



**NYSERDA**

# **GJGNY Advisory Council Meeting**

**May 16, 2017**

# Agenda

- Welcome and Introductions
- Residential Loan Fund Review and Residential Energy Efficiency Program Update
- Workforce Development Working Group Report and Recommendations
- GJGNY Jobs Analysis
- Closing Remarks and Next Steps

# Residential Loan Fund Review and Residential Sector Update

# Changes to Loan Interest Rate – 9/1/2016

Income/Credit Range <sup>1</sup>	Interest Rate – EE <sup>2</sup>	Interest Rate – PV and Other/Combined <sup>2</sup>
Up to 80% AMI	3.49 or 3.99%	3.49% or 3.99%
>80% AMI up to 120% AMI	4.99% or 5.49%	4.99% or 5.49%
>120% AMI Tier 2 <sup>3</sup>	5.99% or 6.49%	5.99% or 6.49%
>120% AMI Tier 1	6.99% or 7.49%	7.99% or 8.49%

<sup>1</sup>AMI – Area Median Income

<sup>2</sup>Lower Interest rate applies to On-Bill Recovery Loan or automatic withdrawal from bank account

<sup>3</sup>Tier 2 refers to expanded underwriting criteria for those unable to meet traditional criteria

# Changes to Home Performance with ENERGY STAR (HPwES) Programs

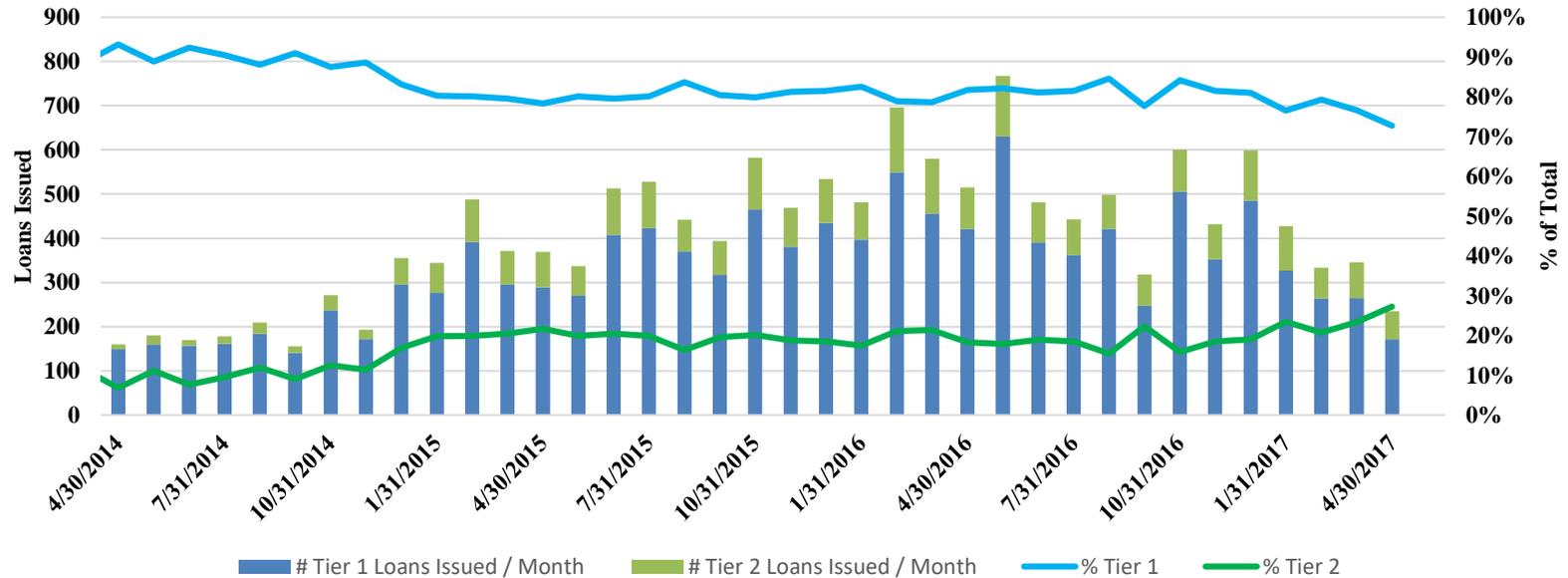
- 9/1/2016
  - 10% consumer incentive eliminated (market rate customers)
  - Multiple contractor incentives consolidated into a 10% contractor incentive
- 10/1/2016
  - Assisted incentive cap reduced from \$5,000 to \$4,000 (\$10,000 to \$8,000 for 2 to 4 unit building)
- 1/1/2017
  - PSEG Long Island is primary administrator of Home Performance with ENERGY STAR on Long Island and coordinates loans with NYSERDA
  - NYSERDA-participating contractors serving other Long Island customers have access to loan fund

# Funding Needs Compared to Projections

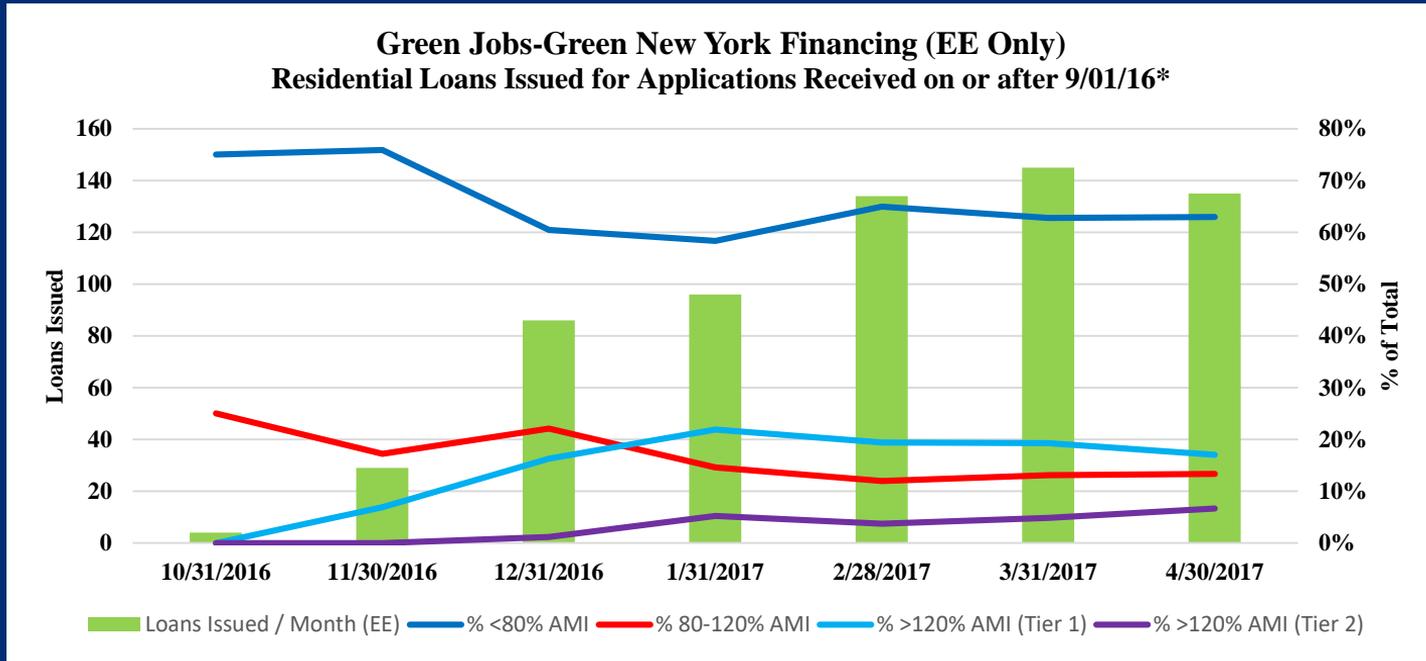
# Projections from 2016 Compared to Actuals

Component	Loans Issued	Projected Loans		Actual Loans Issued		RGGI\$ Business as Usual		RGGI\$ With Proposed		Impact to RGGI\$	
	FY15-16	FY16-17	% of Total	FY16-17	% of Total	3.49%	% of Total	Changes	% of Total	Actual	% of Total
<80% AMI	\$13.1	\$16.1	16%	\$30.5	41%	\$8.0	19%	\$8.0	28%	\$14.1	47%
81-120% AMI	\$17.2	\$24.2	24%	\$17.1	23%	\$12.0	28%	\$10.7	38%	\$6.4	22%
>120% AMI	\$49.0	\$61.2	60%	\$26.9	36%	\$22.3	53%	\$9.8	34%	\$9.1	31%
Total	\$79.3	\$101.5	100%	\$74.4	100%	\$42.3	100%	\$28.5	100%	\$29.7	100%
Tier 1	\$65.1	\$81.5	80%	\$61.6	83%	\$22.3	53%	\$8.5	30%	\$16.8	57%
Tier 2	\$14.2	\$20.0	20%	\$12.9	17%	\$20.0	47%	\$20.0	70%	\$12.9	43%
Total	\$79.3	\$101.5	100%	\$74.4	100%	\$42.3	100%	\$28.5	100%	\$29.7	100%

## Green Jobs-Green New York Financing Residential Loans Issued by Tier (Past Three Years)

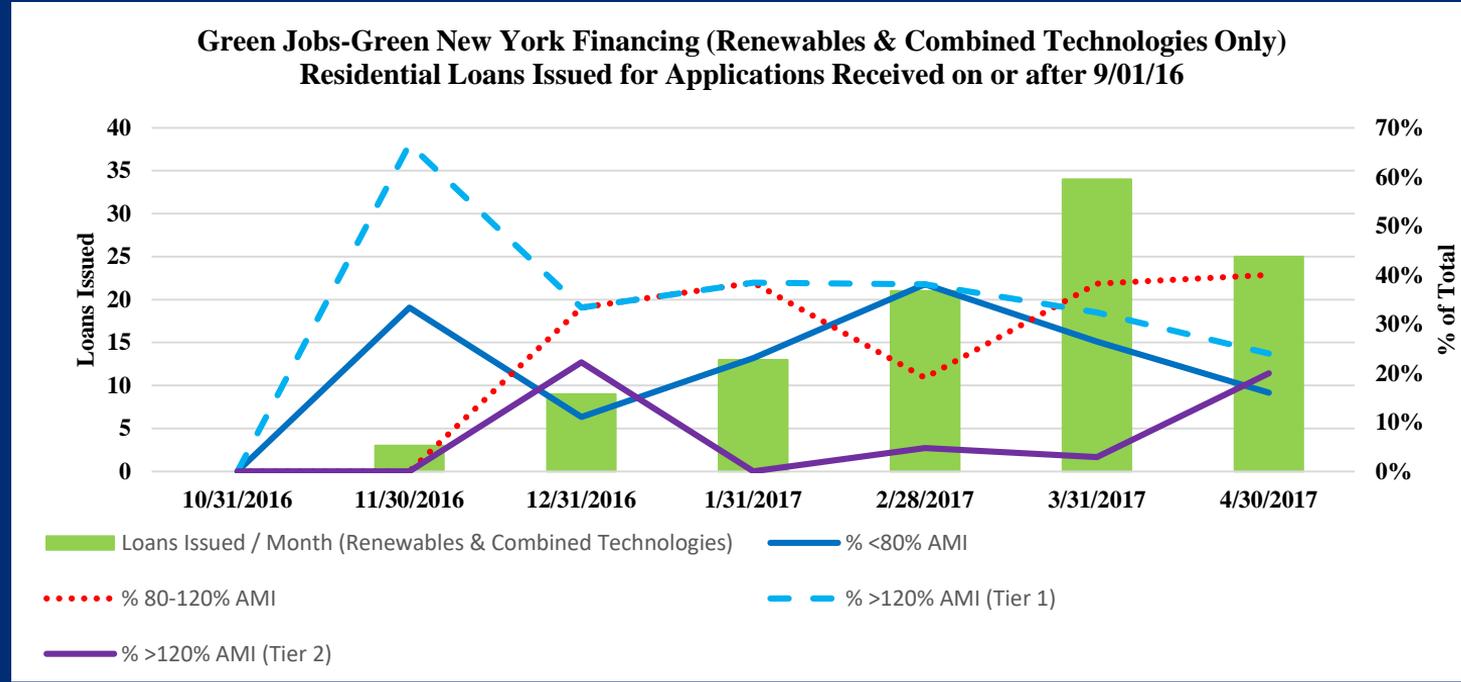


# Income Distribution of Loans - EE

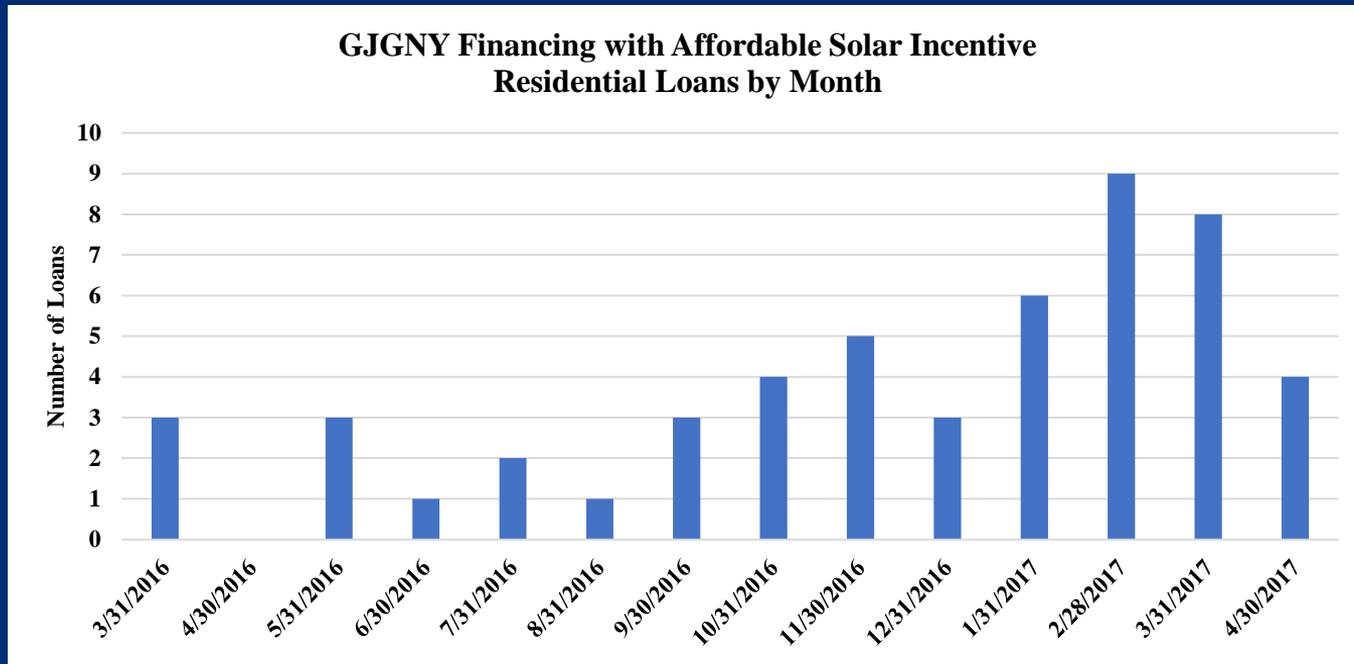


\* AMI = Area Median Income, which is the greater of the State or County Median Income. Households with incomes greater than 120% AMI are further grouped by underwriting Tier, with different interest rates applying to each group.

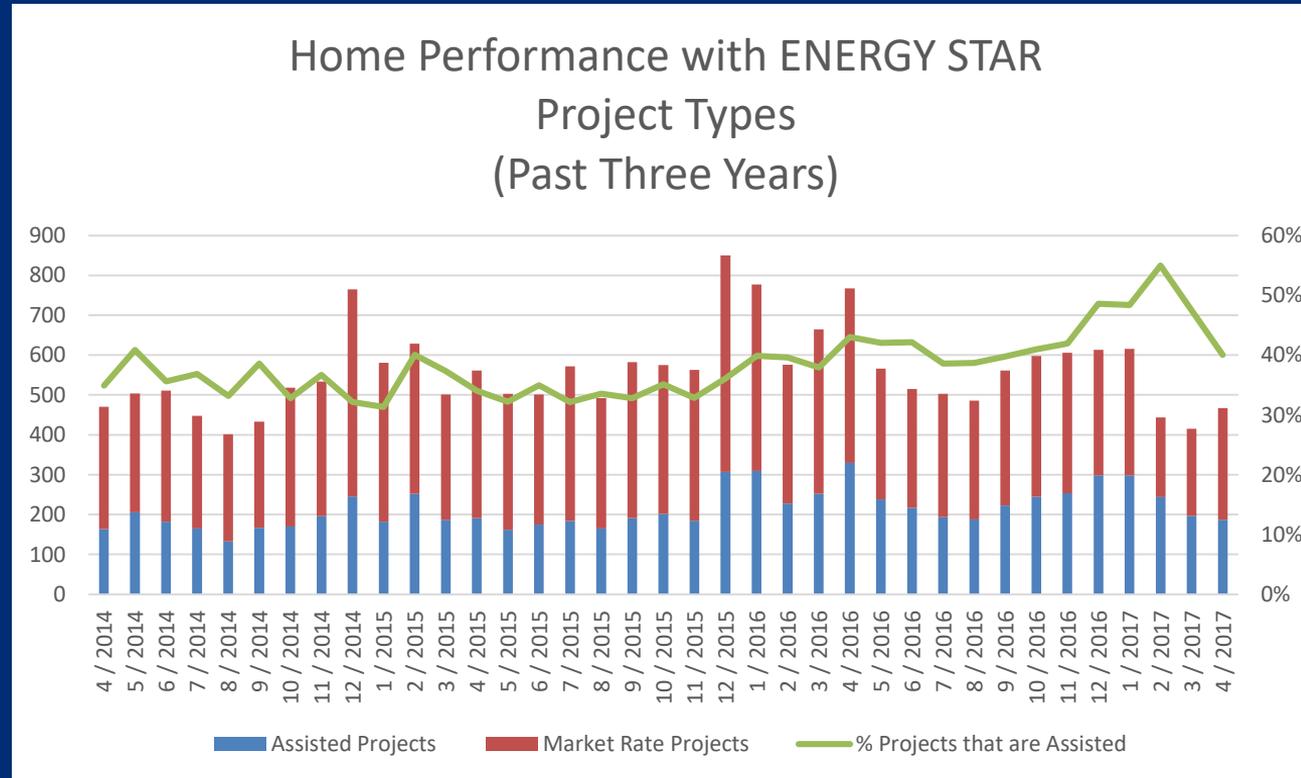
# Income Distribution of Loans – PV, Other Renewables and Combined Projects



# Affordable Solar with GJGNY Loans



# Residential Energy Efficiency – Market Rate

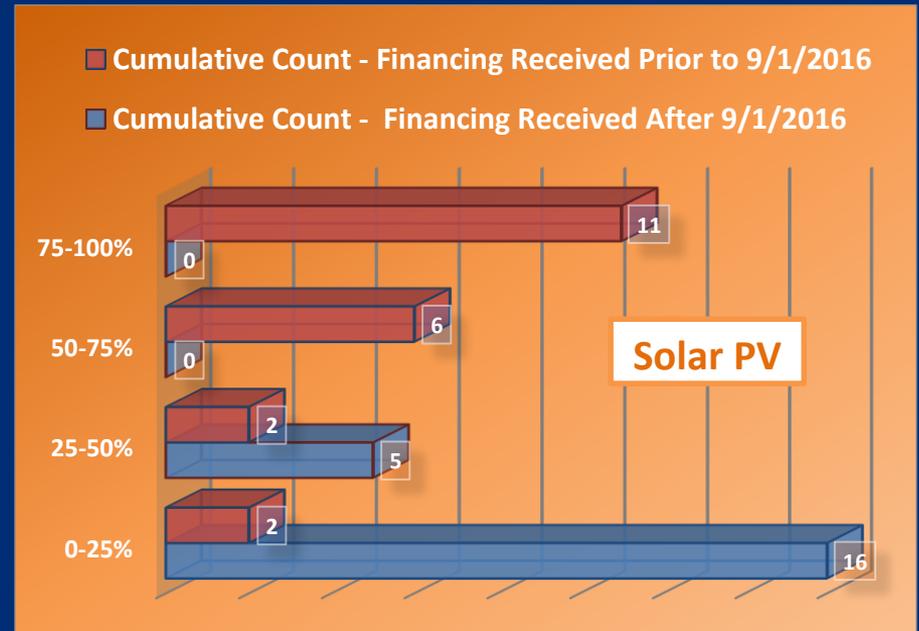
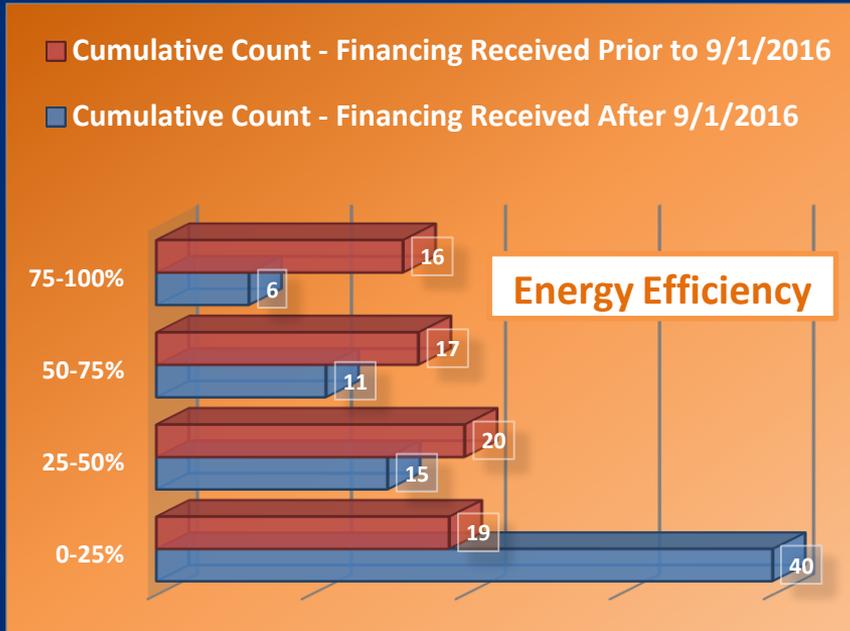


# Contractor/Installer Survey, Loan Fund Performance, Program Performance

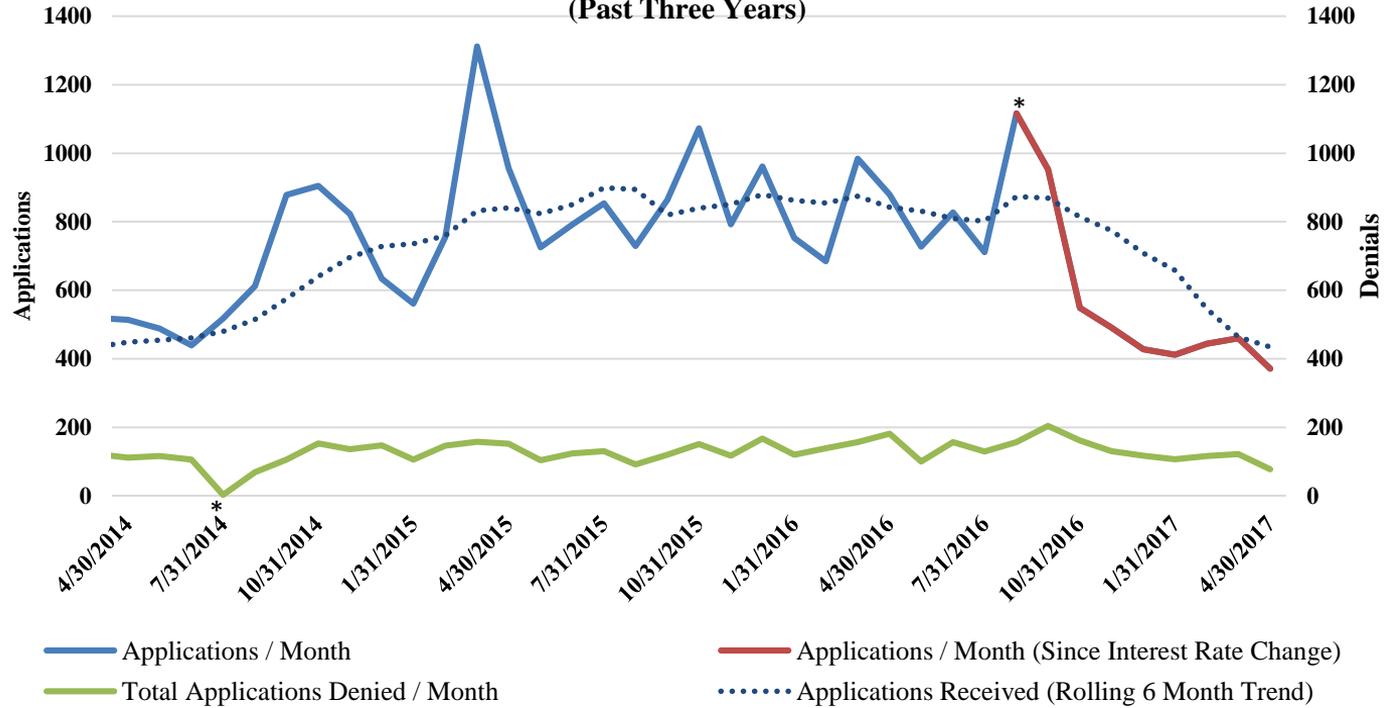
# Survey

- Purpose
  - Understand impact of GJGNY loan interest rate changes
  - Understand impact of Home Performance with ENERGY STAR (HPwES) incentive changes
  - Obtain other “top of mind” feedback
- Distributed April 21st, due April 30<sup>th</sup>; reminder sent
- Two versions:
  - 190 HPwES contractors (40% response rate)
  - 155 PV installers signed up to use loan fund (14% response rate)

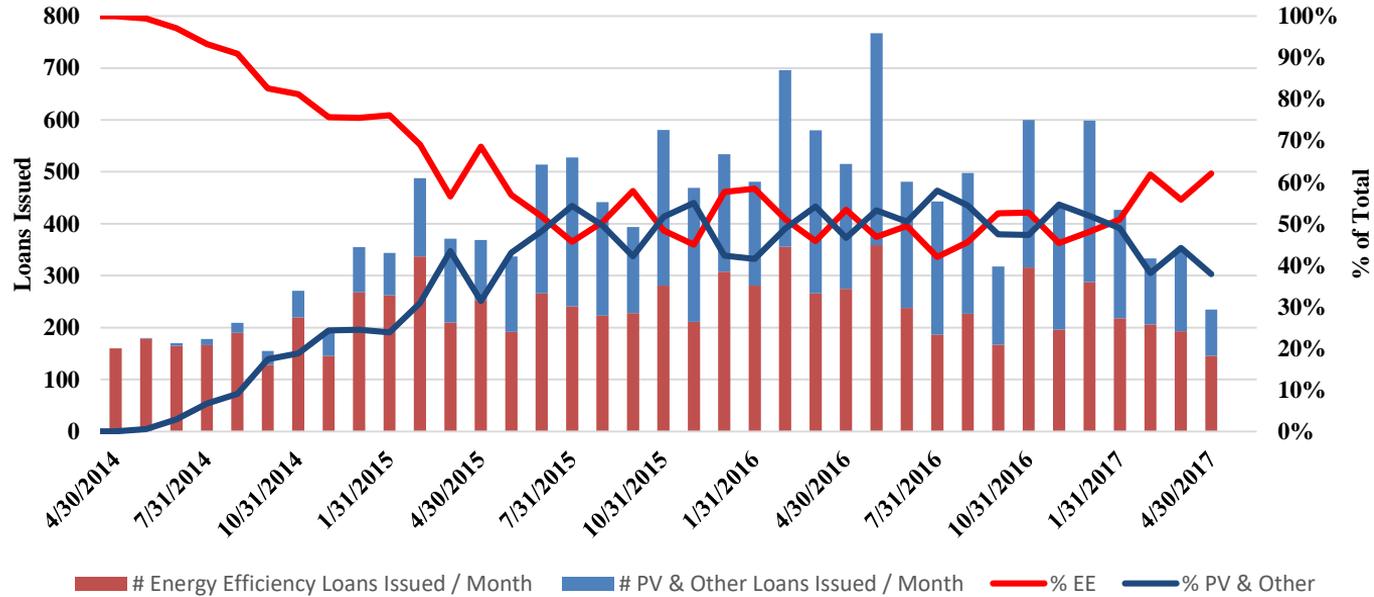
## Q. What is the percentage of your total jobs in the residential 1-4 family sector that received NYSERDA financing prior to 9/1/2016? After?



### Green Jobs-Green New York Financing Residential Applications Received and Denied by Month (Past Three Years)

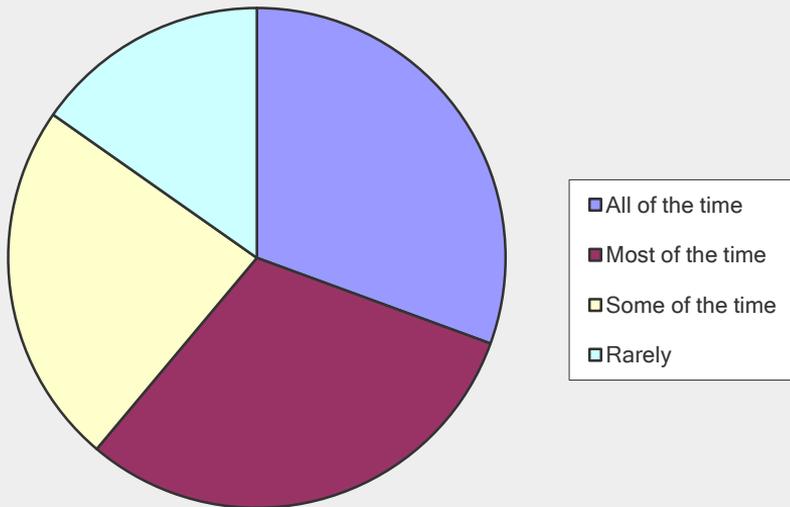


### Green Jobs-Green New York Financing Residential Loans Issued by Technology (Past Three Years)

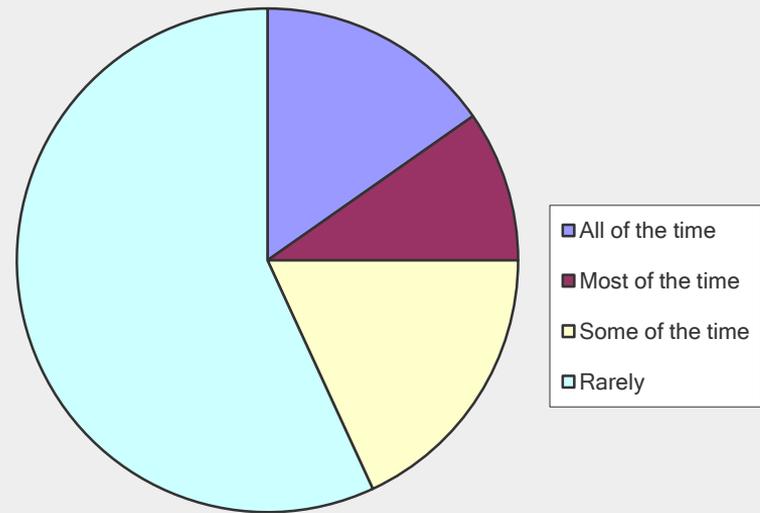


## Q. Since 9/1/2016, how often have you encouraged customers to consider a Smart Energy loan? An On-bill Recovery Loan?

Smart Energy Loan - Energy Efficiency

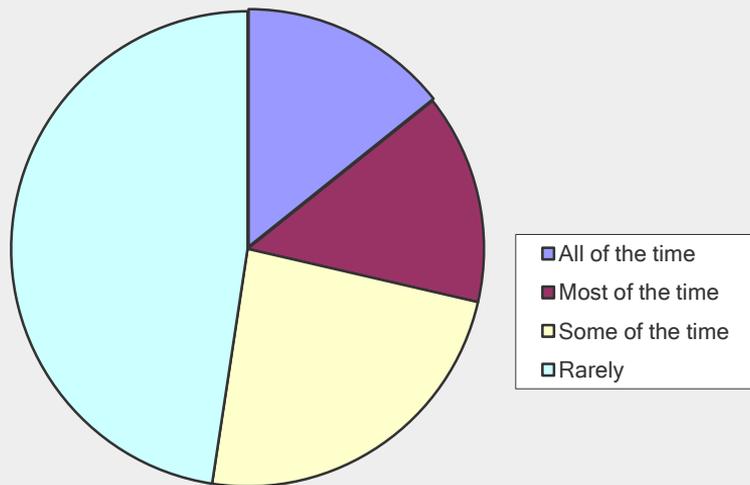


On-Bill Recovery Loan - Energy Efficiency

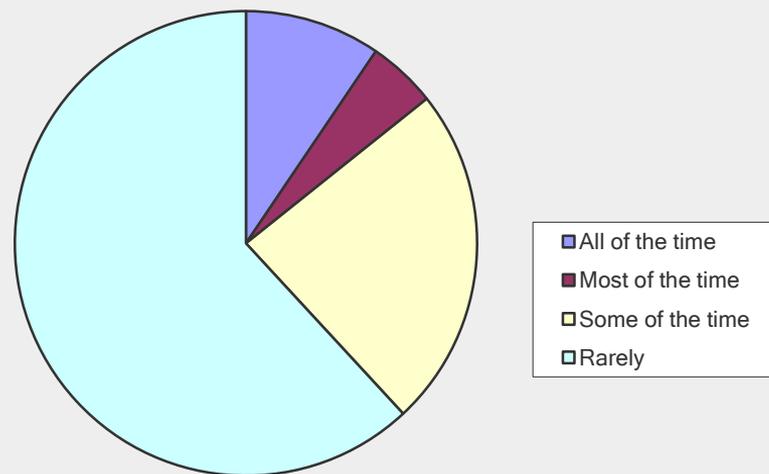


## Q. Since 9/1/2016, how often have you encouraged customers to consider a Smart Energy loan? An On-bill Recovery Loan?

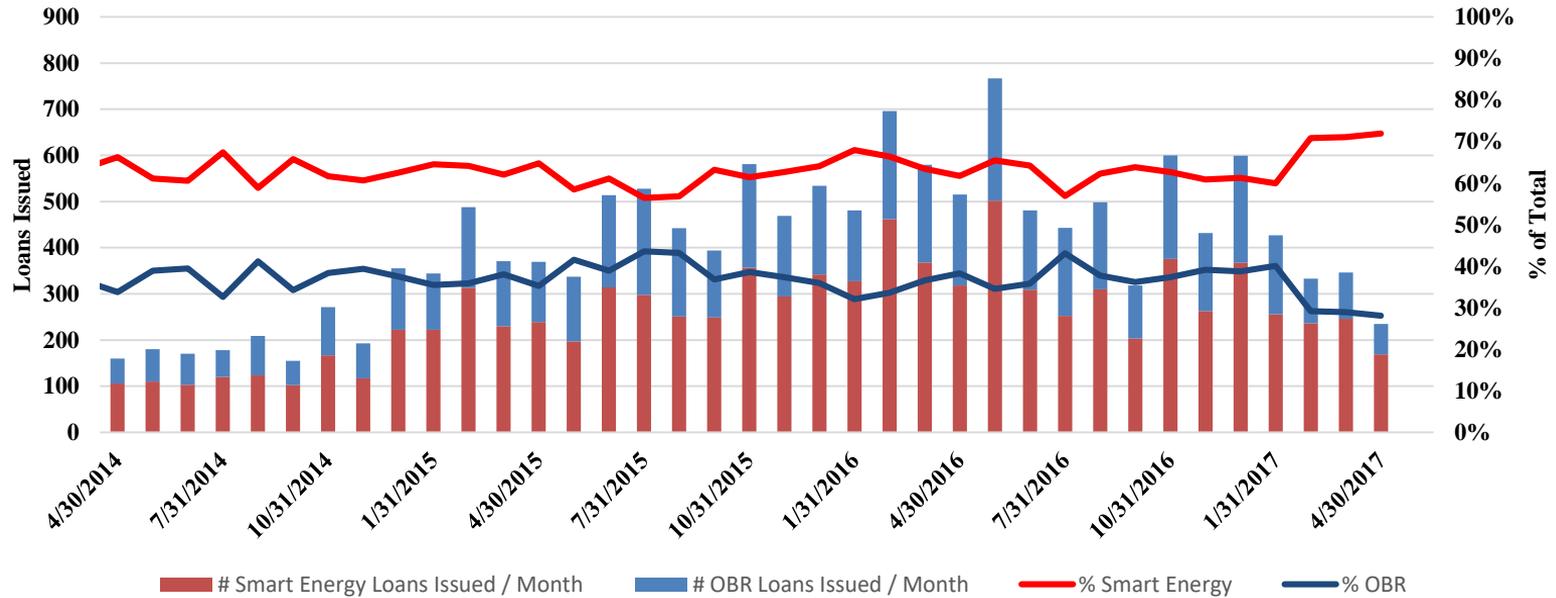
Smart Energy Loan - PV



On-Bill Recovery Loan - PV



### Green Jobs-Green New York Financing Residential Loans Issued by Type (Past Three Years)

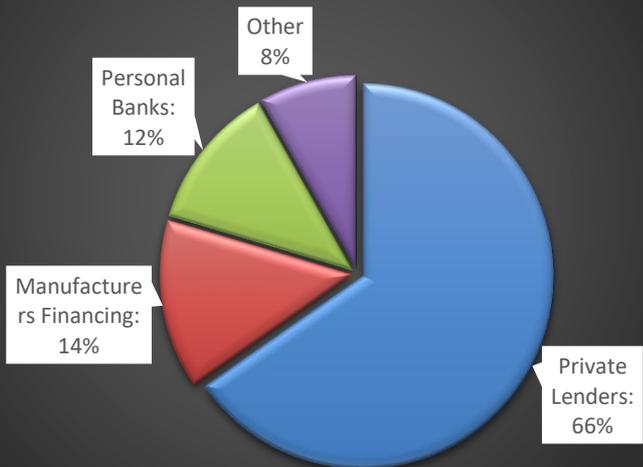


## Q. If NYSERDA's financing program is not used by a customer, how do they pay for their project?

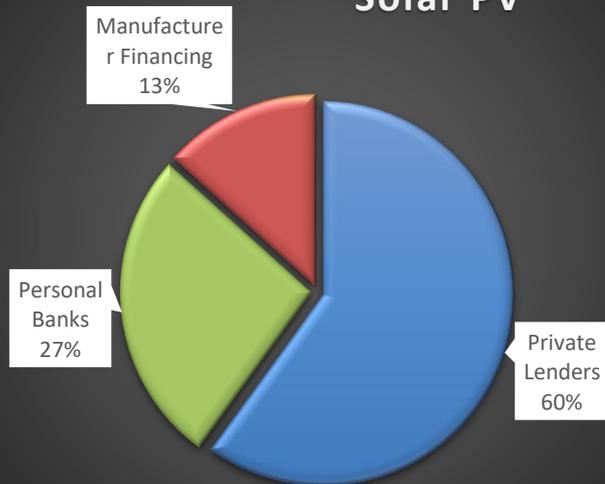
- Highest rank response for EE (67%) – “out-of-pocket”
- Highest ranked response for PV (50%) – “other PV lender,” followed by “out-of-pocket” (34%)
- Variety of other types of financing (local banks, home equity loan, company financing)

Q. Do you suggest lenders other than NYSERDA to your customers? Who?

Response –  
Energy Efficiency

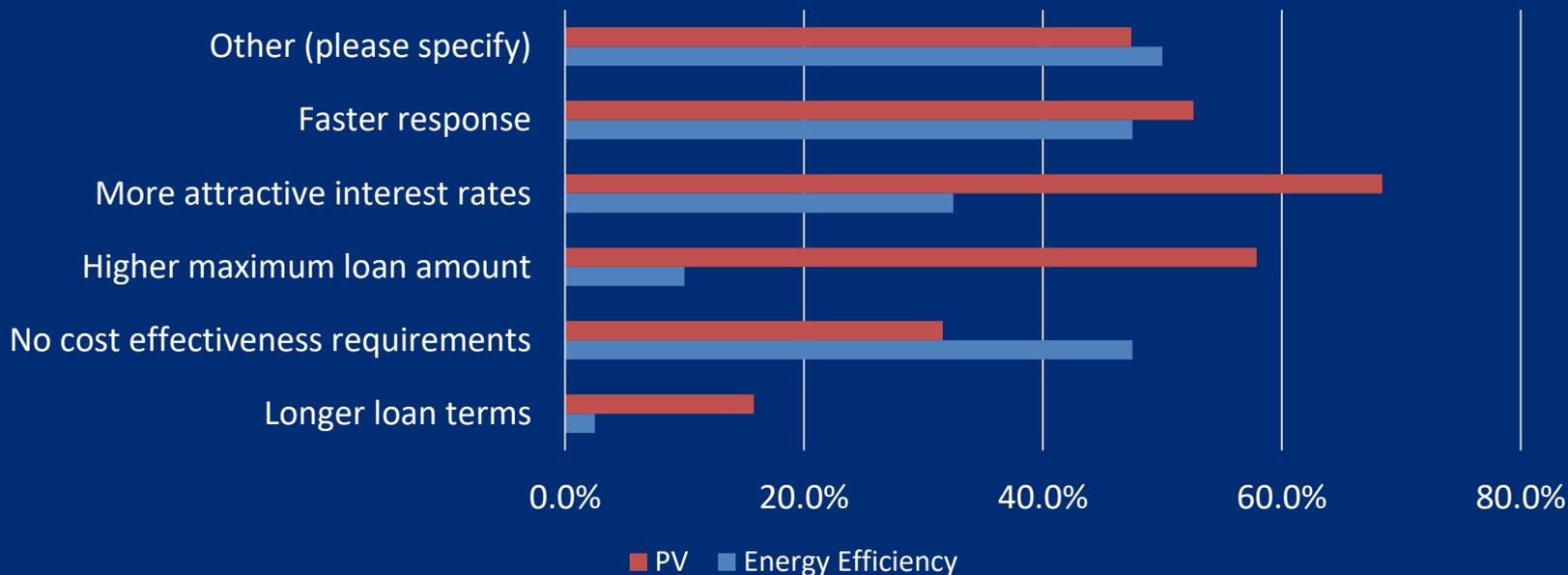


Response –  
Solar PV



## Q. Why do you suggest lenders other than NYSERDA for financing?

### Reasons for Suggesting Other Lenders



Other: easier paperwork and process, faster payment

## Q. If you have seen a decrease in project volume since 9/1/2016, what do you think are the driving factors?

Possible Driving Factors	Energy Efficiency			PV		
	Little Impact	Moderate Impact	Significant Impact	Little Impact	Moderate Impact	Significant Impact
Increased Interest Rates	10	9	22	0	4	16
Projects are unable to meet loan cost effectiveness requirements	15	19	7			
Incentives reduced or eliminated	12	10	19	3	10	7
I'm unable to differentiate myself from other competitors without the 10% consumer incentive	18	9	14			
The reduced incentive of \$4,000 for Assisted Home Performance with ENERGY STAR	12	16	13			
External factors, customers doing fewer improvements to their home (weather, cost of living, cost of energy, etc.)	11	16	14	15	3	2
Lack of other financing options	16	12	13			
Other (please specify):	lack of advertising by NYS, higher business costs, inequitable interest rate			inequitable interest rate, low return on investment		

## Q. Characterize Energy Efficiency Program Participation

- 64% of respondents do most of their projects through the program;
- 48% of respondents indicate the percentage of projects completed outside the program has increased since 9/1/2016
- 59% of respondents indicate demand for services, inside and outside the program, has decreased since 9/1/2016

## Q. Additional Comments?

- Program needs better promotion
- Need market rate incentives (rebate, tax credit, lower interest rate) to improve return on investment
- Difficult to serve middle income
- Hard to justify higher interest rate for high FICO customers
- Harder to close the deal - uncertainty regarding interest rate up-front or customers seek other financing
- Need to qualify more disadvantaged customers for loans

# Discussion

# Workforce Training Working Group Report and Recommendations

# Overview

- Working Group Members
- Primary Areas of Discussion
- Recommendations and NYSERDA Response
- Other Considerations of the Working Group
- Discussion

# Working Group Members

- Adele Ferranti, NYSERDA, Convener
- Stephan Edel, Center for Working Families
- Clarke Gocker, PUSH Buffalo
- Ross Gould, Workforce Development Institute
- Dave Hepinstall, Association for Energy Affordability
- Tony Joseph, NYS Department of Labor
- Jason Kuflik, Green Street Solar
- Ellen Redmond, International Brotherhood of Electrical Workers
- Will Schweiger, Efficiency First New York
- Paul Shatsoff, PS Consulting
- Hal Smith, Halco
- Marilyn Oppedisano, National Electrical Contractors Association

# Primary Areas of Discussion

The working group addressed the following opportunities and needs identified in the *GJGNY LMI Work Group Recommendations Report*:

- Role of community-based organizations in future workforce training efforts
- Opportunities to coordinate with the NYS Department of Labor (NYSDOL)
- Future directions for workforce training efforts, including career pathways, training consortia, apprenticeships, and direct entry
- Incorporating lessons learned both from within GJGNY programs and other jurisdictions
- Labor standards

# Summary of Recommendations

1. Provide on-the-job training incentives to mitigate business risks associated with hiring new clean energy workers
2. Support New York State Registered Apprenticeships in clean energy fields
3. Explore innovative, employer-driven approaches to bridging the gaps between training and employment, including a hiring hall model

# Recommendation #1 – OJT

*NYSERDA should provide on-the-job training (OJT) incentives to mitigate business risks associated with hiring new clean energy workers. OJT incentives typically offset a portion of wages for a fixed period of time.*

- Working Group members suggest a focus on energy efficiency workers (air sealing, insulation, weatherization) because those are the positions for which it is more difficult to recruit and retain talent
- Classroom training should also be supported along with OJT funding to more closely align with the apprenticeship model
- Employers would also like to have financial support for advancing incumbent workers

# Response to #1 – OJT

- NYSERDA will continue to solicit market input and is looking into options for an OJT program consistent with the requirements of the GJGNY Act and the goals of the Clean Energy Fund (CEF).
  - Classroom training to support OJT will be targeted to areas where there is evidenced need in the market and other training either does not exist, is insufficient or is not readily available across the state
  - Energy efficiency has been identified as a primary area of focus
- Through a new workforce training initiative funded under the CEF, employers of building operations and maintenance workers can apply for funding for OJT activities, apprenticeships, internships, etc.--as long as those activities are part of a corporate plan to institutionalize training for new and incumbent workers (PON 3442).

# Recommendation #2 – Apprenticeships

*Support New York State Registered Apprenticeships in clean energy fields.*

- Link community-based hiring halls and workforce training programs to Registered Apprenticeships
- Expand pre-apprenticeship training programs with direct entry into Registered Apprenticeships
- Explore a model that encourages partnerships between community groups, unions, and utilities

# Response to # 2 – Apprenticeships

- NYSERDA will continue to work closely with NYSDOL, unions, Clean Energy Communities, locally-based organizations and contractors/employers to support and facilitate apprenticeships, pre-apprenticeships, and internships in clean energy fields.
  - Coordinate training efforts with Clean Energy Communities and locally-based organizations as they facilitate more clean energy projects
  - NYSERDA is currently looking at market needs/barriers and options to support new curriculum development, training trainers on new and emerging technologies, and leveraging relationships with manufacturers for training equipment
- As noted above, through PON 3442, employers of building operations and maintenance workers can apply for funding for apprenticeships, pre-apprenticeships, internships, etc.

# Recommendation #3 – Hiring Halls

*Explore innovative, employer-driven approaches to bridging the gaps between training and employment, including a hiring hall model.*

- Consider non-traditional ways to support disadvantaged workers such as “hiring halls,” where skilled and vetted workers are employed and insured by a host and can be hired out on an as-needed basis
  - This is one way to support “high road standards” such as family-sustaining wages, fringe benefits, and overtime pay
- Work with locally-based organizations who are uniquely positioned to bridge gaps between workers and clean energy businesses seeking to hire

# Response to # 3 – Hiring Halls

- NYSERDA will continue to investigate opportunities to support all career pathway opportunities to ensure that all New Yorkers have access to good paying jobs in the clean energy economy.
  - NYSERDA is currently looking at market needs/barriers and options to support innovative solutions to bridging the gaps between training and job placement
  - NYSERDA will convene a group to explore what role hiring halls and pre-apprenticeship programs (with a pipeline to registered apprenticeships) might play in increasing clean energy employment within disadvantaged communities, with a recommendation made by the end of the year.

# Other Considerations

Additional considerations explored by the working group include the following:

- Suggested regulatory reform related to on-the-job training for recipients of unemployment insurance
- Necessary coordination with the NYS Department of Labor that can serve as a central resource for information on state-funded workforce development activities and job placement activities
- Assistance for workers in obtaining transferable skills or upgrading skills to better prepare for new responsibilities or to transition from one industry to another—including from fossil fuels to clean energy

# Discussion



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# **GJGNY Advisory Council 2016 Jobs Analysis**

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# Study Objectives

- Previous study completed in 2013
- Update to 2013 study completed in Q4 2016

## Phase 1:

- Estimate number of direct FTEs attributable to GJGNY program activities,
- Identify direct FTEs created in disadvantaged communities,
- Determine other job-related impacts (wage levels, worker skills),
- Provide inputs to economic impact analysis (Phase 2)

## Phase 2:

- Macroeconomic assessment of indirect jobs

# Important Notes

- Direct jobs (in FTEs) are point-in-time estimates by survey respondents
- Due to the close linkage of GJGNY with ratepayer funded programs, Phase 1 survey research carefully addressed attribution and attempted to isolate and claim only the GJGNY impacts
- Macroeconomic analysis output is gross jobs and is not net of potential impacts of alternative spending of the GJGNY funds
- Results should not be added/compared to results from jobs studies on other NYSERDA programs or portfolios

# Phase 1: Analytic Approach

- Surveys assessed Up-skilled and Up-waged FTEs
  - Improved worker skills
  - For those also up-waged, collected previous hourly wage, wage increase, current hourly wage
- Disadvantaged communities
  - Unemployment rate greater than NY state average

# 2014 - 2015 Jobs Evaluation - Summary

	Total Impact (Direct, Indirect, Induced)	
	2013	2014 - 2015
Jobs Total	1,590	5,357
Jobs in Disadvantaged Communities	272	1,700

- 2,627 of the 5,357 total jobs were new plus retained jobs
- Most significant job creation/retention was in plumbing, heating and air-conditioning contractors
- Most significant wage increase was for residential remodelers (49%)

## Total Direct Jobs (jobs created and retained) in 2014-15

Program Initiative	Number	Percent Total
Workforce Development	1,237	47%
NY-Sun Initiative	863	33%
Home Performance with ENERGY STAR	471	18%
Outreach	38	1%
Small Commercial Energy Efficiency	11	0.4%
Financial Services	8	0.3%
<b>Total Green Jobs – Green New York Program</b>	<b>2,627</b>	<b>100%</b>

# Jobs Up-skilled & Up-waged in 2014-15

- GJGNY-related work via NYSERDA programs resulted in 402 existing jobs that were up-skilled and up-waged
- Industry groups with largest number of up-skilled and up-waged jobs:
  - Plumbing, Heating, and Air-Conditioning Contractors: 274.3 up-skilled and up-waged jobs with average hourly wage increased \$4.40 to \$24.03
  - Drywall and Insulation Contractors: 51.4 up-skilled and up-waged jobs with average hourly wage increased \$2.14 to \$18.34

Sector/NAICS Industry Group	Up-skilled & Up-waged Jobs	Wage Increase	Current Wage
<b>TOTAL 2014-15 UP-SKILLED &amp; UP-WAGED JOBS</b>	402	\$4	\$22
<b>SECTORS WITH MOST JOBS UP-SKILLED &amp; UP-WAGED</b>			
Plumbing, Heating and Air-Conditioning Contractors	274	\$4	\$24
Drywall and Insulation Contractors	51	\$2	\$18
Engineering Services	50	\$3	\$19
Social Advocacy Organizations	11	\$2	\$22
Residential Remodelers	6	\$6	\$19

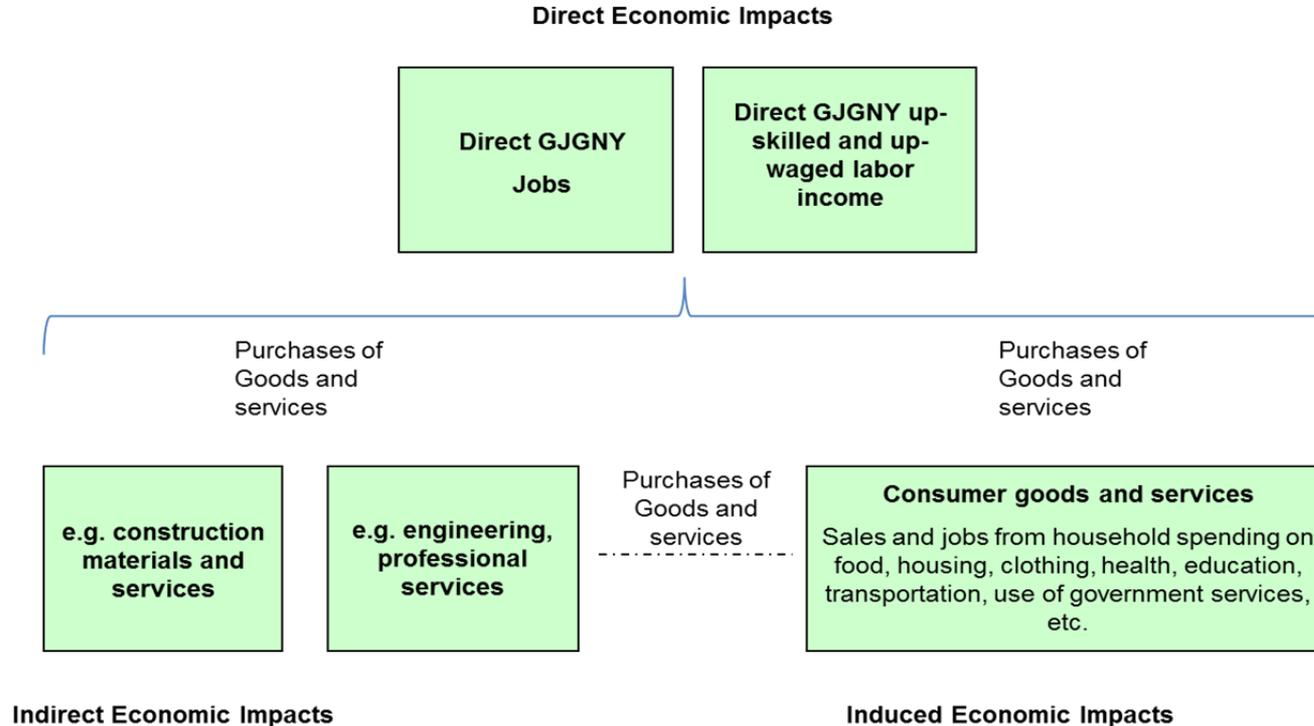
# Disadvantaged Communities

- Of the total 2,627 GJGNY-related Direct jobs, 834 jobs, or 32%, were located in disadvantaged communities.
- About two out of three GJGNY Direct jobs in disadvantaged communities were in just two New York regions:
  - North Country (385 Direct jobs, 46% of total disadvantaged community jobs)
  - Western region (195 Direct jobs, 23% of total disadvantaged community jobs)

# Phase 2: Approach

- Estimated regional economic impacts of NYSERDA's Green Jobs Green New York (GJGNY) program
- New York State IMPLAN model (version 3.1)
- Approach:
  1. Configure the model inputs based on NMR direct jobs and wages survey data
  2. Run modeling scenarios in IMPLAN, statewide for program years 2014-2015
  3. Conduct post-model analysis (regional, disadvantaged communities)
  4. Report results

# Diagram of Modeling Framework



# Reported Output Metrics

- **Employment** – Created by industry, based on the output per worker and output impacts for each industry.
- **Labor Income** – A component of the value added; it consists of all forms of job income. Consistent with I/O terminology, IMPLAN defines this as the sum of the worker compensation and proprietor's income.
- **Gross State Product (GSP)** – Catch-all for payments made by individual industry sectors to workers, interests, profits, and indirect business taxes.
- **Output** – Value of an industry's total output increase due to the modeled scenario (in millions of constant dollars).

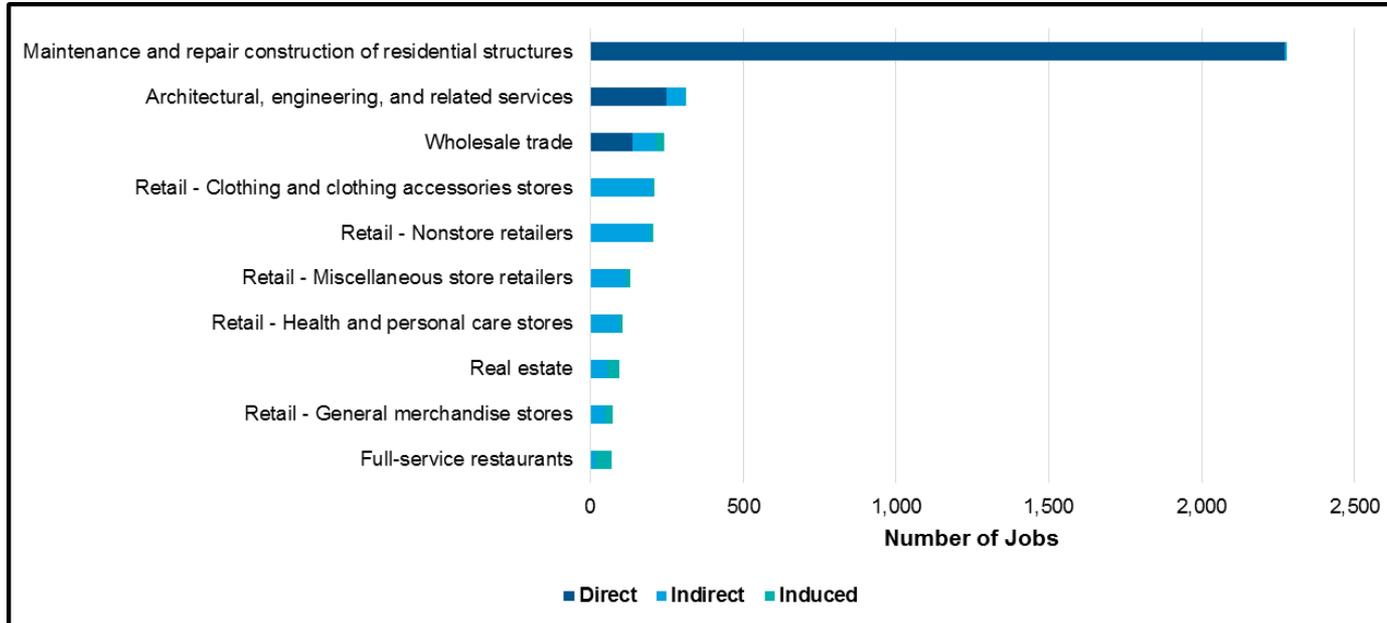
# Results Indicate Significant Impact of GJGNY Program

- In program years 2014-2015, the GJGNY program supported approximately 5,357 NY jobs and over \$463 million in GSP
- Every direct dollar of GSP supports \$1.72 and every direct job supports 1.95 jobs

Impact Type	Employment	Labor Income (\$ millions)	GSP (\$ millions)	Output (\$ millions)	Jobs Multiplier	GSP Multiplier
Direct Effect	2,748	\$144	\$210	\$550	1.95	1.72
Indirect Effect	1,580	\$92	\$149	\$232		
Induced Effect	1,029	\$61	\$104	\$164		
Total Effect	5,357	\$297	\$463	\$946		

# Industry-level Impacts

- The construction sector benefits the most from GJGNY activity, due to significant impact on direct jobs
- Seven of the top ten sectors benefit exclusively from indirect and induced spending



# Questions?

- NMR Group (Phase 1)
  - Rohit Vaidya, [rvaidya@nmrgroupinc.com](mailto:rvaidya@nmrgroupinc.com)
  
- ICF Consulting (Phase 2)
  - Elizabeth Johnston, [Elizabeth.Johnston@icfi.com](mailto:Elizabeth.Johnston@icfi.com)