GJGNY program initiatives.

This section describes evaluation activities planned and provides an update on evaluation activities related to GJGNY-funded initiatives from July 1, 2021 through June 30, 2022. A list of previously completed GJGNY evaluation activities and links to evaluation reports can be found in the 2021 Green Jobs - Green New York Annual Report posted on NYSERDA’s web site.²⁰ Additionally, evaluation contractor reports are posted on NYSERDA’s website for public use once completed.²¹

6.1 Evaluation Activities

There are no GJGNY-related evaluation activities planned or underway for this reporting period. For more information on NYSERDA’s GJGNY Evaluations, please consult our website.²²

6.2 Evaluation Contracts

There were no external contracts related to the evaluation of the GJGNY program during the reporting period. Therefore, Table 13 is intentionally blank.

Table 13. Evaluation Contracts

Identification Number	Contractor	Description
n/a	n/a	n/a

Endnotes

- ¹ Visit the NYSERDA website to view Advisory Council meeting documentation: nyserdera.ny.gov/Researchers-and-Policymakers/Green-Jobs-Green-New-York/Advisory-Council/Meetings
- ² Visit the Open NY website: ny.gov/programs/open-ny
- ³ Visit the NYSERDA website: nyserdera.ny.gov/Partners-and-Investors/Partner-With-NYSERDA/Residential-Market-Advisory-Group
- ⁴ CEF, one of Reforming the Energy Vision's (REV) three strategic pillars, is designed to deliver on New York State's commitment to reduce ratepayer collections, drive economic development, and accelerate the use of clean energy and energy innovation. It will reshape the State's energy efficiency, clean energy, and energy innovation programs. Visit nyserdera.ny.gov/About/Clean-Energy-Fund for information regarding CEF initiatives and budgets.
- ⁵ CEF, one of Reforming the Energy Vision's (REV) three strategic pillars, is designed to deliver on New York State's commitment to reduce ratepayer collections, drive economic development, and accelerate the use of clean energy and energy innovation. It will reshape the State's energy efficiency, clean energy, and energy innovation programs. Visit nyserdera.ny.gov/About/Clean-Energy-Fund for more information about the CEF.
- ⁶ Residential audits were originally funded with an allocation of GJGNY funds. Effective March 1, 2016, audits in CEF territory have been funded with CEF funds. RGGI funds are used to fund audits in non-CEF territory. Beginning in January 2017, customers in PSEG Long Island electric utility service territory are served through PSEG Long Island's HPwES Program, funded in part by RGGI funds through a Memorandum of Understanding between NYSERDA and LIPA.
- ⁷ Residential audits were originally funded with an allocation of GJGNY funds. Effective March 1, 2016, audits in CEF territory have been funded with CEF funds. RGGI funds are used to fund audits in non-CEF territory. Beginning in January 2017, customers in PSEG Long Island electric utility service territory are served through PSEG Long Island's HPwES Program, funded in part by RGGI funds through a Memorandum of Understanding between NYSERDA and LIPA.
- ⁸ These incentives are provided through the Clean Energy Fund (CEF) or Regional Greenhouse Gas Initiative (RGGI).
- ⁹ NYSERDA. 2012. "Process Evaluation and Market Characterization and Assessment: Green Jobs - Green New York Residential Program," nyserdera.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2012ContractorReports/2012-GJGNY-MCA-Report.pdf
- ¹⁰ Visit the NYSERDA website to learn more about Statewide LMI Portfolio: nyserdera.ny.gov/About/Newsroom/2020-Announcements/2020-07-27-Governor-Cuomo-Announces-Clean-Energy-Investments-to-Benefit-Over-350000-Low-to-moderate-Income-Households
- ¹¹ Visit the NYSERDA website to view NYSERDA's Standards for Small Commercial/Not-for-Profit Energy Assessments found in the NYSERDA Small Commercial/Not-for-Profit Energy Efficiency Program Energy Assessment and Request for Financing Package.: nyserdera.ny.gov/-/media/Files/EERP/GJGNY/Small-Business/Energy-Assessment-Standards.pdf
- ¹² Visit the NYSERDA website for information about NYSERDA's subsidized audits for Small Commercial/Not-For-Profits: nyserdera.ny.gov/All-Programs/Programs/Small-Commercial-Energy-Assessments
- ¹³ Visit the NYSERDA website: nyserdera.ny.gov/Contractors/Find-a-Contractor/FlexTech-Consultants
- ¹⁴ Incentives for NY-Sun are provided through the Renewable Portfolio Standard, Regional Greenhouse Gas Initiative and the Clean Energy Fund.
- ¹⁵ Visit the NYSERDA website for details about Program Opportunity Notice 2112, NY-Sun Residential/Nonresidential Incentive Program: https://portal.nyserdera.ny.gov/CORE_Solicitation_Detail_Page?SolicitationId=a0rt0000000QnxFAAS
- ¹⁶ Visit the NYSERDA website for more information about NY-Sun: nyserdera.ny.gov/All-Programs/Programs/NY-Sun.
- ¹⁷ Incentives for Renewable Heat NY were funded through the Regional Greenhouse Gas Initiative and the Clean Energy Fund
- ¹⁸ Visit the SaveEnergy website: <https://saveenergy.ny.gov/NYScleanheat/> for further information about the program.

- ¹⁹ The GJGNY 2021 Annual report shows a decrease in the number of loans issued in “New York” county as compared to the number of loans reported in the GJGNY 2020 Annual report. This is due to the number of loans in “New York” county being reported incorrectly in the GJGNY 2020 Annual Report.
- ²⁰ Visit the NYSERDA website: [nysesda.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports](https://www.nysesda.ny.gov/About/Publications/GJGNY-Advisory-Council-Reports)
- ²¹ Visit the NYSERDA website to view completed evaluation reports: [nysesda.ny.gov/About/Publications/Program-Planning-Status-and-Evaluation-Reports/Evaluation-Contractor-Reports](https://www.nysesda.ny.gov/About/Publications/Program-Planning-Status-and-Evaluation-Reports/Evaluation-Contractor-Reports)
- ²² Visit the NYSERDA website: <https://www.nysesda.ny.gov/About/Publications/Program-Planning-Status-Reports/Evaluation-Plans>

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

To learn more about NYSERDA's programs and funding opportunities, visit nyserda.ny.gov or follow us on Twitter, Facebook, YouTube, or Instagram.

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