

New York State Energy Research and Development Authority

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# Green Jobs — Green New York

Annual Report

Month ending July 31, 2011

October 2011

# NYSERDA's Promise to New Yorkers:

New Yorkers can count on NYSERDA for objective, reliable, energy-related solutions delivered by accessible, dedicated professionals.

**Our Mission:** Advance innovative energy solutions in ways that improve New York's economy and environment.

**Our Vision:** Serve as a catalyst—advancing energy innovation and technology, transforming New York's economy, and empowering people to choose clean and efficient energy as part of their everyday lives.

**Our Core Values:** Objectivity, integrity, public service, and innovation.

## Our Portfolios

NYSERDA programs are organized into five portfolios, each representing a complementary group of offerings with common areas of energy-related focus and objectives.

### Energy Efficiency & Renewable Programs

Helping New York to achieve its aggressive clean energy goals – including programs for consumers (commercial, municipal, institutional, industrial, residential, and transportation), renewable power suppliers, and programs designed to support market transformation.

### Energy Technology Innovation & Business Development

Helping to stimulate a vibrant innovation ecosystem and a clean energy economy in New York – including programs to support product research, development, and demonstrations, clean-energy business development, and the knowledge-based community at the Saratoga Technology + Energy Park.

### Energy Education and Workforce Development

Helping to build a generation of New Yorkers ready to lead and work in a clean energy economy – including consumer behavior, K-12 energy education programs, and workforce development and training programs for existing and emerging technologies.

### Energy and the Environment

Helping to assess and mitigate the environmental impacts of energy production and use – including environmental research and development, regional initiatives to improve environmental sustainability, and West Valley Site Management.

### Energy Data, Planning and Policy

Helping to ensure that policy-makers and consumers have objective and reliable information to make informed energy decisions – including State Energy Planning, policy analysis to support the Low-Carbon Fuel Standard and Regional Greenhouse Gas Initiative, nuclear policy coordination, and a range of energy data reporting including *Patterns and Trends*.

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## **I. Executive Summary**

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On October 9, 2009, the Green Jobs - Green New York Act of 2009 ("the Act", A.8901/S.5888 and chapter amendment A.9031/S.6032) was signed into law. The Act directs NYSERDA to:

- establish a revolving loan fund to provide loans to finance the cost of approved qualified energy efficiency services for residential, multifamily, and non-residential structures;
- pursue the feasibility of other innovative financing mechanisms;
- issue one or more competitive opportunities to solicit applications from partnerships or consortia comprised of constituency-based organizations (CBOs) that can connect community members to the program;
- target communities in areas where energy costs are particularly high in relation to a measure of median household income as determined by NYSERDA, or that have been designated as a nonattainment area for one or more pollutants pursuant to section 107 of the federal Clean Air Act;
- give preference in awards to applicants that include significant participation by minority and women owned business enterprises and/or to applications to serve economically distressed communities;
- establish standards for energy audits based on building type and other relevant considerations;
- establish a schedule of fees for energy audits including a sliding scale by which audit fees shall be waived for residential applicants based on median county income;
- enter into contracts to provide employment and training services to support the Green Jobs - Green New York Program (GJGNY);
- establish an Advisory Council; and
- provide annual reports to the Governor, Senate and Assembly.

The Act allocates \$112,000,000 in funding from New York's share of the Regional Greenhouse Gas Initiative to support the program. NYSERDA has further allocated the funding as shown in Table 1.1 below:

**Table 1.1: Funding**

<b>Element</b>	<b>Total Budget</b>
Workforce Development	\$7,850,000
Outreach & Marketing	\$10,190,000
One- to Four-Family Homes <sup>1</sup>	\$39,248,533
Multifamily <sup>2</sup>	\$15,692,550
Small Business/Not-For-Profit <sup>3</sup>	\$23,674,917
Program Administration	\$7,840,000
Program Evaluation	\$5,600,000
NYS Cost Recovery Fee	\$1,904,000
<b>Total</b>	<b>\$112,000,000</b>
<sup>1,2,3</sup> Budgets include costs of audits, implementation and financing for the respective sector. Additional details on these costs are provided in Section VII-IX.	

On August 4, 2011, Governor Andrew Cuomo signed the Power NY Act of 2011 into law. A component of the Power NY Act provides for on-bill recovery of GJGNY project financing, and increases the limits for residential and small business/not-for-profit GJGNY loans.

#### ***a. Planning Process***

NYSERDA has undertaken an extensive planning process involving significant input from the general public, various interested parties and program stakeholders. This process has included the development of and regular input from an Advisory Council, as required in the Act, along with Working Groups that were instrumental in developing program component Operating Plans. Although the Advisory Council initially met approximately monthly, as the GJGNY program began its deployment phases, meetings of the Advisory Council changed to a quarterly schedule, and monthly written reports were added. In addition, ad-hoc reports on specific topics were sent to Advisory Council members as needed. The general public was able to participate in Advisory Council meetings, and also had access to the GJGNY website where materials and videos of Advisory Council meetings, monthly reports and ad-hoc reports were posted, and links were provided for comments.

#### ***b. Funding***

As of July 31, 2011, of the \$112 million allocated to GJGNY by the Act, \$10.5 million has been expended; an additional \$8.9 million is under contract; and \$8.1 million in negotiation with selected contractors. Approximately \$47.8 million has been allocated to and is available from the Revolving Loan Fund and an additional \$13.9 million is available for energy audit subsidies. In addition, NYSERDA received a US Department of Energy grant (Better Buildings) in the amount of \$40 million, of which \$18.6 million will be used to support GJGNY financing or outreach.

### ***c. Workforce***

NYSERDA has issued six out of the seven planned Program Opportunity Notices (PONs) and Requests for Proposals (RFPs) designed to advance the workforce development goals of GJGNY. Proposals will be funded that support the Workforce Development Operating Plan, and align with the workforce training objectives of the Act, including, but not limited to: 1) incremental occupational training to unemployed workers; 2) work-readiness and entry-level technical training to individuals; 3) apprenticeship and labor-management certification training; 4) skills upgrading for incumbent weatherization workers; 5) skills upgrading for new workers employed through GJGNY to help improve employee retention; and 6) inventory of curriculum related to the objectives of GJGNY as well as a contractor survey designed to assess skills gaps as identified by employers.

As a result of the solicitations, 21 contracts have been awarded representing \$2,029,640 in contract funding. In addition, reimbursements in the amount of \$17,432 have been made to individuals and companies for certification, contractor accreditation, and equipment costs.

Work under this initiative is closely coordinated with NYS DOL, HCR, OTDA and others, leveraging State, federal and local funds where possible.

### ***d. Outreach***

The GJGNY Program is designed to deliver services in targeted communities through CBOs. CBOs will conduct outreach, marketing, and education through a coordinated approach that targets priority communities. Outreach, marketing, and education will target residents, businesses, Not-For-Profits (NFP), multifamily building owners, and potential workforce participants in designated communities. CBOs will encourage participation in energy efficiency programs, facilitate awareness of workforce training opportunities available through GJGNY program, and assist with enrollment in those efforts. RFP 2038 – Green Jobs Green New York Outreach Program was released in the November, 2010 to competitively select the CBOs that will support GJGNY. Fourteen proposals were selected for funding. A second RFP (RFP 2327) was released in June 2011 to fill gaps from the previous solicitation. The review process for selection of proposals is underway.

In addition, NYSERDA competitively procured a marketing contractor, Brand Cool, to develop and execute a statewide integrated marketing and communication program to support GJGNY. Brand Cool completed a secondary research report that compiles findings on consumer attitudes and trends; residential contractor research; and residential and small business on-line focus groups.

GJGNY messaging was integrated into existing program marketing, and additional materials have been developed where needed. Contractor case studies have been produced to highlight successful home performance businesses, supporting additional contractor recruitment.

Media coverage of the program, prompted by press releases, has been generally positive.

### ***e. Energy Retrofits & Financing***

GJGNY audits and financing for the residential sector were launched in November, 2010. GJGNY audits have been available in the Multifamily sector since September, 2010, while financing was launched in June, 2011. GJGNY audits were launched for the Small Business/Not-For-Profit sector in January, 2011; financing became available for this sector in June 2011. Details regarding program activity are included in sections VII One- to Four-Family Residential Buildings, VIII Multifamily Buildings, and IX Small Business and Not-for-Profit.

### ***f. Program Evaluation***

NYSERDA has undertaken a variety of activities to provide real-time analysis of program progress, and both immediate and longer term program impacts. Tactics include the use of GIS-based mapping to understand baseline marketplace conditions and real-time changes in program participation based on demographics and geography; surveys delivered in early months of the program to assess processes and program delivery; and formal evaluation to set a baseline for determining program impacts. Examples of the use of GIS-based mapping are included throughout the document. Program process and market surveys were launched during the third quarter of 2011 to obtain early feedback on the ability of the program as designed to make progress toward goals.

### ***g. Conclusion***

GJGNY has had a successful launch, and is poised to have a significant impact on the market. Still, the true degree of success will be demonstrated over the next two years, as programs begin to have traction in the marketplace and the CBO initiative gets underway. The enhanced outreach performed by the CBOs is expected to increase program production and facilitate the creation of jobs in communities that have not historically participated in energy efficiency programs. At present, new program processes incorporating audits and financing are being tested in the marketplace while CBO contracts are under negotiation. NYSERDA will evaluate the effectiveness of the program and,, with the input of the Advisory Council, make adjustments as necessary to maximize program benefits.

## II. Introduction

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Ramping up the rate of participation in energy efficiency projects is recognized as a means to boost New York's economy, by reducing household and business energy bills and by creating job opportunities, particularly in distressed communities where so much energy efficiency work is needed. To successfully grow the energy efficiency services industry, there must be investments on many fronts – homeowner and building owner investments in their property, business investments in cost-effective process improvements, public and private investments in creating the service delivery infrastructure, as well as public and private investments in educating consumers on the benefits of energy efficiency and program opportunities. Significant public investment is occurring in New York State through resources such as the System Benefits Charge (SBC), Energy Efficiency Portfolio Standard (EEPS), and Regional Greenhouse Gas Initiative (RGGI); and federal resources such as the Weatherization Assistance Program (WAP), and the American Recovery & Reinvestment Act (ARRA). In addition, New York residents and businesses are making significant investments in energy efficiency, sometimes paying as much as 90% to 100% of the cost of work or products supported by public programs. The level of investment is commendable and necessary to overcome the energy challenges we face and to attain the State's aggressive energy goals.

On October 9, 2009, the Green Jobs - Green New York Act of 2009 ("the Act", A.8901/S.5888 and chapter amendment A.9031/S.6032) was signed into law. NYSERDA administers GJGNY in consultation with the Division of Housing and Community Renewal (DHCR), Department of Labor (DOL), Office of Temporary and Disability Assistance (OTDA), Department of Public Service (DPS), Power Authority of the State of New York (NYPA), Department of Economic Development (DED), and the Department of Environmental Conservation (DEC).

The Act directs NYSERDA to:

- establish a revolving loan fund to provide loans to finance the cost of approved qualified energy efficiency services for residential, multifamily, and non-residential structures;
- pursue the feasibility of other innovative financing mechanisms;
- issue one or more competitive opportunities to solicit applications from partnerships or consortia comprised of constituency-based organizations that can connect community members to the program;
- target communities in areas where energy costs are particularly high in relation to a measure of median household income as determined by NYSERDA, or that have been designated as a nonattainment area for one or more pollutants pursuant to section 107 of the federal Clean Air Act;
- give preference in awards to applicants that include significant participation by minority and women owned business enterprises and/or to applications to serve economically distressed communities;
- establish standards for energy audits based on building type and other relevant considerations;

- establish a schedule of fees for energy audits including a sliding scale by which audit fees shall be waived for residential applicants based on median county income;
- enter into contracts to provide employment and training services to support Green Jobs - Green New York;
- establish an Advisory Council;
- provide annual reports to the Governor, Senate and Assembly.

In May 2010, NYSERDA was also awarded federal funds through the competitive “Better Buildings” initiative to support the revolving loan fund established through GJGNY. The status of that initiative is described in Section IV, Funding.

On August 4, 2011, Governor Andrew Cuomo signed the Power NY Act of 2011 into law. A component of the Power NY Act provides for on-bill recovery of project financing, and increases the loan limits for GJGNY. Additional information regarding Power NY is also provided in Section IV, Funding.

With this level of investment and with services delivered through a variety of programs and program administrators, comes the need for coordination, to minimize confusion in the market place, optimize program fund expenditures and avoid duplication of program services. With this in mind, in October 2009 NYSERDA initiated an extensive planning process that recognizes and takes advantage of the significant progress obtained through NYSERDA’s existing market-based programs, enables coordination with existing and new utility rebate programs, and folds in the unique opportunities made available through GJGNY. In this sense, GJGNY provides an opportunity to “tie programs together,” offering comprehensive audits through GJGNY, using complementary funding sources and programs to encourage more comprehensive work through various incentives and rebates through GJGNY.

This report is prepared pursuant to Section 1899 of the Green Jobs - Green New York Act and provides an update on the progress and achievements of the program through July 31, 2011. This is the second Annual Report submitted for the program.

### III. Advisory Council and Public Input

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NYSERDA has undertaken an extensive planning process involving significant input from the general public, various interested parties and program stakeholders. This process has included the development of and regular input from an Advisory Council, along with stakeholder Working Groups that were instrumental in developing program component Operating Plans. The general public was able to participate in Advisory Council meetings, and also had access to the GJGNY website where materials and videos of Advisory Council meetings were posted, and links were provided for comments.

#### *a. Advisory Council*

As directed by the Act, the Advisory Council consists of eleven Ex-Officio Members and numerous Appointed Members representing the following: 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 3.1.

**Table 3.1: Green Jobs - Green New York Advisory Council**

Name	Title/Organization	Term Expires
<b>Ex-Officio Members</b>		
Francis J. Murray, Jr., (Chair)	President and CEO, NYSERDA	n/a
Elizabeth R. Berlin	Executive Deputy Commissioner, Temporary & Disability Assistance	n/a
Mindy A. Bockstein	Chairperson and Executive Director, The Consumer Protection Board	n/a
Garry A. Brown	Chairman, Public Service Commission	n/a
Lorraine Cortes Vazquez	Secretary of State	n/a
Peter Grannis	Commissioner, Environmental Conservation	n/a
Richard Kessel	President, The New York State Power Authority	n/a
Kevin S. Law	President, The Long Island Power Authority	n/a
Dennis Mullen	Commissioner, Economic Development	n/a
Colleen C. Gardner	Commissioner, Department of Labor	n/a
Brian Lawlor	Commissioner, Department of Housing & Community Renewal	n/a

<b>Name</b>	<b>Title/Organization</b>	<b>Term Expires</b>
<b>Appointed Members</b>		
Trenton Allen	Citigroup	12/31/2012
Michael Atkins	Concerned Citizens Action Program	12/31/2011
Chuck Bell	Consumers Union	12/31/2012
Les Bluestone	Blue Sea Construction	
Judy Butler	Butler Building Performance	12/31/2012
Tria Case	City University of New York (CUNY)	12/31/2011
Richard Cherry	Community Environmental Center (CEC)	12/31/2011
Miquela Craytor	Sustainable South Bronx	12/31/2012
Dr. Charles S. Dedrick	Capital Region BOCES	12/31/2012
Emmaia Gelman	Center for Working Families	12/31/2011
Yolanda Gonzales	Nos Quedamos	12/31/2012
Dave Hepinstall	Association for Energy Affordability	12/31/2012
Alan Hipps	Housing Assistance Program of Essex County	12/31/2012
Thomas Holmes	Woodstock Energy	12/31/2012
Frank Hotchkiss	Steelworkers/Apollo	12/31/2011
Gerry Hudson	Service Employees International Union (SEIU)	12/31/2011
David Johnson	Laborers' International Union of North America (LIUNA)	12/31/2012
William Johnson	Green America Public Private Partnership, Inc.	12/31/2012
Jennifer Keida	Standard Insulation Co. Inc.	12/31/2012
Dick Kornbluth	Building Performance Contractors Assoc.	12/31/2011
Hannah Blitzer	Low Income Investment Fund	12/31/2011
Greg Hale	Natural Resources Defense Council (NRDC)	12/31/2011
Dr. Andrew Matonak	Hudson Valley Community College	12/31/2012
Jackson Morris	Pace Climate and Energy Center	12/31/2012
Ryan Moore	ZeroDraft	12/31/2011
Hugo Salinas	New York Energy Conservation	12/31/2011
Eric Walker	People United for Sustainable Housing (PUSH) Buffalo	12/31/2011

As previously reported, the GJGNY Advisory Council held meetings every three to four weeks during its first nine months. As the GJGNY program began its deployment phases, meetings of the Advisory Council changed to a quarterly schedule, and monthly written reports were added to ensure Advisory Council members were up-to-date on important milestone achievements or issues. The Advisory Council met on December 9, 2010; March 16, 2011; June 15, 2011; and September 14, 2011. A webinar was held with interested Advisory Council members on January 10, 2011, to review the marketing strategy. Agendas for the Advisory Council Meetings are provided in *Attachment A: Advisory Council Meeting Agendas*. Each Advisory Council Meeting included an opportunity for public input.

In addition, two ad-hoc written updates on specific topics were sent to Advisory Council members on November 10, 2010, and a program update was sent to Speaker Silver and certain members of the Legislature (and copied to the Advisory Council) on November 30, 2010.

Written comments on documents or planning issues were encouraged from Advisory Council Members and the general public via e-mail links on the web site.

### ***b. Working Groups***

NYSERDA established six distinct Working Groups early in the planning process to address specific areas of focus in the development of GJGNY. The Working Groups include representatives of interested parties and stakeholders. The Working Groups are:

- Workforce Development
- Outreach & Marketing
- Finance
- One- to Four-Family Homes
- Multifamily Buildings
- Small Business/Not-For-Profit

Certain Working Groups continued to meet during the reporting period to complete the development of the individual program component draft Operating Plans. A listing of the individuals and their respective organizations for each Working Group are provided in *Attachment B: Green Jobs - Green New York Working Groups Members*. It is anticipated that at least some of the Working Groups may continue to have a role in reviewing program progress and making recommendations for overcoming any implementation challenges or market barriers throughout program implementation.

***c. Green Jobs - Green New York Website & Listserv***

To ensure transparency in the planning process and inform members of the public about GJGNY, NYSERDA dedicated a section of the NYSERDA website to GJGNY, including a direct link from NYSERDA's home page. The site can be viewed at: <http://www.nysERDA.org/GreenNY/>. All GJGNY related documents, including Frequently Asked Questions, Advisory Council meeting materials and videos, Operating Plans, comments received, ad hoc reports and monthly updates are posted to the website.

The GJGNY website also includes a link to [www.GreenCareersNY.com](http://www.GreenCareersNY.com), a website developed in collaboration with NYSDOL and several other state agencies. GreenCareersNY was launched under GJGNY to match job seekers with green job and training opportunities. This website is a portal to help visitors find information on a variety of green jobs topics including information about green jobs and careers, how to get training, and incentives for training. Each section of the portal is designed to meet the needs of job seekers, businesses, or workforce professionals. This site supports not only GJGNY, but all green career opportunities throughout the state.

Additionally, NYSERDA developed a Listserv that interested parties could subscribe to in order to receive timely updates on planning activities and program announcements. To date, the List-Serve has 1,083 subscribers.

## IV. Funding

This section provides information on the various sources of funding for the GJGNY program, status of commitment and expenditure of funds, and contracts entered into through the program to support the project financing initiatives.

The Act allocates \$112 million in funding from New York's share of the Regional Greenhouse Gas Initiative to support the program. The GJGNY budget supports free and reduced-cost audits; a revolving loan fund; workforce development activities; outreach and marketing through constituency-based organizations, social marketing and other means; program implementation; quality assurance; program administration; and program evaluation. NYSERDA has allocated the funding as indicated in Table 4.1. The budget provides approximately \$51 million to support the loan fund across three targeted property sectors – one- to four-family homes, multifamily properties, and properties owned, leased or managed by small business/not-for-profit organizations, provided that in each instance the applicant has the legal authority to contract for the provision of energy efficiency services.

**Table 4.1: GJGNY Budget as of July 31, 2011**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Workforce Development	\$7,850,000	\$82,431	\$960,248	\$986,961	\$5,820,360
Outreach & Marketing	\$10,190,000	\$519,706	\$2,980,854	\$6,688,661	\$779
Single Family Homes	\$39,248,533	\$5,017,750	\$465,655	-	\$33,765,128
Multifamily	\$15,692,550	\$1,594,557	\$445,320	\$182,940	\$13,469,733
Small Business/Not-For-Profit	\$23,674,917	\$492,447	\$3,548,792	\$240,000	\$19,393,678
Program Administration	\$7,840,000	\$2,340,793	\$3,317	-	\$5,495,890
Program Evaluation	\$5,600,000	\$191,043	\$471,147	\$30,000	\$4,907,810
NYS Cost Recovery Fee	\$1,904,000	\$228,969	-	-	\$1,675,031
<b>Total</b>	<b>\$112,000,000</b>	<b>\$10,467,696</b>	<b>\$8,875,333</b>	<b>\$8,128,562</b>	<b>\$84,568,409</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*

*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*

*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

### **a. US Department of Energy (DOE) Grant Award**

As directed in the Act, NYSERDA has sought out additional funding to support GJGNY. In May 2010, NYSERDA received a competitive award from the DOE (Energy Efficiency Conservation Block Grant, Better Buildings Program) to leverage new and existing energy efficiency retrofit and finance programs to create large-scale sustainable approaches to financing energy efficiency across the state. From the total award of \$40 million, New York City received a sub-award of \$21.4 to support financing to commercial customers. An additional \$5 million was sub-granted to a coalition of Long Island towns, through Community Development Center

of Long Island, to support energy efficiency outreach programs to encourage energy efficiency retrofits, with financing provided through GJGNY (\$2 million of the sub-grant is being used for loan loss reserve for loans issued). NYSERDA's \$13.6 million portion of the grant is being used to support energy efficiency financing through the GJGNY program and to leverage private capital. A breakdown of the budget for this grant funding is provided in Table 4.2:

**Table 4.2: Grant Funding Budget**

Town of Bedford/Westchester Consortium pilot financing program	\$1,267,864
Competitive sub-grants to small local governments	\$6,892,136
GJGNY loan loss/debt service reserves	\$1,980,000
GJGNY small business energy audit subsidies	\$1,700,000
National Grid fees for billing system upgrades to support on-bill recovery financing	\$400,000
NYSERDA administration	\$1,360,000
<b>Total</b>	<b>\$13,600,000</b>

Consistent with the DOE grant requirement that not less than 60% of NYSERDA/State funding must be sub-granted to small municipalities not eligible for EECBG funding, a competitive solicitation was released in March 2011 requesting proposals from small municipalities in nine economic development regions with \$6,892,136 in funding allocated on a per capita basis to serve as either: a host community for the GJGNY Revolving Loan Fund; or to administer an energy efficiency loan fund of their own. Eleven proposals were received representing eight of the nine economic development regions. In June, NYSERDA awarded funding for eight proposals, with seven awards from municipalities that will serve as host communities for the GJGNY Revolving Loan Fund and one who will administer their own small commercial energy efficiency loan fund. A neighboring economic development region was offered and accepted the opportunity to serve as the host for the economic development region from which a proposal was not received. For the municipalities awarded as GJGNY host communities, they will use about \$614,000 for outreach and marketing efforts in the economic development region, and will re-grant \$5.5 million to the GJGNY Revolving Loan Fund; \$500,000 of this will be used to provide payments to utilities to defray costs of billing system upgrades for on-bill recovery financing (described below), and about \$5 million will be used for loan loss reserves for GJGNY financing. Following is a listing of the awardees:

**Table 4.3: Award Recipients of GJGNY Financing**

<b>Region</b>	<b>Award Recipient</b>	<b>Award</b>
Capital	Schenectady County	\$965,437
Central	Oswego County (Small Business EE loans)	\$744,825
Finger Lakes	No proposals received, but awarded to Chautauqua County under provisions to allow a government to serve another region	\$875,534
Long Island	Town of East Hampton	\$775,234
Mid Hudson	Bedford NWEAC	\$832,787
Mohawk Valley	City of Rome	\$484,048
North County	Town of Clayton	\$544,251
Southern Tier	Broome County	\$725,059
Western	Chautauqua County	\$944,961
<b>Total</b>		<b>\$6,892,136</b>

***b. Revolving Loan Fund***

NYSERDA has established a Revolving Loan fund to finance energy efficiency financing for owners of one- to four-family residential buildings, multifamily buildings, and buildings occupied by small businesses and not-for-profit organizations. The GJGNY Act requires the initial balance of the residential account to be at least 50% of the total balance of the two accounts. NYSERDA has initially allocated the financing across the sectors as represented in the table below.

**Table 4.4: Finance Budget by Sector**

<b>Sector</b>	<b>Budget</b>
Residential (1 - 4 Family Homes)	\$26,652,533
Multifamily Buildings	\$11,192,550
Small Business/Not- For- Profit Buildings	\$13,274,917
<b>Total</b>	<b>\$51,120,000</b>

Pursuant to the GJGNY Act, loans were initially limited to not more than \$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 raises the maximum loan amount to \$25,000 for residential structures and \$50,000 for small business and not-for-profit structures provided that the loan term is 15 years or less. NYSERDA has 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 efficiency 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 incentives or rebates that are available. The total cost of the project may include the removal of

equipment or systems to be replaced, the purchase and installation of new systems or equipment, the purchase and installation of any required ancillary equipment and related services, and the customer's expense for an energy audit.

### **1. One- to Four-Family Homes Financing**

An unsecured consumer loan financing product for one- to four-family residential energy efficiency improvements was launched on November 15, 2010. Initially, these loans are being originated statewide through Energy Finance Solutions (EFS), a not-for-profit energy efficiency lending organization competitively selected by NYSERDA to provide residential financing for the Home Performance with ENERGY STAR program. EFS reviews loan applications and originates loans pursuant to loan underwriting criteria established by NYSERDA. EFS closes on the loan, disburses loan proceeds to the contractor, submits the loan to NYSERDA's competitively selected master loan servicer, Concord Servicing Corporation, to determine conformance with NYSERDA's loan underwriting standards, and then NYSERDA purchases the loan from EFS. Concord is responsible for borrower billing and collections on the loan portfolio, and also monitors the origination processes on a sample basis to ensure conformance to standards. Plans are being made to issue a solicitation during the third quarter of 2011 to qualify additional financial institutions to originate unsecured direct residential loans.

Further details of financing for the one - to four-family homes sector are found in *Section VII. One- to Four-Family Residential Buildings*,

### **2. Multifamily Building Energy Efficiency Financing**

NYSERDA launched the GJGNY Multifamily Financing Program in June 2011. A notice of NYSERDA's request for lenders for the Multifamily Financing Program was placed in the Contract Reporter in June, 2011. NYSERDA hosted an orientation webinar for interested lenders on July 21, 2011. This webinar served to familiarize the lending community with the new loan fund and also to solicit interested lenders to list their names on NYSERDA's website as potential financial resources for customers.

Further details of the financing available to this sector are found in *Section VIII. Multifamily Buildings*.

### **3. Small Business/Not-for-Profit Financing**

NYSERDA launched the GJGNY Small Business/NFP Financing Program in June 2011 through the issuance of a Program Opportunity Notice (PON) seeking statements of interest from lenders to participate in the GJGNY Small Business/Not-for-Profit Energy Efficiency Financing Program and requests for financing from small business and not-for-profit enterprises who seek low interest rate financing to implement recommendations from qualified energy audits.

Further details of financing available to this sector are found in *Section IX. Small Business and Not-For-Profit*.

### ***c. On-Bill Recovery (OBR) Financing***

The Power NY Act of 2011 authorizes the establishment of an on-bill recovery mechanism to allow eligible consumers to pay back loans for eligible energy efficiency improvements through the GJGNY program through a charge on their monthly utility bill from a participating combination electric and gas corporations or the Long Island Power Authority. Additional provisions of the law are summarized below:

#### **1. Financing Mechanism**

- Establishes an on-bill recovery charge for participating gas and electric utility corporations for repayment of loans made through the GJGNY program to the owners of one- to four-family residential homes, small business/not-for-profit facilities, and multifamily buildings to finance qualified energy efficiency improvements, based on recommendations contained in an energy audit and consistent with the standards established by NYSERDA. Loans may cover electric, gas, and heating fuel measures. The charge is placed on the electric bill unless the majority of savings result from gas measures in which case the charge is placed on gas bill.
- Unless satisfied prior to sale or transfer, on-bill recovery charges shall survive changes in ownership; arrears at time of transfer are responsibility of the incurring customer unless expressly assumed by subsequent purchaser.
- Each on-bill recovery loan shall be secured with a mortgage upon the real property and recorded with County Clerk pursuant to the Real Property Law. The mortgage shall be subordinate to any current or future mortgage on the property, and may not be used to force payment or foreclose. The purpose of the mortgage is to ensure that a subsequent purchaser of a property with an outstanding obligation has proper notice of the remaining obligation.
- Partial payment of utility bill is first applied to utility charges, then to on-bill recovery charge.

#### **2. Consumer Safeguards**

- Rights and responsibilities of customers participating in on-bill recovery financing shall be substantially comparable to customers for gas and electric charges – safeguards related to termination and reconnection of service, deferred payment agreements, adjustments to budget billing plans, and late payment charges.
- NYSERDA will establish standards for customer participation, including standards for reliable utility bill payment, current good standing on any mortgage obligations, and additional standards deemed necessary; NYSERDA will consider alternative measures of creditworthiness that are prudent in order to include participation by customers who are less likely to have access to traditional sources of financing.

- Monthly repayment charge cannot exceed 1/12<sup>th</sup> of energy savings projected from installation of all energy efficiency measures.
- NYSERDA to provide notice to customers prior to closing stating: the financial and legal obligations of accepting loan responsibilities; on-bill recovery charge will be billed by the customer's utility and failure to pay may result in termination of service; the customer may not lower energy costs over time, based on additional factors that contribute to monthly energy costs; complaints handled by NYSERDA; and that the customer may cancel within five business days of signing loan agreement provided proceeds have not been disbursed.
- At least annually, NYSERDA shall provide information to utility for inclusion or insertion in customer's bill setting forth the amount and duration of remaining on-bill recovery charges and providing NYSERDA contact information for resolving customer complaints.
- Prior to sale of real property that is subject to an on-bill charge, seller must provide written notice to purchaser prior to accepting a purchase offer stating the total amount of the original charge, the payment schedule and approximate remaining balance, a description of the energy efficiency improvements financed and the benefits of those improvements.

### **3. Implementation**

- Gas & electric corporations with over \$200 million in annual revenues will participate. This includes Central Hudson, Con Edison, New York State Electric and Gas (NYSEG), National Grid, Orange & Rockland, Rochester Gas & Electric (RG&E), and the Long Island Power Authority.
- Process/timeline
  - Within 45 days of the legislation's effective date, PSC shall commence proceeding to investigate implementation.
  - Within 150 days, PSC shall make a determination establishing billing and collection procedures for on-bill charges; Department of Public Service staff to consult with NYSERDA in preparation of recommendation to Commission for such determination.
  - Commission shall require each utility to offer on-bill financing within 300 days.
  - LIPA also shall establish program for billing and collection of on-bill charges within 300 days.
  - Utilities and LIPA shall use existing billing systems, to the extent practicable, and use funding available from NYSERDA to defray costs directly associated with the program:
    - NYSERDA to provide \$500,000 [from US DOE Better Buildings grant], allocated on a pro-rata basis based on number of utility

- customers, for costs directly associated with changes to billing systems to accommodate on-bill recovery charges;
- NYSERDA pays a fee of \$100 per loan to each utility within 30 days of closing;
- NYSERDA pays a fee of 1% of loan amount to each utility within 30 days of closing.
- Participation initially limited to .5% of each utility company's customers, but NYSERDA can petition Commission to increase limit provided Commission finds that program has not harmed the company or its ratepayers.
- Commission can suspend any utility's offering after conducting hearing and finding that there has been significant increase in arrears or disconnections directly related to on-bill recovery.

#### ***d. Qualified Energy Conservation Bonds (QECCB)***

NYSERDA was designated as New York State's administrator for the allocation of federally authorized Qualified Energy Conservation Bonds (QECCB), which are tax-subsidy bonds that may be issued for certain qualifying purposes. The State received a total QECCB bond volume cap authorization of \$202.2 million, of which approximately \$182.1 million was further sub-allocated on a per capita basis to 39 large local government counties, cities and towns (with a population in excess of 100,000), resulting in about \$20.1 million available for State Government purposes. The State Government purposes allocation will be used to support bonds issued to support GJGNY loans, and allows these tax-subsidy bonds to offer a lower financing cost allowing the residential energy efficiency loans to be offered at a lower interest rate to borrowers. The initial State Government purposes allocation has grown to about \$29 million with QECCB allocations to municipalities that were waived and reverted to the State. The QECCB allocation allowed NYSERDA to initially charge an interest rate of 3.99% (3.49% for a borrower that agrees to automatic repayment) for unsecured residential loans for loans funded through QECCB bonds. Once this bond allocation is exhausted, the loan interest rate will be raised and NYSERDA projects that the interest rate will be 5.49%-5.99%.

#### ***e. Property Assessed Clean Energy (PACE) Financing***

PACE financing permits the cost of comprehensive energy efficiency retrofits projects to be paid through a tax assessment on the property. The future of PACE financing for residential projects was cast in doubt in July 2010 when the Federal Housing Finance Agency (FHFA) and the Office of the Comptroller of the Currency concluded that the senior-lien residential PACE programs violate standard mortgage provisions and trigger a mortgage default. As a result of these developments, NYSERDA put on hold its plan for residential energy efficiency financing using a PACE-type financing approach pending resolution of these issues by the federal government. Meanwhile, the ability to develop PACE financing with a primary lien with not-for-profit mortgagees not eligible for FHFA mortgages continues to be explored by the Town of Bedford. Should the issues raised by federal regulators be resolved, State legislative amendments

will be required, authorizing municipalities to enter into agreements with NYSERDA and to use funding provided by NYSERDA.

#### ***f. PowerSaver Loans***

On April 21, 2011, the U.S. Department of Housing and Urban Development (HUD) announced that Energy Finance Solutions (EFS)<sup>1</sup>, in partnership with NYSERDA, was approved under a pilot program for providing energy efficiency improvement loans under a new federally-insured loan program from the Federal Housing Administration (FHA) known as FHA PowerSaver. NYSERDA will integrate PowerSaver loans into GJGNY as an additional financing optional available to consumers.

Under the 2-year pilot program, FHA insures selected private lenders against the risk of default for up to 90% of any single loan made for energy efficiency improvements in single-family residential homes. The goals of the program are: to facilitate the testing and scaling of a mainstream financing product for home energy efficiency improvements that includes liquidity options for lenders, resulting in more affordable and widely available loans than are currently available; and to establish a robust set of data on home energy efficiency improvements and their impact for driving development and expansion of mainstream mortgage products to support residential energy efficiency improvements. The loans are available for single-family, owner-occupied homes and may be used to finance a published list of energy saving and renewable energy improvements, with a maximum loan amount of \$25,000 and a maximum term of 15 years. Loans may be issued on an unsecured basis if under \$7,500, but must be secured by a mortgage with not less than a second lien if over \$7,500. Loan underwriting is performed by the lender and must conform to HUD's underwriting standards - a minimum FICO score of 660, a maximum debt-to-income ratio of 45%, and a maximum amount of debt, including the proposed loan, of not more than 100% of the value of the residence. HUD intends to award up to \$25 million in grants as incentives to participating lenders to offset costs of originating and servicing PowerSaver loans to be able to offer the loans at attractive interest rates to the consumers, with a maximum award of \$5 million per lender.

EFS and NYSERDA propose to offer PowerSaver loans on a statewide basis as secured mortgage loans as a companion to the unsecured loans currently being offered through GJGNY. Although HUD's regulations allow PowerSaver loans to be issued on an unsecured basis if below \$7,500, NYSERDA anticipates these loans will only be offered on a secured basis to avoid confusion for participating consumers. EFS will originate the loans, which will then be funded by NYSERDA using the GJGNY funds, and the loans will be serviced by NYSERDA's third-party master loan servicer, Concord Servicing Corporation. HUD's regulations allow loan amounts up to \$25,000. As is currently contemplated under GJGNY, once aggregated to a sufficient scale (\$25 million), NYSERDA will issue bonds secured by repayments from the loans

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<sup>1</sup> Wisconsin Energy Conservation Corporation, d/b/a Energy Finance Solutions (EFS) is a not-for-profit organization with experience in providing energy efficiency improvement loans for Fannie Mae. EFS currently originates unsecured energy efficiency improvement loans being offered through the Green Jobs-Green New York program. EFS requested the maximum grant amount of \$5 million, and will be notified of its grant award once they complete the application process for the HUD Title 1 program.

issued, allowing capital to be returned to the program and used to fund additional loans. NYSERDA intends to use limited Qualified Energy Conservation Bond (QECB) volume cap authorization provided to the State to issue QECB bonds, which are taxable bonds where the U.S. Treasury reimburses approximately 70% of the interest cost on the bonds. The use of this bonding structure will allow access to private capital to provide low interest loans to consumers to finance energy efficiency improvements. Currently, with the support of the QECB bonding authority, GJGNY is able to offer unsecured loans at an interest rate of 3.99% (3.49% if the consumer repays through automated payment). NYSERDA and EFS hope to offer the PowerSaver loan at a lower rate (3.49%/2.99%) with the use of FHA incentives NYSERDA and EFS are working through several issues that will need to be resolved in order to implement the program.

Following is a summary of loan underwriting standards for PowerSaver loans.

**Table 4.5: Underwriting Standards**

<b>Terms</b>	<b>FHA PowerSaver Pilot Loan</b>
<b>Eligible properties</b>	Single family, detached, owner-occupied; structures completed and occupied for at least 90 days
<b>Loan amount</b>	up to \$25,000
<b>Loan term</b>	Up to 15 yrs (renewables would be allowed up to 20 yrs if authorized)
<b>Loan security</b>	Secured by mortgage or deed of trust, not below second lien (HUD allows unsecured up to \$7,500, but NYSERDA will limit to only be offered on secured basis)
<b>Interest rate</b>	Projected rates: 3.49%/2.99% (w/ QECB) 5.49%/4.99% (w/o QECB)
<b>Minimum FICO</b>	660
<b>Max Debt-to-Income ratio</b>	45%
<b>Property valuation</b>	Appraisal or other approved measure
<b>Max Loan-to-Value ratio</b>	100%

***g. Contracts Entered Into***

NYSERDA competitively retained a financial advisor, Lamont Financial Services, that has been assisting with program design and structures for financing. NYSERDA competitively selected Hawkins, Delafield and Wood, as its bond counsel to provide advice on trusts and other financial matters. As part of developing legislation to support alternative financing approaches to be used in GJGNY, Hawkins was retained to provide legal assistance with regard to program design and structures for financing. Additionally, NYSERDA has entered into a contract with the Energy Programs Consortium to support a multistate effort to develop common standards for unsecured energy efficiency financing that will facilitate the securitization of such loans.

NYSERDA extended its contract with Energy Finance Solutions to provide origination services for unsecured residential loans. A competitive solicitation issued in March 2011 resulted in the

selection of Concord Servicing Corporation to provide master loan servicing. Funding amounts for these contracts are detailed below<sup>2</sup> :

**Table 4.6 Contract Funding**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
18591	Hawkins Delafield & Wood	Legal financial advisory services for GJGNY	\$138,000	\$134,187	\$3,813	
19923	Lamont Financial Services	Financial Advisor Services	\$228,100	\$132,851	\$95,249	
20662	Energy Programs Consortium	Energy Programs Consortium- Phase I	\$7,500	\$7,500	-	
21769	Concord Servicing Co	Interim Loan Servicing for GJGNY	\$216,000	\$8,954	\$207,046	
20822	Concord Servicing Corporation	Master Loan Servicer for GJGNY	\$7,776,000	-	-	\$7,776,000
<b>Total</b>			<b>\$8,365,600</b>	<b>\$283,492</b>	<b>\$306,108</b>	<b>\$7,776,000</b>

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<sup>2</sup> Contract funding amounts listed in Table 4.6 are total amounts. Due to the fact that these services are provided across the One- to Four-Family Homes, Multifamily, and Small Business/Not-For-Profit sectors, the prorated share of these contracts is also provided in the Contract Funding Tables in Sections VII, VIII, IX.

## V. Workforce Development

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The Workforce Development initiative builds on existing NYSERDA, NYS Department of Labor (NYSDOL) and other initiatives established for green careers in New York State. In particular, workforce development efforts are expanded to more directly address disadvantaged workers, emerging workforce, pathways out of poverty and establishing career pathways. Implementation of the approved GJGNY Workforce Development Operating Plan began in mid-2010 and was initially presented in the October 1, 2010 GJGNY Annual Report. Following is an update on progress since the last reporting period.

### *a. Workforce Development Solicitations*

NYSERDA has issued six out of the seven planned Program Opportunity Notices (PONs) and Requests for Proposals (RFPs) designed to advance the workforce development goals of GJGNY. Proposals will be funded that support the Workforce Development Operating Plan<sup>3</sup>, and align with the workforce training objectives of the Act, including, but not limited to: 1) incremental occupational training to unemployed workers; 2) work-readiness and entry-level technical training to individuals; 3) apprenticeship and labor-management certification training; 4) skills upgrading for incumbent weatherization workers; 5) skills upgrading for new workers employed through GJGNY to help improve employee retention; and 6) inventory of curriculum related to the objectives of GJGNY as well as a contractor survey designed to assess skills gaps as identified by employers.

GJGNY Workforce Development activities are expanding the capacity to deliver training services and to provide direct-entry, on-the-job, apprenticeship and internship incentives to help defray the costs associated with bringing on new hires. Initiatives are also being implemented to help build New York's training infrastructure by working with community-based training organizations, through the expansion of existing training centers, providing much-needed training equipment and tools, and minimizing barriers to obtaining field testing and taking and passing certification examinations. Funds for the GJGNY Worker Readiness component, building upon efforts under Energy Efficiency Portfolio Standard (EEPS) Career Pathways initiative, were quickly exhausted and demonstrate the need for training that bridges the skills gap between remedial training and technical training for traditionally disadvantaged populations.

The following provides an overview and status update on GJGNY Workforce Development solicitations and resulting contracts:

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<sup>3</sup> The Workforce Development Working Group, convened in November 2009, was asked to identify the workforce training needs necessary to implement GJGNY, taking into consideration the specific requirements of the Act and workforce development and training activities already being implemented across the state. The Working Group provided input and recommendations that were integrated into the GJGNY Workforce Development Operating Plan, presented to the Advisory Council for comment and subsequently approved by NYSERDA's Senior Management in March, 2010.

- **PON 1816 - Workforce Development Training Partnerships for Energy Efficiency:** PON 1816, issued December 2010, includes several funding components: career pathways for engaging disadvantaged communities, technical training, certification reimbursement and internships and apprenticeship support. \$1.65 million in GJGNY funds were added to the existing Energy Efficiency Portfolio Standard- (EEPS) funded PON 1816, an open enrollment solicitation, in order to leverage existing career pathways (GJGNY Worker Readiness) efforts, support infrastructure for field testing, and to provide certification and accreditation reimbursement. Five Training Partnership Agreements (TPAs) are in place under the Worker Readiness component of PON 1816 and NYSERDA is negotiating two additional Worker Readiness TPAs. Also under PON 1816, NYSERDA is negotiating four contracts for lab houses, located at Community Colleges and BOCES around the state, intended to expand New York State's capacity for training and field testing. In addition to agreements with educational institutions, numerous contracts have been issued or are under negotiation for company accreditation, equipment reimbursement and on-the-job training incentives.
- **PON 1817 - Energy Efficiency Career Pathways Training and Technical Training:** PON 1817, issued June 2010, includes \$600,000 in GJGNY funds to support the development of training for Small Commercial Energy Auditing and for Oil Heat Efficiency training. As a result of this competitively bid solicitation, three contracts are under review and will be fully executed in August, 2011.
- **PON 2011 - Solar Thermal Training:** PON 2011, issued in May 2010, offered \$300,000 in GJGNY funds to develop Solar Thermal Training or Solar Thermal modules to integrate with existing Energy Efficiency training including: curriculum development, equipment, code official training, and assistance to apply for Institute for Sustainable Power (ISP) accreditation. A total of four contracts have been executed with Ulster County BOCES, Sullivan County BOCES, Monroe Community College and SUNY Canton.
- **RFP 2014 - Contractor Exchange Workshops:** RFP 2014, issued August 2010, offered \$300,000 to hold Contractor Exchange Workshops. The goal of these workshops is to help improve the business development and management skills of contractors to improve their profitability and to better prepare them to become participating Home Performance Contractors. The primary Contractor, the Building Performance Institute (BPI), held two Contractor Exchange Workshops in Rochester on June 21-22, 2011 and Albany on June 23-24, 2011, with three more slated for later in the year to help promote the goals of GJGNY.
- **PON 2033 - Internships/Apprenticeships/On-the-Job Training:** PON 2033, issued June 2011, provides \$2.625 million to recruit entry-level workers, support businesses hiring Green Jobs Work Readiness graduates, and enhance standards for the NYS Registered Apprenticeship Programs and building trades programs to include weatherization and certified energy efficiency technicians for GJGNY. To date, 15 applications for on-the-job training funds have been approved by NYSERDA and forwarded to NYS DOL Business Services.

- **RFP 2034 - Green Jobs Green New York: Curriculum Inventory, Assessment, and Curriculum Updates:** RFP 2034, issued July 2010, offered \$475,000 to conduct a curriculum inventory, contractor needs assessment, and curriculum updates. The curriculum inventory and contractor needs assessment were awarded to Pace University who has begun research activity.
- **Survey of past Center for Energy Efficiency in Building Science (CEEBS) trainees:** GJGNY supported a \$25,000 contract with the Building Performance Contractors Association to survey nearly 1,800 past CEEBS training participants who took Building Analyst I training from 2008 to 2010 to identify the challenges and barriers to achieving BPI certification. The survey was completed in mid-April with more than 180 respondents and a number of challenges/barriers to certification were identified including: lag time between training and actually taking the test; test questions not aligning to training curriculum; and lack of preparedness or access to field equipment and hands-on practice. RFP 2032, to be issued in the fall of 2011, is designed to address some of these issues.
- **PON 2032 - Technical Workshops/Expand BPI Field Exam Capacity/Certification Standards:** PON 2032, to be issued Fall, 2011, will include \$1.48 million to develop technical workshops; fund training centers to expand BPI field exam capabilities; and develop certification standards. This is the final GJGNY solicitation.

***b. Coordination with New York State Department of Labor***

NYSDOL received \$1,112,207 in American Recovery & Reinvestment Act (ARRA) funds through USDOL's Labor Market Intelligence (LMI) Solicitation to measure employer demand for green jobs against the capacity of existing educational and training resources to address specific energy related training needs across New York State. NYSDOL is working in collaboration with the New York City Labor Market Information Service (NYCLMIS) at the City University of New York (CUNY) Graduate Center, the Energy and Environmental Technology Application Center (E2TAC) at the State University of New York (SUNY) at Albany's College of Nanoscale Science and Engineering, the Advanced Energy Research Technology Center at Stony Brook University, and SUNY's Office of Business and Industry Relations.

**1. Purpose of NYSDOL LMI Research**

- To determine the number and type of jobs involved in the production, distribution, installation, construction, design, consultation, and financing of renewable energy and energy efficiency products and services.
- To determine the training needs of businesses with "green" jobs. To achieve these goals, NYSDOL reached out to 20,000 New York State businesses in six industry clusters. They include: construction, manufacturing, professional services, and building services. Info on NYS's Weatherization Assistance Program was also be collected.

## **2. Defining Green Jobs**

For the purposes of NYSDOL's study, green jobs is defined as "employment involved primarily in producing goods or delivering services that increase energy efficiency or generate renewable energy." Examples may include:

- Renewable energy generation, system manufacturing, installation or storage (including solar, wind, biomass, geothermal, hydro)
- Regulation, measurement and monitoring of renewable energy systems
- Sale, installation, manufacturing or maintenance of renewable energy equipment
- Retrofitting/improving energy efficiency in buildings or facilities
- Energy efficiency home or building inspection
- Design and/or construction of new buildings or residences
- Financial management consultants who promote energy efficiency and renewable energy use

### **a) Participants**

NYS DOL asked 20,000 businesses to fill out a short questionnaire about green jobs either on-line or through a print version. Responses are being pooled with information from thousands of other businesses. With the results of this survey, NYSDOL will:

- Identify any new, emerging green jobs
- Develop appropriate job training to create a better-prepared workforce
- Assure that public investments are effective and efficient
- Reinvigorate our State's economy with an eye toward a green and clean future.

The NYSDOL data is being used to support the training inventory, needs assessment, and curriculum updates to be implemented by the contract awarded to PACE under NYSERDA's RFP 2034 - GJGNY Training Inventory, Assessment, and Curriculum Updates. The breadth of information in the NYSDOL report will provide a comprehensive inventory of state-wide programs and generalized needs that NYSERDA can leverage to complete a more detailed training needs assessment and skills gap analysis planned in support of GJGNY. Preliminary findings from this survey can be found in *Attachment C: New York State Green Jobs Survey, preliminary findings*

### **b) Additional Coordination**

NYSERDA continues to work with NYSDOL to leverage State and federal funds to develop training opportunities for the unemployed, new and emerging workers through the NYSDOL One-Stop Career Centers and the State's Workforce Investment Boards. The NYSDOL One-Stop Career Centers assist jobseekers to identify career goals and locate appropriate training and certificate programs to meet these goals. For example, under PON 2033, which was developed

cooperatively with NYSDOL, NYSERDA contractors are working with NYSDOL’s Business Service Representatives and One-Stop Centers to match jobseekers with jobs in energy efficiency. NYSERDA’s contractors will provide on-the-job (OJT) training to their hires, and receive six months of funding (up to \$10,000 per new worker for up to five workers) to help support the new workers. Newly-hired workers may also obtain training other than OJT as approved by NYSERDA, up to \$4,000 per worker.

NYSERDA continues to collaborate with the NYSDOL to establish a comprehensive workforce development program for New York that supports existing and planned energy efficiency programs, and further leverages the "pathways out of poverty" program to engage disadvantaged communities. NYSDOL funding can provide training to new and emerging workers to prepare them with skills necessary for entry-level employment, while NYSERDA funding can provide more focused and specialized training related to energy efficiency programs.

**c. Budget**

**Table 5.1 Workforce Development Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Equipment and Training Infrastructure	\$2,375,000	\$29,662	-	\$59,610	\$2,285,728
Certifications and Company Accreditation	\$800,000	\$32,769	\$230,000	-	\$537,231
Apprenticeships/Internships	\$2,625,000	-	-	-	\$2,625,000
Curriculum	\$1,775,000	-	\$600,228	\$927,351	\$247,421
Conferences and Technical	\$275,000	\$20,000	\$130,020	-	\$124,980
<b>Total</b>	<b>\$7,850,000</b>	<b>\$82,431</b>	<b>\$960,248</b>	<b>\$986,961</b>	<b>\$5,820,360</b>
<i>Expended: Contractor Invoices processed for payment by NYSERDA.</i> <i>Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.</i> <i>Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.</i>					

**d. Contracts Entered Into**

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 5.2 Workforce Development Contracts**

PO#	Contractor	Description	PO Amount	Expended	Encumbered	Pre-encumbered
18165	North American Board	Clean Energy Technology Training	\$200,000	-	\$200,000	-
19822	BPCA NYS Inc.	PO for GJGNY research/training survey	\$25,000	\$25,000	-	-
19844	NABCEP	PO for company accreditation	\$49,999	\$19,999	\$30,000	-
22486	Ulster County BOCES	GJGNY Solar Thermal Training Solicitation	\$52,000	-	\$52,000	-
22504	Sullivan County BOCE	GJGNY Solar Thermal Training Solicitation	\$48,000	-	\$48,000	-
22937	Northern Manhattan I	Open Enrollment for EEPS Workforce Training Providers	\$50,000	-	\$50,000	-
22983	Building Performance	Workforce Homeowner/Community Outreach and Contractor Exchange	\$150,020	\$20,000	\$130,020	-
22987	Research Foundation	GJGNY Solar Thermal Training Solicitation	\$125,000	-	\$125,000	-
22989	CEC Stuyvesant Cove	Open Enrollment for EEPS Workforce Training Providers	\$76,099	-	\$76,099	-
23130	Mason Tenders	Open Enrollment for EEPS Workforce Training Providers	\$10,238	-	\$10,238	-
23182	Monroe Community Col	GJGNY Solar Thermal Training Solicitation	\$75,000	-	\$75,000	-
23875	Madison Oneida BOCES	Open Enrollment for EEPS Workforce Training Providers	\$15,000	-	\$15,000	-
23883	The Outsource Center	Open Enrollment for EEPS Workforce Training Providers	\$40,567	-	\$40,567	-
24317	Conservation Services Group	Curriculum for GJGNY Outreach	\$108,324	-	\$108,324	-
	Multiple Awards	Equipment and contractor training incentives	-	\$17,432	-	-
20750	NYS Department of Labor	Co-funding for a Tandberg video conference	-	-	-	\$46,000
20830	Community Power Network of NYS, Inc	Career pathways tech training solicitation	-	-	-	\$290,173
20835	Research Foundation of SUNY	Career pathways tech training solicitation	-	-	-	\$159,313
20837	Research	Career Pathways Tech	-	-	-	\$102,865

	Foundation-CUNY	Training Solicitation				
20919	Pace Energy Project	GJGNY Curriculum Assessment and Update	-	-	-	\$275,000
21739	Conservation Services Group	Training and Implementation Contractor	-	-	-	\$100,000
23343	Meeting Industry Experts, Inc.	Meeting Planning Services	-	-	-	\$13,610
<b>Total</b>			<b>\$1,025,247</b>	<b>\$82,431</b>	<b>\$960,248</b>	<b>\$986,961</b>

## VI. Outreach & Marketing

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Implementation of the approved GJGNY Outreach & Marketing Operating Plan<sup>4</sup> began in mid-2010 and was initially presented in the October 1, 2010 GJGNY Annual Report. Following is an update on progress since the last reporting period.

### *a. Outreach through Constituency Based Organizations (CBOs)*

The GJGNY Program is designed to deliver services in targeted communities through CBOs. CBOs will conduct outreach, marketing, and education through a coordinated approach that targets priority communities. Outreach, marketing, and education will target residents, businesses, Not-For-Profits (NFP), multifamily building owners, and potential workforce participants in designated communities. CBOs will encourage participation in energy efficiency programs, facilitate awareness of workforce training opportunities available through GJGNY program, and assist with enrollment in those efforts. RFP 2038 – Green Jobs Green New York Outreach Program was released in the November, 2010 to competitively select the CBOs that will support GJGNY. Fourteen proposals were recommended for funding as detailed in Table 6.1. NYSERDA is in the contracting stage with the CBOs.

**Table 6.1 – CBOs Recommended for Funding through RFP 2038**

<b>CBO</b>	<b>Target Region</b>
Pathstone	Finger Lakes
Northeast Parent and Child Society	Capital Region
Affordable Housing Partnership of the Capital Region	Capital Region
Adirondack North Country Association	North Country
Bronx Overall Economic Development Corporation	Bronx
Neighborhood Housing Services of Staten Island	Kings and Richmond Counties
El Puente	Kings and Richmond Counties
Downtown Manhattan Community Development	New York County
Asian Americans for Equality	Queens County
Rural Ulster Preservation Company	Mid-Hudson and Westchester County
Long Island Progressive Coalition	Long Island
Public Policy and Education Fund	Central New York
Public Policy and Education Fund	Southern Tier
People United for Sustainable Housing	Western New York

NYSERDA Staff completed an analysis of the geographic and programmatic areas (i.e. workforce and energy efficiency outreach) addressed by the CBOs selected through RFP 2038, noting potential gaps in coverage. A second RFP (RFP 2327) was released in June 2011 to fill gaps from the previous solicitation. Thirteen proposals were received on July 12, 2011. A

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<sup>4</sup> The GJGNY Outreach & Marketing Operating Plan was presented to the Advisory Council for comment and subsequently approved by NYSERDA's Senior Management in June, 2010.

Technical Evaluation Panel<sup>5</sup> to select the additional CBOs was held on August 1, 2011. The review process for selection of proposals is underway.

### **1. Training and Implementation Contractor**

RFP 2080 was released in July 2010, seeking a GJGNY Training and Implementation Contractor (TIC), to support and provide structured training for the CBOs; geographic coordination and support of CBO Outreach programs; effective communication across all regions; tracking of CBO goals including recruiting efforts; assessing and fulfilling CBO needs; assistance in planning and coordinating events, if necessary; tracing progress of referrals made to GJGNY; data gathering; and regular reporting of program activities and results to NYSERDA. Twenty-four proposals were received and the contract was awarded to Conservation Services Group (CSG).

Since execution of the contract, CSG has met with all of the CBOs selected from RFP2038 to identify needs and systems necessary to implement the Outreach program. Work continues on the development of the curriculum to support CBO outreach and education activities, and a two-day training session is scheduled for October 2011 at which time all CBOs will be under contract. CSG is identifying relevant programs and services and documenting protocols, procedures, program policies, and performance standards to be used in the Outreach program.

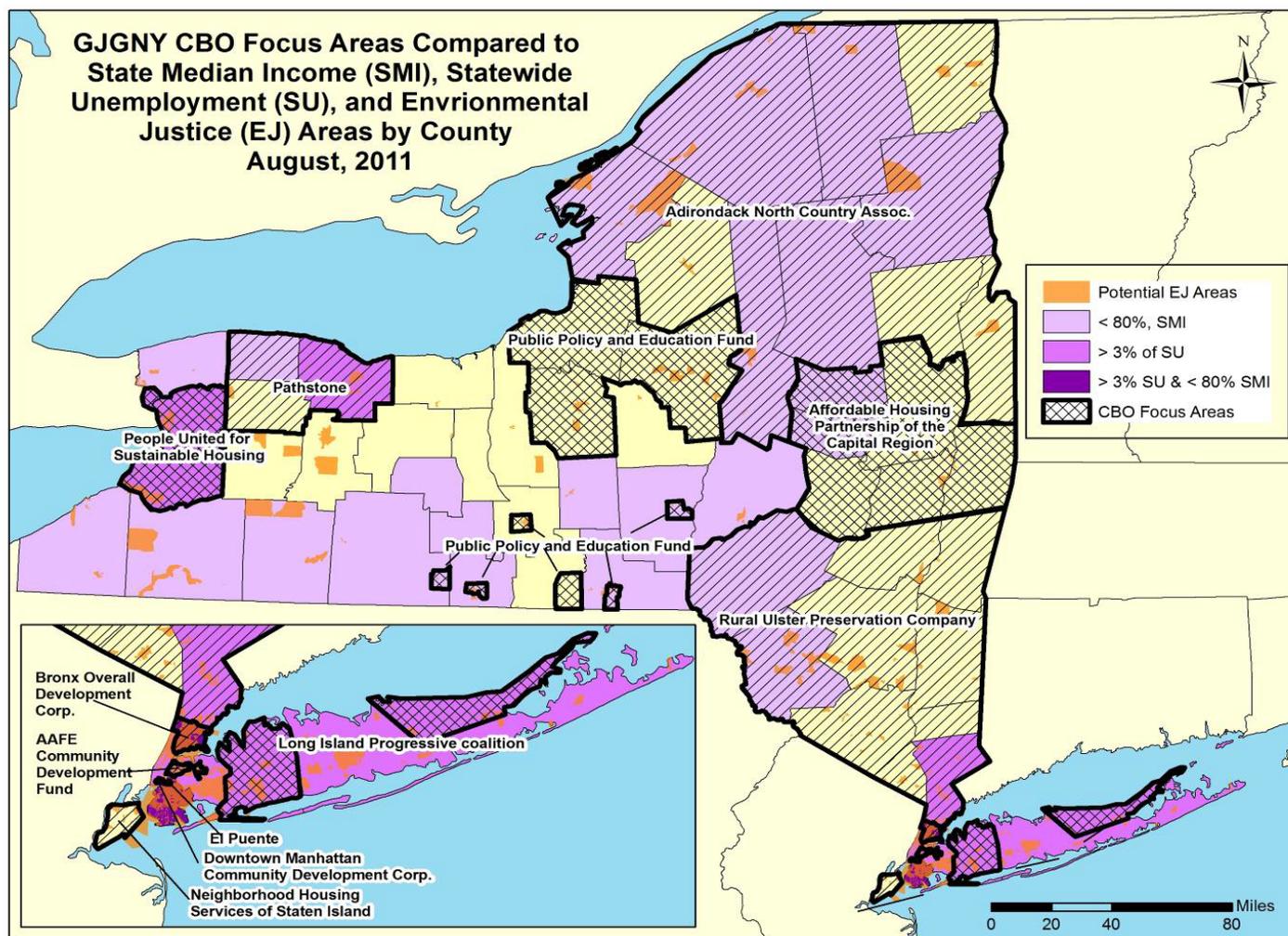
A web-based site is being developed for use by the CBOs to access and download program information and materials, upload information such as reports and leads, and converse about the program and its deployment. The site will become a critical tool for the implementation of the GJGNY Outreach Program. NYSERDA staff will ensure that the information gathered from CBOs on the site integrates with the programmatic database system, such as the (Comprehensive Residential Information System (CRIS)).

A Geographic Information System (GIS) Working Group has been established, consisting of NYSERDA staff and Advisory Council members. The Working Group will advise NYSERDA as to the potential uses for GIS to support GJGNY activities and coordination with other GIS efforts underway in the state. GIS will be used to understand how the Outreach program is working within the 12 regions (i.e. leads, audits, conversions, etc), to determine the potential effectiveness of outreach activities, and to identify those areas throughout the state that are in need of marketing or other marketing strategies to boost participation. Figure 1.1 illustrates the CBO outreach areas in relation to counties with less than 80% of State Median Income (SMI) and more than 3% of the state's unemployed population, in addition to potential Environmental Justice Areas. This map, and similar variations that incorporate program data, will allow NYSERDA Staff to evaluate the impact of CBOs and target outreach strategies accordingly.

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<sup>5</sup> A Technical Evaluation Panel (TEP) consists of a team of NYSERDA staff and external individuals who demonstrate knowledge and expertise in the subject matter.

**Figure 1.1 GJGNY CBO Focus Areas Compared to Key Factors**



***b. Green Jobs - Green New York Marketing***

In 2010, NYSERDA competitively procured a marketing contractor, Brand Cool, to develop and execute a statewide integrated marketing and communication program to support GJGNY.

**1. Marketing Research**

Brand Cool completed a secondary research report that compiles findings on consumer attitudes and trends. The secondary research assists in understanding the market for the GJGNY program and the development of marketing materials and other strategic elements. The secondary research report considered findings from the Department of Public Services’ large scale segmentation and messaging study, which was conducted as part of its new consumer marketing campaign.

Residential contractor research was completed, and a final report was delivered to NYSERDA. The research involved in-depth interviews with participating Building Performance Institute (BPI) accredited home performance contractors as well as non-

accredited contractors and non-certified technicians, to probe their understanding of existing program components and to explore areas important to the conduct of their business. The interviews also probed the contractors' experiences with the various tools and program components available to them to determine what works well and areas in need of improvement. The study also looked at contractors' level of knowledge related to BPI certification and accreditation, and the tools and programs available to those who are certified, as well as reasons for not becoming BPI certified or accredited. A short-term strategy for the GJGNY marketing program is to grow BPI accredited contractor coverage statewide, particularly in areas where coverage is needed to address program growth and support workforce development goals.

Residential and small commercial online focus groups were held. On-line focus groups will be used to provide feedback on a variety of topics related to energy use, to gauge attitudes towards energy efficiency, to identify barriers to participation, and to determine general motivational factors. Focus groups will include participants from a wide geographic range, assuring a relevant variety of locations from which to collect input.

## **2. Marketing Materials**

A communications audit was conducted on existing NYSERDA-related residential outreach and marketing materials. The purpose of the audit was to ensure that GJGNY messaging and communications are fully integrated into other NYSERDA materials and are delivering consistent messages; to further understand how NYSERDA marketing could support CBOs and Energy Smart Community Coordinators<sup>6</sup> (E\$CCs) in promoting energy efficiency at the local level; to share ideas from the field that could be used to create a centralized communications and support framework that can aid E\$CCs, CBOs, and Centers of Influence in meeting marketing and communications objectives; and to identify communication elements and touch points that work well or can be improved to better educate participants on program offerings and the steps involved in the retrofit process. Key thoughts from this research are documented within the report and provide the basis for recommended improvements to provide support to critical channels and to future groups as they embark on outreach to constituents within their areas.

Contractor case studies (sample provided in Attachment D) were developed to assist in the contractor recruitment process. The case studies focus on several participating Home Performance contractors that have grown their business by embracing the whole house concept and BPI accreditation. GJGNY Marketing also is supporting five Contractor Exchange Workshops being held throughout NYS to assist in bringing more Home Performance contractors into the program.

Other GJGNY marketing materials developed include financing fact sheets for the residential and small commercial/NFP programs and web pages to support individual program components. Marketing materials to support the CBO Outreach program currently are in development. Materials for the CBOs include a tool kit, customizable fact sheets, case studies and testimonials that are specific to the region and sector, door-to-door hangers for

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<sup>6</sup> E\$CC are funded through the System Benefits Charge program and are tasked with conducting outreach and awareness of NYSERDA's programs at the local level in ten regions throughout the state.

those doing block-by-block outreach, web content, event support, email blast templates, and PowerPoint content and visuals. It is expected that some of the material will be translated to various languages to support the diverse populations found throughout New York State.

Press releases to announce the availability of the GJGNY residential and small commercial/NFP programs were released. Media coverage of the GJGNY program has been positive and considerable.

**c. Budget**

**Table 6.2 Outreach and Marketing Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Delivered through CBOs	\$6,040,000	-	-	\$6,038,719	\$741
General Statewide Marketing	\$3,500,000	\$519,706	\$2,980,854	-	-
Training and Implementation Contractor	\$650,000	-	-	\$649,962	\$38
<b>Total</b>	<b>\$10,190,000</b>	<b>\$519,706</b>	<b>\$2,980,854</b>	<b>\$6,688,681</b>	<b>\$779</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*  
*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*  
*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

**d. Solicitations and Contracts**

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 6.3 Outreach and Marketing Solicitations and Contracts**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
22502	Brand/Cool Marketing	GJGNY Marketing	\$3,498,860	\$518,006	\$2,980,854	-
22725	Cision Public Relations	Services	\$1,700	\$1,700	-	-
21739	Conservation Services Group	Training and Implementation Contractor	-	-	-	\$649,962
22878	Public Policy and Education Fund of	Request for funding for GJGNY Services	-	-	-	\$385,444
22879	Affordable Housing Partnership	RFP2038	-	-	-	\$338,920
22884	Adirondack North Country	RFP2038	-	-	-	\$292,752
22885	PPEF - Southern Tier	RFP2038	-	-	-	\$279,363
22886	Northeast Parent and Child	RFP2038	-	-	-	\$44,470
22887	Pathstone	RFP2038	-	-	-	\$420,753
22888	PUSH Buffalo	RFP2038	-	-	-	\$542,358
22889	Bronx Overall Econ. Development Corp	RFP2038	-	-	-	\$511,460
22890	Downtown Manhattan Development Corp	RFP2038	-	-	-	\$487,000
22896	Neighborhood Housing	RFP2038	-	-	-	\$308,071

	Services SI					
22897	Rural Ulster	RFP2038	-	-	-	\$606,113
22906	AAFE Community Development Fund	RFP 2038	-	-	-	\$410,000
22908	Long Island Progressive Coalition	RFP 2038 Green Job Green New York - Lo	-	-	-	\$372,015
22909	El Puente	RFP2038 El Puente Green Light District	-	-	-	\$150,000
RFP 2327 Constituency Based Organizations - awards pending			-	-	-	\$890,000
<b>Total</b>			<b>\$3,500,560</b>	<b>\$519,706</b>	<b>\$2,980,854</b>	<b>\$6,688,681</b>

## **VII. One- to Four-Family Residential Buildings**

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Implementation of the approved GJGNY One- to Four-Family Homes Operating Plan<sup>7</sup> began in the fourth quarter of 2010.

### ***a. Target Audience***

The GJGNY Act defines a residential structure as “a residential building that has four or fewer dwelling units.” The target audience for the sector is owners of buildings, with up to four residential dwelling units, with incomes above 60% of state median income. Those with lower incomes may be eligible for the federally-funded Weatherization Assistance Program or NYSERDA’s EmPower New York<sup>SM</sup> program through which services could be provided at no cost to the household, and should therefore not be targeted with this program – although they will not be turned away if they choose to participate. Building owners whose incomes are equal to or less than 80% of the state or area median income (S/AMI) may be eligible for a grant of 50% of the cost of the work to be performed, up to \$5,000, (or up to \$10,000 for buildings with two to four units), from NYSERDA<sup>8</sup>. These households are a particular target of interest for GJGNY. Communities in areas where energy costs are high in relation to AMI, or those in non-attainment for one or more designated pollutants under the Federal Clean Air Act, will be targeted.

### ***b. Implementation Strategy***

Services to the residential sector are delivered through the successful existing program, Home Performance with ENERGY STAR<sup>®</sup> (HPwES). HPwES is a “whole house” program that uses building science to identify and install cost-effective measures to reduce energy consumption in New York State’s one-to-four family residential structures. Contractors perform a comprehensive home energy assessment (audit), including health and safety testing, prior to performing work, and also “test out” of the house after work is complete to ensure a safe and healthy environment after installation of energy efficiency measures. The program offers low-interest financing and homeowner cash-back incentives to encourage comprehensive work scopes, including a higher incentive level for those households qualifying for the “Assisted” component of the program. Participating households typically reduce their total energy use by 25-30 percent after a participating contractor has completed work on the home.

The GJGNY supported free/reduced-cost energy audits and low-interest financing components of HPwES were launched on November 15, 2011.

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<sup>7</sup> The GJGNY One- to Four-Family Operating Plan was presented to the Advisory Council for comment and subsequently approved by NYSERDA’s Senior Management in November, 2010.

<sup>8</sup> These incentives are provided through EEPS, SBC, or RGGI funded-HPwES Program.

Owners of residential buildings seeking services from the program can participate through one of two approaches: 1) as individual owners, or 2) as a participant in a CBO-organized aggregation.

### **1. Individual Owner Approach**

Owners of residential buildings with four units or less interested in receiving a free or reduced cost audit can download a HPwES Residential Audit Application from [www.getenergysmart.org](http://www.getenergysmart.org) or call 1-877-NY-SMART to request an audit application to be mailed; or obtain an audit application from a participating contractor or a CBO. The application is submitted to the application processing center by mail, fax or emailed scan file. The application must be accompanied by a copy of a recent utility bill with a minimum of 12 months of usage history. Where the primary heating fuel is from a non-utility provider, a 12 to 24 month billing history for the heating fuel is required. A copy of the Audit Application can be found in *Attachment E: Residential Audit Application*.

An applicant that is eligible for a free or reduced cost audit will receive a reservation number from the application processing center with the estimated level of audit subsidy that will be paid by NYSERDA to the contractor for a completed audit. The final amount to be paid to the contractor will be based on verification by the contractor of the number of units or square footage of the residence. The reservation number will be valid for a single audit to be completed within 90 days of issuance of the reservation. If the reservation is not used within that period it will be eligible for reissuance if audit funds remain available.

### **2. Aggregation Approach**

NYSERDA is in the process of developing contracts with CBOs to provide outreach and marketing of GJGNY. It is anticipated that 10 CBOs will conduct aggregation pilots to demonstrate whether this is a viable model to grow the market for energy efficiency retrofits in their communities. Aggregation is a collection of eligible building owners brought together by a CBO who have agreed up-front to use the same contractor or contractor team to perform audits and retrofit work. Building owners participating in aggregation benefit from lower cost through standardized pricing and a simplified participation process. Contractors participating in aggregation benefit by reducing cost associated with travel, marketing, material purchasing and a more efficient use of work crews. Aggregation also benefits the targeted community by requiring participating contractors to comply with certain employment standards, as agreed to by the CBO and interested contractors. These standards may include, but are not limited to; hiring future employees for the “local region”, providing a structured training program to enable entry level employees to continue career development, paying employees a certain minimum wage on aggregation projects, and offering employees benefits, such as, health care, sick days, and vacation time.

## **c. Standards for Energy Audits and Development of Work Scopes**

Energy audits and energy services for GJGNY are delivered by participating HPwES contractors that have Partnership Agreements with NYSERDA. Partnership Agreements used in the HPwES program have been updated to reflect new requirements of GJGNY. The HPwES Partnership Agreement is posted on NYSERDA's Web site.

Contractors delivering audits and performing services must be accredited by the Building Performance Institute (BPI), in accordance with NYSERDA's Partnership Agreement. BPI accreditation includes a review of certain business standards and practices in addition to technical certification requirements.

To qualify for HPwES program incentives and financing, eligible measures must meet the program minimum efficiency requirements and must be cost effective with a Savings-to-Investment Ratio (SIR) greater than 1.0. Contractors can elect to remove 15%, up to \$2,000, of the cost of associated health and safety measures and qualified accessories to meet the minimum SIR requirements for financing. Measures excluded from the SIR calculation are not eligible for program incentives beyond financing. Please refer to *Attachment F: NY Home Performance with ENERGY STAR Eligible Measures and Accessories List* for additional details.

NYSERDA performs quality assurance inspections on approximately 15% of projects to ensure contractor work meets program standards. In addition, BPI performs quality assurance inspections to ensure work meets their technical standards. If projects fail to meet standards, BPI and/or NYSERDA follow up with the contractor to ensure remediation takes place. Failure to meet BPI and program standards may result in probation, suspension, loss of accreditation and/or removal from the HPwES program, in accordance with BPI and NYSERDA processes.

#### ***d. Energy Audit Fees***

The GJGNY legislation requires the program to make energy audits available to residential buildings with one-to-four units. The fee for energy audits must be waived for New York households that have a demonstrated income that is 200% of the median county household income or less. In households with income from 201 to 400% of the median county household income, the applicant, "...shall pay a pro rata percentage of the audit fees." Only those households that have a county median income above 400% "pay the full fees." HPwES has integrated the free and sliding scale audits into the current structure by making payments directly to participating contractors.

Previously, HPwES contractors were free to set fees for the audit based on market conditions, and those fees typically ranged from \$200 to \$800. Some contractors refunded the cost if the homeowner went forward with work and others offered audits at no cost after customers pre-qualified for financing.

Contractors expressed concern that reimbursement for the free and reduced cost audits should reflect the true cost of delivering the service, particularly as the availability of free audits might

attract a large number of audit requests that do not result in contracts for work. To address this shared concern, NYSERDA provided software to each participating contractor that allows the contractor to prepare a project proposal with estimated costs and savings at the time of the inspection. This proposal development process using this software is somewhat simpler than the full model required for the program at a later stage in the project process. Recently, the HPwES program approved additional software to provide audit reports. It greatly simplifies the data entry process and produces a more consumer friendly graphical audit report. Early adopters have reported being able to convert larger numbers of audits to projects.

The GJGNY audit fee for a single family building with less than 3,500 square feet of above grade conditioned space is \$250 as described in the table below.

**Table 7.1: Audit Fee for Single Units Homes Under 3,500 Square Feet**

<b>Single Unit HPwES Audit Fees (under 3,500 square feet of above grade conditioned space)</b>		
Household Income	Cost to Customer	NYSERDA Payment to Contractor
≤200% AMI	-0-	\$250
201 – 250% AMI	\$50	\$200
251 – 300% AMI	\$100	\$150
301 – 350% AMI	\$150	\$100
351 – 400% AMI	\$200	\$50
≥401% AMI	Market Rate	-0-

Residential buildings with 2-4 dwelling units and single units over 3,500 square feet of above grade conditioned space are eligible for a \$400 audit fee as described in the table below.

**Table 7.2: Audit Fee for 2 - 4 Units and Single Units Over 3,500 Square Feet**

<b>HPwES Audit Fees for 2 - 4 Units and Single Units over 3,500 square feet of above grade conditioned space</b>		
Household Income	Cost to Customer	NYSERDA Payment to Contractor
≤200% AMI	-0-	\$400
201 – 250% AMI	\$80	\$320
251 – 300% AMI	\$160	\$240
301 – 350% AMI	\$240	\$160
351 – 400% AMI	\$320	\$80
≥401% AMI	Market Rate	-0-

***e. Financing***

An unsecured consumer loan financing product for energy efficiency improvements to one- to four-family homes was launched on November 15, 2010. Loan terms are offered for 5, 10, and 15 years and for an amount not in excess of \$13,000 (the Power NY Act of 2011 increases this to \$25,000 for repayment terms of 15 years or less) Following is a table summarizing loan underwriting standards used for unsecured loans. NYSEDA has modified loan underwriting standards twice since the launch of the program in an effort to address loan application denials and, in a responsible manner, improve the penetration of financing to consumers who would not qualify using traditional underwriting standards.

**Table 7.3: Green Jobs-Green New York Loan Underwriting Standards (Effective 7/21/2011)**

<b>Standard</b>	<b>Unsecured “Tier 1” Loan (Funded from revolving loan fund, aggregated, and then financed through capital markets)</b>	<b>Unsecured “Tier 2” Loan (Funded from revolving loan fund, monitored for acceptable repayment performance (2-3 yrs), and then financed through capital markets)</b>
Minimum FICO or alternate	640 (680 if self-employed for 2yrs+) (720 if self-employed < 2yrs)	None - Utility bill current for 2 consecutive months during each of the last 2 yrs; - No utility/mortgage payments more than 60 days late in the last 2 yrs; - Current on mortgage payments for the last year
Max Debt-to-Income ratio	Up to 50%	Up to 55% Up to 70% if FICO score of 680+
Bankruptcy	No bankruptcy within last 7 yrs	No bankruptcy within last 5 yrs
Judgments	No outstanding collections, judgments or tax liens > \$2,500	

Following is a table summarizing loan applications and loans issued to date.

**Table 7.4: GJGNY Unsecured Direct Residential Loans**

Green Jobs - Green New York Residential Financing							
July 2011							
1- to 4- Family Homes		Applications Received	Applications Approved	Loans Closed			
				Value	Total	HPwES	Assisted HPwES
<b>Tier 1</b>	Program to Date	1,798	900	\$3,435,650	429	248	181
<b>Tier 2</b>	Program to Date	44	28	\$118,944	13	9	4
<b>Total- Program to Date</b>		<b>1,798</b>	<b>928</b>	<b>\$3,554,594</b>	<b>442</b>	<b>257</b>	<b>185</b>

Financing Summary	Tier 1	Tier 2
Loans Closed	429	13
Value	\$3,435,650	\$118,944
Average Loan*	\$8,009	\$9,150
Average Term*	11.2 Years	13.5 Years
3.49%*	82%	62%
3.99%*	18%	38%
Approval Rate**	59%	70%
Denial Rate**	41%	30%
*Refers to closed loans only		
** Does not include applications pending review or withdrawn		

Reasons for Tier 1 and Tier 2 Loan Denials	
Debt Ratio	44%
Credit Score	21%
Bankruptcy/Foreclosure/Repossession	18%
Collections/Judgments/Charge-offs	15%
Other	2%
<b>Total</b>	<b>100%</b>

**f. Additional NYSEDA Incentives**

NYSEDA offers a consumer incentive to eligible households equal to 10% of the cost of eligible measures. Availability of the incentive is subject to funding availability from the Energy Efficiency Portfolio Standard (EEPS) for pre-qualified electric and gas measures, and the Regional Greenhouse Gas Initiative (RGGI) for oil and propane measures<sup>9</sup>. NYSEDA provides

<sup>9</sup> Effective September 1, 2011, funding for HPwES transitioned from the System Benefits Charge (SBC) to EEPS except for market transformation activities, such as training and certification, which continue to be supported with SBC funds.

participating contractors with updates on funding availability and household eligibility as necessary.

In addition, building owners with incomes equal to or less than 80% of the state or area median income (S/AMI) may be eligible for a grant of 50% of the cost of the work to be performed, up to \$5,000, (or up to \$10,000 for buildings with two to four units), through Assisted Home Performance with ENERGY STAR.

A comprehensive job scope incentive is available to contractors equal to 5% of the approved measures, up to \$500. Availability of the incentive is subject to funding availability from the SBC for electric and gas measures, EEPS for pre-qualified gas measures, and RGGI for oil and propane measures. NYSERDA provides participating contractors with updates on funding availability as necessary.

***g. Coordination with other Program Administrators***

NYSERDA continues to work with other program administrators, including investor-owned and municipal gas and electric utilities and the Long Island Power Authority (LIPA), to address coordination and minimize confusion where multiple incentive opportunities are available to residential customers. NYSERDA, in coordination with LIPA and National Grid, is developing a web-based tool that lists measure incentives available from each program administrators. The incentive analysis tool will enable contractors to present customers with a scope of work that takes best advantage of available incentives.

Provided that work performed to participate in a utility rebate program meets NYSERDA's HPwES requirements, the GJGNY loan may be used in coordination with the utility rebate. Likewise, the GJGNY loan may be used in coordination with the NYSERDA incentives. Nevertheless, although GJGNY loans may be combined with either the NYSERDA or the utility incentives, NYSERDA and utility incentives cannot be combined with each other on the same measure. The table below presents an example of a work scope that includes measures eligible for utility incentives and GJGNY financing. The GJGNY loan amount is determined by "netting-out" all applicable utility or NYSERDA incentives at the measure level from the total cost of the work.

**Table 7.5: Eligible Work Scope for GJGNY Financing**

<b>GJGNY Financing Work Scope</b>			
<b>Measure</b>	<b>Cost</b>	<b>Incentive</b>	<b>Source</b>
Gas heating equipment	\$4,500	\$500	Utility
Central AC	\$3,000	\$400	Utility
Air Sealing	\$750	\$75	NYSERDA
Insulation	\$3,500	\$350	NYSERDA
Total Project Cost/Incentives	\$11,750	\$1,325	
<b>Net Cost Eligible for Financing</b>	<b>\$10,425</b>		

**h. Budget, Goals & Metrics****Table 7.6: One- to Four-Family Homes Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Energy Audits	\$11,596,000	\$1,425,370	\$215,852	-	\$9,954,778
Implementation and Quality Assurance	\$1,000,000	\$302,597	\$249,803	-	\$447,600
Financing	\$26,652,533	\$3,369,857	-	-	\$23,362,750
Financing Loan Repayments	-	\$(80,074)	-	-	
<b>Total</b>	<b>\$39,248,533</b>	<b>\$5,017,750</b>	<b>\$465,655</b>	<b>-</b>	<b>\$33,765,127</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*  
*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*  
*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

**Table 7.7: One- to Four-Family Homes Program Goals & Metrics 11/15/2010 – 7/31/2011**

<b>One- to Four-Family Homes Metrics and Goals (as of 7/31/2011)</b>		
	<b>Totals</b>	<b>Goal</b>
Audit Applications	11,102	NA
Average Number of Applications Per Month	1,411	NA
Approved Applications for Free Audit	9,593	NA
Approved Applications for Reduced Cost Audit	843	NA
Total Approved Audit Applications	10,436	NA
Scheduled Audits	7,549	NA
Completed Audits	6,218	46,000
Projects Contracted	1,803*	NA

Projects Completed – 896 HPwES and 299 Assisted HPwES	1,195	15,000
kWh Saving*	799,455	**
MMBtu Savings*	43,056	**
Energy Savings per Project*	669 kWh/project; 36 MMBtu/project	688 kWh/project; 31 MMBtu/project
Dollar Savings per Project*	\$651 per year/project	\$675 per year/project
<p><i>* Projects that receive GJGNY-supported audits 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.</i></p> <p><i>** The Operating Plan expresses anticipate energy and dollar savings on an average per project basis.</i></p>		

The 1,195 completed projects since program launch November 15, 2010 are associated with a free/reduced-cost audit. An additional 3,500 projects were completed during this period without the free/reduced-cost audit. This is due at least in part to the length of the project cycle between the audit, contract and completion of work, and represent for the most part projects that were initiated prior to November 2010. In July 2011, 60% of the completed projects originated from a free/reduced-cost audit.

\*The current conversion rate from completed audit to project contract is 29%.

The maps below depict a baseline for HPwES across the state. Figure 1.2 illustrates the level of program activity across the state in the calendar year prior to the launch of the audit component of GJGNY. 6,228 projects were completed across the state in the year prior to November 15, 2010. Figure 1.3 illustrates the number of audit applications across the state (more than 11,000 to date) since the launch of the audit component. It is clear that audit applications are being received in regions where project completions were not prevalent during the previous year. NYSERDA staff will be able to look at regional penetration of projects, regional conversion rates of audits to projects, and other relevant data as various marketing and outreach activities get underway. This information will be useful in adjusting marketing and outreach to ensure target regions are participating in the program. Additional GIS maps will be developed with the input of the GIS working group to support program impact analysis.

Figure 1.2 Green Jobs Green New York HPwES Project Locations

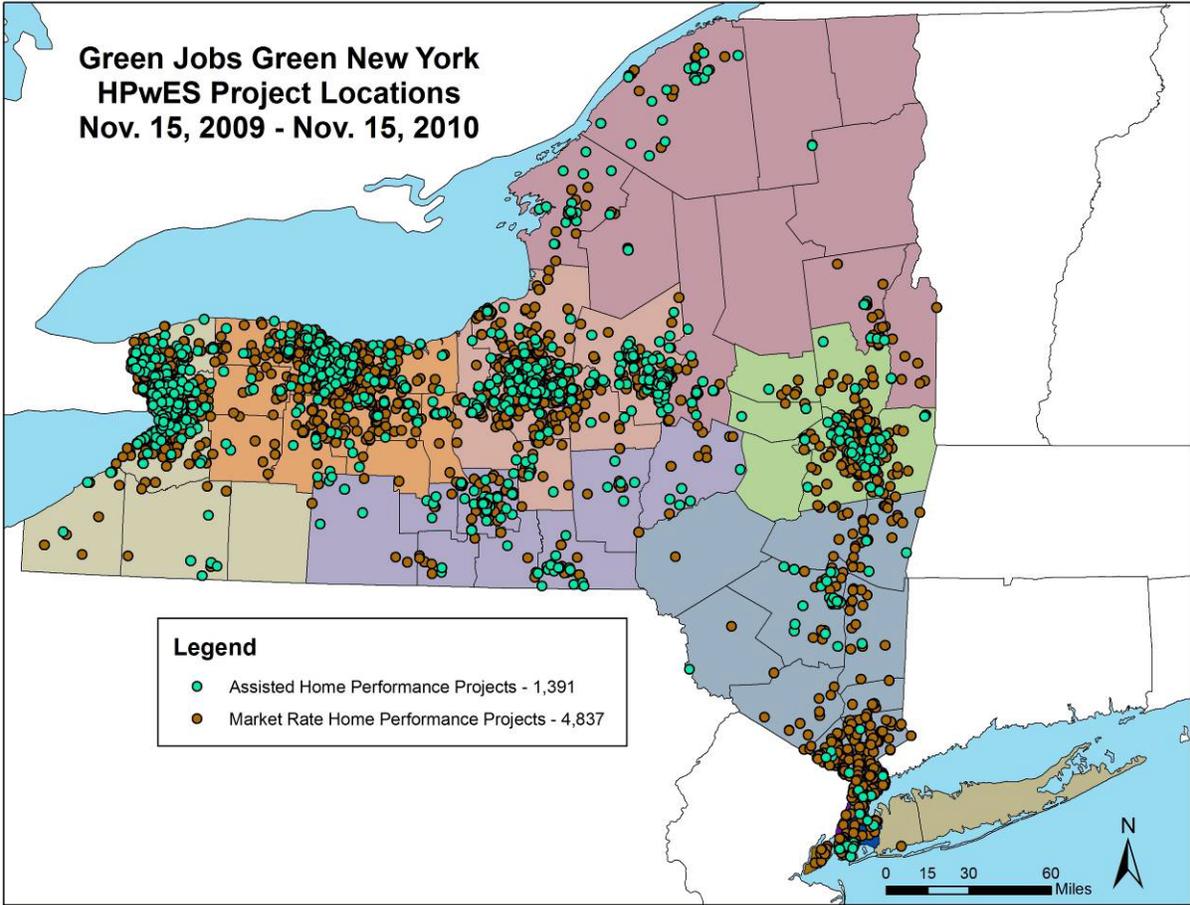
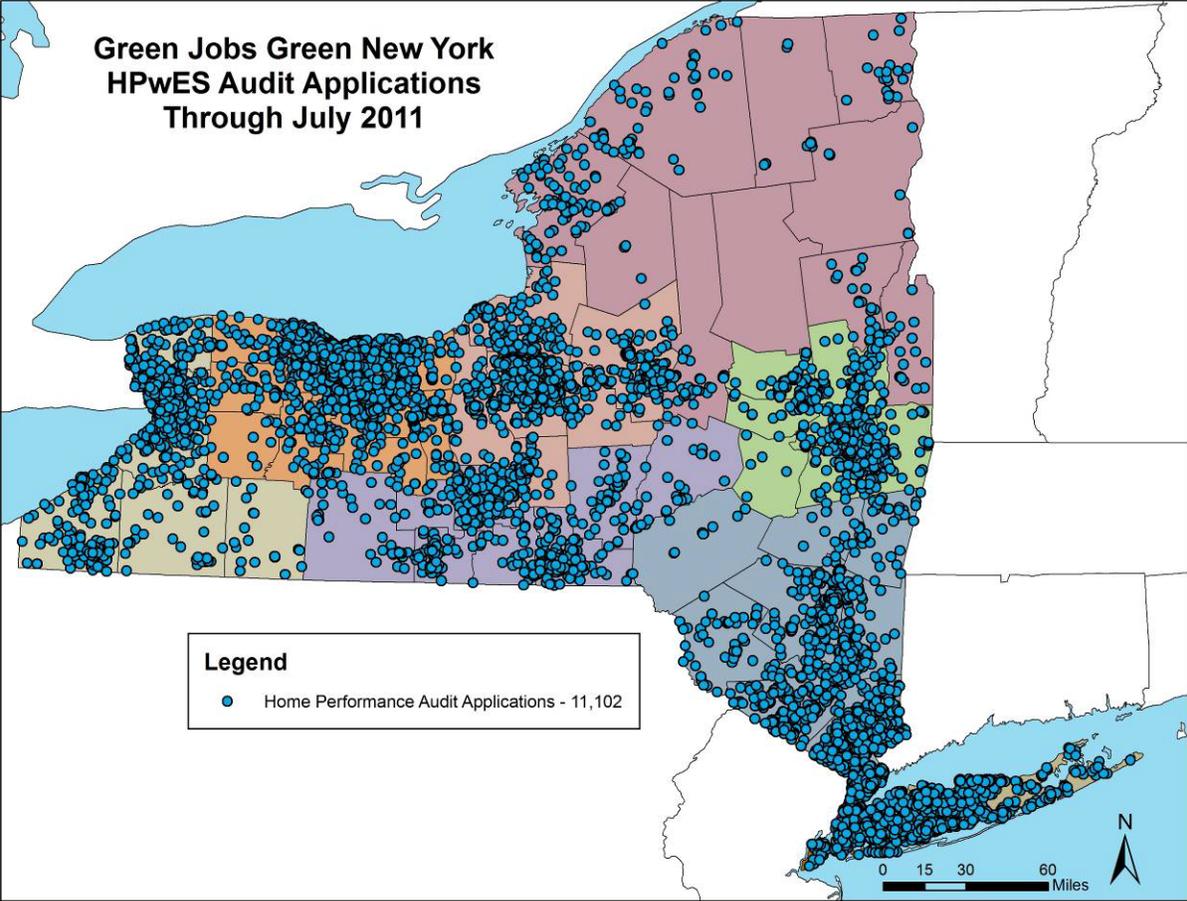


Figure 1.3 Green Jobs Green New York HPwES Audit Applications



***i. Contracts Entered Into***

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 7.8 One- to Four-Family Homes Contracts**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
18591	Hawkins Delafield & Wood	Legal financial advisory services for GJGNY	\$70,000	\$67,882	\$2,118	-
19923	Lamont Financial Services	Financial Advisor Services	\$152,050	\$108,605	\$43,445	-
20662	Energy Programs Consortium	Energy Programs Consortium- Phase I	\$6,250	\$6,250	-	-
21769	Concord Servicing Corporation	Interim Loan Servicing for GJGNY	\$216,000	\$11,760	\$204,240	-
	Wisconsin Energy Conservation Corp/ Energy Finance Solutions	Loan origination fees	-	\$108,100	-	-
ST9802	Conservation Services Group	Energy Audit Implementation	\$215,850	-	\$215,850	-
<b>Total</b>			<b>\$444,300</b>	<b>\$302,597</b>	<b>\$249,803</b>	<b>-</b>
<i>Details related to expenditures/encumbrances for Audits and Financing for this sector may be found in the Budget table.</i>						

## VIII. Multifamily Buildings

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Implementation of the approved GJGNY Multifamily Buildings Operating Plan<sup>10</sup> began in the third quarter of 2010.

### *a. Target Audience*

The GJGNY Act defines a multifamily structure as "a multi-unit residential building with five or more dwelling units."<sup>11</sup> A multifamily project may include a single multifamily structure or a group of multifamily structures.

The needs of the multifamily sector will be addressed by working with developers, building owners and their representatives to improve the energy efficiency, health, safety, and security of multifamily residential buildings. The intention is to identify and target those potential participants<sup>12</sup> who are committed to implementation of energy-related improvements. As part of the GJGNY marketing and outreach efforts, provisions will be made to encourage referrals from CBOs.

### *b. Implementation Strategy*

GJGNY provides financing and co-funding for comprehensive energy audits and the development of an Energy Reduction Plan (ERP)<sup>13</sup> through NYSERDA's Multifamily Performance Program (MPP). The availability of GJGNY co-funded audits began in September, 2010 and GJGNY financing in the multifamily sector was launched in June 2011. MPP is a comprehensive program that serves market-rate and low-to moderate-income projects using a common process, and relies on a network of energy service contractors who have demonstrated their ability to provide building performance services to multifamily buildings. These contractors are identified as MPP Partners, and must be employed by MPP participants to complete specific building performance services.

NYSERDA will manage GJGNY-funded services as a seamless part of the MPP process, regardless of whether the participant intends to access MPP implementation incentives, utility program rebates, or other financial assistance, or simply intends to fund a portion or all of the

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<sup>10</sup> The GJGNY Multifamily Buildings Operating Plan was presented to the Advisory Council for comment and subsequently approved by NYSERDA's Senior Management in April, 2010.

<sup>11</sup> Green Jobs - Green New York Act of 2009 (A.8901/S.5888 and chapter amendment A.9031/S.6032) Laws of New York, 2009. Chapter 487, Page 2, Section 1892, Sub-section 8

<sup>12</sup> Eligibility to apply and participate is limited to building owners and entities authorized by the owner to contract for the provision of qualified energy efficiency services. Singular dwelling unit residents or owners are not eligible to separately participate.

<sup>13</sup> An Energy Reduction Plan, the ERP, identifies the set of cost-effective energy-related improvements to be installed, and provides information necessary to guide installation of those measures. The ERP includes a detailed description of the proposed work scope, with the associated costs, projected energy saving, an outline for how costs will be financed, and a proposed schedule for construction.

energy-related improvements through GJGNY financing. To promote participation within the Multifamily sector, NYSERDA has used a number of marketing and educational tools. For example, morning presentations, "Power breakfasts", were offered statewide to promote and educate the public about the suite of multifamily programs.

**c. Audit Fees**

Co-funding of the energy audit(s) and development of ERPs is offered in two tiers, based on household income, with a higher level of funding available to buildings that satisfy NYSERDA's affordable housing criteria. To be eligible as an affordable housing project, the applicant must document that at least 25% of the residential dwelling units are occupied by families earning no more than 80% of the state or area Median Income (whichever is higher). NYSERDA allows reliance upon certain proxies to document compliance with this definition and those proxies are specified in the MPP program documentation. The current proxies include previously completed household income verification by housing regulators, such as the Housing and Community Renewal, NYC's Housing Preservation and Development (HPD), the NYS Housing Finance Agency, and the U.S. Department of Housing & Urban Development (HUD).

One ERP is developed per project; however a single project may include multiple buildings. The co-funding amount is dependent on the size and complexity of the project, with higher co-funding offered if more than one unique energy audit must be conducted in support of a single project and the associated ERP. To be eligible to receive this co-funding and to access GJGNY financing, the participant must use an MPP Partner to complete the audit and ERP. The co-funding amount offered for completion of the audits and ERPs are listed in *Table 8.1: GJGNY Multifamily Audit Incentives*, and are specified in the MPP program documentation.

**Table 8.1: GJGNY Multifamily Audit Incentives**

	<b>AFFORDABLE HOUSING</b>	<b>MARKET-RATE HOUSING</b>
<b>PAYMENT #1</b>		
Base Incentive (projects up to 30 units)	\$5,000 / project	\$2,500 / project
Base Incentive (projects from 31-500 units)	\$10,000 / project	\$5,000 / project
Incremental Incentive	\$20 / unit (over 100 units)	\$10 / unit (over 100 units)
Payment #1 is payable upon approval of the Energy Reduction Plan and associated documents, which must include documentation that the building has been benchmarked using the NYSERDA Benchmarking Tool. The list of required documents and additional information is located in NYSERDA's MPP Program Guidelines Section 2 and 3.		

**d. Additional NYSERDA Incentives**

NYSERDA offers additional incentives to install eligible measures outlined within the ERP. The incentive is subject to funding availability from the Energy Efficiency Portfolio Standard (EEPS) or Regional Green House Gas Initiative (RGGI). Incentives are paid at specified stages of the project's completion. Incentive amounts are detailed below in *Table 8.2: Multifamily Performance Program Incentive Schedule*. Projects may also participate in NYSERDA's RGGI-funded Multifamily Carbon Emission Reduction Program to receive an incentive for switching from #6 fuel oil to #2, natural gas or biodiesel blend. Incentives are based on fuel conversion type. Projects participating may receive \$30 per ton of carbon saved up to \$175,000.

**Table 8.2: Multifamily Performance Program Incentive Schedule**

<b>PAYMENT #2</b>	Up to \$300 / unit
Payable at 50% construction complete, based upon a successful Program inspection. The list of required documents and additional information is located in NYSERDA's MPP Program Guidelines Section 4.	
<b>PAYMENT #3</b>	Up to \$300 / unit
Payable at substantial completion of construction, based upon a successful Program inspection, performance testing (as applicable), and verification of active utility accounts. The list of required documents and additional information is located in NYSERDA's MPP Program Guidelines Section 4.	
Note: Incentive payments cannot exceed total cost of the project.	

**e. Financing**

NYSERDA launched the GJGNY Multifamily Financing Program in June 2011. GJGNY financing is available to multifamily building owners with an approved Energy Reduction Plan. Building owners work with a commercial lender of their choice. NYSERDA enters into participation agreements with lenders in which NYSERDA provides 50 percent of the principal of the loan made to support the installation of the improvements contained in the pre-approval document, up to \$5,000 per apartment or up to \$500,000 per building, at 0% interest. The lender provides the remaining principal of the loan at market rate. By participating in the loan program, New York State lenders will be able to offer blended interest rates at approximately half the market rate to their customers. The Lender will then collect all loan payments and remit to NYSERDA its share of the loan. NYSERDA will then use these funds to continue further lending activities. No loans have been issued as of the writing of this report.

**f. Coordination with other Program Administrators**

NYSERDA coordinates with the Housing and Community Renewal's Weatherization Assistance Program (WAP), NYC Housing Preservation and Development (HPD), the U.S. Department of Housing & Urban Development (HUD), and others to leverage additional funding, as appropriate.

NYSERDA continues to work with utility program administrators to address coordination issues and minimize confusion where multiple incentive opportunities are available to customers. If the multifamily building owner chooses not to participate in NYSERDA's MPP, they may elect to participate in a utility rebate program. In this case, the GJGNY loan may be used in coordination with the utility rebate(s) provided a building audit has been completed that meets MPP standards.

Still, although GJGNY loans may be combined with either the NYSERDA or the utility incentives, NYSERDA and utility incentives cannot be combined with each other on the same measure. The GJGNY loan amount is determined by “netting-out” all applicable utility or NYSERDA incentives at the measure level from the total cost of the work.

***g. Program Area Budget, Goals & Metrics***

**Table 8.3: Multifamily Buildings Program Area Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Energy Audits	\$3,000,000	\$378,973	\$314,510	\$32,940	\$2,273,578
Implementation and Quality Assurance	\$1,550,000	\$1,215,585	\$130,810	\$150,000	\$53,605
Financing	\$11,142,550	-	-	-	\$11,142,550
<b>Total</b>	<b>\$15,692,550</b>	<b>\$1,594,557</b>	<b>\$445,320</b>	<b>\$182,940</b>	<b>\$13,469,733</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*

*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*

*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

**Table 8.4: Multifamily Buildings Goals & Metrics**

<b>Multifamily Audit Status as of 7/31/11</b>				
	<b>Affordable Housing</b>	<b>Market Rate Housing</b>	<b>Totals</b>	<b>Budget/Goal</b>
Number of Audit Applications	41	32	73	500
Audit Funds Encumbered	\$497,060	\$199,363	\$696,423	
Audit Funds Invoiced	\$259,840	\$130,593	\$390,433	\$3,000,000
Audits Completed	20	24	44	400
Number of Projects withdrawing from MPP after audit*	10	18	28	
Number of Projects in Pipeline**	31	14	45	
Projects Contracted (to have measures installed)	12	6	18	
Households (HH) associated with Projects Contracted	1,765	1,463	3,228	
kWh Savings of installed measures†	1,712,506	34	1,712,540	
MMBtu Savings of installed measures†	2,026	4,085	6,111	
Dollar savings of installed measures†	\$298,893	\$52,403	\$351,296	
kWh Savings of installed measures per HH†	970.26	0.02	530.53	460 kWh/year/unit***
MMBtu Savings of installed measures per HH†	1.15	2.79	1.89	13 mmbtu/year/unit***
Dollar savings of installed measures per HH†	\$169	\$36	\$109	\$293/year/unit***
<p><i>*MPP Projects must achieve a minimum of 15% in energy savings. Projects may choose to proceed outside MPP. Some may choose smaller work scopes that 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 audit would still be eligible to apply for GJGNY financing.</i></p> <p><i>**Projects that receive GJGNY-supported audits 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.</i></p> <p><i>*** The Operating Plan expresses anticipate energy and dollar savings on an average per project basis.</i></p> <p><i>† - Represents both a scope of work that is totally, or partially, installed at this time for projects. Energy savings associated with installed measures are included in this figure.</i></p>				

The maps below depict program and audit activity in the multifamily sector. Figure 1.4 illustrates the level of program activity across the state in the calendar year prior to the availability of GJGNY audits. Figure 1.5 illustrates the number of audit applications across the state since the launch of the audit component, but prior to the implementation of the CBO initiative. While 92 projects were completed across the state in the year prior to August 31, 2010, 76 applications were submitted since then. Other maps will be developed to support impact evaluation of the audits, financing and outreach activities of GJGNY.

**Figure 1.4 Green Jobs Green New York MPP Project Locations**

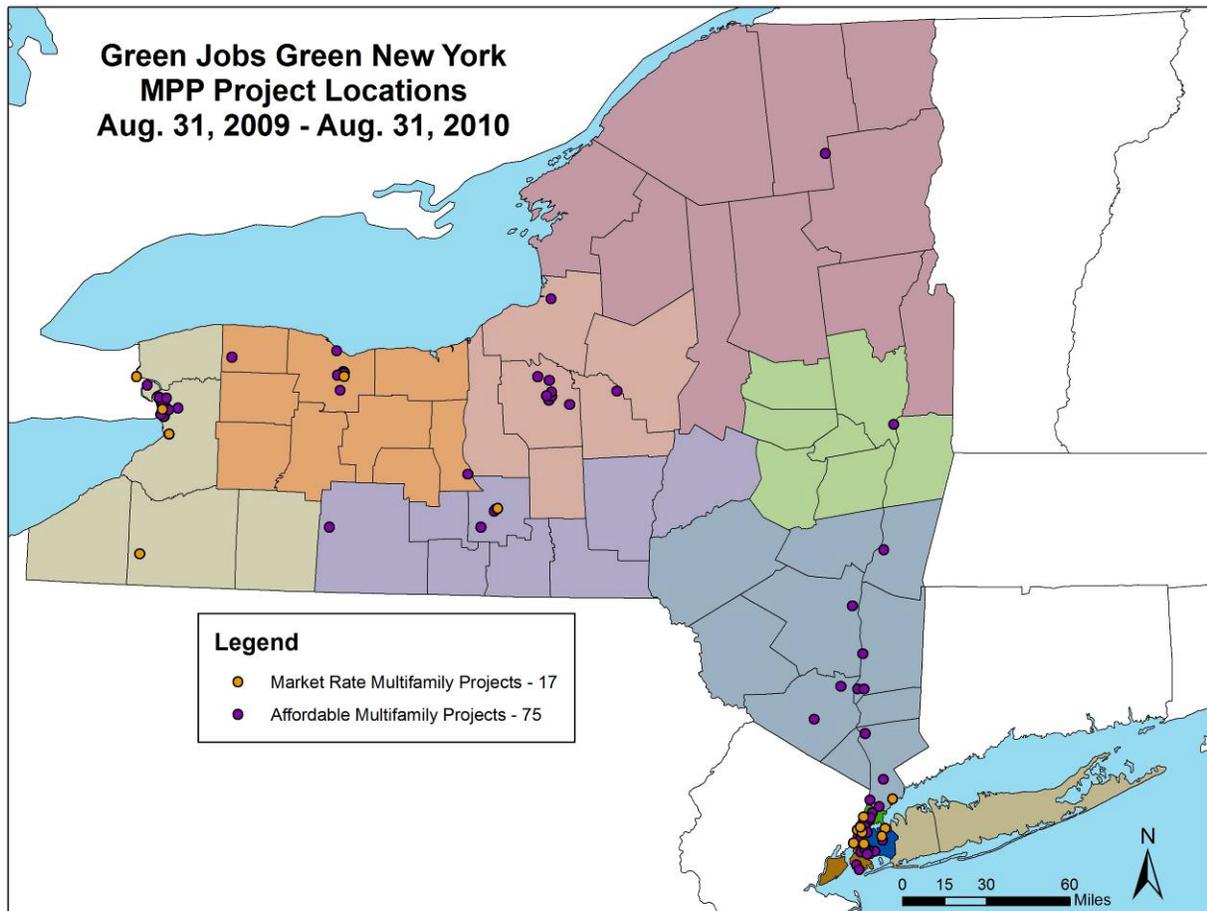
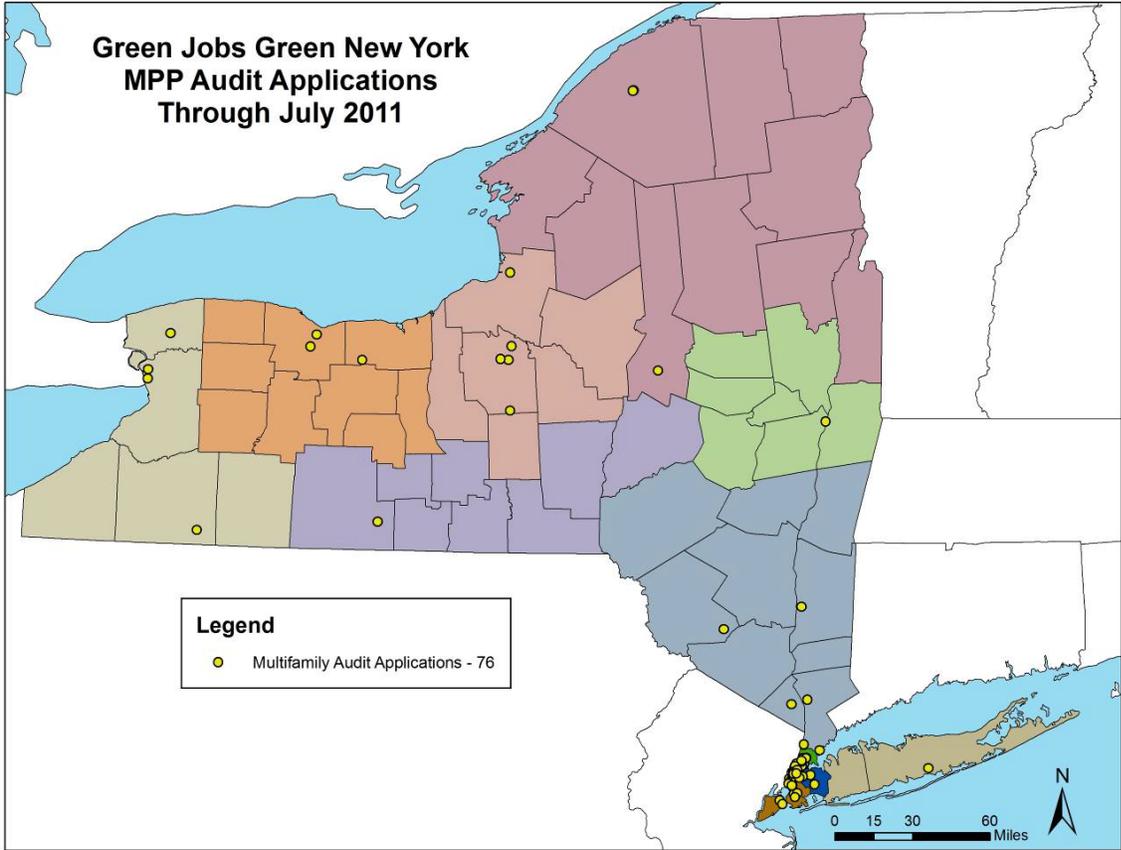


Figure 1.5 Green Jobs Green New York MPP Audit Applications



***h. Contracts Entered Into***

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 8.5 Contracts**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
18649	TRC Engineers Inc.	Program Implementer for Multifamily Building Performance Program	\$1,224,574	\$1,132,625	\$91,949	-
18591	Hawkins Delafield & Wood	Legal financial advisory services for GJGNY	\$28,000	\$27,153	\$847	-
19923	Lamont Financial Services	Financial Advisor Services	\$30,420	\$13,042	\$17,378	-
20662	Energy Programs Consortium	Energy Programs Consortium-Phase I	\$2,500	\$2,500	-	-
ST-9941	Taitem Engineering PC		\$60,900	\$40,264	\$20,636	-
20822	Concord Servicing Corporation	MF Master Loan Servicer for GJGNY	-	-	-	\$150,000
<b>Total</b>			<b>\$1,346,394</b>	<b>\$1,215,585</b>	<b>\$130,810</b>	<b>\$150,000</b>
<i>Details related to expenditures/encumbrances for Audits and Financing for this sector may be found in the Budget table.</i>						

## **IX. Small Business and Not-for-Profit**

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Implementation of the approved GJGNY Small Business/Not-for-Profit Operating Plan<sup>14</sup> began in the first quarter of 2011.

### ***a. Small Business & Not-for-Profit Target Audience***

In June 2011, the Small Business and Not-for-Profit Energy Efficiency Financing Program, began offering low-interest financing to small businesses with 100 employees or less and not-for-profits with any number of employees that have qualified energy audits. Small businesses and not-for-profits must own, lease or manage the building that their organization uses or occupies and have the authority to contract for the provision of qualified energy efficiency services<sup>15</sup> to the building. If the small business or not-for-profit leases the building space it must obtain permission from the building owner to seek financing through the Program.

### ***b. Implementation Strategy***

Qualified energy audits<sup>16</sup> are offered through NYSERDA audit contractors, utility service providers, and other qualified energy auditors<sup>17</sup>. NYSERDA will enter into participation agreements with lenders to provide small businesses and not-for-profits with access to energy efficiency project financing.

NYSERDA intends to issue a competitive solicitation to select Project Expeditor(s) to provide assistance to small business and not-for-profit customers to encourage implementation of energy audit recommendations. The Project Expeditor can help small business and not-for-profit customers understand energy audit recommendations, identify available NYSERDA incentives, and verify that the technologies and services included in energy contractor bids are consistent with technologies recommended in the energy audit.

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<sup>14</sup> The GJGNY Small Business/Not-for-Profit Operating Plan was presented to the Advisory Council for comment and subsequently approved by NYSERDA's Senior Management in October, 2010.

<sup>15</sup> Qualified Energy Efficiency Services are modifications to a Non-Residential Structure based upon recommendations contained in a Qualified Energy Audit performed under NYSERDA's FlexTech Audit program, by a utility program, or by a Qualified Energy Auditor. Qualified Energy Efficiency Services may include Prequalified and custom measures or services including but not limited to: Heating, Ventilation, Air Conditioning (HVAC), Lighting, Controls, Building Envelope, Domestic or Service Hot Water, or Business Processes (e.g. Kitchens, Laundries, Air Compression, etc.)

<sup>16</sup> Qualified Energy Audits includes either 1) a "Full Walkthrough Commercial Audit," which will provide customers with a thorough examination of energy use, a set of recommendations for qualified energy efficiency services, and include installation cost estimates, and associated energy and cost savings; or 2) a "Technology or Equipment Specific Commercial Audit," which will provide basic information on energy use, and include recommendations on one or more building systems, equipment replacement or upgrade opportunities.

<sup>17</sup> Qualified Energy Auditor is an individual who can either work for a NYSERDA or utility-contracted entity, or its subcontractor, under a NYSERDA or utility commercial energy efficiency program; or is a Certified Energy Auditor (CEA) or Certified Energy Manager (CEM) through the Associated Energy Engineers (AEE), with at least two years experience conducting commercial energy audits, or is an individual who conducts commercial energy audits that are reviewed and approved by a CEA or CEM with at least two years experience conducting commercial audits; or meets other criteria or requirements established by NYSERDA.

### ***c. Audit Fees***

The FlexTech program offers free GJGNY energy audits statewide for small businesses and not-for-profits with an average electric demand of 100kW or less and ten employees or less. A limited amount of federal American Recovery and Reinvestment Act (ARRA) funds were secured to provide free energy audits to small businesses and not-for-profits with greater than ten employees and an average electric demand of 100 kW or less.

### ***d. Financing***

NYSERDA enters into participation agreements with lenders in which NYSERDA provides 50% of the principal of the loan, up to \$26,000, at 0% interest. The lender provides the remaining principal of the loan at market rate. By participating in the loan program, New York State lenders will be able to offer blended interest rates at approximately half the market rate to their customers. The lender will then collect all loan payments and remit to NYSERDA its share of the loan. NYSERDA will then use these funds to continue further lending activities. In accordance with the passage of the New York Power Act, NYSERDA will raise its maximum share of the principal of a small business and not-for-profit loan to \$50,000.

### ***e. Additional NYSERDA Incentives***

NYSERDA also offers small businesses and not-for-profits incentives to reduce the cost of eligible qualified energy efficiency services. These services may include prequalified and custom measures or services, including but not limited to: Heating, Ventilation, and Air Conditioning (HVAC), Lighting, Building Envelope or Business Processes (i.e. kitchens, laundries, air compression etc.) The availability of incentives for this sector is also subject to funding levels from the Energy Efficiency Portfolio Standard (EEPS).

### ***f. Coordination with other Program Administrators***

New York State small businesses and not-for-profits can use Qualified Energy Audits provided by regulated and unregulated utility service providers to apply for energy efficiency financing through the GJGNY Small Business and Not-for-Profit Energy Efficiency Financing Program. Through the financing program, small businesses and not-for-profits will be able to finance the cost of approved energy efficiency improvements that are not covered by estimated utility and NYSERDA incentives.

NYSERDA is coordinating with utilities to incorporate the financing opportunity into marketing and outreach materials. NYSERDA is also working with the Long Island Power Authority (LIPA) to encourage project implementation in the LIPA service territory. LIPA will make customers aware of NYSERDA's GJGNY Small Business and Not-for-Profit Energy Efficiency Financing Program.

***g. Program Area Budget, Goals & Metrics***

**Table 9.1: Small Business and Not-for-Profit Program Area Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Energy Audits	\$5,600,000	\$428,405	\$3,471,597	-	\$1,699,998
Implementation and Quality Assurance	\$4,800,000	\$64,042	\$77,195	\$240,000	\$4,418,763
Financing	\$13,274,917	-	-	-	\$13,274,917
<b>Total</b>	<b>\$23,674,917</b>	<b>\$492,447</b>	<b>\$3,548,792</b>	<b>\$240,000</b>	<b>\$19,393,678</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*  
*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*  
*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

**Table 9.2: Small Business and Not-for-Profit GJGNY Energy Audit Goals & Metrics**

<b>Program Element</b>		<b>Performance as of 7/31/11</b>	<b>Goals</b>
Audits	GJGNY	319	2,100
	ARRA	130	800
	Business Partners	-	2,100
Completed Projects*		-	1,296
Loans Issued		-	1,000
Anticipated Energy Savings (kWh)**		-	18,000 kWh per year/ completed project
Anticipated Energy Savings (mmBtu)**		-	160 mmBtu per year/ completed project
Anticipated Dollar Savings**		-	\$5,200 per year/ completed project

\* Typically, project installation for the small business and not-for-profit sector can take months to years after an audit is complete.  
 \*\* Projects that receive GJGNY-supported audits 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.

### ***h. Contracts Entered Into***

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 9.3: Small Business/Not-for-Profit Contracts**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
18591	Hawkins Delafield & Wood	Legal financial advisory services for GJGNY	\$42,000	\$40,729	\$1,271	-
19923	Lamont Financial Services	Financial Advisor Services	\$45,630	\$19,563	\$26,067	-
20662	Energy Programs Consortium	Energy Programs Consortium- Phase I	\$3,750	\$3,750	-	-
24210	Kema Services Inc.	FlexTech Energy Audit Support	\$49,857	-	\$49,857	-
20822	Concord Servicing Corporation	EES Master Loan Servicer for GJGNY	-	-	-	\$240,000
<b>Total</b>			<b>\$141,237</b>	<b>\$64,042</b>	<b>\$77,195</b>	<b>\$240,000</b>

*Details related to expenditures/encumbrances for Audits and Financing for this sector may be found in the Budget table.*

### ***i. Recommendations for Improvements***

The GJGNY Act of 2009 defines an applicant eligible to apply for small business and not-for-profit energy efficiency financing as a non-residential building owner, lessee, or manager that has the legal authority to contract for the provision of Qualified Energy Efficiency Services to the building. This definition limits the ability of NYSERDA’s Small Business and Not-for-Profit Energy Efficiency Financing Program to provide access to low-cost energy efficiency financing to the thousands of small business and not-for-profit customers that use or occupy space in mixed-use buildings or buildings with multiple tenants. This definition has the potential to limit the program’s ability to reach customers in urban areas, where entities often lease space within a building, but do not lease an entire building for their business or organization. NYSERDA will monitor how this issue impacts project implementation rates over the next year, and if warranted, will recommend a statutory amendment to address it.

## **X. Evaluation**

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The GJGNY Evaluation Operating Plan was approved by NYSERDA's Officers during the third quarter of 2010,<sup>18</sup> and NYSERDA has engaged its third-party evaluation contractors to develop more detailed evaluation plans for GJGNY programs and to begin implementation of these plans. Given the optimal timing of program evaluation and the need for program activities to ramp up prior to conducting significant assessments of progress, activities have focused on evaluation design, development and planning. However, a logic model report has been completed for the entire program, and a major market baseline and process evaluation is underway for some program components. This section describes evaluation activities that are currently completed, underway and planned. Future annual reports will provide updates to these activities and evaluation contractor reports will be posted on NYSERDA's website for public use once completed.

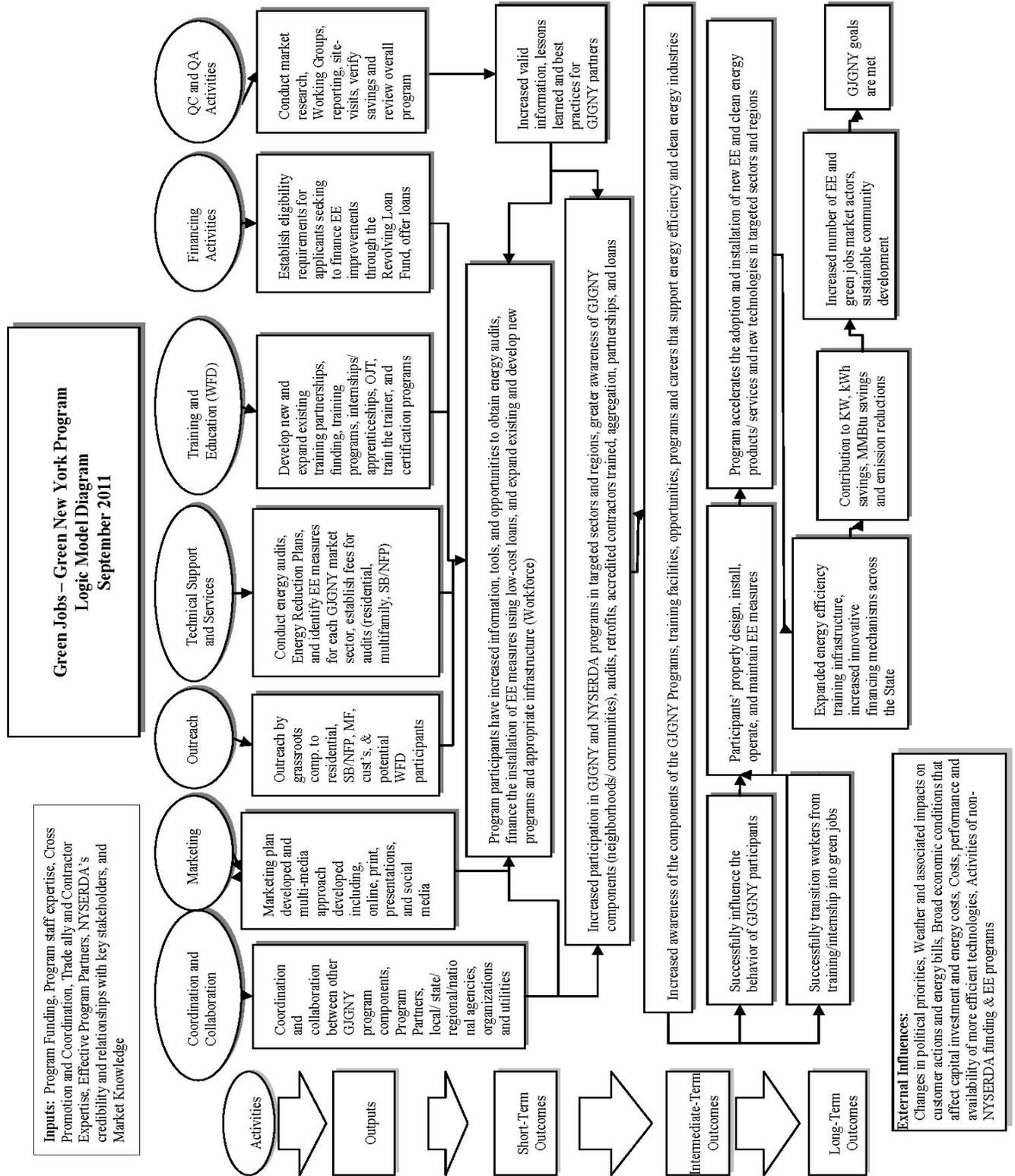
### ***a. Completed Evaluation Activities***

As defined in the Evaluation Operating Plan, a logic model is typically one of the first steps in initiating evaluation activities. NYSERDA and its evaluation contractors commenced program logic modeling activities in March 2011. The program logic model process includes information gathering from program staff and results in a report that clearly documents and defines program goals, inputs, outputs, outcomes, barriers, external influences, and indicates research issues for future evaluation. A logic model diagram which encapsulates many of these elements is included as Figure 2.1. The full logic model document was completed in September 2011 and will be available on the NYSERDA website. The program logic model is useful to program staff, stakeholders and evaluators. Using the program logic model, evaluation is better positioned to set market progress indicators and collect time-series measurements of those indicators to determine the effectiveness of the program in transforming or developing markets for energy efficiency.

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<sup>18</sup> For more information, see the [Green Jobs – Green New York Operating Plan for Program Evaluation](#) available on NYSERDA's website.

**Figure 2.1 Green Jobs Green New York Logic Model Diagram**



## ***b. Evaluation Activities Currently Underway***

Market Characterization/Assessment (MCA) and Process Evaluation activities commenced in May 2011. The objective of the MCA evaluation is to track changes in markets over time with a specific focus on market indicators that are likely to be impacted by program offerings. The MCA evaluation collects and compiles descriptive data on the markets served or targeted by the program and describes and quantifies the various market actors and end users involved and their roles in decision making. This evaluation will assist in the comprehensive understanding of current and emerging markets, market structures, and market actors and provide baseline and background information to enable NYSERDA to define, deliver, and evaluate programs for these target markets.

The process evaluation will help staff to understand program efficiency and effectiveness, the degree to which program activities are in alignment with program goals, the barriers to achievement of program goals, and the influence of program activities on participant and non-participant perceptions of the program. The MCA and Process evaluation is being led by NYSERDA's evaluation contractor, NMR Group (as a subcontractor to both Navigant Consulting and Research Into Action), and reports are expected to be completed in the first quarter of 2012.

### **1. Interim Findings**

To understand the reasons for the high volume of project completions between January and March 2011, following the mid-November 2010 introduction of the GJGNY free or reduced-cost audits and financing, NMR conducted ten in-depth telephone interviews with program contractors. The in-depth interviews probed the participating contractor's understanding of their role, knowledge of program offerings, perceived reasons for the high project volumes during January to March 2011, program participation motivations and barriers, program strengths and opportunities for improvement, methods of financing utilized by consumers, and other factors influencing participation. Preliminary findings are under review by NYSERDA program staff and will be included in the complete analysis and report on the MCA and Process evaluation effort.

### **2. Program Staff and Implementation Contractor Interviews**

NMR conducted twelve open-ended interviews with program staff, program implementation contractors, and utility program administrators. The process and MCA topics covered in the interviews include, but are not limited to, the following:

- Key roles and responsibilities of program implementation staff involved in program delivery
- Coordination and protocols for internal NYSERDA program staff communications and for external communications with CBOs, utilities, contractors, etc.
- Steps in enrollment, audits, project application and approval, financing application and approval, measure implementation, and project and participant tracking
- Identification of program activities, changes that have occurred, and rationales for those changes

NMR worked closely with NYSERDA evaluation staff to coordinate interview question development, identify appropriate contacts to be interviewed, and conduct interviews. The findings of these in-depth interviews will be included in the final evaluation report that is expected in the first quarter of 2012.

**a) Constituency-based Organization (CBO) Interviews**

The team will conduct interviews with constituency-based organizations (CBOs) conducting outreach and training under contract to the program. The interviews with CBOs will address topics that include but are not limited to:

- Experience with contracting process
- Planned approach to implementing the GJGNY residential program elements
- Level of market awareness and interest in GJGNY offerings including free or reduced cost audits and financing
- Difficulties encountered in program implementation and steps taken to overcome them
- Overall program strengths and areas for improvement

NMR worked closely with NYSERDA evaluation staff to coordinate interview question development, identify appropriate contacts to be interviewed, and conduct interviews. The findings of these interviews will be included in the final evaluation report.

**b) Homeowner Surveys**

The evaluation team will conduct interviews with a sample of homeowners including:

- HPwES program participants who received or planned audits with GJGNY financing and without GJGNY financing
- Audit only customers; completed an audit but did not go on to complete a HPwES project
- Non-participating End-use Customers who own their own homes, have not participated in GJGNY or HPwES and have either done energy efficient upgrades within the past one year or are planning upgrades within the year

The overall goals of the surveys will be to understand attitudes toward energy efficiency and energy efficiency upgrades, program awareness, and reasons for participating or not-participating in the program.

The NMR team worked closely with NYSERDA evaluation and program staffs to develop survey guides and identify statistically significant samples for the homeowner surveys. To estimate program uptake by region the sample will be divided into regions: Upstate A, Upstate B, and Downstate. Additionally, an oversample of low- to moderate-income households is planned. This oversample will assist in establishing a baseline for this target population. The surveys are in various stages of development and the data collection is scheduled for completion by the end of the third quarter of 2011.

**c. Evaluation Activities Planned**

## 1. Multifamily

Given the timing of the rollout and startup of the multifamily financing component a detailed evaluation was not conducted within this reporting period. The evaluation needs identified in the program logic model and identified in discussions with program staff will be addressed in future evaluation studies.

## 2. Small Business and Not-for-Profit

Given the timing of the rollout and startup of the Small Business/Not-for-Profit component a detailed evaluation was not conducted within this reporting period. The evaluation needs identified in the program logic model and identified in discussions with program staff will be addressed in future evaluation studies.

### d. Budget

**Table 10.1: Evaluation Budget**

	<b>Budget</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>	<b>Balance</b>
Internal costs	\$5,600,000	\$142,411	-	-	\$4,907,810
Evaluation consultants		\$48,632	\$471,147	\$30,000	
<b>Total</b>	<b>\$5,600,000</b>	<b>\$191,043</b>	<b>\$471,147</b>	<b>\$30,000</b>	<b>\$4,907,810</b>

*Expended: Contractor Invoices processed for payment by NYSERDA.*  
*Encumbered: Remaining funding obligated under a contract, purchase order or incentive award.*  
*Pre-encumbered: Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.*

### e. Contracts

External contracts related to the implementation of the GJGNY Program are detailed below.

**Table 10.2: Evaluation Contracts**

<b>PO#</b>	<b>Contractor</b>	<b>Description</b>	<b>PO Amount</b>	<b>Expended</b>	<b>Encumbered</b>	<b>Pre-encumbered</b>
19112	Navigant Consulting	Market Characterization & Assessment Evaluation	\$189,757	\$29,338	\$160,419	-
ST9835-1	Research Into Action	Process Assessment and Evaluation Management	\$80,042	\$18,915	\$61,127	-
ST9836-1	Megdal & Associates	Impact Assessment	\$50,000	-	\$50,000	-
ST9942-1	Apprise Incorporate	Survey Data Collection	\$79,995	\$379	\$79,616	-
24594	NMR Group, Inc.	General Evaluation Assistance Contract	\$119,985	-	\$119,985	-
9836-1	Megdal & Associates	Impact Assessment	-	-	-	\$10,000
ST9942	Apprise, Incorporated	Survey Data Collection	-	-	-	\$20,000
<b>Total</b>			<b>\$519,779</b>	<b>\$48,632</b>	<b>\$471,147</b>	<b>\$30,000</b>

*Details related to the expenditures/encumbrances for Audits and Financing for this sector may be found in the Budget table.*

# **Attachment A. Green Jobs – Green New York Advisory Council Meeting Agendas**

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## December 9, 2010

- I. Welcome & Introductions
- II. Financing Update
- III. Launch of GJGNY for 1-4 Family Homes Sector
- IV. Status Updates
  - a. Small Business/Not-for-Profit
  - b. Multifamily
  - c. Outreach & Marketing
- V. Public Input
- VI. Next Steps
  - a. 2011 Advisory Council Meetings  
March 16, 2011 at 1:00 pm  
June 15, 2011 at 1:00 pm

## March 16, 2011

- I. Welcome & Introductions
- II. Better Building Grant Update
- III. Mapping of NYSERDA Residential Projects
- IV. Status Update
  - a. Outreach
  - b. One- to Four-Family Homes
  - c. Small Business/Not-for-Profit
  - d. Multifamily
  - e. Workforce Development
- V. Monthly Updates
- VI. Public Input
- VII. Next Steps

June 15, 2011

- I. Welcome and Introductions
- II. Financing
  - a. Status of Residential Applications and Approvals
  - b. Proposed New Residential Underwriting Criteria
  - c. Additional Residential Loan Originators
  - d. HUD PowerSaver
  - e. RFP 2228 – Better Buildings Sub Grants to Small Municipalities
- III. Status Updates
  - a. Small Business/Not-for-Profit
  - b. One- to Four-Family
  - c. Workforce Development
    - 1. Worker Readiness Training
    - 2. PON 2033
  - d. Outreach and Marketing
    - 1. RFP for CBOs
- IV. GIS Mapping
- V. Public Input
- VI. Next Steps
  - a. Next Advisory Council Meeting  
September 14, 2011 at 1:00 pm
  - b. Annual Report

# Attachment B. Green Jobs - Green New York Working Group Members

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## Workforce Development Working Group Members

Adele Ferranti, Ruth Horton, Rhona Saffer, Vicki Colello, Kim Lenihan, Alison Neligan,  
Lee Butler, Lori Clark, Kelly Tyler, and Jaques Roth, NYSERDA

Jeff Jones, Apollo Alliance

Larry Zarker, Building Performance Institute

Rebecca Lurie, Center for Worker Education

Chloe Tribich, Center for Working Families

Claudia Edwards, Community Environmental Center

Lisbeth Sheperd, Clean Energy Corps

Mike Bobker, CUNY BPL

Ron Kamen, Earth Kind Energy

Richard Kornbluth, Building Performance Contractors Association/NYS (BPCA/NYS)

Paula Hayes, Hudson Valley Community College

Rick Cataldo, IBW 236

Myles Lennon, Laborers International Union of North America

Melinda Mulawka, NYC Workforce Investment Board

Phil Larocque, NYS Builders Association

Tony Joseph, NYS Department of Labor

John Levey, Oil Heat Associates

Jackie Gentile, Peter Young Housing Industries, Treatment

James Barry, SEIU Local 32BJ Thomas Shortman Training Programs

William Bringham, Small Business Development Corporation

Miquela Craytor, Sustainable South Bronx

Virginia Carrig, Ulster County BOCES

Paul Shatsoff, Workforce Development Institute

David Hepinstall, Association for Energy Affordability, Inc.

Barbara Drago, State University of New York

Bill Macchione, Empire State Carpenters

Michael Dunseith, Green Jobs Training Center

## Outreach & Marketing Working Group Members

Tom Lynch, Kevin Carey, Susan Moyer, Jeffrey Gordon, Heather Saunders, Ryan  
Moore, Kelly Tyler, Kelli Herndon, Robert McKeon, Kelvin Keraga, Angela  
Bush, Tina Blowers, and Susan Andrews, NYSERDA

Samuel Sage, Atlantic Sales

Chloe Tribich, Center for Working Families

Corinne Hammons, Community Development Corporation Of Long Island

Nancy Peters and James Plastiras, DHCR

Christopher Pinheiro, Department of Labor

Outreach & Marketing Working Group Members (continued)

Ed Maitino, ESDC  
Michele Mattingly, Fiscal Policy Institute  
William Johnson, Green America-Public Private Partnership  
Alan Hippy, Housing Assistance of Essex County  
Dan Miner, Long Island City Business Development Corporation  
Aamaria Archila, Make the Road NY  
Chris Hinseley, Metrojustice  
Taleigh Smith, NWBCCC  
Laura Haight, NYPIRG  
Adrian Gonzales, Orange County Rural Dev. Adv. Corp  
Lauren Melodia, Open Society Institute Fellow  
Wendy Fleischer, Pratt Center for Community Development  
Eric Walker, PUSH Buffalo  
Mike Dunleavy, RECAP  
Sheila Somashekhar, Sustainable South Bronx  
Art Wheaton, WNY Apollo Alliance  
Mike Patterson, Youth Constructive Initiative  
Brian Vattimo, New York Power Authority

Finance Working Group Members

John Ahearn, Jeff Pitkin, Ruth Horton, Marilyn Dare, Pat Fitzgerald, and Luke Falk,  
NYSERDA  
Peter Krajsa, AFC First Financial Corporation  
David Brown IV, Change Investments Management, LLC  
Emmaia Gelman, Center For Working Families  
Anthony Belsito, Department of Public Service  
Chris Kallaher, Direct Energy  
Tom Peters, Empire State Petroleum Association  
Nancy O'Brien, Energy Finance Solutions  
Howard Banker, Energy Programs Consortium  
George McCarthy, Ford Foundation  
Henry Lanier, Forsyth Street Advisors  
Kerry Quaglia, Home Headquarters, Inc  
Glenn Sharpe, IQ Venture Partners, Inc.  
Dorian Dale, Long Island Green Homes  
William Codner and Jed Sabio, National Grid  
Sarah Ludwig, Neighborhood Development Advocacy Project  
Neal Parikh, NYC Office Of Sustainability  
Arlo Chase, NYS Housing Finance Agency  
Greg Hale, NRDC  
Margot Brandenburg and Brinda Ganguly, Rockefeller Foundation

#### One- to Four-Family Homes Working Group Members

James Reis, John Ahern, John Schott, Mark Wyman, Michael Levitz, Bryan Henderson,  
Lee Butler, and Andrew VanGorder, NYSERDA  
Richard Kornbluth, Building Performance Contractors Association/NYS (BPCA/NYS)  
Larry Zarker, Building Performance Institute (BPI)  
David Palmer, Emmaia Gelman, Center for Working Families (CWF)  
Rick Cherry, Community Environmental Center (CEC)  
Mark Dyen, Conservation Services Group (CSG)  
Carlene Pacholczak, Department of Public Service  
Damian Hodgkinson, Efficiency First  
Mike Lyons, Honeywell Utility Solutions (HUS)  
Myles Lennon, Laborers International Union of North America  
Sammy Chu, Long Island Green Homes  
Lisanne Altmann, Long Island Power Authority (LIPA)  
Lisa Tallet, National Grid Generation d/b/a National Grid  
Brian Paterson, New Buffalo Impact (NBI)  
Kevin Schmalz and Betty Weis, New York State Electric & Gas Corporation/Rochester  
Gas and Electric Corporation

#### Multi-Family Working Group Members

Pat Fitzgerald, Lindsay Robbins, Frank Mace, Jim Reis, Peggie Neville, Joey DeRosa,  
Michael Colgrove, and Luke Falk, NYSERDA  
Fred Fellendorf, Buffalo Energy  
Andy Padian, CPC  
Jodi Smits Anderson, DASNY  
Sam Marks, Deutsche Bank  
Dan Buyer, DHCR  
Abby Sigal, Enterprise  
Amy Barr, National Grid  
Michael Weisberg, M-Core Credit Corporation  
Margret Gans, PEACE  
Bob Noonan, RealLease  
Paul Rogers, Siemens

#### Small Business Working Group Members

Ruth Horton, Brian Platt, Marilyn Dare, Susan Andrews, Kim Lenihan, Peter Savio, and  
Liz Hanna, NYSERDA  
Les Bluestone, Blue Sea Development, Inc.  
Kate Shackford, Bronx Overall Economic Development Corporation  
Michael Conway, C.J. Brown Energy Engineering & Architecture, PC  
Terry Zima, Capitol District Supply Company  
Anthony Capese, Central Avenue (Albany) BID  
Michael Spector, Central Hudson Gas & Electric  
Jessica DiDonato, Con Edison

Small Business Working Group Members (continued)

Elizabeth Berger, Downtown Alliance (Lower Manhattan BID)  
Steve Cohen, Empire State Development  
Tom Peters, Empire State Petroleum Association  
Abby Jo Sigal, Enterprise Community Partners  
Abraham Neuhaus, Greenlight Energy Conservation  
Dennis Landsberg, L&S Energy Services, Inc.  
Michael Healy, Lime Energy  
John Franceschina, Long Island Power Authority  
Jon Gruchala, National Fuel Gas  
Jim Stapleton, National Grid  
Tzipora Lubarr, New York Industrial Retention Network  
Nicola Coddington, Interfaith Power & Light  
James King, NY Small Business Development Center  
Robert Melvin, Orange and Rockland Utilities, Inc.  
John D'Amico, TCBA Watson Rice LLP

Working Group of the Advisory Council on Aggregation

Dan Buyer, DHCR  
Dave Johnson, LIUNA  
David Hepinstall, AEA  
Dick Kornbluth, Building Performance Contractors Assoc.  
Emmaia Gelman, Center for Working Families  
Eric Walker, PUSH Buffalo  
Judy Butler, Butler Building Performance  
Les Bluestone, Blue Sea Construction  
Mike Atkins; Concerned Citizens Action  
Mario Musolino, NYS DOL  
Rick Cherry, Community Environmental Center  
Tony Joseph; NYS DOL  
William A Johnson, GAPPP  
Hugo Salinas, New York Energy Conservation  
Karen Villeneuve, NYSERDA  
Dave Munro, NYSERDA  
Kevin Carey, NYSERDA  
Ruth Horton, NYSERDA  
John Jones, NYSERDA  
Peggie Neville, NYSERDA  
Pat Fitzgerald, NYSERDA  
Susan Moyer, NYSERDA

# Attachment C. New York State Green Jobs Survey Preliminary Findings



## New York State Green Jobs Survey *Overview*

### *Introducing the Green Jobs Study*

As part of the American Recovery and Reinvestment Act of 2009, the New York State Department of Labor was awarded a \$1.1 million grant from the U.S. Department of Labor to conduct research on the green labor market in New York State.

This research goes hand-in-hand with New York State's commitment to increasing energy efficiency and maximizing growth in its clean energy sector, in keeping with the Energy Efficiency Portfolio Standard; the Renewable Portfolio Standards; the Regional Greenhouse Gas Initiative; and the State Energy Plan.



As one part of the study, the New York State Department of Labor and its research partners surveyed 20,000 businesses in autumn 2010 to determine the number of and types of green jobs in the State.

### *Questions Answered*

Policymakers, researchers and the public have a variety of questions about the green labor market in New York State. The Green Jobs Survey begins the work of demystifying green by answering the following questions for several industry clusters involved with producing goods or delivering services that increase energy efficiency or generate renewable energy.



- **How many firms have green employees?**
- **How many workers are green?**
- **How do firms expect their green employment to change?**
- **What green credentials do firms prefer?**
- **Which occupations are green or greening?**
- **What are some key green occupations?**
- **For which occupations do firms have difficulty recruiting green workers?**
- **Which green occupations require more training, and how do workers get this training?**



## Defining Green

While 'green' touches nearly every sector of the economy, such as agriculture, conservation, education, energy, transportation, etc., New York State's Green Jobs Survey focused on two specific areas:

### Renewable Energy and Energy Efficiency

- **Green economic activities<sup>1</sup>**: producing goods or delivering services that increase energy efficiency or generate renewable energy.
- **Green employer**: an employer that engages in green economic activities.
- **Green employee**: a worker primarily engaged in producing green products or services.

Future research may include other green sectors such as pollution abatement or waste remediation, which would require more expansive green definitions.

## Industry Spotlight

The Green Jobs Survey was sent to firms in seven industry clusters<sup>2</sup>. For now, the findings are focused on the following four:

- ✓ **Construction Trades**
- ✓ **Building Services**
- ✓ **Component Manufacturing**
- ✓ **Professional Services**

## Research Partners

- ***The New York City Labor Market Information Service at the City University of New York's Graduate Center***
- ***The Energy and Environmental Technology Applications Center at the University at Albany's College of Nanoscale Science and Engineering***
- ***The Advanced Energy Center at Stony Brook University***

## Survey Conventions

While every effort was made to ensure that the survey findings are representative<sup>3</sup>, please note:

- As with all surveys, results are subject to sample and non-sample sources of error
- Estimates are based on employer self-identification and have not been independently verified
- Firm and employment estimates are rounded to the nearest ten
- Percentages are calculated from unrounded data and rounded to the nearest percentage point

## New York State Green Jobs Survey Finding #1: Prevalence

### Statewide, by Industry Cluster, for 2010 4<sup>th</sup> Qtr



Firms Statewide	Component Manufacturing	Professional Services	Building Services	Construction Trades
Number with Green Employees	260	2,840	4,110	7,370
Total Number in Cluster	1,660	10,300	25,540	26,980
<b>Percent with Green Employees</b>	<b>16%</b>	<b>28%</b>	<b>16%</b>	<b>27%</b>

In these four clusters alone, there are over 14,500 firms that have one or more employees primarily engaged in producing goods or delivering services that increase energy efficiency or generate renewable energy.

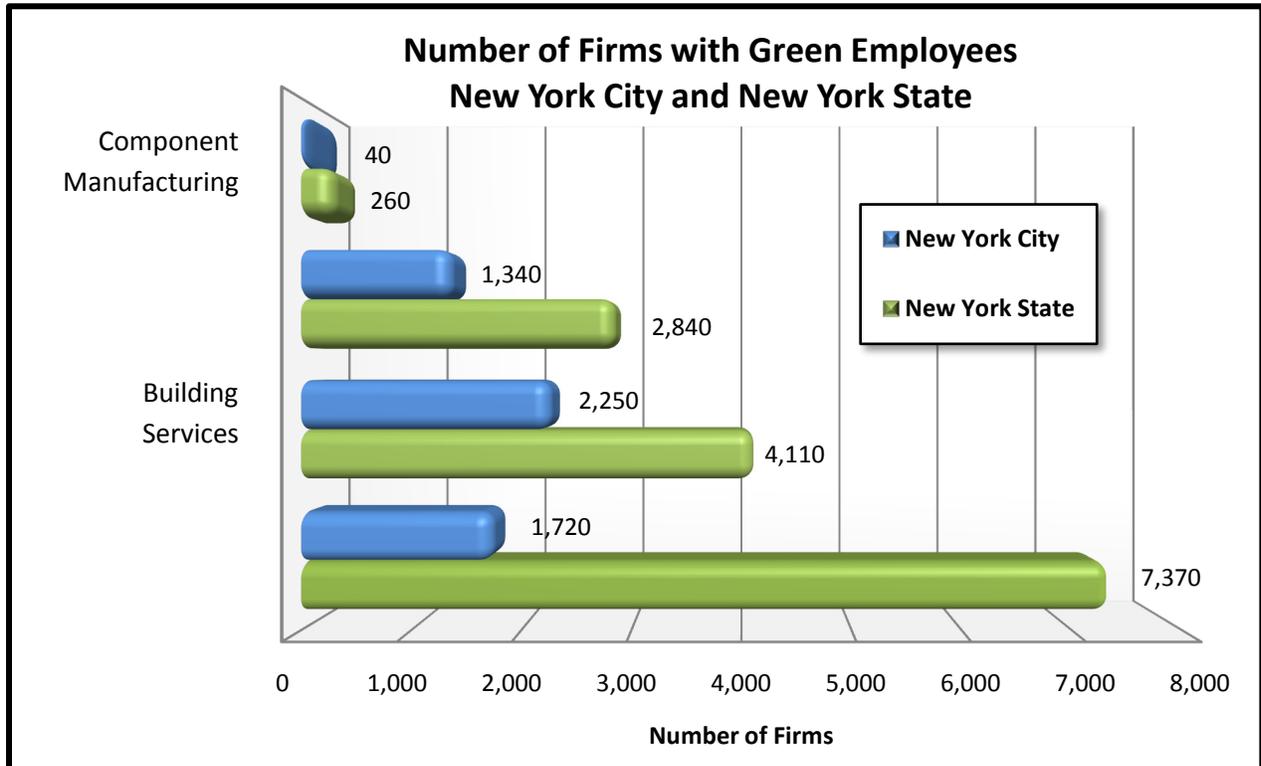
The smallest industry cluster listed above – Component Manufacturing – also has the fewest firms with green employment whereas the largest – Construction Trades – has the most. In the same vein, Building Services is the second largest cluster and has the second highest number of firms with green employment, while Professional Services<sup>1</sup> ranks third on both measures.

A different picture emerges when clusters are ranked by share of firms with green jobs. Professional Services tops the list with 28% of its firms having green employment. Construction Trades is a close second with 27%, and Building Services and Component Manufacturing are tied at 16%.

<sup>1</sup> The Professional Services industry cluster excludes legal services.

## New York State Green Jobs Survey Finding #1: Prevalence

### New York City, by Industry Cluster, for 2010 4<sup>th</sup> Qtr



Green Firms	Component Manufacturing	Professional Services	Building Services	Construction Trades
In New York City	40	1,340	2,250	1,720
In New York State	260	2,840	4,110	7,370
<b>Share<sup>2</sup> in New York City</b>	<b>17%</b>	<b>47%</b>	<b>55%</b>	<b>23%</b>

Although over 40% of New York State’s businesses are in New York City, this proportion does not hold true across every industry. For example, New York City has 40% of the State’s Professional Services companies, but only 30% of the State’s Construction Trades firms. Building Services has the largest share of firms located in New York City (63%) and Component Manufacturing has the smallest (17%).

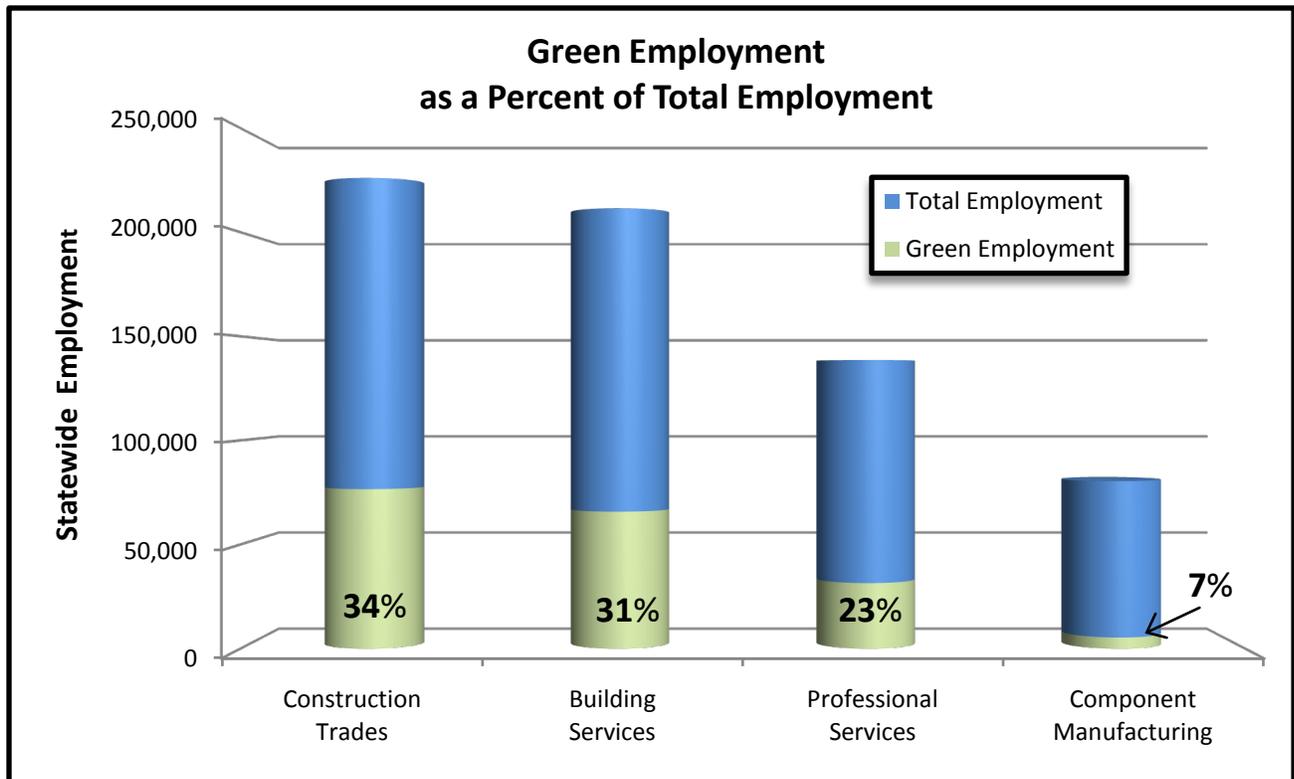
In New York City, over 5,000 green firms account for approximately:

- 17% of all green Component Manufacturing firms in New York State
- 47% of all green Professional Services firms in New York State
- 55% of all green Building Services firms in New York State
- 23% of all green Construction Trades firms in New York State

<sup>2</sup> Percentages are calculated from unrounded data.

## New York State Green Jobs Survey Finding #2: Green Employment

### Statewide, by Industry Cluster, for 2010 4<sup>th</sup> Qtr



Statewide	Construction Trades	Building Services	Professional Services	Component Manufacturing
Green Employment	76,600	65,770	31,490	5,360
Cluster Employment	226,020	211,460	138,600	80,450

Statewide, there are nearly 180,000 green workers in these four clusters alone.

Among selected industry clusters, Construction Trades not only has the greatest number of workers (226,020), but also the greatest number of green workers<sup>3</sup> (76,600) and the highest incidence of green employment (34%).

Workers engaged in green economic activity make up 31 % (65,770) of Building Services' total employment of 211,460 and 23% (31,490) of Professional Services'<sup>4</sup> total employment of 138,600.

Component Manufacturing is the smallest of four clusters, with only 80,450 workers. This cluster also has the fewest green workers (5,360) and has the lowest incidence of green employment (7%).

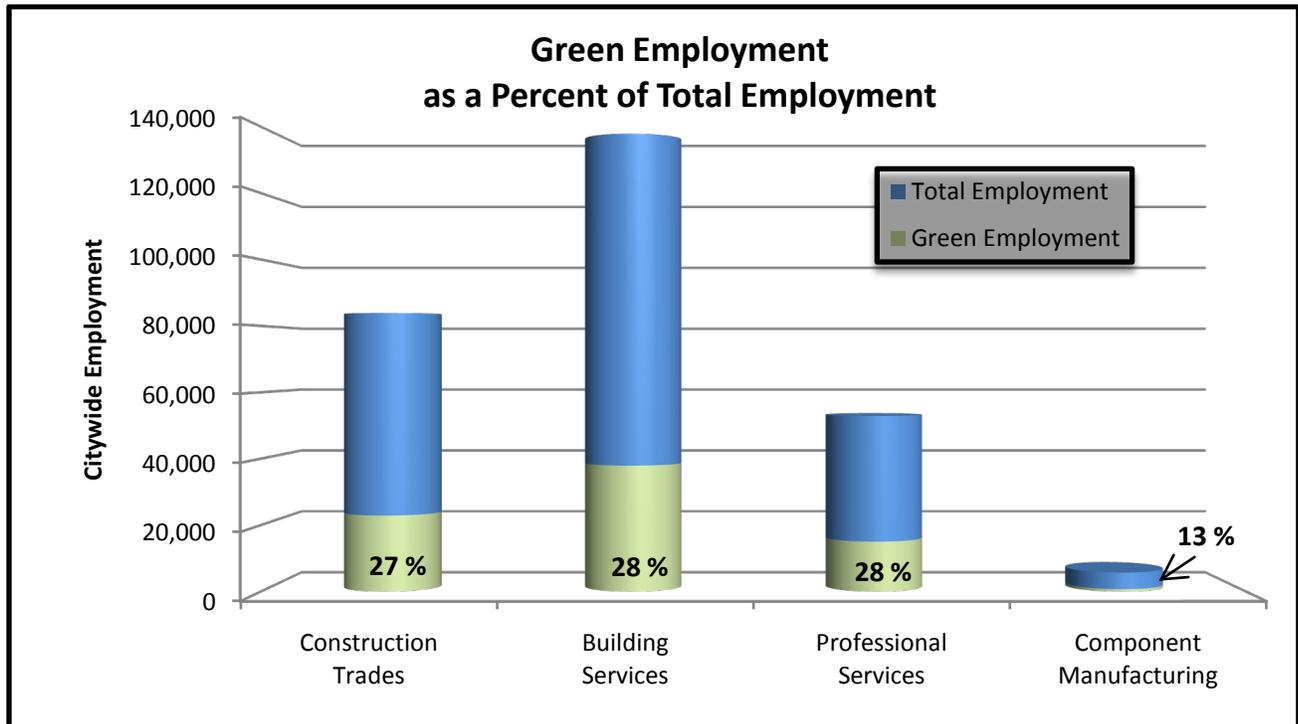
### **New York State Green Jobs Survey Finding #2:**

<sup>3</sup> For the purpose of this study, *green workers* are defined as workers "primarily engaged in producing green products or services."

<sup>4</sup> The Professional Services industry cluster excludes legal services.

## Green Employment

### New York City, by Industry Cluster, for 2010 4<sup>th</sup> Qtr



Citywide	Construction Trades	Building Services	Professional Services	Component Manufacturing
Green Employment	22,900	37,940	15,050	760
Cluster Employment	83,880	137,840	52,910	5,750

Over 75,000 green workers in these four clusters are employed by firms located in the five boroughs.

#### ***Spotlight: New York City Building Services***

In New York City, the Building Services cluster is composed of 137,840 total workers. It is estimated that 28% (37,940) are green workers - a slightly lower incidence than Building Services statewide (31%).

With a regulatory environment in New York City that encourages green practices in the Building Services Industry, one might expect a higher percentage of green employment. However, there is a lag in green activity by the small<sup>5</sup> employers that encompass 96% of the firms and account for 46% of the employment in Building Services in New York City.

Only 13% of small firms in New York City report engaging in green economic activities, a lower share than otherwise comparable larger employers (29%). Also, these small firms were less likely to engage in green economic activities than similarly-sized Building Services firms across the rest of the state (19%).

<sup>5</sup> Fewer than 25 employees

**New York State Green Jobs Survey Finding #3:  
Green Expectations**

**Statewide, by Industry Cluster, for 2010 4<sup>th</sup> Qtr**

**Expected Changes in Green Employment, by Firm, Over the Next Year**

<b>One Year Change</b>	<b>Building Services</b>	<b>Construction Trades</b>	<b>Component Manufacturing</b>	<b>Professional Services</b>
<b>For Firms with Green Employees, what is their expected change in green employment?</b>				
Grow Larger	26%	30%	42%	38%
Unchanged	50%	42%	39%	45%
Become Smaller	1%	4%	3%	3%
Don't Know	24%	23%	17%	14%
<b>Number of Firms</b>	<b>4,110</b>	<b>7,370</b>	<b>260</b>	<b>2,840</b>
<b>For Firms without Green Employees, do they expect to have green employment?</b>				
Yes	4%	7%	3%	4%
No	71%	57%	70%	74%
Don't Know	25%	36%	27%	22%
<b>Number of Firms</b>	<b>21,430</b>	<b>19,600</b>	<b>1,400</b>	<b>7,460</b>

Among firms with green employees, Component Manufacturers are most likely to anticipate an increase in green employment – 42% foresee having a larger green workforce next year. Half of these firms expect their number of green workers to be ‘larger’ and half expect their number to be ‘significantly larger.’

Among firms with green employees, 26% of Building Services, 30% of Construction Trades, and 38% of Professional Services expect their green employment to grow.

No change in green employment over the year is the most common prediction by firms across all four industry clusters. This is the case for both firms with (‘Unchanged’) and for firms without (‘No’) green employees, though a much more common occurrence in the latter.

Few firms anticipate a decrease in the number of their green workers. In every cluster, less than 5% of green firms foresee a reduction in their existing green workforce.

A number of firms without green workers expect to hire their first green employee in the next year. For example, 4% of 7,460 Professional Services businesses (see table below) anticipate employing at least one green worker, which could increase the number of Professional Services firms with green employment by 300 (+11%).

**New York State Green Jobs Survey Finding #3:**

## Green Expectations

### New York City, by Industry Cluster, for 2010 4<sup>th</sup> Qtr

#### Expected Changes in Green Employment, by Firm, Over the Next Year

One Year Change	Building Services	Construction Trades	Component Manufacturing	Professional Services
<b>For Firms with Green Employees, what is their expected change in green employment?</b>				
Grow Larger	22%	31%	27%	39%
Unchanged	45%	46%	53%	41%
Become Smaller	0%	2%	0%	4%
Don't Know	33%	21%	20%	16%
<b>Number of Firms</b>	<b>2,250</b>	<b>1,720</b>	<b>40</b>	<b>1,340</b>
<b>For Firms without Green Employees, do they expect to have green employment?</b>				
Yes	5%	9%	4%	4%
No	69%	53%	67%	70%
Don't Know	26%	38%	28%	25%
<b>Number of Firms</b>	<b>13,930</b>	<b>6,300</b>	<b>240</b>	<b>2,740</b>

Among New York City businesses with green employees, Professional Services firms are the most likely to expect increased green employment, with 39% predicting growth. Twenty-two percent of Building Services, 31% of Construction Trades, and 27% of Component Manufacturing firms also anticipate hiring additional green workers in the next year.

For companies with and without green employees, no change in green employment was the most common one-year prediction by New York City firms across all four industry clusters. The least common over-the-year forecast is for a 'Smaller' green workforce; less than 5% of the New York City green firms in any cluster anticipate a loss of green jobs.

A number of New York City firms without green workers expect to hire at least one green worker this year -- including, for example, 5% of the 13,930 non-green firms in Building Services (see table below). This could increase the number of Building Services firms with green employment by 660 (+29%).

## **New York State Green Jobs Survey Finding #4: The Top Green Credentials Preferred by Green Employers**

### **Leadership in Energy and Environmental Design (LEED)**

Leadership in Energy and Environmental Design (LEED) is administered by the U.S. Green Building Council (USGBC), a non-profit association with over 18,500 member organizations from the building trades. LEED offers both certification for buildings and credentials for individuals. The Green Building Certification Institute (GBCI) administers LEED professional credentials in green building design, construction and maintenance, and neighborhood development. For more information about LEED credentials, visit [www.gbci.org](http://www.gbci.org).

### **The Building Performance Institute, Inc. (BPI)**

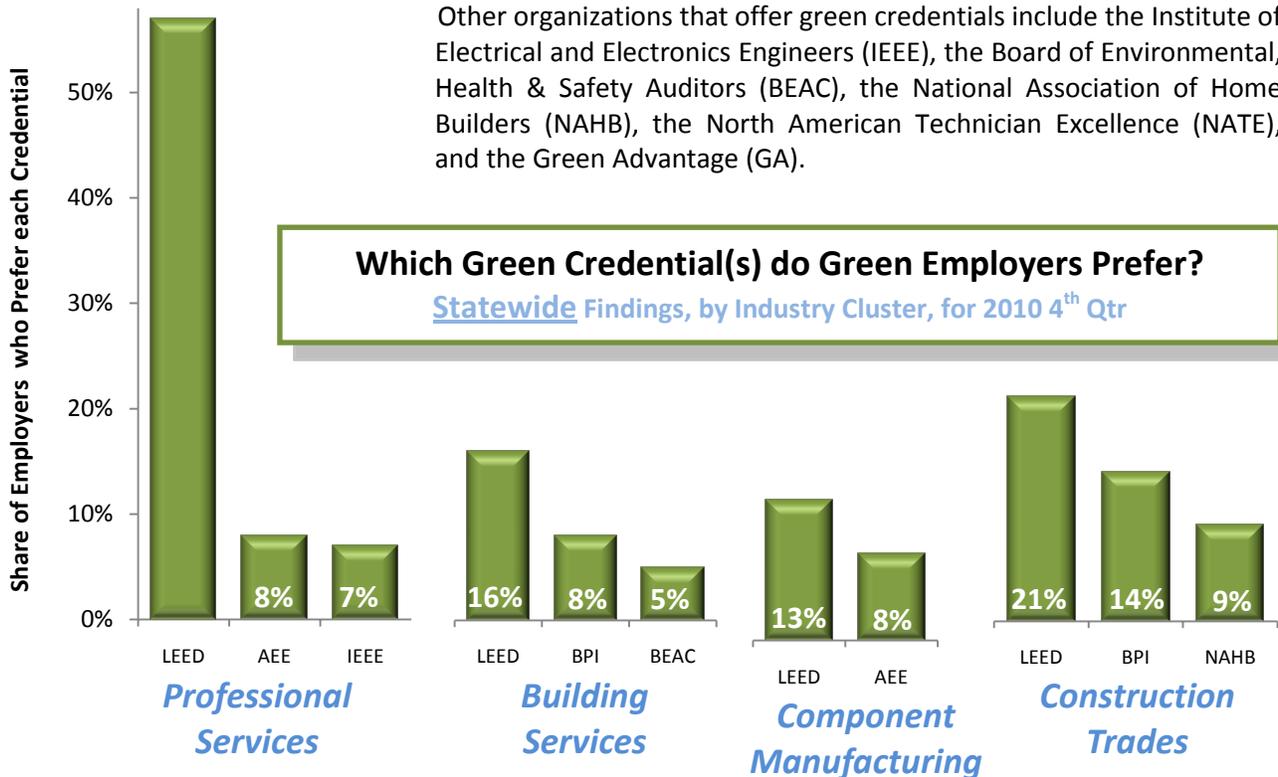
The Building Performance Institute, Inc. (BPI) is an independent non-profit organization that develops industry standards for residential energy efficiency retrofits and weatherization. BPI offers company accreditations and professional credentialing. Many professional certification types are available, including envelope, manufactured housing, and multifamily. For more information, see [www.bpi.org](http://www.bpi.org).

### **The Association of Energy Engineers (AEE)**

The Association of Energy Engineers (AEE), a non-profit professional society with over 14,000 members, offers a broad range of professional certifications in the energy industry. AEE certification programs require candidates to pass written examinations as well as meet specific educational and/or experience criteria. To learn more, go to [www.aeecenter.org](http://www.aeecenter.org).

### **Other Green Groups**

Other organizations that offer green credentials include the Institute of Electrical and Electronics Engineers (IEEE), the Board of Environmental, Health & Safety Auditors (BEAC), the National Association of Home Builders (NAHB), the North American Technician Excellence (NATE), and the Green Advantage (GA).



## Green Credentials Preferred by Green Employers

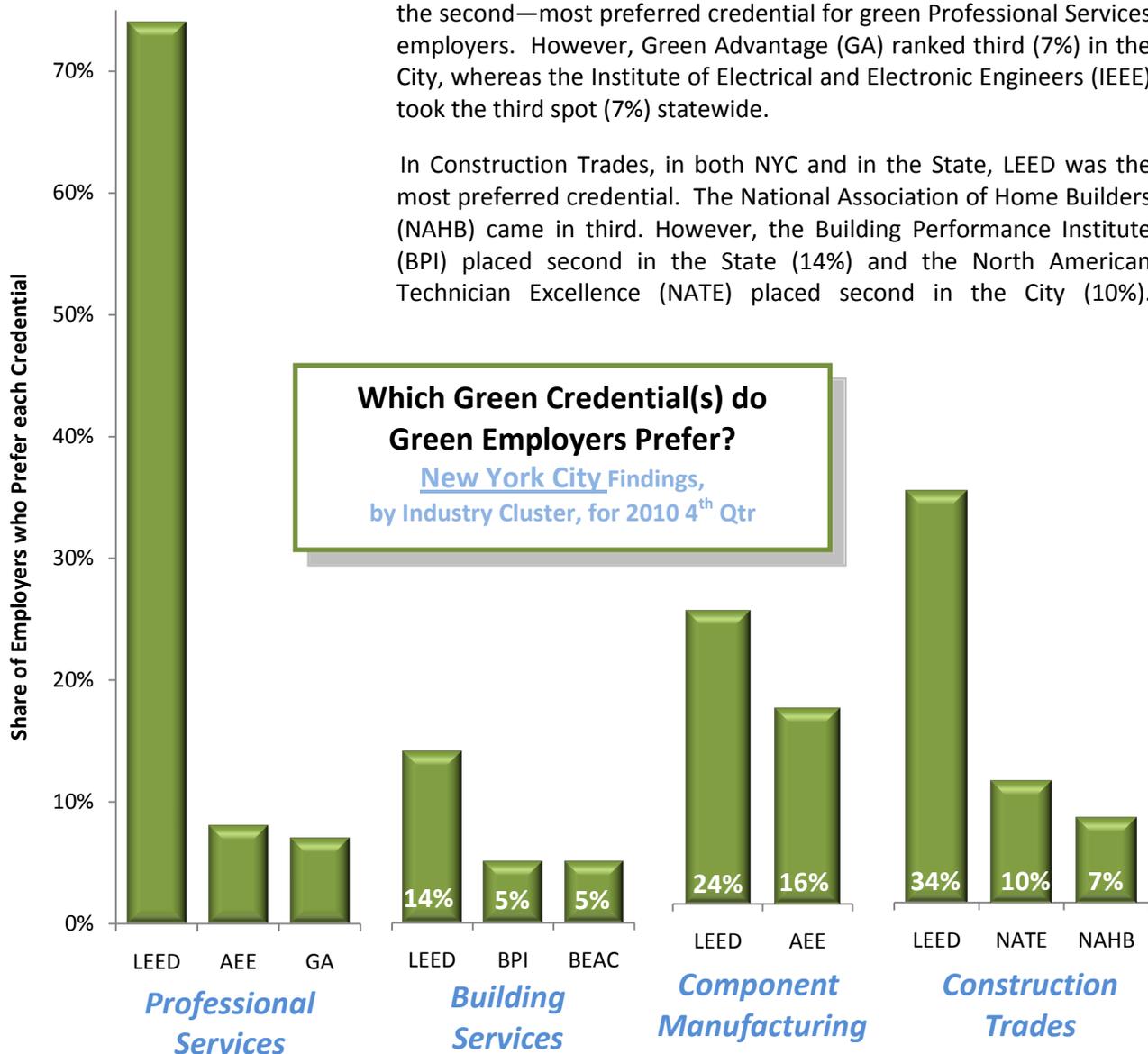
### LEED is the Leader, Especially in New York City

Across all clusters, both in the State and in New York City, the Leadership in Energy and Environmental Design (LEED) credential was the most preferred by firms with green employees. In the five boroughs, among Professional Services, Construction Trades, and Component Manufacturing firms, this preference for LEED is even more pronounced. In Professional Services, 74% of green employers in NYC preferred their employees to have LEED credentials, compared with 57% of green employers statewide. Similarly, 34% of green Construction Trades employers located in NYC preferred LEED, compared to 21% of otherwise comparable employers located throughout the State.

### Regional Differences

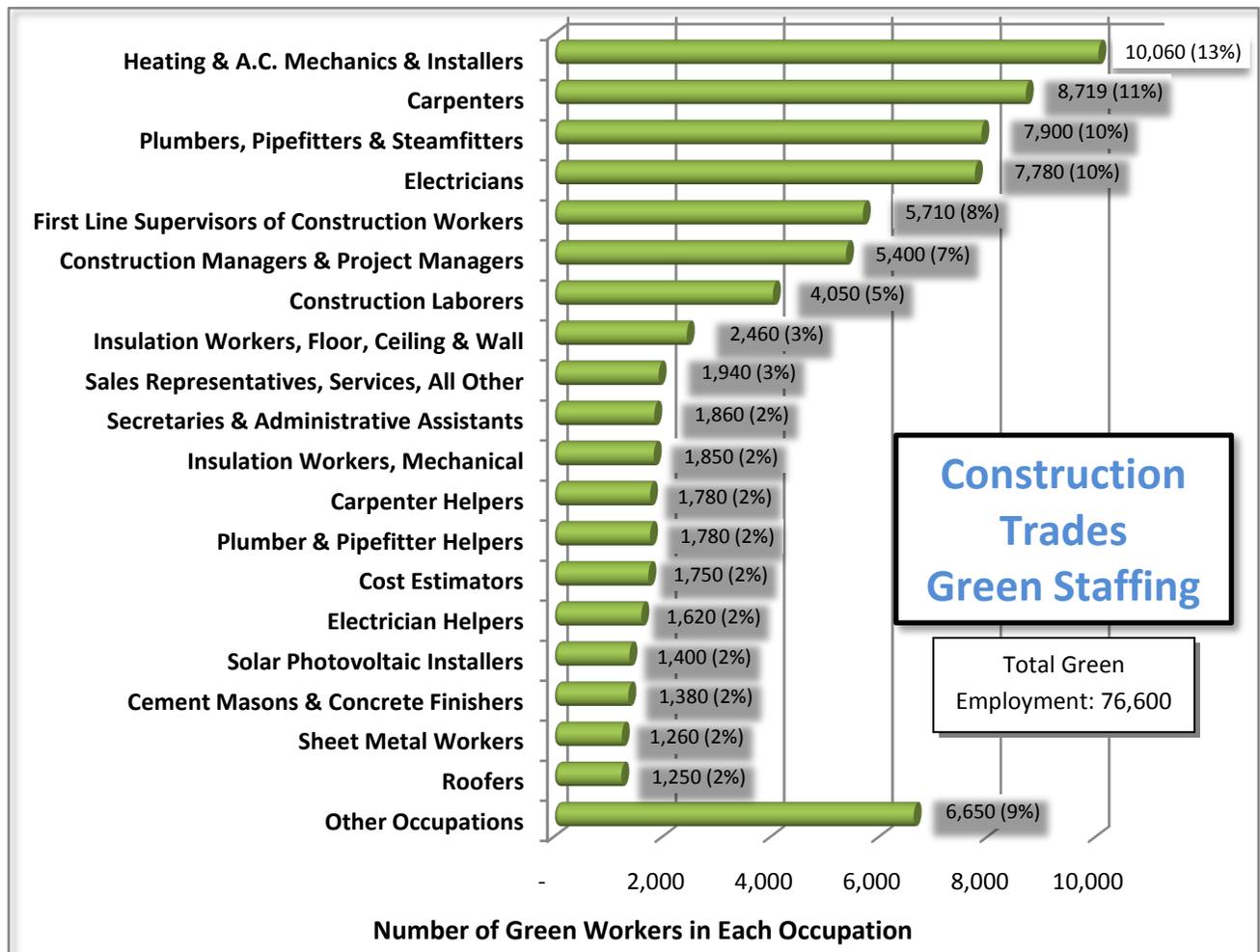
In New York City (as in the State), LEED was the first—and AEE was the second—most preferred credential for green Professional Services employers. However, Green Advantage (GA) ranked third (7%) in the City, whereas the Institute of Electrical and Electronic Engineers (IEEE) took the third spot (7%) statewide.

In Construction Trades, in both NYC and in the State, LEED was the most preferred credential. The National Association of Home Builders (NAHB) came in third. However, the Building Performance Institute (BPI) placed second in the State (14%) and the North American Technician Excellence (NATE) placed second in the City (10%).



## New York State Green Jobs Survey Finding #5a: Common Green Occupations

### Statewide, Construction Trades, for 2010 4<sup>th</sup> Qtr



Many different occupations are involved in producing goods or delivering services that increase energy efficiency or generate renewable energy. Construction workers, for example, engage in new construction or retrofitting to improve the energy efficiency of residential and commercial buildings.

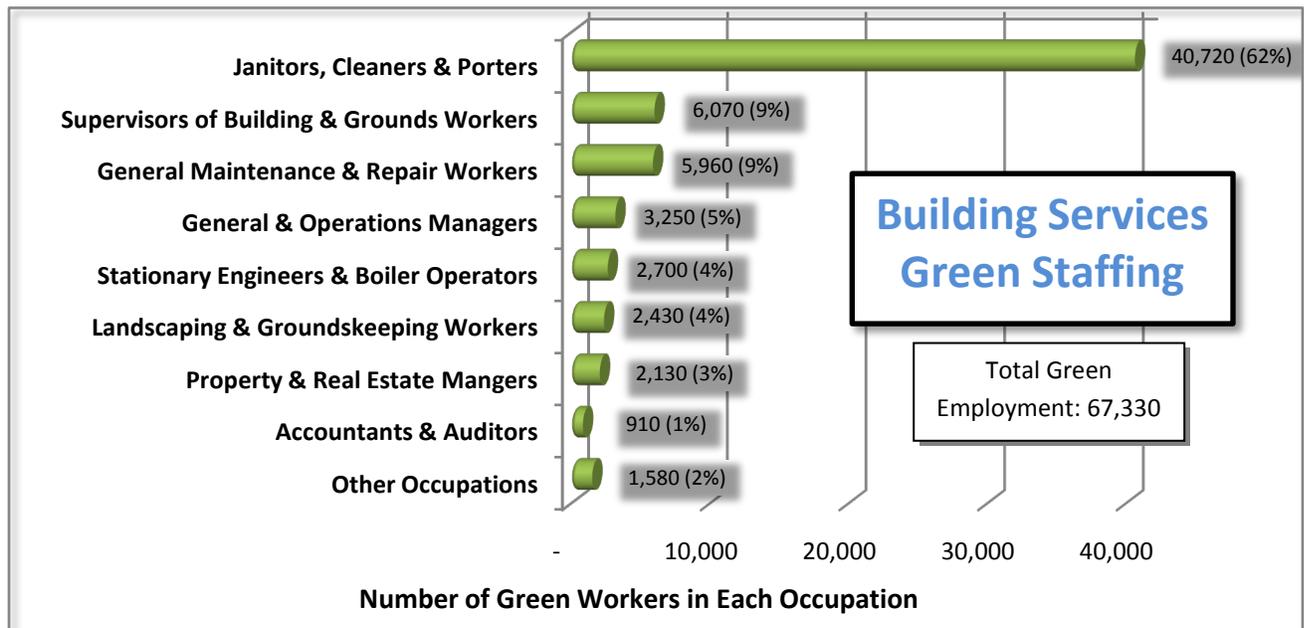
In Construction Trades, the five most common green occupations are: Heating and Air Conditioning Mechanics and Installers; Carpenters; Plumbers; Electricians; and Supervisors of Construction Workers. These five occupations provide over 50% of this industry cluster’s green employment.

In the chart above, ‘Other Occupations’ includes all occupations that by themselves account for less than 1% of the total green jobs in Construction Trades. These occupations, such as

Construction and Building Inspectors and Electrical Power-Line Installers, together make up 9% of green employment in this industry cluster.

## New York State Green Jobs Survey Finding #5b: Common Green Occupations

### Statewide, Building Services, for 2010 4<sup>th</sup> Qtr



The most common green occupations in Building Services -- Janitors, Maintenance and Repair Workers, First Line Supervisors, General Managers, etc. -- are involved not only in energy efficiency activities, but also in recycling and green cleaning. Recycling and green cleaning contribute to 'environmental sustainability' (see below).

More than 60% of the cluster's green employment is in one occupation: Janitors, Cleaners and Porters.

The 'Other Occupations' category includes Real Estate Sales Agents and Appraisers and Assessors of Real Estate. These occupations, not normally considered green, have a small share of practitioners who specialize in knowing the green real estate market. Each occupation by itself comprises less than 1% of the industry cluster's total green employment.

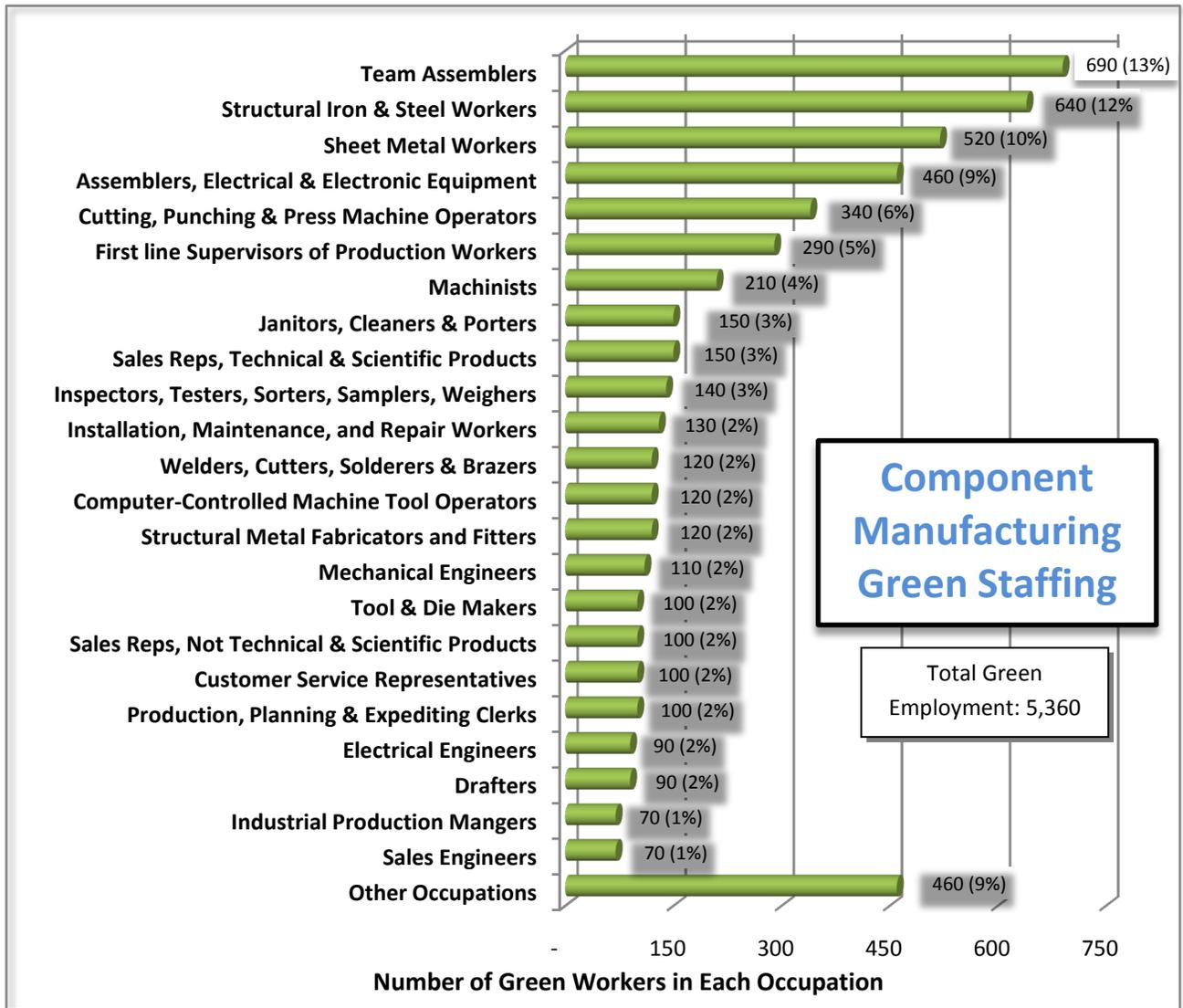
### How is Green Defined Differently in Building Services?

In Building Services, green is defined as helping buildings and facilities achieve greater energy efficiency, use new energy technologies, or achieve other

environmental sustainability goals. For this cluster, people engaged in recycling and green cleaning are counted as green workers.

### New York State Green Jobs Survey Finding #5c: Common Green Occupations

#### Statewide, Component Manufacturing, for 2010 4<sup>th</sup> Qtr



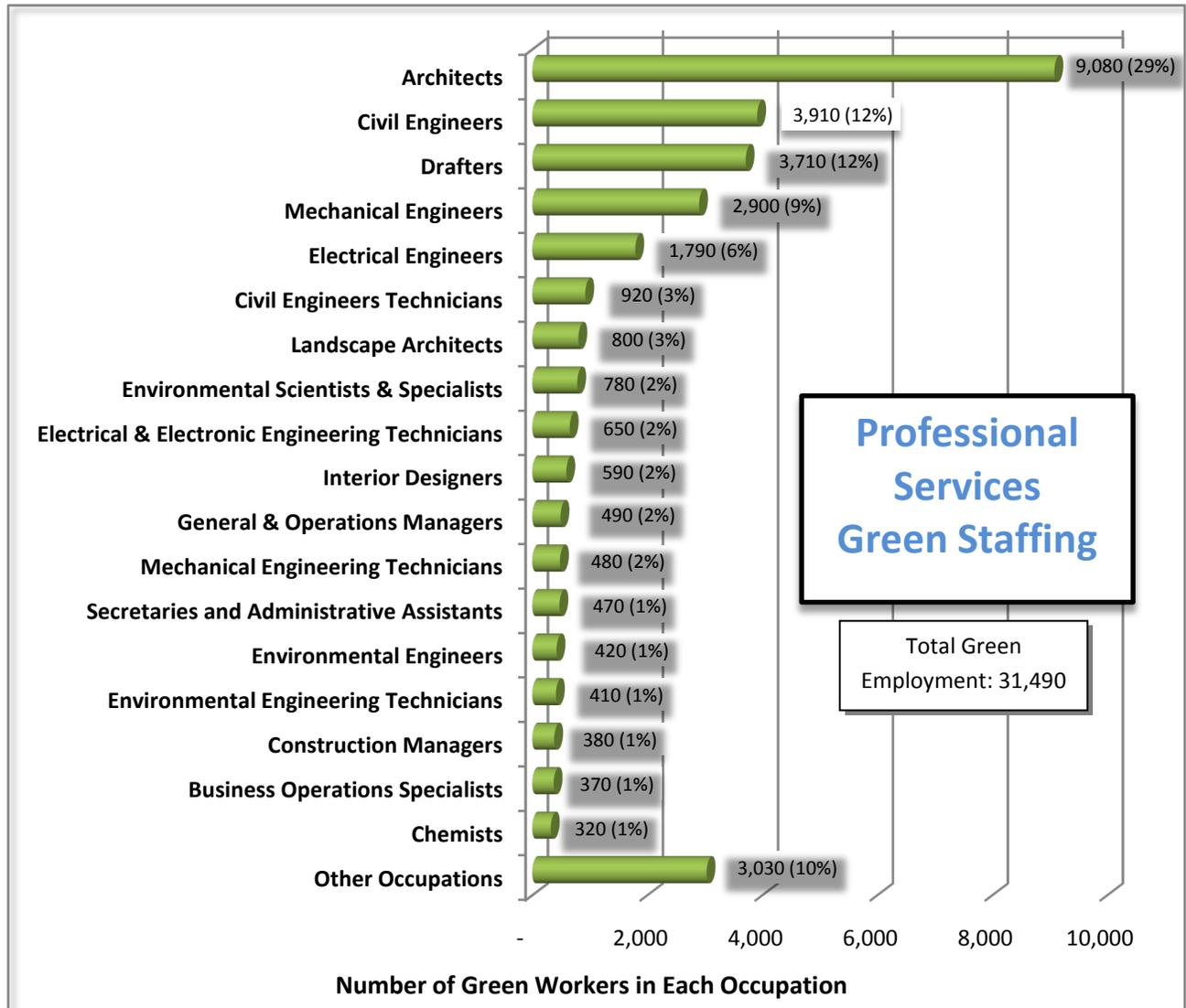
The five most common green occupations in the Component Manufacturing Cluster are: Team Assemblers; Structural Iron and Steel Workers; Sheet Metal Workers; Electrical and Electronic Equipment Assemblers; and Cutting, Punching and Press Machine Operators (Metal and Plastic). These five occupations account for half of the cluster’s green employment.

In the chart above, ‘Other Occupations’ includes job titles that individually account for less than 1% of the total green employment in Component Manufacturing. These occupations, such as

Civil Engineers, Electricians, and Environmental Engineers, together make up 9% of green employment in this industry cluster.

### New York State Green Jobs Survey Finding #5d: Common Green Occupations

#### Statewide, Professional Services, for 2010 4<sup>th</sup> Qtr



Green employment in the Professional Services cluster is concentrated in a few occupations. The five most common green occupations -- Architects, Civil Engineers, Drafters, Mechanical Engineers and Electrical Engineers -- account for over two-thirds of the cluster's green employment. All of these occupations are involved in delivering energy efficiency products and services.

In Professional Services, 'Other Occupations' make up 10% of the cluster's green employment. 'Other Occupations' includes job titles with low green employment, such as Occupational Health and Safety Specialists, Commercial and Industrial Designers, and Urban and Regional Planners. By itself, each occupation comprises less than 1% of the cluster's total green employment.

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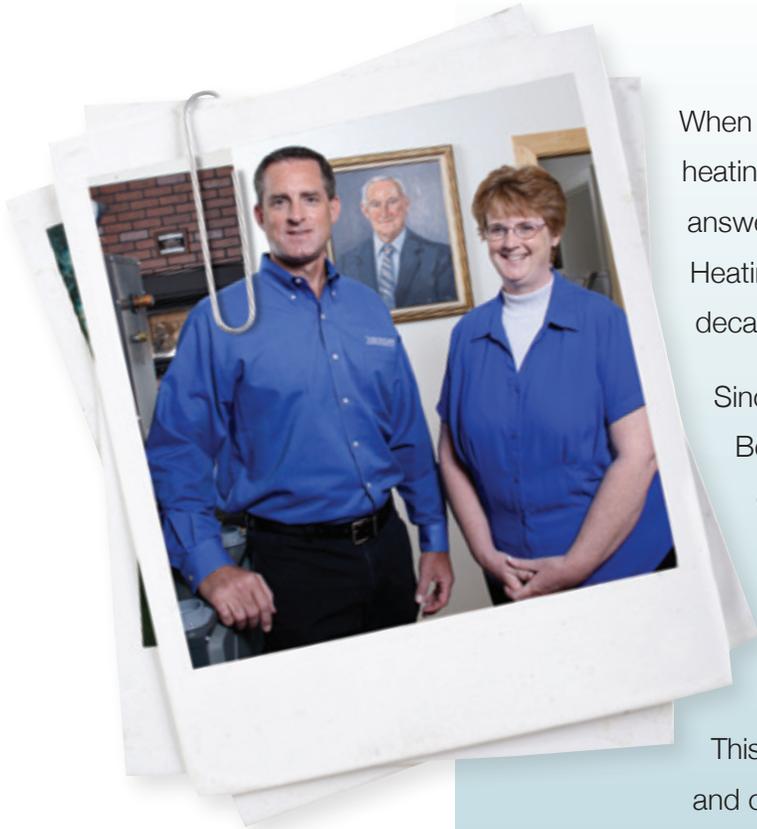
<sup>1</sup> In Building Services the definition of green economic activities differs slightly to: helping buildings and facilities achieve greater energy efficiency, use new technologies or achieve other environmental sustainability goals.

<sup>2</sup> Appendix B for a list of 6-digit NAICS codes included in selected industry clusters.

<sup>3</sup> See Appendix A for information on sample selection and data collection.

John Betlem Heating & Cooling

# Incentives for energy efficiency upgrades push customer demand



When you're an established, respected and reputable heating and cooling company, you have to be ready to answer your customers' evolving needs. John Betlem Heating & Cooling is that kind of company—with the decades-long customer relationships to show for it.

Since its launch in 1941 by namesake founder John Betlem, the company has kept pace with new equipment and technologies. In 2004, company leaders **Kathy and Jim Betlem**—grandchildren of the founder—**embraced an emerging green opportunity, the “whole house” approach to customers' energy needs.**

This broadened the company's focus beyond heating and cooling equipment to the energy efficiency performance of all systems in a home.

**Incentives from the New York State Research and Development Authority (NYSERDA) have been instrumental in helping John Betlem Heating & Cooling expand its range of services.** Since earning accreditation from the Building Performance Institute (BPI) and becoming a participating Home Performance contractor, the company has seen **sustained growth of 10 to 15 percent each year.**



## Evolving to incorporate energy efficiency

Unlike heating companies that have created a subsidiary to manage business generated from energy efficiency upgrades, John Betlem Heating & Cooling, Inc., in Rochester, NY, integrated the “whole-house” concept into its business model—an approach that has contributed to the company’s recent 10 to 15 percent year-over-year growth.

“We’re one of the top three companies that people call in Rochester when they are looking for competitive bids,” said Jim Betlem. **“People respect our heritage and reputation. And we’ve built on that by embracing the green movement and energy efficiency for our customers.”**

“Back in 2004, energy efficiency was gaining momentum, and we wanted to be sure we were on the leading edge to serve our customers,” Jim said. “We didn’t start a new company or a new division, though. We changed our outlook on the way we serve our customers by taking a whole-house approach to a home’s comfort and safety.” This approach is in line with the principles of energy efficiency, and is the **cornerstone of NYSERDA’s Home Performance with ENERGY STAR® program.**

**To qualify for NYSERDA incentives,** John Betlem technicians earned BPI certification and the company pursued BPI accreditation. The company then provided training to its staff and hired a coordinator to handle the paperwork necessary to participate in the Home Performance with ENERGY STAR program.



The training was costly, not only the expense of the courses, but also to send technicians out of town, Kathy Betlem said. “It was a good investment, though, in positioning our business to take advantage of additional support, which has balanced some of the upfront costs. For example, we received rebates from NYSERDA for some of the training cost and equipment.”

John Betlem Heating & Cooling also takes advantage of the cooperative marketing incentives available through NYSERDA for about 80 percent of its marketing initiatives. Both Betlems agree that NYSERDA’s co-op program has a lot to offer contractors who participate.

## New competition poses a unique challenge

**The contractor landscape is changing.** “In the earlier days, we had a leg up on the competition because we were one of the only companies in town specifically trained to use the whole-house approach. Customers appreciated the thoroughness of the comprehensive home energy assessment,” Jim Betlem said. “Today, window companies and insulation contractors are getting into the business, and taking it upon themselves to install heating and AC equipment. The problem is, except for some specific brands, you don’t have to be licensed to install the equipment. Practically anyone can do it, whether they’re qualified or not.

**“That means that we might lose work on price,” he continued, “but often we are the ones they call to ‘fix it’ when something goes wrong.** We tell customers to do their homework first—to check the company with the Better Business Bureau and to check references, and to be sure that the company doing the work is qualified.” BPI accreditation, with its rigorous standards for home performance work, is one of the assurances of quality the Betlems point out to customers.

### Business Insights:

#### ► Solid advice from Betlem Heating and Cooling

- Embrace the whole-house concept as a business model, not just an add-on
- Be aware of competitors who will underbid but aren’t qualified to install heating or air-conditioning equipment—advise prospective customers of the risk

## Looking forward to a green future

John Betlem Heating & Cooling has been active in energy efficiency upgrades and whole-house assessments since the company qualified for NYSERDA programs in 2004. The company's strong sales team works to explain why wise homeowners proceed with a whole-house assessment, instead of one-off installations, to uncover how systems are interconnected within the home.

John Betlem's two BPI-certified technicians perform approximately 30 to 40 home assessments per month, and the work done as a result is an **important factor in the company's steady growth rate of 10 to 15 percent each year since becoming accredited by BPI**. Customers are realizing the best paybacks in investments for insulation, air sealing and heating equipment.

Looking forward, Jim and Kathy Betlem foresee more and more interest in energy efficiency, as consumers learn more about the importance of saving energy, the potential cost savings, and the benefits of a safer, more comfortable home.

**“Today, people are realizing that just having an ENERGY STAR furnace isn't enough—that there are plenty of other ways to improve their home's energy efficiency...**

They're more in tune with the whole-house concept, and becoming interested in alternative energy sources like solar and geothermal,” said Kathy Betlem. “That's where the future is, and that's where John Betlem Heating & Cooling will be too, positioned to serve future demand.”



### Situation

- Well respected company with a long history in the community
- Quick to embrace the opportunities presented by an emerging awareness of energy efficiency
- Desire to integrate the whole-house approach into day-to-day business

### Solutions

- Evolve the heating-and-cooling business model to incorporate a whole-house approach without creating a separate company or division
- Take an integrated approach and encourage all prospects to pursue a comprehensive home energy assessment
- Qualify for NYSERDA and Home Performance with ENERGY STAR incentives through company accreditation by BPI, and the credibility it demonstrates to prospective customers
- Provide BPI training to certify contracting staff

### Benefits

- Incentives from NYSERDA are instrumental in maintaining a steady business growth of 10 to 15 percent year-over-year despite the economic downturn
- Keep John Betlem Heating & Cooling poised for the future of energy-efficiency technologies

# ► Grow your skills. Grow your business.

Become part of New York Home Performance with ENERGY STAR

- Get accredited by the Building Performance Institute (BPI) to **become a participating Home Performance with ENERGY STAR contractor**
- **Access the large and growing market** for home energy efficiency upgrades
- **Gain a competitive advantage**—offer your customers energy efficiency services and incentives through NYSERDA’s Home Performance with ENERGY STAR program
- **Get leads** through the NYSERDA website
- **Provide homeowners with a comprehensive home assessment** and real solutions—not patchwork fixes—to save money on energy
- **Qualify for a number of attractive program incentives** for you and your customers
- **Get reimbursed for training!** For a limited time only, NYSERDA will reimburse up to 50 percent of the training fee at select locations



## ► Opportunity’s knocking! Call 1-877-NY-SMART or visit [GetEnergySmart.org](http://GetEnergySmart.org)



NYSERDA’s Home Performance with ENERGY STAR® program offers homeowners a comprehensive, whole-house approach to improving energy efficiency and home comfort while saving money. Energy assessments and upgrades are conducted by a participating Home Performance contractor accredited by the Building Performance Institute (BPI).

Income-qualified homeowners are eligible for additional incentives to make energy improvements.



Participate in Home Performance with ENERGY STAR® and take advantage of funding for comprehensive home energy assessments and low-cost financing for energy upgrades through Green Jobs–Green NY. Green Jobs–Green NY is a statewide effort to strengthen our communities through energy efficiency. It enables New Yorkers

to make a significant difference in our homes, businesses and neighborhoods—making them more comfortable, more sustainable, and more economically sound. Green Jobs–Green NY is administered by NYSERDA and made available by the Green Jobs – Green New York Act of 2009.

### About NYSERDA

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





NY HOME PERFORMANCE WITH ENERGY STAR® FREE/REDUCED-COST ENERGY AUDIT APPLICATION



NY Home Performance with ENERGY STAR provides **income eligible owners of one-to-four unit residential buildings** the opportunity to receive a free or reduced-cost residential energy audit.

To qualify for a free/reduced cost residential energy audit you must (1) own the 1-4 unit residential building, (2) have a total household income at or below the limits indicated below, (3) have not previously received a free/reduced cost audit, and (4) provide a 12-24 month summary of the **electric and heating usage** for the building. New building owners that do not have access to a full year of usage data can provide the partial year with proof of the date of purchase.

Free/reduced cost residential energy audits are available on first-come, first-served basis until funds are fully committed. Applicants that meet the eligibility and supporting documentation requirements will receive a **Reservation Number** along with terms and conditions from the Program. Applicants will have 90 days to have their residential energy audits completed by a Participating Home Performance with ENERGY STAR Contractor. Please complete all required fields, sign and date application.

Applicant Information

First Name Middle Initial Last Name

Building Address City County Zip

Mailing Address (if different than the above) Unit # City County Zip

Home Phone ( ) - Cell Phone ( ) - Email Address

Residential Building Type (5+ units do not qualify) Above Grade Conditioned Square Footage of Building

How did you hear about the Program? (Select one from each line)

Constituency Based Organization Contractor NYSERDA Neighbor/Friends Municipality Energy Smart Coordinator Other Newspaper Circular / Flyer Home Show Verbal Radio Television Internet Other

Project Finance Preference?

Home Performance Loan Home Equity Loan Out-of-Pocket Personal Loan

Household Income Range (please refer to the NY Home Performance Household Income Chart)

My total household income is: (Households with total income over 400% Area Median Income (AMI) do not qualify) <= 200% AMI <= 250% AMI <= 300% AMI <= 350% AMI <= 400% AMI

Energy Supplier Information

Electric Utility Account Number: Does the building listed above have central air conditioning? Gas Utility Account Number: Other Fuel Supplier Oil Propane Other Account Number

IMPORTANT ENERGY USAGE DATA REQUIREMENT - You must provide the electric and primary heating fuel usage for the building listed above for 12-24 months. Your energy supplier can provide you with this information. New building owners that do not have access to a full year of usage data can provide the partial year with proof of the date of purchase. Please provide an estimate of the heating fuel purchased over the past year if you obtain heating fuel from various suppliers and/or do not have access to usage data.

Eligibility Declaration

I certify that I am the owner of the building listed above and the income of all the persons in my household is not more than the amount shown and that the other information I have given on this form is correct to the best of my knowledge and belief. I understand that my signature on this form gives permission for NYSERDA, or its designee, to verify records necessary to assure my eligibility for a free/reduced cost NY Home Performance with ENERGY STAR residential audit. I understand that if I give false information or withhold information in order to make myself eligible for benefits that I am not entitled to, I can be prosecuted to the fullest extent of the law.

Applicant's Signature

Date

When complete, please mail, fax, or email the signed application and supporting energy usage documentation to:

Please send a copy of my NY Home Performance Energy Audit Reservation Number to the Home Performance Contractor Listed Below:

Mail: HPwES Energy Audit PO Box 12129 Albany, NY 12212 Fax: (866) 335-6306 Email: HPwES-Audit@csggrp.com Questions: (855) 838-7818

Contractor Name Email address

**Household Income Chart**

NY Home Performance with ENERGY STAR Median Family Income 2011						
County Name	Median Household Income	200%	250%	300%	350%	400%
Albany	\$77,000	\$154,000	\$192,500	\$231,000	\$269,500	\$308,000
Allegany	\$52,500	\$105,000	\$131,250	\$157,500	\$183,750	\$210,000
Broome	\$61,000	\$122,000	\$152,500	\$183,000	\$213,500	\$244,000
Cattaraugus	\$52,300	\$104,600	\$130,750	\$156,900	\$183,050	\$209,200
Cayuga	\$61,200	\$122,400	\$153,000	\$183,600	\$214,200	\$244,800
Chautauqua	\$53,400	\$106,800	\$133,500	\$160,200	\$186,900	\$213,600
Chemung	\$56,200	\$112,400	\$140,500	\$168,600	\$196,700	\$224,800
Chenango	\$55,800	\$111,600	\$139,500	\$167,400	\$195,300	\$223,200
Clinton	\$62,500	\$125,000	\$156,250	\$187,500	\$218,750	\$250,000
Columbia	\$70,100	\$140,200	\$175,250	\$210,300	\$245,350	\$280,400
Cortland	\$59,000	\$118,000	\$147,500	\$177,000	\$206,500	\$236,000
Delaware	\$53,600	\$107,200	\$134,000	\$160,800	\$187,600	\$214,400
Dutchess	\$86,100	\$172,200	\$215,250	\$258,300	\$301,350	\$344,400
Erie	\$65,300	\$130,600	\$163,250	\$195,900	\$228,550	\$261,200
Essex	\$59,300	\$118,600	\$148,250	\$177,900	\$207,550	\$237,200
Franklin	\$51,400	\$102,800	\$128,500	\$154,200	\$179,900	\$205,600
Fulton	\$50,800	\$101,600	\$127,000	\$152,400	\$177,800	\$203,200
Genesee	\$60,000	\$120,000	\$150,000	\$180,000	\$210,000	\$240,000
Greene	\$58,200	\$116,400	\$145,500	\$174,600	\$203,700	\$232,800
Hamilton	\$59,000	\$118,000	\$147,500	\$177,000	\$206,500	\$236,000
Herkimer	\$58,000	\$116,000	\$145,000	\$174,000	\$203,000	\$232,000
Jefferson	\$54,100	\$108,200	\$135,250	\$162,300	\$189,350	\$216,400
Lewis	\$50,500	\$101,000	\$126,250	\$151,500	\$176,750	\$202,000
Livingston	\$67,800	\$135,600	\$169,500	\$203,400	\$237,300	\$271,200
<b>Long Island</b>						
Nassau & Suffolk	\$106,100	\$212,200	\$265,250	\$318,300	\$371,350	\$424,400
Madison	\$65,700	\$131,400	\$164,250	\$197,100	\$229,950	\$262,800
Monroe	\$67,800	\$135,600	\$169,500	\$203,400	\$237,300	\$271,200
Montgomery	\$56,000	\$112,000	\$140,000	\$168,000	\$196,000	\$224,000
<b>New York City</b>						
Bronx, Kings, New York, Queens, Richmond	\$64,200	\$128,400	\$160,500	\$192,600	\$224,700	\$256,800
Niagara	\$65,300	\$130,600	\$163,250	\$195,900	\$228,550	\$261,200
Oneida	\$58,000	\$116,000	\$145,000	\$174,000	\$203,000	\$232,000
Onondaga	\$65,700	\$131,400	\$164,250	\$197,100	\$229,950	\$262,800
Ontario	\$67,800	\$135,600	\$169,500	\$203,400	\$237,300	\$271,200
Orange	\$86,100	\$172,200	\$215,250	\$258,300	\$301,350	\$344,400
Orleans	\$67,800	\$135,600	\$169,500	\$203,400	\$237,300	\$271,200
Oswego	\$65,700	\$131,400	\$164,250	\$197,100	\$229,950	\$262,800
Otsego	\$57,300	\$114,600	\$143,250	\$171,900	\$200,550	\$229,200
Putnam	\$64,200	\$128,400	\$160,500	\$192,600	\$224,700	\$256,800
Rensselaer	\$77,000	\$154,000	\$192,500	\$231,000	\$269,500	\$308,000
Rockland	\$101,700	\$203,400	\$254,250	\$305,100	\$355,950	\$406,800
Saratoga	\$77,000	\$154,000	\$192,500	\$231,000	\$269,500	\$308,000
Schenectady	\$77,000	\$154,000	\$192,500	\$231,000	\$269,500	\$308,000
Schoharie	\$77,000	\$154,000	\$192,500	\$231,000	\$269,500	\$308,000

Schuyler	\$54,500	\$109,000	\$136,250	\$163,500	\$190,750	\$218,000
Seneca	\$55,300	\$110,600	\$138,250	\$165,900	\$193,550	\$221,200
St. Lawrence	\$51,900	\$103,800	\$129,750	\$155,700	\$181,650	\$207,600
Steuben	\$54,400	\$108,800	\$136,000	\$163,200	\$190,400	\$217,600
Sullivan	\$60,700	\$121,400	\$151,750	\$182,100	\$212,450	\$242,800
Tioga	\$61,000	\$122,000	\$152,500	\$183,000	\$213,500	\$244,000
Tompkins	\$72,800	\$145,600	\$182,000	\$218,400	\$254,800	\$291,200
Ulster	\$72,900	\$145,800	\$182,250	\$218,700	\$255,150	\$291,600
Warren	\$61,800	\$123,600	\$154,500	\$185,400	\$216,300	\$247,200
Washington	\$61,800	\$123,600	\$154,500	\$185,400	\$216,300	\$247,200
Wayne	\$67,800	\$135,600	\$169,500	\$203,400	\$237,300	\$271,200
Westchester	\$106,500	\$213,000	\$266,250	\$319,500	\$372,750	\$426,000
Wyoming	\$60,000	\$120,000	\$150,000	\$180,000	\$210,000	\$240,000
Yates	\$58,100	\$116,200	\$145,250	\$174,300	\$203,350	\$232,400

**NOTES:**

The NY Home Performance with ENERGY STAR audit fee for single family buildings with less than 3,500 square feet of above grade conditioned space will be \$250 as described in the table below.

**Single Unit NY Home Performance Audit Fees**

Household Income	Cost to Customer	NYSERDA Payment to Contractor
≤ 200% AMI	- 0 -	\$250
201 - 250% AMI	\$50	\$200
251 - 300% AMI	\$100	\$150
301 - 350% AMI	\$150	\$100
351 - 400% AMI	\$200	\$50
> 400% AMI	Market Rate	- 0 -

A residential building with 2-4 dwelling units, or a single unit with greater than 3,500 square feet of above grade conditioned space, will be eligible for a \$400 audit fee as described in the table below.

**2-4 Units NY Home Performance Audit Fees**

Household Income	Cost to Customer	NYSERDA Payment to Contractor
≤ 200% AMI	- 0 -	\$400
201 - 250% AMI	\$80	\$320
251 - 300% AMI	\$160	\$240
301 - 350% AMI	\$240	\$160
351 - 400% AMI	\$320	\$80
> 400% AMI	Market Rate	- 0 -

**Data Source:** [http://www.huduser.org/portal/datasets/il/il2010/select\\_Geography\\_mfi.odn](http://www.huduser.org/portal/datasets/il/il2010/select_Geography_mfi.odn)

\* NY Home Performance offers financing, energy audits, and workforce development opportunities as part of the Green Jobs-Green NY Act of 2009.

**NY Home Performance with ENERGY STAR®**  
**Eligible Measures and Accessories Matrix**  
*Effective: July 1, 2011*

The NY Home Performance with ENERGY STAR (HPwES) Program is designed to improve the energy performance, durability, comfort, and safety of existing one- to four-family residential housing. The HPwES Program is funded by a variety of sources, which affects the ability of the Program to provide incentives for some measures. Incentives listed as “limited” in the matrix below are available for eligible oil and propane saving measures only. To qualify for Program incentives and financing, the energy efficiency improvements must be installed by a Participating BPI Accredited HPwES Contractor, meet the minimum energy efficiency requirements, and the project must be cost effective with a Savings-to-Investment Ratio (SIR) of greater than 1.0.

Below is a matrix of the minimum efficiency requirements and availability of various customer incentives for eligible measures. Please contact your Account Manager with questions you may have regarding these measures and incentives.

		Minimum Efficiency Requirements	Incentive Eligibility			
			10% HEMI	50% AHP Subsidy	HPwES Financing	Assisted Loan
Primary Heating and Cooling System <sup>1,2</sup>	Furnace – Natural Gas or LP <sup>3</sup>	AFUE 92% (as long as not prohibited by local codes). Furnaces with ECM Motor allowed.	X	X	X	X
	Furnace – Fuel Oil <sup>3</sup>	AFUE 85%	X	X	X	X
	Boiler - Condensing	AFUE 90%	X	X	X	X
	Boiler – Hot Water	AFUE 85%	X	X	X	X
	Boiler – Steam	AFUE 82% (size must be matched to cumulative capacity of connected radiators, per Institute of Boilers & Radiator Mfrs (IBR) standards)	X	X	X	X
	Air Source Heat Pump (electric split systems) <sup>3</sup>	14.5 SEER / 12 EER / 8.5 HSPF			X	
	Ground Source Heat Pump <sup>3</sup>	ENERGY STAR Qualified (closed-loop, open-loop, or direct expansion)			X	
	Wood/or Solid Fuel Pellet Stove	EPA phase 2 (Solid fuel pellet stoves are exempt from EPA Phase 2)	X	X	X	X
	Distribution Improvements, Duct work, Radiators <sup>4</sup>	Installed in accordance with all applicable state and local codes	Limited	Limited	X	Limited
	Duct Sealing	UL 181B Mastic or other permanent sealant; use of duct tape is disallowed	X	X	X	X
	Pipe Insulation	R-3	X	X	X	X
	Solar Thermal	OG-300 certification from SRCC. SF 0.5. Warranty: 10 years-collector, 6 years-storage tank. 2 years-control. 1 year-piping and parts	Limited	Limited	X	Limited
	Central Air Conditioner (split system) <sup>5</sup>	AHRI Certificate Required. 14.5 SEER / 12 EER. <b>*Except in Con Edison and Central Hudson electric territory, this measure is subject to site-specific analysis and pre-approval by CSG in order to determine eligibility.</b>	X*		X	
Programmable Thermostat	ENERGY STAR Qualified. UL Approved. Limited to one thermostat installed per unit.	X	X	X	X	

		Minimum Efficiency Requirements	Incentive Eligibility			
			10% HEMI	50% AHP Subsidy	HPwES Financing	Assisted Loan
Building Shell	Insulation (attic, wall, floor, band joist, basement, crawl space)	NYS Energy Conservation Code compliant, or to the Program Technical Specifications, or limits of construction. Must be accompanied by blower door assisted air sealing per BPI and program guidelines.	X	X	X	X
	Air Sealing	Supervised by professional; blower door assisted per BPI and program guidelines	X	X	X	X
	Replacement Windows	ENERGY STAR for climate/region <a href="#">Link to ENERGY STAR</a>			X	
	Storm Windows and Storm Doors	No minimum efficiency requirement			X	
	Movable Window Insulation	R-3			X	
	Exterior Doors	ENERGY STAR for climate/region <a href="#">Link to ENERGY STAR</a>			X	
Water Heater		<51 gallon EF.63 / >51 gallon EF.53	Limited	Limited	X	Limited
	Natural Gas, Propane or Oil	Instantaneous: EF .78	Limited	Limited	X	Limited
	Electric	EF .93			X	
	Indirect-Fired Tank	UL Approved	X	X	X	X
	Solar	OG-300 certification from SRCC. SF 0.5. Warranty: 10 years-collector, 6 years-storage tank. 2 years-control. 1 year-piping and parts.	Limited	Limited	X	Limited
	Hot Water Tank Insulation	R-10			X	
Conservation	Faucet Aerator	No minimum efficiency requirement	X	X	X	X
	Low Flow Showerhead	Maximum flow rate of 1.5 gallons per minute. Aerating type showerheads not eligible.	X	X	X	X
Appliances & Lighting <sup>6</sup>	Refrigerator	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor. Existing refrigerators must be greater than 10 years old to be eligible for replacement.	X	X	X	X
	Freezer	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor.	X	X	X	X
	Dishwasher	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor.	X	X	X	X
	Clothes Washer	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor.			X	

		Minimum Efficiency Requirements	Incentive Eligibility			
			10% HEMI	50% AHP Subsidy	HPwES Financing	Assisted Loan
Appliances & Lighting <sup>6</sup>	Dehumidifier	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor.	X	X	X	X
	Room Air Conditioner	ENERGY STAR Qualified. Must be combined with at least 1 major measure installed by the contractor.	X	X	X	X
	Heat/Energy Recovery Ventilator	No minimum efficiency requirement	Limited	Limited	X	Limited
	CFLs	ENERGY STAR Qualified	X	X	X	X
	LEDs	ENERGY STAR Qualified			X	
	Light Fixtures	ENERGY STAR Qualified for compact fluorescent, or electronic ballast for fluorescent tubes			X	
Health and Safety	Smoke Detectors, Radon Detectors, and Carbon Monoxide Detectors	Hard wired or battery operated			X	
	Ventilation Fans (Whole house fans or similar attic exhaust fans are not eligible)	ENERGY STAR Qualified (must vent to exterior of building shell)			X	
	Repairs/upgrades to heating and/or DHW systems (including power venting kits) to correct spillage, inadequate draft, carbon monoxide failures	Per code and/or manufacturer specifications, as appropriate			X	
	Measures to provide sufficient combustion air and prevent Combustion Appliance Zone (CAZ) depressurization, spillage or inadequate draft	Allowed when BPI-required combustion safety tests indicate problem(s) with CAZ depressurization, draft or spillage, per BPI standards			X	
	Gas leak repair	Repaired in compliance with applicable codes			X	
	Dry vent repair	Repaired in compliance with applicable codes			X	
	Gas Oven Replacements, venting repairs and repairs to reduce carbon monoxide	UL Listed Gas Ovens			X	

<sup>1</sup> Defined as the “primary heating system for the space being conditioned”.

<sup>2</sup> Addition/replacement of secondary heating systems are not eligible for Assisted Home Performance.

<sup>3</sup> Duct systems for warm air furnaces, heat pumps and central air conditioners should be tested and sealed to reduce leakage. This will help ensure that the total system will operate efficiently.

<sup>4</sup> In instances where an area of a home lacks adequate distribution, installation of new distribution to serve the area is eligible. The area lacking adequate distribution must be located within the pre-existing thermal boundary.

<sup>5</sup> Non-eligible measure under Assisted Home Performance.

<sup>6</sup> Maximum Assisted Subsidy for each appliance is: \$300 for refrigerators & freezers; \$250 for dishwashers; \$75 for dehumidifiers; and \$50 for Room Air Conditioners. Only the base price of the appliance plus applicable tax is eligible; delivery, set-up, warranties or appliance accessories, and any associated taxes on these items are not eligible for incentives.

**Note:** NYSERDA reserves the right to modify the Minimum Efficiency Requirement for any measure during the term of the Home Performance with ENERGY STAR Partnership Agreement.



### **FINANCING REQUIREMENTS**

The maximum amount eligible for Program Financing is \$13,000 per property. The work scope must be cost effective with a Savings to Investment Ratio (SIR) greater than 1.0 for the recommended package of improvements to be financed.

### **ADDITIONAL SUPPORT**

The HPwES Program offers a 10% cash-back High Efficiency Measure Incentive (HEMI) on eligible measures. For income-qualified customers, Assisted HPwES offers a 50% work scope incentive (Subsidy) of up to \$5,000 for a single family home and up to \$10,000 for a 2- to 4- family home. The balance of the cost can be financed. Assisted Home Performance follows the same minimum efficiency requirements and measure eligibility except as noted in the list above. The 10% HEMI and Assisted Subsidy can be combined with low interest rate Program Financing, but cannot be combined with the Loan Fund's interest rate reduction.

### **INCENTIVE ELIGIBILITY**

Program Financing is available statewide for all eligible measures.

To be eligible for the 10% HEMI, 50% Assisted Subsidy, or the Assisted Home Performance Loan, customers must pay into the SBC/EEPS and be in one of the following utility territories: Central Hudson, Con Edison, National Fuel, National Grid (NYC and Upstate), NYSEG, Orange and Rockland, and Rochester Gas and Electric. Customers of National Grid (Long Island) are eligible for the HEMI and Subsidy for natural gas reduction measures only. Limited, statewide funds, regardless of utility territory, are available for the HEMI and Subsidy for eligible oil and propane reduction measures and will be committed on a first come, first served basis.

### **QUALIFIED ACCESSORIES**

The costs associated with the installation of qualified accessories are eligible for incorporation into a reduced interest rate loan offered through the Program. Qualified accessories include: grills, diffusers, chimney liners, chimney caps, air cleaners, furnace humidifiers, thermostats, oil burner replacements, moisture barriers and attic venting. Accessory items included in work scopes that involve fuel switching (for example, electric baseboard heating to natural gas furnace) are eligible for incorporation into a reduced interest rate loan offered through the Program, provided the new heating system is installed through the HPwES Program, is an eligible measure and meets the cost-effectiveness requirement. Examples of these fuel-switching accessories are: gas main extensions, new oil tanks, service laterals, and piping.

### **ADDITIONAL HEALTH & SAFETY MEASURES**

The first \$2,000 of costs associated with any combination of the following measures is eligible for incorporation into a reduced interest rate loan offered through the Program but are not eligible for the 10% cash-back HEMI and Assisted Subsidies:

- Asbestos abatement or electrical service upgrade necessary when installing a new heating/cooling unit;
- Upgrade of knob and tube wiring in order to install insulation;
- Radon and lead abatement work;
- The cost of removing an oil tank or replacing a faulty oil tank when done in connection with a heating system replacement; and
- Repairs to the home due to water damage, molds and mildew, ice dams or other symptoms of poor building performance, as long as the cause(s) of building performance-related damage are addressed.

**For more information please contact:**  
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