## New York State Energy Research and Development Authority

# Green Jobs – Green New York December 2016 Monthly Update

Period ending December 31, 2016

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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 Training Program Updates

#### **Clean Energy Technical Training**

Through December 2016, NYSERDA's GJGNY training partners trained over 3,846 individuals in courses including solar thermal installation, introductory photovoltaic training, advanced air sealing, pressure diagnostics, BPI Basic Air Sealing and Insulation, oilheat technology, and thermography. The vast majority of NYSERDA's GJGNY-funded training partnership agreements concluded by December 31, 2015.

#### 2 Outreach and Events

GJGNY Outreach and Marketing provides for community-based outreach, enabling one-on-one assistance with the process of participating in the GJGNY Program. This, combined with both print and electronic statewide marketing initiatives, increases the reach of the program, particularly among disadvantaged populations and those not traditionally participating in energy-efficiency programs.

#### 2.1 Outreach Activities

Constituency-based organizations (CBOs) continue to assist customers to access the Home Performance with ENERGY STAR program (HPwES) offered through Green Jobs-Green New York. Through December 2016, CBOs are responsible for 7,231 completed assessments resulting in 2,328 completed retrofits. Approximately 56 percent of those retrofits were for Assisted HPwES customers who have a household income of up to 80 percent of the county median income, which is the target market for CBOs.

Figure 2-1. CBO Percentage of GJGNY Completed Assessments.

Figure 2-1 provides percentages of GJGNY residential assessment completions by quarter that were initiated by CBOs versus other sources, such as home performance contractors or online searches.

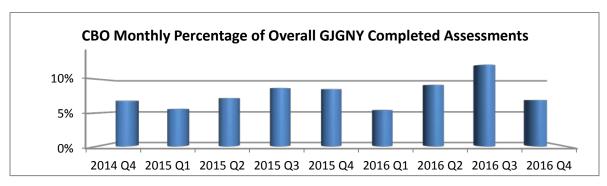


Figure 2-2. CBO Percentage of GJGNY Unit Completions.

Figure 2-2 provides percentages of project (by number of units) completions by quarter that were initiated by CBOs.

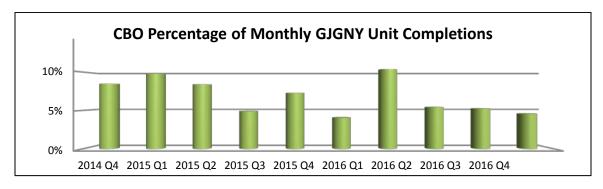
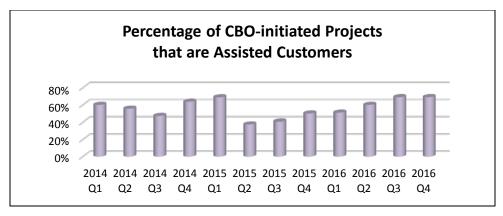


Figure 2-3. Percentage of CBO-initiated Projects that are for Assisted Customers.

Figure 2-3 provides percentages of CBO-initiated project completions for Assisted Home Performance customers by quarter.



#### **CBO Events and Activities**

CBOs participated in several events and meetings throughout the December, providing program information to a variety of audiences across the state.

- PathStone conducted five outreach sessions at several community gatherings in the greater Rochester area.
- El Puente hosted an outreach event at a home buyer's information session to help persuade potential buyers of the importance of energy efficiency in the homes they seek to purchase.
- In the borough of Queens, Neighborhood Housing Services of Jamaica hosted one evening efficiency
  workshop while also performing outreach at five separate weekend handyman trainings throughout
  the month.
- PUSH Buffalo held five outreach events throughout the greater Buffalo area, two of which were held in close succession with solar and building code meetings in Erie County.
- As it has in past months, Affordable Housing Partnership continues to gather leads through its homeownership informational website.
- Sustainable South Bronx continued its support and outreach within the Shorehaven condominium development, helping to usher one additional project forward to contractual approval.

#### **Additional Outreach**

- In recent months, PathStone has taken the initial steps towards creating its own aggregation pilot in coordination with the City of Rochester. The CBO has provided documentation to NYSERDA staff in an effort to launch an initiative in the coming weeks.
- Adirondack North Country Association has partnered with a participating HPwES contractor in the region to perform follow-up services to all of its stalled or otherwise in-progress clients.

## 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 Home Performance with ENERGY STAR® (HPwES) program offers homeowners in New York State a comprehensive approach to improving energy efficiency and home comfort while saving money. Participating Building Performance Institute (BPI) Gold Star contractors 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 Home Performance with ENERGY STAR® Assessments

Through December 2016, from the 138,246 approved assessment applications, 105,925 (77 percent) assessments have been completed. In the month of December, 1,947 free/reduced-cost comprehensive home energy assessment applications were received. The Program-to-date conversion rate from assessment to energy retrofit is 30 percent. The conversion rate for the period between December 2015 and December 2016 was 38 percent. The average cycle time between assessment completion to project completion is 81 days.

Table 3-1. Home Performance with ENERGY STAR Assessments.

Table 3-1 provides HPwES monthly and cumulative assessment figures.

Time	eframe	CBO Initiated since 11/1/11 <sup>a</sup>	GJGNY Totals since 11/15/10 <sup>b</sup>
Tillie		it Applications	11/15/10
M	onth	92	1,947
Program	m to Date	11,073	144,442
Average # of Applications Re	ceived per Month	176	1,965
	Approved Aud	lit Applications	
	Fr	ee	
М	onth	105	1,979
Progran	m to Date	10,731	128,046
	Reduc	ed Cost	
М	onth	3	113
Progran	m to Date	586	10,200
Total Approved Audit Applica	ations	11,317	138,246
Average # of Applications Ap	proved Per Month	180	1,881
	Schedule	ed Audits	
Scheduled Audits as of End o	f Current Month	108	5,747
	Complete	ed Audits <sup>b</sup>	
		Free	
	Month	92	1,617
Goal: (77,500-Audits)	Program to Date	6,843	98,355
dom (77)300 riduits)		Reduced Cost	
	Month	3	86
	Program to Date	388	7,570
Total Completed Audits		7,231	105,925
Audit Funds Invoiced to Date	!		\$26,074,460

<sup>&</sup>lt;sup>a</sup> GJGNY totals since 11/15/10 are inclusive of CBO initiated activities.

<sup>&</sup>lt;sup>b</sup> Reported data includes all audits offered through the Residential Free/Reduced-Cost Energy Audit Program regardless of funding source. In mid-2016, NYSERDA began using CEF funds for audits in CEF electric utility territories.

### 3.2 Home Performance with ENERGY STAR® Projects

Of the 31,367 projects completed through HPwES resulting from a GJGNY assessment and/or GJGNY financing, 10,849 (35 percent) projects are associated with income-qualified customers who have a household income of up to 80 percent of the county median income.

In December 2016, there were 613 HPwES project completions, of which 547 (89 percent) were associated with a GJGNY assessment or loan. Forty-six percent of the December GJGNY HPwES project completions were for income-qualified customers who have a household income of up to 80 percent of the state or county median income.

Table 3-2. Home Performance with ENERGY STAR Projects.

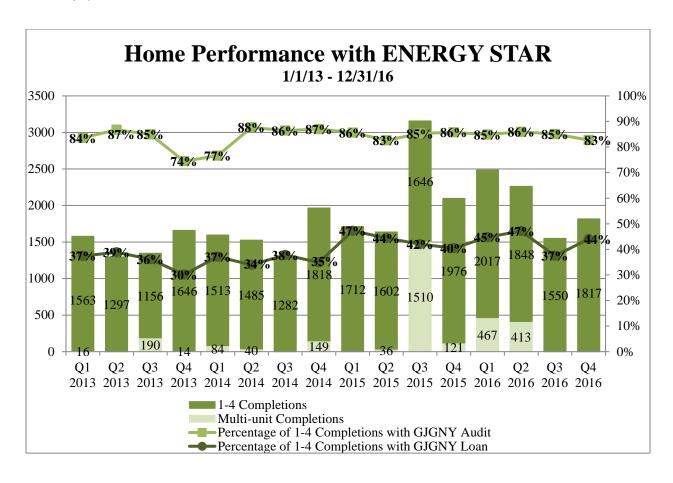
Table 3-2 provides HPwES monthly and cumulative project figures.

Timeframe	CBO Initiated since 11/1/11	GJGNY Totals since 11/15/10 <sup>a</sup>	HPwES Totals since 11/15/10 <sup>b</sup>						
Projects Contracted									
To Date	2,444	30,603	NA						
	Completed P	rojects/Units							
	Assi	sted							
Month	21 / 23	262 /266	298 /302						
Program to Date	1,112 / 1,316	10,404 / 10,849	17,111 / 17,740						
	Marke	et Rate							
Month	9/9	312 / 312	315 / 315						
Program to Date	1,099 / 1,012	20,316 / 20,518	25,345 / 25,600						
Total Completed Projects/Units (Project Goal: 25,000)									
2,211 / 2,328 30,720 / 31,367 42,456 / 43,340									

b Total HPwES including GJGNY Projects.

Figure 3-1. Home Performance with ENERGY STAR Completions, Quarterly.

Figure 3-1 illustrates trends in HPwES project completions associated with GJGNY assessments or loans, by quarter.



#### 3.3 One- to Four-Family Residential Buildings Financing

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.

As of December 31, 2016, 18,721 Residential GJGNY Loans have closed to date, comprising of 12,857 Home Performance with Energy Star® (HPwES) loans, 5,843 Photovoltaic (PV) loans, 10 Solar Thermal (ST) loans and 11 Renewable Heat NY (RHNY) loans. Of the 18,721 total loans closed, 15.8 percent are Tier 2 customers, representing 15.2 percent of the total funds, while 84.2 percent are Tier 1 customers representing 84.8 percent of the funds.

Of the 12,857 HPwES loans closed to date, 32.6 percent are for Assisted HPwES customers, representing 24.3 percent of the total funds; while 67.4 percent are for Market Rate customers representing 75.7 percent of the total funds; 16.7 percent are Tier 2 customers, representing 15.9 percent of the total funds, while 83.3 percent are Tier 1 customers representing 84.1 percent of the funds. Of the loans closed for Assisted HPwES customers, 70.9 percent are Tier 1 loans, while 29.1 percent are Tier 2.

Since the launch of On-Bill Recovery, 25.2 percent of the Assisted HPwES customers who access financing use OBR Loans, while 32.8 percent of the Market Rate HPwES customers who access financing use OBR Loans; 26.1 percent of Tier 2 customers use OBR Loans while 31.2 percent of Tier 1 customers use OBR Loans.

Of the 5,843 PV loans closed to date, 51.9 percent are OBR Loans and 86.1 percent are Tier 1 customers.

Table 3-3. Green Jobs-Green New York Financing Details.

Table 3-3 provides cumulative details of the Green Jobs–Green New York financing program. EE= energy efficiency only. PV = PV only. EE & PV = a loan incorporating both energy efficiency and PV. RH = renewable heat (pellet or wood stoves).

GJGNY Loan Type	Applications Received (Number)*	Applications Approved (Number)	Loans Closed (Number)	Loans Closed (Dollars)	Loans Awaiting Closing (Number)	Loans Awaiting Closing (Dollars)
EE Smart Energy Loan		12,419	9,284	\$86,086,117	527	\$4,533,753
EE On-Bill Recovery Loan		6,031	3,573	\$40,003,384	85	\$2,246,162
Total	28,138	18,450	12,857	\$126,089,501	612	\$6,779,915
PV Smart Energy Loan		3,573	2,787	\$46,382,910	279	\$4,676,113
PV On-Bill Recovery Loan		4,194	3,029	\$52,270,249	337	\$5,891,299
Total	9,585	7,767	5,816	\$98,653,159	616	\$10,567,411
EE & PV Smart Energy Loan		46	21	\$387,587	3	\$38,974
EE & PV On-Bill Recovery Loan		73	6	\$126,200	3	\$56,808
Total	286	119	27	\$513,787	6	\$95,782
RHNY Smart Energy Loan		16	10	\$144,482	2	\$7,712
RHNY On-Bill Recovery Loan		4	1	\$13,445	0	\$0
Total	36	20	11	\$157,927	2	\$7,712
ST Smart Energy Loan		11	9	64,039	0	0
ST On-Bill Recovery Loan		2	1	4,830	1	6,680
Total	13	13	10	\$68,869	1	\$6,680
Grand Total	38,058	26,369	18,721	\$225,483,244	1,237	\$17,457,500

<sup>\*</sup>Applicants are not required to choose loan type (Smart Energy vs On-Bill Loan) at time of application, therefore only total applications are shown.

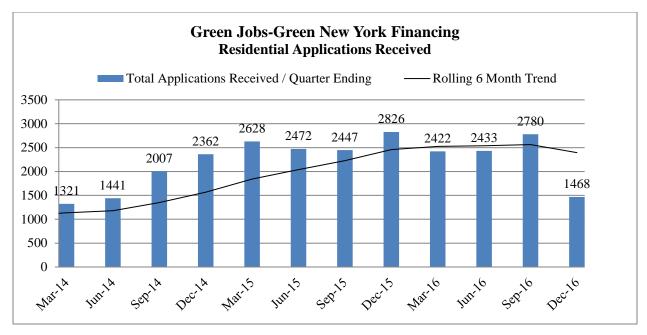
Table 3-4. Green Jobs-Green New York Financing Summary.

Table 3-4 provides a cumulative summary of Smart Energy Loan and On-Bill Recovery Loan activity.

Smart Energy		Financing Summary	On-Bill F	On-Bill Recovery					
Tier 1	Tier 2	Financing Summary	Tier 1	Tier 2					
10,105	2,006	Loans Closed	5,655	955					
\$111,826,557	\$21,238,580	Value	\$79,308,780	\$13,109,328					
\$11,066	\$10,588	Average Loan*	\$14,025	\$13,727					
13.3 Years	14.0 Years	Average Term	14.7 Years	14.7 Years					
N/A	N/A	2.99%	14.71%	9.95%					
85.02%	82.10%	3.49%	85.18%	89.84%					
14.62%	17.55%	3.99%	N/A	N/A					
0.13%	0.15%	4.99%	0.05%	0.00%					
0.06%	0.15%	5.49%	N/A	N/A					
N/A	0.05%	5.99%	N/A	0.21%					
N/A	0.00%	6.49%	N/A	N/A					
0.10%	N/A	6.99%	0.04%	N/A					
0.04%	N/A	7.49%	N/A	N/A					
0.04%	N/A	7.99%	0.02%	N/A					
0.00%	N/A	8.49%	N/A	N/A					
	0.00% N/A 8.49% N/A N/A *Average Loan Amount for borrowers with Assisted Home Performance projects is \$7,340.								

Figure 3-2. Green Jobs-Green New York Financing Residential Applications Received, Monthly.

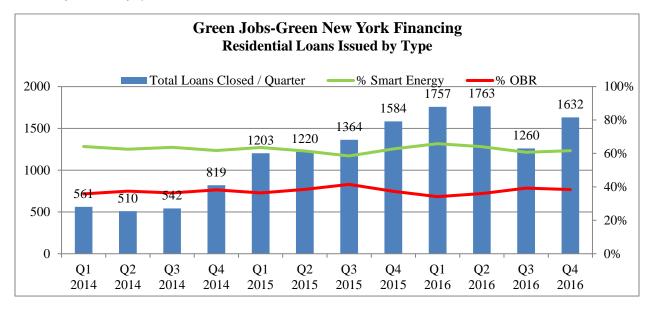
Figure 3-2 illustrates the rate of applications received for GJGNY loans, by quarter.



NOTE: Historically, charts broke out applications by Loan Type (Smart Energy Loan vs On-bill Recovery Loan.) Chart has been revised to show total applications received since in many cases the loan type is not finalized until well after application intake. Cumulative totals over time have been removed and a trendline has been added.

Figure 3-3. Green Jobs-Green New York Financing Loans Issued by Type, Quarterly.

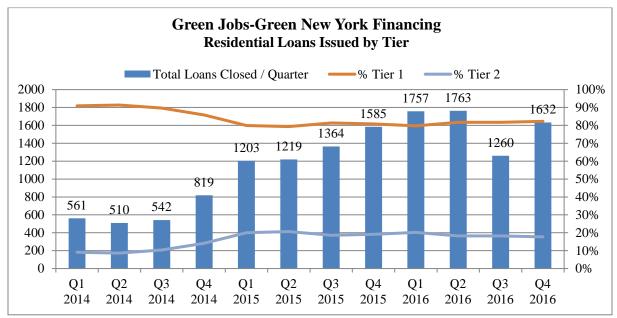
Figure 3-3 illustrates the rate of loans issued for GJGNY Smart Energy Loans and GJGNY On-Bill Recovery Loans, by quarter.



NOTE: Chart has been revised to show total loans closed each month with loan types reflected as a percent of total. Historically, charts showed stacked columns and cumulative totals by type over time.

Figure 3-3. Green Jobs-Green New York Financing Loans Issued by Tier, Quarterly.

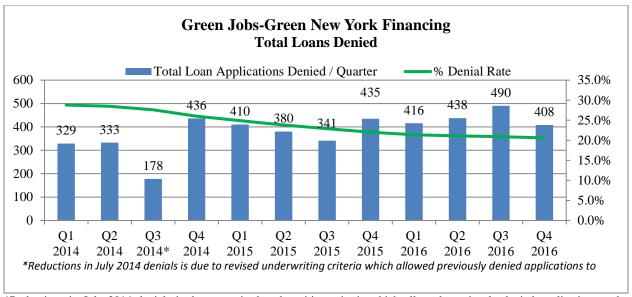
Figure 3-3 illustrates trends in GJGNY loans issued, distinguished between Tier 1 and Tier 2 loans, by quarter.



NOTE: Chart has been revised to show total loans closed each month with Tier designation reflected as a percent of total. Historically, charts showed stacked columns and cumulative totals by Tier over time.

Figure 3-4. Green Jobs-Green New York Financing Loans Denied, Quarterly.

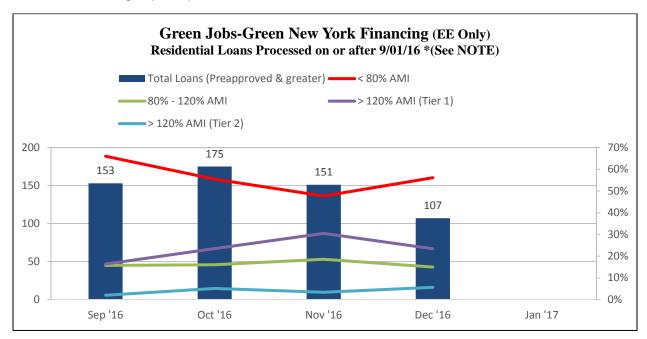
Figure 3-4 illustrates trends in GJGNY loan denials, by quarter. Debt to Income Ratio continues to be the leading reason for denial at 31%, followed by Credit Score at 29%. Collections, Judgements, & Chargeoffs collectively make up 29% of all denials, with Bankruptcies, Foreclosures, and Repossessions equaling 10% of all denials. 1% of all denials are due to other factors not already listed.



<sup>\*</sup>Reductions in July 2014 denials is due to revised underwriting criteria which allowed previously denied applications to be rescreened and qualify.

Figure 3-5. Green Jobs-Green New York Financing Residential Loans Processed, Energy Efficiency Only, Monthly

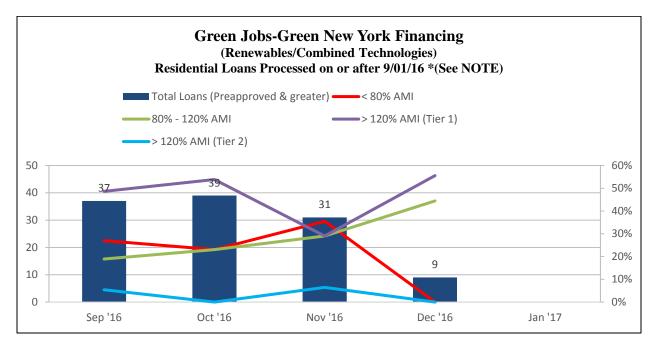
Figure 3-5 illustrates the number of loans in a final pre-approval status or greater, where the application was first submitted on or after September 1, 2016. The chart does not include loans that were denied or have not yet received pre-approval; or loans submitted prior to September 1, 2016, as household income was not collected for most applications at that time. Also shown is the percentage of the total that each household income group comprises.



<sup>\*</sup> AMI = Area Median Income, which is the greater of the State or County Median Income. Households with incomes greater than 120% AMI are further grouped by underwriting Tier, with different interest rates applying to each group.

# Figure 3-6. Green Jobs-Green New York Financing Residential Loans Processed, Renewables and Combined Technologies, Monthly

Figure 3-6 illustrates the number of loans in a final pre-approval status or greater, where the application was first submitted on or after September 1, 2016. The chart does not include loans that were denied or have not yet received pre-approval; or loans submitted prior to September 1, 2016, as household income was not collected for most applications at that time. Also shown is the percentage of the total that each household income group comprises.



<sup>\*</sup>AMI = Area Median Income, which is the greater of the State or County Median Income. Households with incomes greater than 120% AMI are further grouped by underwriting Tier, with different interest rates applying to each group.

## 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 New York State. NYSERDA's programs make it easier to assess, fund, implement, and measure energy efficiency upgrades that improve building performance and save money.

#### **4.1 Multifamily Energy Performance Assessments**

Through December 2016, from the 333 approved assessment applications, 304 (91 percent) assessments have been completed.

Table 4-1. Multifamily Energy Performance Assessments.

Table 4-1 provides Multifamily Performance monthly and cumulative assessment figures.

Metric		Month		Cumulative			
	Affordable Housing	Market Rate Housing	Monthly Total	Affordable Housing	Market Rate Housing	Program Total	Budget/ Goal
Received Assessment Applications	0	0	0	193	140	333	
Approved Assessment Applications	0	0	0	193	140	333	500
Assessment Funds Encumbered (\$)	0	0	0	2,342,960	1,120,987	3,463,947	
Assessment Funds Invoiced (\$)	0	0	0	1,291,100	\$694,930	1,986,030	3,000,000
Completed Assessments	0	0	0	170	134	304	400
Number of Projects Withdrawing from MPP after Assessment*	0	0	0	17	29	46	

<sup>\*</sup>MPP Projects must achieve a minimum of 15 percent in energy savings. Projects may choose to proceed outside MPP. Some may choose smaller work scopes which will not achieve program standard and thus not be eligible for MPP and some may elect to access utility incentives. If energy efficiency projects are completed, building owners that have an authorized assessment would still be eligible to apply for GJGNY financing.

## **4.2 Multifamily Energy Performance Projects**

Through December 2016, the Multifamily Energy Performance Program has completed 32,894 housing units with installed measures. Of those units with installed measures, 15,539 (47 percent) are associated with affordable housing.

**Table 4-2. Multifamily Energy Performance Projects.** 

Table 4-2 provides Multifamily Performance monthly and cumulative project figures.

Metric		Month		Cumulative			
	Affordable Housing	Market Rate Housing	Monthly Total	Affordable Housing	Market Rate Housing	Program Total	
Projects in Pipeline*	0	0	0	193	140	333	
Projects Contracted to have Measures Installed	0	0	0	193	140	333	
Households Associated with Projects Contracted	0	0	0	32,785	32,817	65,602	
Projects with Installed Measures (units)	0	0	0	15,539	17,355	32,894	
kWh Savings of Installed Measures	0	0	0	13,810,878.6	4,103,148.2	17,914,027	
MMBtu Savings of Installed Measures	0	0	0	198,280.1	177,455.9	375,736	
Dollar Savings of Installed Measures	0	0	0	\$9,611,178.24	\$7,147,540.00	\$16,758,718.24	

<sup>\*</sup>Projects that receive GJGNY-supported assessments and/or financing may also receive incentives through the System Benefits Charge (SBC), Energy Efficiency Portfolio Standard (EEPS), Regional Green House Gas Initiative (RGGI), and/or utility programs, such that the projects' energy savings may not all be attributable solely to GJGNY.

# 4.3 Multifamily Energy Performance Financing

As of December 2016, 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 4-3. Multifamily Energy Performance Financing.** 

Table 4-3 provides Multifamily Performance monthly and cumulative financing figures.

Loan Status	us Month			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	

## 6 Small Commercial Energy Efficiency Program

NYSERDA's Small Commercial Energy Efficiency Program offers financial and technical assistance to help small businesses and not-for-profit organizations improve their energy efficiency and reduce their energy costs. This program offers free assessments to help identify economically viable improvements, (e.g. lighting, motors or thermostats) that may yield substantial annual energy savings and two low-interest loan options to finance energy efficiency projects. The first one is On-Bill Recovery Financing, which makes it possible for small businesses and nonprofits to use the savings on their energy bills to pay for their energy efficiency upgrades. The second one is the Participation Loan, where NYSERDA partners with lenders across New York State to help small businesses and nonprofits access low-interest financing for energy efficiency improvements by providing a share of the loan principle at a low interest rate.

The Small Commercial Energy Efficiency Program continues to improve processes and services that enable Program participants to increase project installations resulting from energy assessments. This includes improving the communication of energy assessment results to small business and nonprofit customers, providing additional follow-up services to support implementation, and increasing outreach to lenders to raise lender awareness and increase lender participation in Small Commercial Energy Efficiency Financing made available by GJGNY. In addition, eligible small business and not-for-profit customers participating in NYSERDA's NY-Sun Solar PV Incentive Program can now access low-interest GJGNY financing to install solar PV systems of up to 200 kW.

#### 5.1 Small Commercial Energy Efficiency Assessments

Through December 2016, the Small Commercial Energy Efficiency Program has received 4,436 assessment applications. Of those received applications, 4,097 (92 percent) have resulted in completed assessments.

Table 5-1. Small Commercial Energy Efficiency Assessments.

Table 5-1 provides Small Commercial Energy Efficiency monthly and cumulative assessment figures.

Metric	Month			Program Cumulative			
	GJGNY	GNY ARRA* Total		GJGNY	ARRA*	Program Total	
Received Assessment Applications	72	0	72	3,574	934	4,508	
Completed Assessments	46	0	46	3,294	849	4,143	

<sup>\*</sup>The GJGNY Act of 2009 restricts the provision of GJGNY-funded energy assessments to small business and not-for-profit organizations with 10 employees or less. American Recovery and Reinvestment Act of 2009 (ARRA) funds were used for eligible small business and not-for-profit organizations that have more than ten employees. ARRA funding expired on September 30, 2013.

### **5.2 Small Commercial Energy Efficiency Projects**

Through December 2016, the Small Commercial Energy Efficiency Program estimates 1,803 project completions as a result of GJGNY funded assessments.

#### Table 5-2. Small Commercial Energy Efficiency Projects.

Table 5-2 provides an estimate of Small Commercial Energy Efficiency monthly and cumulative project figures.

Metric	Month	<b>GJGNY Program Cumulative</b>				
Estimated Projects Completed*	20	1823				
*The 2015 Small Commercial Energy Efficiency Program Impact Evaluation found that 44 percent of the energy savings recommended						

<sup>\*</sup>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 December 2016, the Small Commercial Energy Efficiency Program has closed 54 loans with a total value of \$2,741,386. NYSERDA's share of that total loan value is \$1,686,462.

#### Table 5-3. Small Commercial Energy Efficiency Financing.

Table 5-3 provides Small Commercial Energy Efficiency monthly and cumulative financing figures.

Loan Status		Month		Program Cumulative				
	NYSERDA Share of Total Number Loan Value		Total Loan Value**	Number	NYSERDA Share of Total Loan Value	Total Loan Value**		
		Applica	ations Approve	ed*				
Participation Loans	3	\$41,374	\$82,748	124	\$2,547,229	\$5,423,695		
On-Bill Recovery 1 \$		\$9,139	\$9,139	77	\$2,435,305	\$3,122,161		
	Loans Closed							
Participation Loans	\$0	\$0	27	\$868,998	\$1,844,416			
On-Bill Recovery	2	\$50,182	\$50,182	28	\$817,646	\$897,152		
Total	2	\$50,182	\$50,182	55	\$1,686,644	\$2,741,568		

The Small Commercial Energy Efficiency Financing Program has 13 participating lenders.

<sup>\*</sup> 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.

<sup>\*\*</sup>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.

#### 7 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 Currently Underway**

One evaluation is nearing completion.

• An evaluation of the GJGNY Jobs impacts is in the final stage of review and nearing completion. This study is designed to update the GJGNY Jobs analysis that was conducted in 2013 and is being implemented using a two-phased approach. Phase 1 involved primary data collection via telephone and web-based surveys of various GJGNY market actors and the Phase 2 component of the evaluation included an update to the 2013 macroeconomic assessment of indirect jobs. The Phase 1 report is under review and Phase 2 analysis is nearing completion. NYSERDA will strive to finalize the reports for Phases 1 and 2 in February 2017.