

New York State Energy Research and Development Authority

Green Jobs – Green New York Q1 2020 Quarterly Update

Quarter ending March 31, 2020

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Program Description

Green Jobs – Green New York (GJGNY) provides funding for energy assessments, low-cost financing for energy upgrades, and technical and financial support to develop a clean energy workforce. GJGNY is a statewide effort to strengthen communities through energy efficiency and uses constituency-based organizations to support program outreach in underserved communities. GJGNY enables New Yorkers to make a significant difference in homes, businesses and neighborhoods—making them more comfortable, more sustainable, and more economically sound. GJGNY is administered by NYSERDA and made available by the [Green Jobs – Green New York Act of 2009](#).

1 Workforce Development

GJGNY supports a broad range of education and training programs aimed at creating an experienced green collar workforce. This workforce will have the relevant skills and credentials needed to support New York State’s growing clean energy economy. The workforce training programs help meet the demand for energy efficiency and renewable energy measures and technologies. Through public-private partnerships, workforce development programs fund the development and delivery of cutting-edge training programs and provide financial support to those who wish to pursue new career training, professional certifications, and critical on-the-job training.

1.1 Clean Energy Technical Training

From the program’s inception through March 2019, over 4,184 New Yorkers were trained in a range of energy efficiency and renewable energy courses.

NYSERDA issued an 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 New York State employers outside of the Systems Benefit Charge 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 one OJT company this quarter, bringing the total number of GJGNY businesses to seven for a total investment of approximately \$146,371.44 of GJGNY funds in the OJT program. To date, 23 people have been hired by these businesses under the OJT program.

2 Outreach

2.1 Community Energy Engagement Program

The Community Energy Engagement Program (CEEP) incorporates and builds upon the success of previous engagement efforts including the Green Jobs, Green New York (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 continues locally-based outreach and engagement efforts through the CEEP program with funding provided via the Clean Energy Fund (CEF) and Regional Greenhouse Gas Initiative.

Through CEEP, NYSERDA awarded approximately \$5.5 million to deploy Community Energy Advisors to conduct engagement activities to New York State residents, small businesses, and multifamily building owners, with an emphasis on low-to-moderate income (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.

Additionally, the program seeks to address energy affordability needs, reduce energy bills, and increase participation in energy efficiency and renewable energy solutions and programs for residential, multifamily and small business customers. The program also seeks to ensure residential, multifamily and small business customers' awareness of and access to financing options for energy efficiency and renewable energy projects while educating households and communities to achieve greater energy literacy, understand the value proposition of clean energy solutions, enable informed energy decisions, facilitate action in completing clean energy projects, and decrease energy consumption.

Key activities this quarter included:

- General outreach and engagement at a variety of public events where Community Energy Advisors exhibited and encouraged residential and small business customers to be better informed about available resources such as financing options for energy efficiency and renewable energy projects.
- Targeted program outreach continued to focus on key residential programs such as Assisted Home Performance with ENERGY STAR®, EmPower New York and Home Performance with ENERGY STAR®, with 234, 223 and 57 opportunities generated this quarter, respectively. As of March 31, 2020, there are 1,767, 1,411 and 1,338 opportunities for these residential programs, respectively. Community Energy Advisors also continued targeted outreach on the Solar for All

Program for low-income residential customers with 62 opportunities generated in Q1 2020, for a total of 348 opportunities as of March 31, 2020.¹

- Targeted program outreach for small commercial and nonprofit customers on the GJGNY Energy Study Program continued by engaging Chambers of Commerce, Rotary clubs and other organizations geared towards local businesses. For Q1 2020 there were 17 new small businesses or nonprofits assisted by Community Energy Advisors through this program, bringing the total number of small businesses and nonprofits assisted through Q1 2020 to 94.
- During Q1 2020 many of the planned in-person outreach events were cancelled or postponed until further notice due to the COVID-19 pandemic. The Community Energy Advisors across the state are evaluating options for conducting outreach and engagement virtually in the future and have scheduled virtual events as early as April 2020.
- Leveraging private investment from other sources to support implementation of clean energy projects continued through CEEP. In Q1 2020, the Community Energy Advisors reported a total of approximately \$381,000 in non NYSERDA private investment was leveraged for projects completed that quarter. This brings the reported, cumulative total of private investment leveraged by the Community Energy Advisors to approximately \$4,557,000 for implementation of clean energy projects. This includes but is not limited to funding from the NYS HOME program, Weatherization Assistance Program (WAP), Utility Energy Affordability Programs and local resources such as the Rochester ENergy Efficiency and Weatherization (RENEW) Climate Fund and the Sustainable Tompkins ASHP Rebates and Finger Lakes Climate Fund, among others. Affordable Housing Corporation (AHC), Rochester Safe and Efficient Homes Initiative (RSEHI), Utility Energy Affordability Programs, etc.

¹ Opportunities are customer referrals or leads to NYSERDA or non NYSERDA programs that are self-reported by the Community Energy Advisors. Opportunities include customers assisted with clean energy applications.

3 One- to Four-Family Residential Buildings Program

GJGNY provides home assessments and financing to support energy efficiency and renewable energy improvements to one-to-four family homes.

NYSERDA’s residential programs offer homeowners in New York State a comprehensive approach to improving energy efficiency and home comfort while saving money. Participating contractors and energy auditors conduct energy assessments and upgrades. Income-qualified homeowners are eligible for additional incentives to make energy improvements.

The GJGNY loan also supports deployment of solar photovoltaic (PV) through the NY-Sun program, solar thermal (hot water) systems, and certain wood and pellet stove replacements through Renewable Heat NY.

3.1 Residential Energy Audits

Beginning in January 2020, New Yorkers across the state are eligible to receive no-cost GJGNY audits through NYSERDA’s residential energy audit programs which include the Residential Audit Program, Assisted Home Performance with ENERGY STAR and EmPower, New York.

Depending on the income limits of the customer, following the completion of the audit, additional work may be done at the residence though NYSERDA’s Low to Moderate Income programs. Assisted Home Performance provides a 50% subsidy capped at \$4,000 for households earning less than 80% of the Area Median Income. The remaining balance of the project may be eligible for GJGNY financing.

For households earning less than 60% of the State Median Income, NYSERDA provides additional no cost services to the household, including lighting, replacement of inefficient refrigerators/freezers, installation of health and safety measures and insulation and air-sealing improvements.

Table 3-1. Residential Energy Audits

Timeframe	GJGNY Totals since 11/15/10 ^a
Completed Audits^{b,c}	
Q1 2020	6,138
Total Completed Audits	146,979
Audit Funds Invoiced to Date	\$37,466,680
^a GJGNY totals since 11/15/10 are inclusive of CBO initiated activities. ^b Reported data includes all audits offered through the Residential Energy Audit Program. In mid-2016, NYSERDA began using CEF funds for audits in CEF electric utility territories. ^c Beginning in Q1 2020, Total Completed Audits is inclusive of GJGNY audits completed though Assisted Home Performance with ENERGY STAR and EmPower New York, which have audits as part of the work provided, and the Residential Audit Program.	

3.2 One- to Four-Family Residential Buildings Financing

New York residents can apply for a loan to finance energy efficiency work, including, but not limited to, upgrading insulation, air sealing, and replacing outdated appliances with ENERGY STAR® certified products that may render savings on their monthly utility bill. Green Jobs-Green New York (GJGNY) financing has also expanded to net-metered technologies, such as solar electric systems and solar thermal systems, that have attracted many customers statewide.

GJGNY provides two loan options for consumers: On-Bill Recovery (OBR) loans, which enable customers to make payments through their utility bills; and Smart Energy loans, unsecured loans that are paid back directly to NYSERDA’s loan servicing contractor. Both loans offer expanded credit qualification criteria (Tier 2) enabling some applicants who would not qualify for a loan based on more traditional criteria (Tier 1) to qualify for GJGNY loans.

Table 3-2. Green Jobs–Green New York Financing, Summary by Loan Purpose and Loan Type
 EE= energy efficiency only. PV = PV only. RHNY = renewable heat (pellet or wood stoves). GSHP = ground source heat pump. ST = solar thermal. ASHP = air source heat pump.

GJGNY Loan Type	Loans Issued (Number)	Loans Issued (Dollars)
EE Smart Energy Loan	14,256	\$125,690,196
EE On-Bill Recovery Loan	4,126	\$45,971,153
Total	18,382	\$171,661,349
PV Smart Energy Loan	3,938	\$64,743,650
PV On-Bill Recovery Loan	4,676	\$77,944,466
Total	8,614	\$142,688,116
RHNY Smart Energy Loan	58	483,943
RHNY On-Bill Recovery Loan	9	\$42,621
Total	67	\$526,563
GSHP Smart Energy Loan	12	\$245,979
GSHP On-Bill Recovery Loan	11	\$218,603
Total	23	\$464,582
ASHP Smart Energy Loan	70	\$1,036,197
ASHP On-Bill Recovery Loan	3	\$30,175
Total	73	\$1,066,372
ST Smart Energy Loan	9	\$64,039
ST On-Bill Recovery Loan	2	\$11,510
Total	11	\$75,549
Grand Total	27,170	\$ 316,482,532

Table 3-3. Green Jobs–Green New York Financing, Summary by Loan Type and Underwriting

Loan Type Summary							
	Smart Energy			On-Bill Recovery			Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	14,494	3,849	18,343	7,434	1,393	8,827	27,170
Value (Dollars)	154,543,272	37,720,733	192,264,004	105,219,685	18,998,843	124,218,528	\$316,482,532
Average Loan	10,663	9,800	10,482	14,154	13,639	14,073	
Average Term (Years)	13.7	14.3	13.8	14.6	14.7	14.6	

Table 3-4. Green Jobs–Green New York Financing, Energy Efficiency Loans, by Market Indicator and Underwriting

Energy Efficiency Loans (Assisted vs. Market Rate)							
	Assisted			Market Rate			Grand Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	5,053	2,473	7,526	9,381	1,352	10,733	18,259
Value (Dollars)	34,211,784	17,519,008	\$51,730,791	102,896,510	15,499,213	\$118,395,723	\$170,126,514
Tier % (Loan Count)	67%	33%	100%	87%	13%	100%	
% of Total Loans issued			41%			59%	100%
% of Total Funds Issued			30%			70%	100%
Average Loan Amount	\$6,862			\$11,031			\$9,339

Table 3-5. Green Jobs–Green New York Financing, Photovoltaic Loan Summary, by Market Indicator and Underwriting

Photovoltaic Loan Summary (Affordable Solar vs. Market Rate)							
	Affordable Solar			Market Rate			Grad Total
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total	
Loans Issued	175	62	237	6,743	1,202	7,945	8,182
Value (Dollars)	2,401,121	927,916	\$3,329,037	\$111,703,889	\$20,732,532	\$132,436,421	\$135,765,458
Tier % (Loan Count)	74%	26%	100%	85%	15%	100%	
% of Total Loans Issued			3%			97%	100%
% of Total Loans Issued			2%			98%	100%
Average Loan Amount	\$14,047			\$16,669			\$16,593

Figure 3-1. Green Jobs–Green New York Financing, Residential Applications Received and Approved by Year (Program to Date).

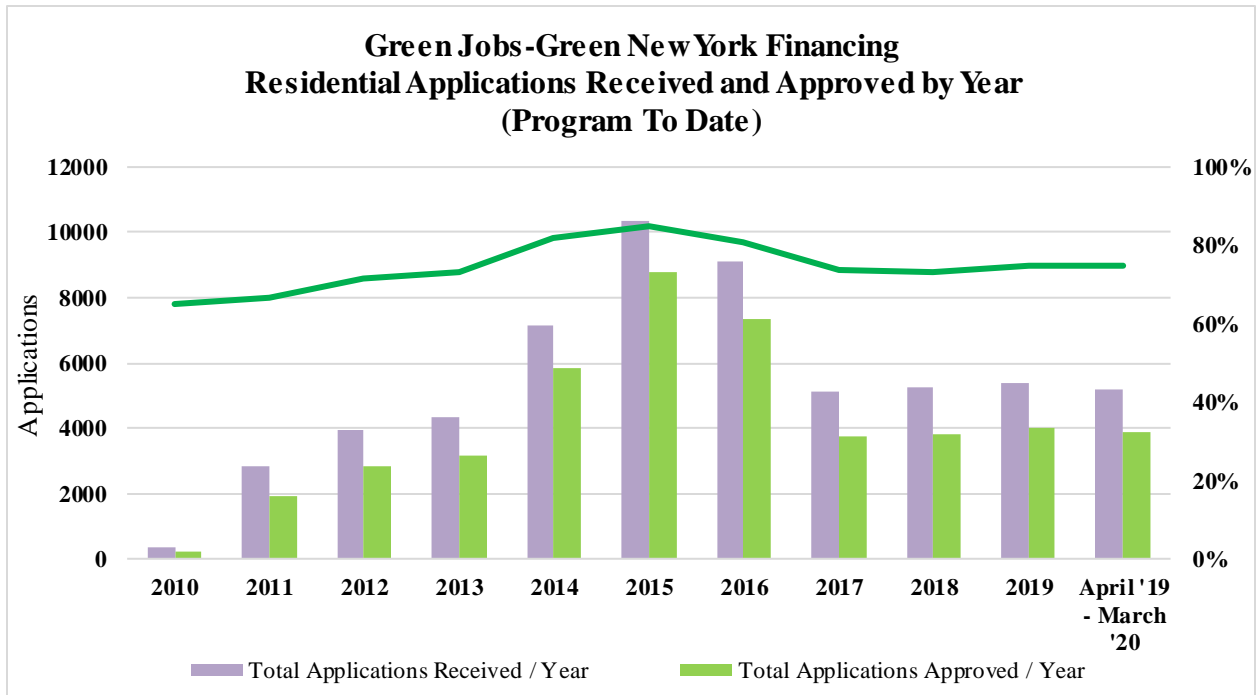


Figure 3-2. Green Jobs–Green New York Financing, Smart Energy and On-Bill Recovery Loans Issued per Year.

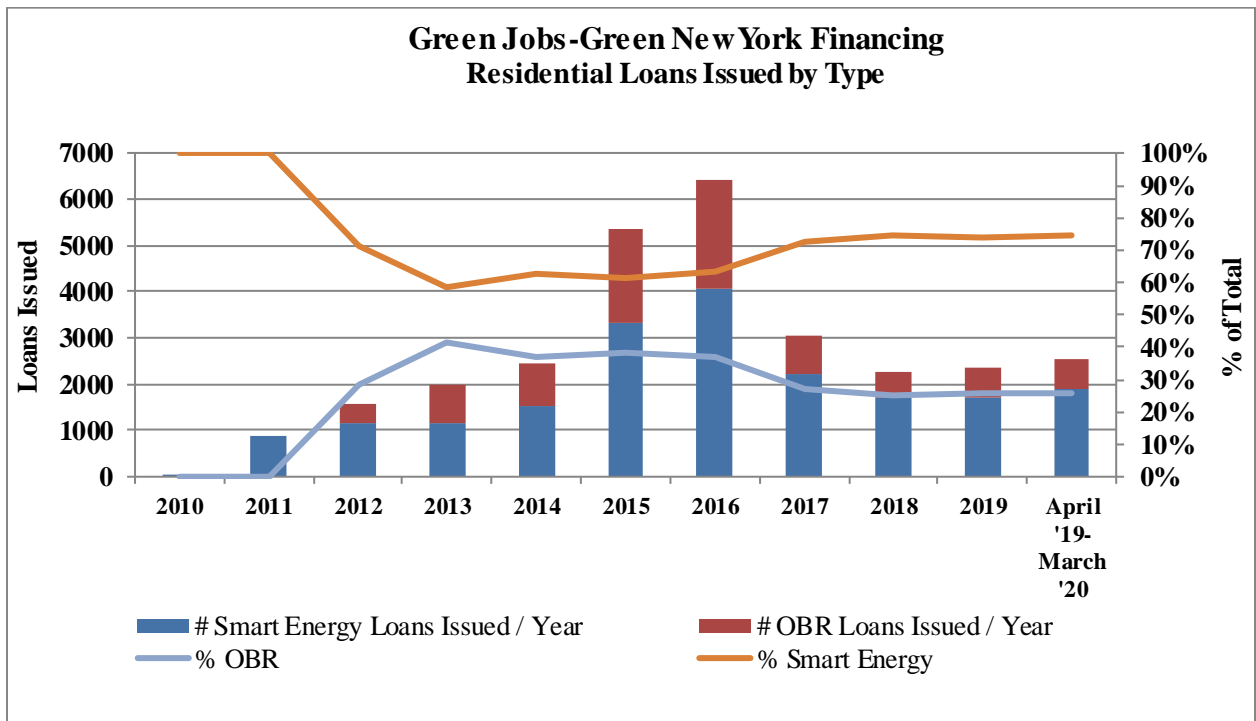
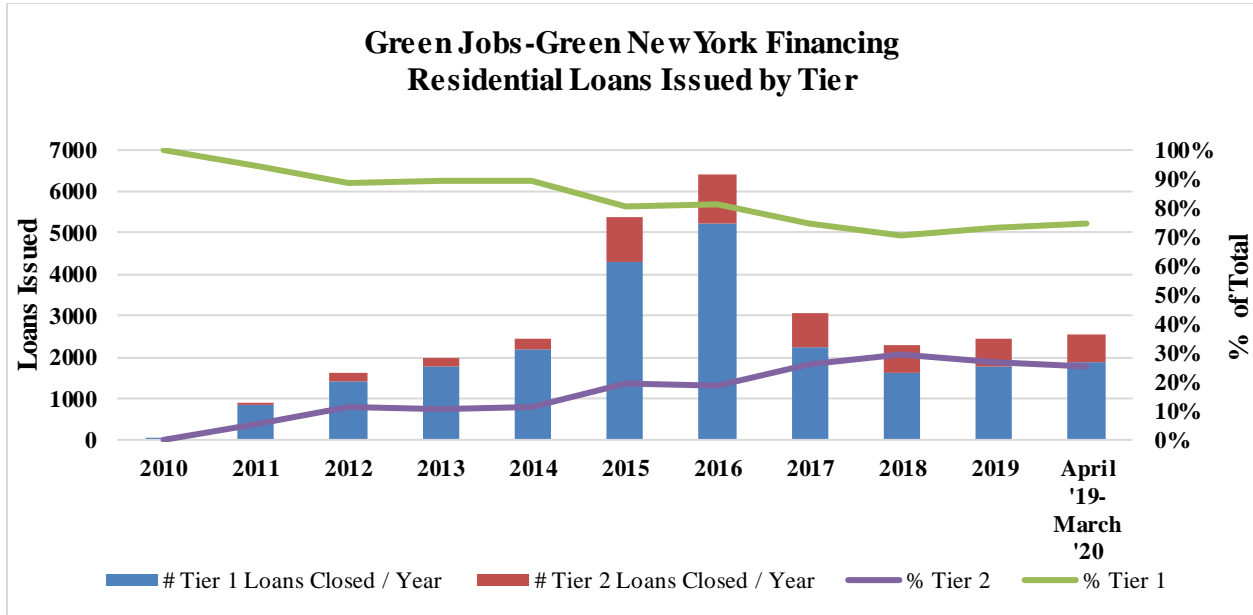


Figure 3-3. Green Jobs–Green New York Financing, Loans Issued by Tier, per Year.



4 Multifamily Energy Performance Portfolio

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 expended in 2018 and the pipeline was closed. NYSERDA continues to support audits for the multifamily sector through its offerings under the Clean Energy Fund. These programs include the continuation of the Multifamily Performance Program (MPP) and Flextech. Description of the GJGNY audit implementation approach can be found in previous GJGNY quarterly reports.

4.3 Multifamily Energy Performance Financing

Through March 31, 2020, the Multifamily Performance Program has closed 22 loans with a total value of \$12,099,798. NYSERDA’s share of that total loan value is \$3,834,685.

Table 4-1. Multifamily Energy Performance Financing

Loan Status	Q4 2019			Cumulative		
	Number	NYSERDA Share of Total Loan Value	Total Loan Value	Number	NYSERDA Share of Total Loan Value	Total Loan Value
Participation Agreements Approved	0	\$0	\$0	22	\$3,834,685	\$12,099,798
Loans Closed	0	\$0	\$0	22	\$3,834,685	\$12,099,798

5 Small Commercial Energy Efficiency Program

NYSERDA’s Small Commercial Energy Efficiency Program offers financial assistance to help small businesses and not-for-profit organizations improve their energy efficiency and reduce their energy costs.² This program offers two market rate interest loan options to finance energy efficiency projects. On-Bill Recovery Financing offers eligible small businesses and not-for-profit customers up to \$50,000 for a maximum 10 years. Borrowers use the savings on their energy bills to pay for their energy efficiency upgrades by repaying the loan through a monthly assessment on the organization’s electric utility bill. The second loan option is a Participation Loan. NYSERDA partners with lenders across New York State to help small businesses and not-for-profit organizations access below-market financing. NYSERDA provides 50% of the loan principal, up to \$50,000, for not more than 10 years. The lender provides the remaining principal of the loan at market rate. The interest rate for both loan options is the Wall Street Journal Prime Rate of Interest + 2.00%, fixed at closing. In addition, eligible small business and not-for-profit customers participating in NYSERDA’s NY-Sun Solar PV Incentive Program can access GJGNY financing to install solar PV systems of up to 200 kW. Financing is also available for the purchase of solar thermal systems, pellet stoves, and advanced cord wood boilers as approved under NYSERDA’s Renewable Heat NY Program.

5.1 Small Commercial Energy Efficiency Assessments

Through March 2020, the Small Commercial Energy Efficiency Program completed 4,326 assessments. The previous assessment program closed in December 2016, and in March 2019, NYSERDA began offering subsidized energy studies (assessments) for GJGNY-eligible small businesses and not-for-profit organizations.

Table 5-1. Small Commercial Energy Efficiency Assessments

Metric	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Program Cumulative		
	GJGNY	GJGNY	GJGNY	GJGNY	GJGNY	ARRA*	Program Total
Received Assessment Applications	35	27	42	43	3,721	934	4,655
Completed Assessments	6	35	32	37	3,477	849	4,326

² Visit <https://www.nyserdera.ny.gov/All-Programs/Programs/Small-Commercial-Energy-Assessments> for information about NYSERDA’s subsidized audits for Small Commercial/Not-For-Profits

5.2 Small Commercial Energy Efficiency Projects

Through March 2020, the Small Commercial Energy Efficiency Program estimates 1,855 project completions as a result of GJGNY funded assessments.

Table 5-2. Small Commercial Energy Efficiency Projects

Metric	Q2 2019	Q3 2019	Q4 2019	Q1 2020	GJGNY Program Cumulative
Estimated Projects Completed*	0	0	0	0	1855
*The 2015 Small Commercial Energy Efficiency Program Impact Evaluation found that 44 percent of the energy savings recommended through program audits were reported to be implemented. Estimated projects completed are inclusive of those that used ARRA funds referenced in Table 5-1 above.					

5.3 Small Commercial Energy Efficiency Financing

Through March 31, 2020, the Small Commercial Energy Efficiency Program has closed 80 loans with a total value of \$3,854,090. NYSERDA’s share of that total loan value is \$2,574,081.

Table 5-3. Small Commercial Energy Efficiency Financing.

Loan Status	Q1 2020			Program Cumulative		
	Number	NYSERDA Share of Total Loan Value	Total Loan Value**	Number	NYSERDA Share of Total Loan Value	Total Loan Value**
Applications Approved*						
Participation Loans	0	\$0	\$0	154	\$3,211,086	\$6,834,846
On-Bill Recovery	0	\$0	\$0	91	\$2,851,504	\$3,551,619
Loans Closed						
Participation Loans	0	\$0	\$0	35	\$1,140,325	\$2,420,334
On-Bill Recovery	0	\$0	\$0	45	\$1,433,756	\$1,433,756
Total	0	\$0	\$0	80	\$2,574,081	\$3,854,090
The Small Commercial Energy Efficiency Financing Program has 16 participating lenders.						
* Customer applications are assessed for both Participation Loan and On-Bill Recovery Loan eligibility prior to approval. Approved application values are inclusive of loans that have moved forward to closure.						
**The total loan value represents the total value of the loan issued by the lender to the borrower. The total loan value may include financing for non-energy efficiency projects. NYSERDA's share of the total loan value represents 50% of the total energy project cost or \$50,000, whichever is less.						

6 Evaluation

The overarching goals of Evaluation are to provide objective and credible information that supports optimum program operation and outcomes, as well as program accountability. Three major types of evaluation are implemented for the GJGNY program. Process evaluation provides information to support program operations by addressing program efficiency and effectiveness, satisfaction and barriers to participation, among other issues. Impact evaluation provides information to help understand actual program impact and improve energy impact estimates, including economic, environmental, and non-energy benefits; in doing so it supports program accountability. Market evaluation also provides information to support program operations and accountability by characterizing and assessing target markets for programs.

Evaluation Activities

In the third quarter of 2019, NYSERDA launched the evaluation of GJGNY-funded audit-only projects for studies completed between 2014 and 2017. The objective of this evaluation is to estimate energy savings resulting from measures recommended in the energy audit and installed outside of a NYSERDA program. Results from this evaluation are anticipated in Q3 2020.