



# **NEW YORK'S RGGI-FUNDED PROGRAMS**

**STATUS REPORT  
YEAR ENDING DECEMBER 31, 2010**

**APRIL 2011**

**NEW YORK STATE  
ENERGY RESEARCH AND  
DEVELOPMENT AUTHORITY**

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# 1 Introduction

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To implement the Regional Greenhouse Gas Initiative (RGGI), New York State has established its CO<sub>2</sub> Budget Trading Program through regulations promulgated by the Department of Environmental Conservation (DEC) and the CO<sub>2</sub> Allowance Auction Program through regulations promulgated by New York State Energy Research and Development Authority (NYSERDA).<sup>1</sup> This report is prepared pursuant to the “Operating Plan for Investments in New York under the CO<sub>2</sub> Budget Trading Program and the CO<sub>2</sub> Allowance Auction Program” (Operating Plan),<sup>2</sup> and provides an update on the progress of programs through the year ending December 31, 2010. It contains an accounting of program spending, an estimate of program benefits, and a summary description of program activities and implementation.

## 1.1 New York’s RGGI Funds<sup>3</sup>

As of December 31, 2010, New York had sold over 116 million CO<sub>2</sub> allowances and received approximately \$282 million in auction proceeds. An additional \$940,276 in interest earned on the proceeds has also been realized on RGGI proceeds. These funds are reinvested for program implementation and have been allocated to various RGGI programs. Detailed auction results are presented in Table 1-1, while total RGGI funds are shown in Table 1-2.

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<sup>1</sup> For the DEC adopted regulations, see 6 NYCRR Part 242: CO<sub>2</sub> Budget Trading Program Regulations; for the NYSERDA adopted regulations, see 21 NYCRR Part 507: CO<sub>2</sub> Allowance Auction Program Regulations.

<sup>2</sup> On June 21, 2010, NYSERDA published an Operating Plan that provides the budgets and descriptions for the programs that would be funded by the RGGI auction proceeds. Please refer to [RGGI Use of Auction Proceeds](#) for ongoing developments.

<sup>3</sup> RGGI funds include both auction proceeds and interest earned from those proceeds. See [NY Proceeds by Auction](#) for more details on auction results.

**Table 1-1. New York State's RGGI Auction Results<sup>4</sup>**

Auction Date	Control Period	Clearing Price	New York State Allowances Sold	New York State Auction Proceeds
12/17/08	Current	\$3.38	12,422,161	\$41,986,904
3/18/09	Current	\$3.51	12,422,161	\$43,601,785
	Future	\$3.05	776,385	\$2,367,974
6/17/09	Current	\$3.23	11,861,849	\$38,313,772
	Future	\$2.06	776,385	\$1,599,353
9/09/09	Current	\$2.19	11,861,849	\$25,977,449
	Future	\$1.87	776,385	\$1,451,840
12/02/09	Current	\$2.05	11,861,850	\$24,316,793
	Future	\$1.86	571,423	\$1,062,847
3/10/10	Current	\$2.07	15,136,022	\$31,331,56
	Future	\$1.86	740,167	\$1,376,711
6/9/10	Current	\$1.88	15,136,022	\$28,455,721
	Future	\$1.86	756,801	\$1,407,650
9/8/10	Current	\$1.86	11,421,736	\$21,244,429
	Future	\$1.86	464,418	\$863,817
12/1/10	Current	\$1.86	8,678,724	\$16,142,427
	Future	\$1.86	414,863	\$771,645
<b>TOTAL</b>			<b>116,079,201</b>	<b>\$282,272,683</b>

Source: RGGI Inc.

**Table 1-2. New York State's RGGI Funds through December 31, 2010**

Fund Category	Cumulative Funds
RGGI Auction Proceeds	\$282,272,683
Allocated Interest	\$940,276
<b>TOTAL</b>	<b>\$283,212,959</b>

<sup>4</sup> New York did not offer allowances for sale in the RGGI auction held on September 25, 2008, where the clearing price for 2009 vintage allowances was \$3.07.

## **2** *Budget and Spending Status*

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This section presents financial data for the approved programs through December 31, 2010. Table 2-1 reflects how the \$283.2 million of current funds have been allocated across the five major program areas:

- Residential/Commercial/Industrial/Municipal;
- Transportation;
- Power Supply and Delivery;
- Sustainable Agriculture and Bioenergy; and
- Multi-Sector.

Table 2-1 also presents the current contract commitments and spending levels for each program.

**Table 2-1. Anticipated Available Funding and Financial Status through December 31, 2010 (\$ million)**

	Allocation of Cumulative Funds <sup>a</sup>	Contract Commitments <sup>b</sup>	Funds Spent
<b>Residential/Commercial/Industrial/Municipal</b>			
Green Jobs/Green NY	96.7	96.7	1.4
Residential Space and Water Heating Efficiency	22.4	6.0	1.8
Commercial, Industrial, Municipal and Institutional	3.5	1.4	0.6
Climate Smart Communities	1.5	-	-
Advanced Building Systems and Industrial Process Improvements	2.0	<0.1	<0.1
<b>Total Residential/Commercial/Industrial/Municipal</b>	<b>126.1</b>	<b>104.0</b>	<b>3.8</b>
<b>Transportation</b>			
Transportation Efficiency (and Electrified Rail Efficiency)	-	-	-
Advanced Transportation Development	2.0	0.8	-
<b>Total Transportation</b>	<b>2.0</b>	<b>0.8</b>	<b>-</b>
<b>Power Supply and Delivery</b>			
Statewide Photovoltaic Initiative	12.0	12.0	10.1
Advanced Power Technology	4.5	2.1	0.3
<b>Total Electric Power Supply and Delivery</b>	<b>16.5</b>	<b>14.1</b>	<b>10.5</b>
<b>Sustainable Agriculture and Bioenergy</b>			
Sustainable Agriculture and Bioenergy Program	-	-	-
<b>Total Sustainable Agriculture and Bioenergy</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Multi-Sector</b>			
Clean Technology and Industrial Development	7.8	1.5	-
Climate Research and Analysis	3.0	1.4	0.7
<b>Total Multi-Sector</b>	<b>10.8</b>	<b>2.9</b>	<b>0.7</b>
<b>PROGRAM AREA TOTAL</b>	<b>155.3</b>	<b>121.8</b>	<b>14.9</b>
<b>Other Costs <sup>c</sup></b>			
Deficit Reduction Plan (DRP) Transfer <sup>d</sup>	90.0	90.0	90.0
Con Edison Smart Grid Program <sup>e</sup>	7.7	7.7	7.7
Program Administration <sup>f</sup>	13.4	11.9	5.3
Metrics and Evaluation	9.6	5.6	<0.1
RGGI Inc. Costs <sup>g</sup>	3.9	3.0	2.6
New York State Cost Recovery Fee	3.3	2.4	0.6
<b>OTHER COSTS TOTAL</b>	<b>127.9</b>	<b>120.6</b>	<b>106.2</b>
<b>TOTAL</b>	<b>283.2</b>	<b>242.4</b>	<b>121.1</b>

<sup>a</sup> Includes auction proceeds and allocated interest. The allocation is consistent with the three-year budget presented in the Operating Plan.

<sup>b</sup> Represents total cumulative encumbrances, i.e. funds that have been spent or legally obligated. In addition, contract commitments for Green Jobs/Green NY include funds, set aside in a dedicated account, that are not otherwise spent or legally obligated to particular contracts.

<sup>c</sup> The values for Program Administration, Metrics and Evaluation, and the New York State Cost Recovery Fee represent aggregate funds and commitments for all RGGI-funded activities, including GJGNY.

<sup>d</sup> On December 4, 2009, New York State enacted numerous deficit reduction measures that included the transfer of \$90 million in RGGI auction proceeds to the General Fund.

<sup>e</sup> On December 22, 2009, NYSERDA's Board approved a proposed consent decree that resolves the legal challenge to the state's RGGI program. The parties to the consent decree estimate that the total commensurate benefit for years 2009 - 2011 is \$7,658,707 and agreed to dedicate such funds for the development of smart grid technologies in the Con Edison territory. In October 2010, State Supreme Court Judge Thomas J. McNamara signed a Stipulation and Order of Discontinuance signed by all the parties, thereby formally ending the litigation.

<sup>f</sup> Includes NYSERDA's upfront administrative expenses related to the development and implementation of the CO<sub>2</sub> Budget Trading Program, the CO<sub>2</sub> Allowance Auction program, and the Operating Plan.

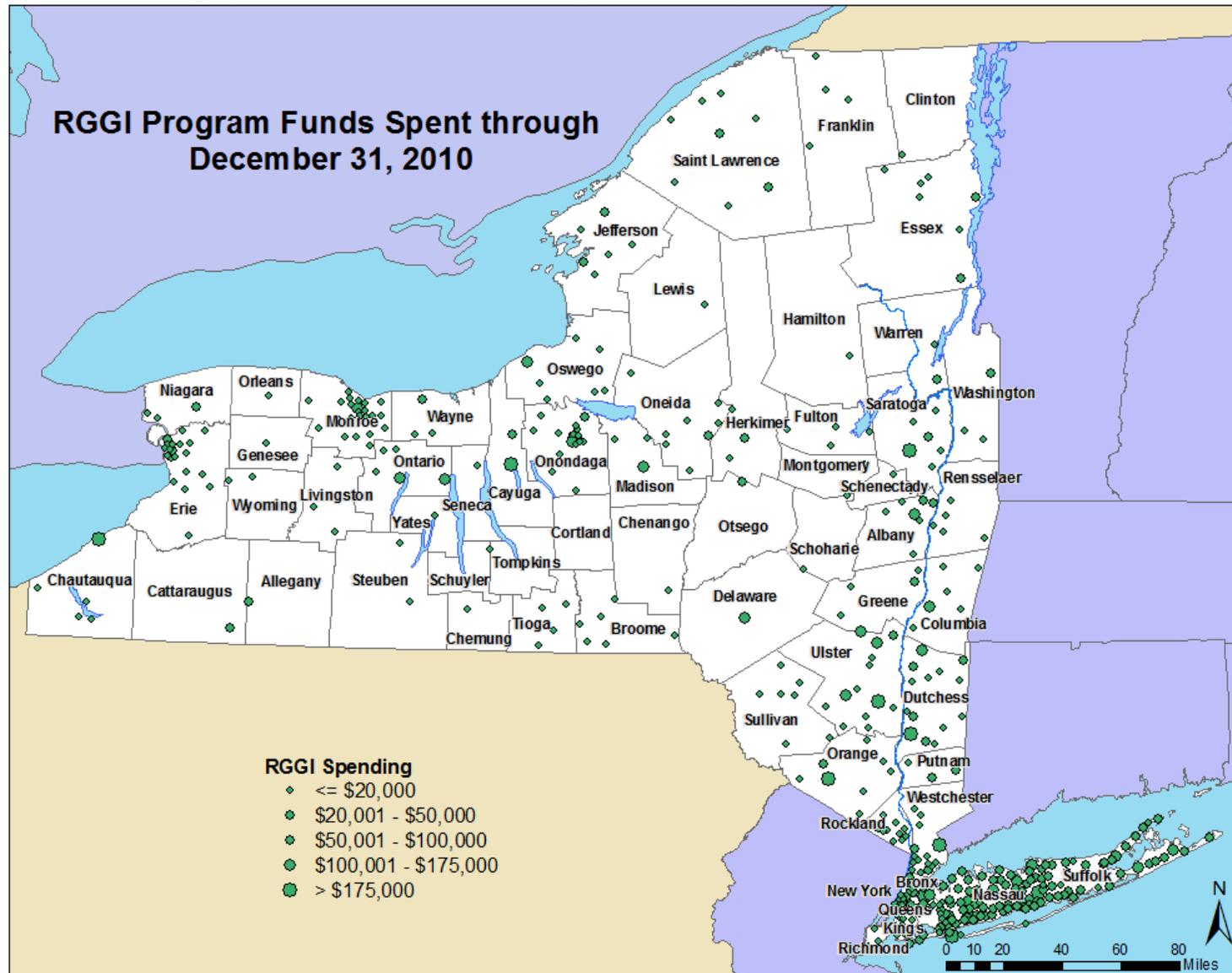
<sup>g</sup> The first year budget includes RGGI Inc. start-up costs and New York State's share of ongoing RGGI Inc. expenses. RGGI Inc. is a non-profit corporation created to support development and implementation of the CO<sub>2</sub> Budget Trading Program.

Totals may not sum exactly due to rounding.

Source: NYSERDA

As stated in the Operating Plan, geographic equity of expenditures will be pursued across the portfolio of RGGI programs. Table 2-1 shows the distribution of nearly \$14 million in spent RGGI program funding across the state for projects or activities that can be associated with a specific geographic area. An additional \$1.0 million, not depicted in this figure, has been spent on activities that have statewide benefits, such as climate research and workforce development.

**Figure 2-2. Geographic Distribution of RGGI Program Funds Spent**



### 3 Summary of Program Benefits

Table 3-1 shows the estimated cumulative annual program benefits as of December 31, 2010.<sup>5</sup> These metrics are estimates made by program implementation staff and have not been evaluated. When evaluation results are available, they will be presented in subsequent Annual Evaluation and Status Reports, which will also include these metrics along with macroeconomic indicators such as job creation resulting from program activity. NYSERDA begins tracking program benefits once projects have been installed. The reporting of fund transfers may lag behind the installation date such that program benefits are reported prior to the financial report of funds spent. At this time, the program benefits include some projects that have also been supported by other non-RGGI NYSERDA funding sources.

**Table 3-1. Summary of Cumulative Program Benefits**

Benefits	Results through December 31, 2010
Net Greenhouse Gas Emission Savings <sup>1</sup> (Annual Tons CO <sub>2</sub> e <sup>2</sup> )	9,310
Net Electricity Savings <sup>3</sup> (Annual MWh)	838
Renewable Energy Generation <sup>3</sup> (Annual MWh)	4,316
Net Natural Gas Savings (Annual MMBtu)	3,926
Net Fuel Oil Savings (Annual MMBtu)	74,691
Net Propane Savings (Annual MMBtu)	301
Net Steam Savings (Annual MMBtu)	12,553
Net Gasoline Savings (Annual MMBtu)	---
Net Diesel Savings (Annual MMBtu)	---
Annual Energy Bill Savings to Participating Customers (\$ Million) <sup>4</sup>	2.9

<sup>1</sup> These emission reductions are associated with both electric and fossil-fuel saving measures. Under a cap-and-trade system, the total number of emission allowances is determined by regulation. Regulated entities can purchase allowances and collectively emit up to the cap that is currently in place. Therefore, in the near term, electric efficiency projects may not decrease the overall amount of emissions going into the atmosphere.

Nevertheless, electric efficiency projects will reduce end-users' responsibility or footprint associated with emissions from electricity production.  
<sup>2</sup> CO<sub>2</sub>e stands for carbon dioxide equivalent and describes the amount of CO<sub>2</sub> that would have the same global warming potential as a given mixture of gases based on factors published by the Intergovernmental Panel on Climate Change.

<sup>3</sup> In previous reports, MWh of electricity produced photovoltaic systems was reported as net electricity savings. Going forward, these MWh will be reported as renewable energy generation.

<sup>4</sup> This total excludes bill savings associated with steam for the Multifamily Performance Program.

Source: NYSERDA

<sup>5</sup> Cumulative annual benefits are reflective of the annual impacts from all currently operational projects installed since program inception.



# 4 Program Activities and Implementation<sup>6</sup>

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## 4.1 Residential, Commercial, Industrial and Municipal Sectors

### 4.1.1 Green Jobs – Green New York (GJGNY)

GJGNY is a statewide program to promote energy efficiency and the installation of clean technologies to reduce energy costs and greenhouse gas emissions. GJGNY will provide subsidized energy audits to single family, multifamily, small business, and not-for-profit building owners as well as financing options for completing the energy efficiency services. GJGNY is also designed to support sustainable community development and create opportunities for green jobs. The GJGNY Annual Report was submitted to the New York State Legislature in October 2010.<sup>7</sup>

The GJGNY Evaluation Operating Plan was approved by NYSERDA's Officers during the third quarter of 2010,<sup>8</sup> and NYSERDA is beginning to engage third-party contractors to develop more detailed evaluation plans for GJGNY programs. Some projects that receive GJGNY funding may also receive incentives through SBC, EEPS, and/or utility programs, such that the projects' energy savings may not all be attributable solely to GJGNY. Nevertheless, all of the energy savings associated with those projects are included in this report.

*Residential.* The single-family residential and free/reduced cost audit component of GJGNY was launched on November 15 with services delivered through the Home Performance with ENERGY STAR Program. Unsecured loans are available for up to \$13,000 at an interest rate of 3.99% or 3.49% with Automated Clearing House (ACH) payments.

Through the end of 2010, the single-family residential financing and free/reduced cost audit components of GJGNY has received 1,180 applications, approved 796, and completed 186 of the audits. Twenty-nine of these have progressed to work scopes being approved. There have been 322 loan applications received with 198 loans pre-approved. A total of nine loans have been closed for a total of \$80,391.

The multifamily financing component of GJGNY has received a funding allocation of \$11.4M, which will be delivered through the Multifamily Performance Program. NYSERDA staff spent much of the year working internally and with external stakeholders to develop the loan mechanism that will be supported with these funds. The multifamily financing component of the program is anticipated to launch late in the second quarter 2011.

Through the end of 2010, the 23 audits were completed through the Multifamily Performance Program, which also had another 30 ongoing GJGNY projects as of December 31.

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<sup>6</sup> The metrics presented in this section are estimates made by program implementation staff and have not been validated; evaluation results will be presented in the Annual Evaluation and Status Report.

<sup>7</sup> For more information, see the [Green Jobs – Green New York Annual Report](#).

<sup>8</sup> For more information, see the [Green Jobs – Green New York Operating Plan for Program Evaluation](#).

NYSERDA has retained the services of Brand Cool to develop and execute a statewide integrated marketing and communications program to support GJGNY. In the fourth quarter of 2010, the contractor presented some initial research findings and proposed tactical strategies for marketing the program to residential, small business, not-for-profits, and multifamily customers.

Additionally, several solicitations were released and requests for proposals (RFPs) submitted during 2010:

- **PON 2011 - Solar Thermal (ST) Training** (\$300,000 of RGGI/GJGNY funds): The objective of this opportunity is to develop ST training or an ST module to integrate with existing energy efficiency training, including curriculum development, equipment, code development, code official training, and assistance to apply for the Institute for Sustainable Power (ISP) accreditation. The PON closed on June 30, 2010. Four proposals were approved for funding and will be executed in the first quarter of 2011.
- **PON 1816 - Workforce Development Training Partnerships for Energy Efficiency** (\$5,462,410; \$1,650,000 of RGGI/GJGNY funds and \$3,812,410 of EEPS funds): The goal of this PON is to significantly strengthen the energy efficiency infrastructure that serves the needs of the portfolio of programs funded through the EEPS and GJGNY Programs and to increase the number of credentialed individuals and contractors supporting these programs. This PON was re-released in December of 2010, adding \$1,650,000 in GJGNY funding for equipment incentives, training, lab houses for field training and testing, and to develop work readiness courses. To date, two applications for GJGNY Worker Readiness training have been received. The PON is available until May 31, 2012.
- **PON 1817 - Energy Efficiency Career Pathways Training and Technical Training** (\$1,850,000; \$600,000 of RGGI/GJGNY funds and \$1,250,000 of EEPS funds): The objective of this PON is to develop Small Commercial Energy Audit Training and Oil Heat Training under GJGNY and also to develop EEPS Career Pathways and Tech Training. The PON closed on August 3, 2010. Twenty proposals were received and reviewed. NYSERDA is negotiating eleven contracts as a result of this solicitation.
- **RFP 2034 - Green Jobs Green New York: Curriculum Inventory, Assessment, and Curriculum Updates** (\$300,000 of RGGI/GJGNY funds): The objective of this PON is to conduct a curriculum inventory, contractor needs assessment, and curriculum updates. The PON closed on 08/31/2010. Nine proposals were received and reviewed. NYSERDA is negotiating two contracts as a result of this solicitation.
- **RFP 2014 - Workforce Homeowner/Community Outreach Curriculum and Contractor Exchange Workshops** (\$300,000 of RGGI/GJGNY funds): The objective of this PON was the creation of standardized curriculum to educate those responsible for the outreach, field work, and related services for GJGNY and/or to hold three Contractor Exchange Workshops. The PON closed on September 21, 2010. Two proposals were received and NYSERDA is negotiating one contract for the Contractor Exchange workshops as a result of this solicitation. No proposals were selected for curriculum development. NYSERDA will be adding the curriculum development task to another related contract.
- **RFP 2080 - GJGNY Training & Implementation Contractor** (\$500,000 of RGGI/GJGNY funds): The objective of this solicitation is to engage a contractor to assist with the roll-out and implementation of the GJGNY outreach services to be provided by Community Based

Organizations (CBOs), including trainings and coordination. RFP 2080 was released on July 20, 2010 and proposals were due October 6, 2010. Seven proposals were received. Contract negotiations are underway, with a single entity with an executed agreement expected in the first quarter of 2011.

- **RFP 2032 - Technical Workshops/Expand BPI Field Exam Capacity/Certification Standards** (\$1,480,000 of RGGI/GJGNY funds): This solicitation will seek proposals to develop technical workshops, fund training centers to expand BPI field exam capabilities, fund third parties to recognize/approve and accredit technical curriculum and certification and to develop certification standards. This RFP is under development, with an anticipated release date in the first quarter of 2011.
- **RFP 2033- Internships/Apprenticeships/On-the-Job Training** (\$2,625,000 of RGGI/GJGNY funds): This solicitation will provide for the recruitment of entry-level workers, funding to support businesses hiring Green Jobs Work Readiness graduates, and enhancement of standards for the NYS Registered Apprenticeship Programs and building trades programs to include weatherization and energy efficiency certified workers for GJGNY. NYSERDA is working closely with NYS Department of Labor to develop this solicitation with an anticipated release date of early 2011.
- **RFP 2038 Green Jobs – Green New York Outreach Program** (\$6,000,000 of RGGI/GJGNY funds): This solicitation was released on November 10, 2010. Staff held a pre-bid webinar open to interested parties to discuss this solicitation and permit potential proposers the opportunity to ask questions. More than 90 people participated in the call and staff fielded a variety of questions about the program. The webinar presentation was posted on the website along with the questions and answers from the session. The due date for this RFP is February 22, 2011.

*Small Business and Not-for-Profit.* During the fourth quarter of 2010, Management approved the expansion of the FlexTech Audit program in support of the GJGNY legislation. Audits will be offered statewide at no charge to eligible small businesses and not-for-profits, with an electric demand of less than 100kW and less than ten employees. These audits will be available in the first quarter of 2011.

NYSERDA anticipates rolling out a loan program for the Small Business/Not-for-profit sectors in the second quarter of 2011.

#### **4.1.2 Residential Space and Water Heating Efficiency**

NYSERDA currently offers a suite of programs providing comprehensive energy services for single and multifamily existing buildings and new construction, including low-income households. In addition to energy savings, these programs provide significant health and safety benefits through comprehensive testing and verification, improved air quality, and improved comfort. Historically, NYSERDA has been able to use limited funds for gas efficiency measures, primarily for low-income consumers, in select gas utility service territories.

The addition of the Residential Space and Water Heating Efficiency programs allows NYSERDA to use RGGI funds for fossil-fuel based measures and renewable energy measures not eligible for System Benefits Charge (SBC) and Energy Efficiency Portfolio Standard (EEPS) incentives. Coordination of these funding sources expands the number of households served and ensures that opportunities for carbon reduction measures are not lost. The Residential Space and Water Heating Efficiency programs seeks to address environmental justice issues by directly targeting outreach to environmental justice communities,

and working with community-based organizations that address environmental justice issues by referring them to appropriate programs.

*Multifamily Performance Program.* The Multifamily Performance Program (MPP) serves residential buildings with five or more units. RGGI funds are used to supplement the program's current SBC and EEPS funding streams, and are specifically targeted at reducing oil and propane energy use in the multi-unit residential buildings and increasing the efficiency and performance of space and domestic water heating systems, ventilation systems, and building enclosures through system replacement and optimization.

All buildings receive program support for energy audits to determine what measures are cost effective, their expected energy savings, and the costs to install them. Projects also receive implementation incentives. Sixty percent of the program funds are targeted to low-income and affordable housing. NYSERDA will coordinate closely with the Weatherization Assistance Program (WAP) to ensure the most effective use of RGGI funds.

Through December 31, 2010, RGGI funds supported five fully-completed energy efficiency projects that are expected to save a total of 38,669 MMBtu and 550,702 kWh per year.<sup>9</sup> An additional 11 ongoing projects have installed measures that are anticipated to save 48,635 MMBtu and 147,517 kWh annually.

*Multifamily Carbon Emission Reduction Program.* The Multifamily Carbon Emissions Reduction Program (MCERP) will provide financial assistance and technical support to owners of multifamily buildings currently burning #6 fuel oil that convert their heating systems to use less carbon-intensive fuels. Less carbon-intensive fuels include #2 fuel oil, biodiesel and biodiesel blends, natural gas, and renewables (geothermal, solar thermal). This program is positioned to help encourage early adoption of the city of New York's phase-out of #6 fuel oil and early compliance with city-level legislation (Int. 194-2010), which requires all buildings that burn fuel oil to burn biofuel blends. Converting #6 fuel oil heated buildings to cleaner fuels will reduce carbon emissions, improve air quality and produce positive public health benefits.

It is anticipated that MCERP will launch in March 2011. The program is expected to have a budget of approximately \$8,000,000, and it is projected that the program could serve approximately 13,000 multifamily apartment units. The program is expected to predominantly serve the New York City market, but will be available to customers statewide.

*EmPower New York<sup>SM</sup>.* EmPower New York<sup>SM</sup> (EmPower) provides cost-effective energy reduction services to households with incomes at or below 60 percent of the State Median Income. RGGI funding will permit cost-effective oil and propane efficiency measures such as insulation, blower-door assisted air sealing, and heating systems repair and replacements. All households meeting the income eligibility requirements, regardless of electric service provider, will be eligible to apply for heating efficiency assistance. NYSERDA will continue to coordinate closely with the WAP to ensure effective use of RGGI funds.

Through December 31, 2010, 61 energy efficiency projects had been completed, which are projected to save a total of 1,470 MMBtu per year. An additional 84 projects are currently in progress.

*Home Performance with ENERGY STAR<sup>®</sup>.* Home Performance with ENERGY STAR (HPwES) is a comprehensive energy efficiency services program for existing one-to-four family homes. The program

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<sup>9</sup> Four of these projects installed all of the planned measures, while one project installed a portion of the planned measures before discontinuing program participation.

uses a network of service providers accredited by the Building Performance Institute (BPI) to perform diagnostic testing on the home, recommend improvements, determine the payback period for those improvements, and install improvements selected by the homeowner.

The initial RGGI-funded HPwES projects will be completed in the first quarter of 2011.

*Green Residential Building Program.* The Green Residential Building Program (GRBP)<sup>10</sup> is a market transformation initiative designed to change the building practices of the residential construction industry for single-family and multifamily homes up to 12 units. The GRBP offers incentives to building owners for certifying buildings to meet or exceed Leadership in Energy and Environmental Design (LEED) or National Green Building Standard guidelines, as well as other program-specific energy efficiency and health and safety requirements. The program is designed to reduce energy use and greenhouse gas production, preserve natural resources, use sustainable building materials, reduce waste, improve indoor air quality, and reduce indoor and outdoor pollution. The GRBP provides an innovative approach to program design, and is the first statewide program in the country to offer direct incentives to building owners for certified green residential buildings.

In 2010, 30 GRBP applications were received, and 29 incentives were paid.<sup>11</sup> Some projects that receive GRBP funding may also receive incentives through SBC, EEPS, and/or utility programs, such that the projects' energy savings may not all be attributable solely to the GRBP. That said, the GRBP incentives have increased the effectiveness of the delivery of EEPS programs, and have helped effectuate approximately 2,149 MMBtus and 112,084 KWh of energy savings. An additional 50-70 projects that may meet program requirements are under construction and are anticipated to be completed in 2011.

Integral to the market transformation approach is the need to increase the awareness of and demand for comprehensive building performance services while simultaneously building an infrastructure of trained, certified technicians and accredited contractors. Outreach to NYSERDA residential program partners to raise awareness of the Green Residential Building Program is ongoing. Applications continue to be received, reviewed, and approved for Home Energy Rating System (HERS) Raters, Green Verifiers, or Green Rater technicians to certify GRBP building eligibility. Through December 2010, twenty-seven technicians have been approved for program participation.

*Solar Thermal Incentive & Outreach Program.* RGGI funds will support incentives for the installation of solar thermal systems to replace fossil-fuel domestic hot water systems. Incentives will be available for new and existing multifamily and single-family buildings. Incentives will also be fully coordinated with the Multifamily Performance Program, Home Performance with ENERGY STAR®, the New York ENERGY STAR® Homes Program, and the new solar thermal program under the Renewable Portfolio Standard. RGGI funds may be used to support the installation of residential solar thermal systems through outreach efforts targeted at increasing the market and demand for solar thermal.

The program opportunity notice (PON) for the Solar Thermal Program (PON 2149) was released on December 10, 2010. Currently there are 19 approved installers. NYSERDA has received six incentive applications totaling \$23,763 for RGGI-funded projects. The PON has a total of \$240,000 available for solar thermal units that can displace between 50% and 80% of the fossil fuels used to produce domestic hot water.

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<sup>10</sup> Public Authorities Law Section 1872(4) directs NYSERDA to create and administer a green residential building program in New York.

<sup>11</sup> Energy savings associated with these incentives and projects are currently being captured in the System Benefits Charge and Energy Efficiency Portfolio Standard progress reports, and are not represented within this report.

### **4.1.3 Commercial, Industrial, Municipal, and Institutional (CIMI) Programs**

The purpose of CIMI programs is to reduce energy use through energy efficiency measures and improved maintenance practices. CIMI programs offer a set of coordinated initiatives designed to achieve cost-effective CO<sub>2</sub> reductions by providing technical support and implementation assistance to existing facilities and new construction projects.

The Wastewater Energy Efficiency Program (WWEP) provides a unique opportunity to coordinate RGGI climate change goals and funding with US Environmental Protection Agency (USEPA) goals and funding, while installing infrastructure that will improve the environment and keep New York waters clean and healthy. New York State has secured Green Project Reserve Funds offered by the USEPA that will bolster efforts to finance a new generation of water and wastewater infrastructure via the Clean Water State Revolving Fund (SRF) Program. Plants financed with State Revolving Fund monies will be constructed to high energy efficient standards, thus minimizing carbon emissions and improving their economic and environmental performance.

This program is co-managed by the New York State Environmental Facilities Corporation (EFC) and NYSERDA. WWEP reviews projects on the SRF Intended Use Plan, including likely recipients of Green Project Reserve Funds, and identifies candidates for energy efficiency and carbon abatement opportunities. Selected projects receive technical analysis to identify costs and savings associated with energy efficiency, process improvements, and carbon abatement opportunities, as well as grants to cost share plant upgrades. WWEP was selected as one of five national recipients of the States Stepping Forward Program Award for excellence by the American Council for an Energy-Efficient Economy.

Through December, NYSERDA had reviewed and evaluated the impact of the USEPA's 2010 guidelines for potential projects and, in conjunction with EFC, continued to initiate outreach to municipalities selected under the 2010 Intended Use Plan in order to discuss the benefits of participation in the WWEP. Cumulatively, RGGI funds had supported the technical energy analyses of 29 municipal wastewater treatment plants. Once installed, the measures recommended by the analyses are projected to save a total of 17,655 MWh and 52,932 MMBtu annually.

### **4.1.4 Climate Smart Communities Support**

The Climate Smart Communities (CSC) program was established in 2009 by the state departments of Environmental Conservation (DEC), and State (DOS), the Public Service Commission (PSC), and NYSERDA. It operates under the joint management of DEC and NYSERDA. The CSC program was designed to strengthen and enhance the participating agencies' outreach to local governments (counties, towns, villages, and cities). Contractors will engage local communities in climate action planning, greenhouse gas emissions inventories, energy conservation, use and encouragement of low-carbon energy, improved waste management, reduction of transportation emissions, and adaptation to climate change through land-use and other planning. NYSERDA plans to issue an RFP for CSC contractors during the first quarter of 2011.

### **4.1.5 Advanced Building Systems and Industrial Process Improvements Program**

The Advance Building Systems and Industrial Process Improvements program is a longer-term initiative that will support development and demonstration of technologies with substantial GHG reduction potential, and that are relevant to New York manufacturing industries and building systems. Funded projects will focus mainly on innovations that reduce the use of fossil fuels; have high replication potential for New York's manufacturing base; are likely to be cost effective; and are not at present supported under SBC programs. For Advanced Building Systems, projects will focus on technical

innovations that collectively enable net-zero-energy buildings, and involve strategies that focus on absolute reduction of building energy loads and increases in systems efficiency prior to introduction of renewable energy sources, such as photovoltaic and solar thermal systems. For Industrial Process Improvements, projects will focus on technical innovations that include thermal efficiency improvements for fossil fuel-based processes and alternative processes that eliminate the use of fossil fuels directly, and indirectly for technologies that bring about thermal destruction of byproducts. Projects may also include changes in material inputs and development of advanced controls provided they directly bring about GHG reductions.

NYSERDA completed a competitive PON for Ultraviolet Light and Electron Beam Process Innovation and Market Transformation (PON 11641) and selected projects for RGGI funding. Twelve proposals were received and RGGI funding was approved for four projects that requested a total of \$888,610. Project contracting is ongoing.

NYSERDA also completed a competitive PON for the Next Generation of Technologies for End Use Efficiency (PON 1772). PON 1772 sought proposals to develop and demonstrate emerging and innovative technologies or systems that increase the efficiency of end-use energy consumption in buildings, reduce greenhouse gas (GHG) emissions in buildings, reduce energy demand in New York State, or are of strategic importance to the state's energy and environmental future. Nineteen proposals were received, and RGGI funding was approved for four projects that requested a total of \$1,042,381, and project contracting is ongoing.

## **4.2 Transportation**

### ***4.2.1 Advanced Transportation and Development***

The goal of the Advanced Transportation Development Program is to commercialize technologies, products, systems, and services that provide superior GHG reduction performance and cost-per-ton values. Activities include product development, field testing, performance validation, policy development, and business assistance associated with emerging products that provide verified GHG benefits.

RGGI funding was approved for ten projects that requested a total of \$2,054,889 under a competitive PON for Advanced Transportation Technology (PON 1520). As of December 31, contracting for five projects had been completed and the projects were underway, while contract negotiations for the remaining projects were ongoing.

## **4.3 Power Supply and Delivery (PSD)**

The objective of the two PSD programs is to help reduce greenhouse gas (GHG) emissions from the electric power sector in New York. The initiative has both near-term and long-term components that will support a portfolio of diverse projects relating to electric power generation, transmission, and distribution systems. These projects will reduce GHG emissions throughout the sector, including implementation of an integrated strategy enabling smart-grid functionality and maintenance of a diverse portfolio of efficient generation resources. The PSD programs are designed to simultaneously maintain system reliability, safety, and security.

### ***4.3.1 Statewide Photovoltaic Program***

The Statewide Photovoltaic Program focuses on reducing GHG emissions in the short term by helping establish a sustainable market for solar energy throughout New York that includes targeted financial

incentives. The program supports end-use solar installations for commercial, industrial, and residential customers as well as electric utility applications to improve the performance of distribution circuits and reduce peak electric load in critical load pockets.

The Statewide Photovoltaic Program supported the installation of 383 solar photovoltaic systems with a total capacity of approximately 3,724 kW. It is estimated that these systems will produce 4,316 MWh of electricity annually.

#### **4.3.2 Advanced Power Technology Program**

The Advanced Power Technology Program (APTP) is designed to reduce GHG emissions in the long term. The program will focus on three primary areas — advanced renewable energy, advanced power delivery, and carbon capture, recycling, and sequestration — and will provide support activities to yield substantial GHG reductions. Other advanced power generation systems and technologies may be explored in the future.

*Advanced Renewable Energy.* The Advanced Renewable Energy component of the APTP will support site-specific, pre-development activities that will foster the market introduction of a broad range of promising renewable energy technologies in New York, including advanced biomass, tidal, and off-shore wind technologies. Seven renewable power generation technology projects requesting \$4,077,280 were selected for funding under a PON for Environmentally Preferred Power Systems (PON 1670). The RGGI funding is being used to support advanced wind, solar, and hydropower technologies. Project contracting for these projects is currently underway, with \$766,087 contracted through the end of December. In addition, a series of technical analyses that characterize and establish, on a preliminary basis, the suitability of an ocean site area for a wind energy project have been conducted on behalf of a collaboration between the New York Power Authority, the Long Island Power Authority, and Con Edison to procure energy from a 350-700 MW offshore wind farm located in the New York City-Long Island harbor-bay area (also known as the NY Bight). These studies are intended to establish a baseline of knowledge of geophysical features, meteorology, climatology, and natural resources/biota in the affected ocean tract, and will provide some basis for supporting future leasing applications as well as project siting and development activities.

*Advanced Power Delivery.* The Advanced Power Delivery initiative of the APTP will focus on applied demonstrations of advanced technologies that promote statewide interconnection of renewable resources, smart-grid capability, advanced meters, energy storage systems, innovative demand-side management strategies, and high efficiency power delivery technologies.

*Carbon Capture, Recycling, and Sequestration.* The Carbon Capture, Recycling, and Sequestration component of the APTP will focus on assessing and demonstrating carbon capture, reuse, compression, and transport technologies, characterization and testing the state's geological sequestration potential, as well as support the development of carbon capture and sequestration demonstration projects in New York.

The TriCarb Consortium for Carbon Sequestration continued project work to identify potential sequestration targets in Rockland County. The project, which is also supported by the U.S. Department of Energy (USDOE), will complete detailed geological analysis of Rockland County's Newark Basin bedrock.

## **4.4 Multi-Sector Programs**

### ***4.4.1 Clean Technology Industrial Development***

The Clean Technology Industrial Development Program seeks to create, attract, and grow industries in New York that can exploit emerging business opportunities in clean energy and environmental technologies while supporting the goal of carbon mitigation. Key elements of the program include advanced industrial research and development of innovative technologies, providing risk capital and business assistance, and development of advanced research centers.

NYSERDA has made awards to four companies through the Renewable, Clean Energy and Energy Efficiency Product Manufacturing Incentive Program (PON 1176). Each project is receiving \$1.5 million with the majority of funding being tied to manufacturing the defined products in New York State. An additional project is anticipated to be selected in the final round of the competitive solicitation. The \$6 million in RGGI funds already awarded has attracted private investment of over \$17.7 million.

### ***4.4.2 Climate Research and Analysis***

The Climate Research and Analysis Program supports research studies, demonstrations, policy research and analyses, and outreach and education efforts. Through these activities, the Program addresses critical climate change-related problems facing the state and the region, including the needs of environmental justice communities.

Current efforts for the Climate Research and Analysis Program continue to include the completion of the state's Climate Action Plan, as called for by Executive Order 24. This Order established a goal to reduce greenhouse gas emissions in New York State to 80 percent below levels emitted in 1990 by the year 2050, and included a directive to assess how all economic sectors can adapt to climate change. During the first half of the year, the program completed an extensive stakeholder process that resulted in the identification of policies and strategies that could assist New York State in meeting its greenhouse gas emissions reduction goal. During the fourth quarter, the program focused on completing the first phase of the Climate Action Plan, which was published on November 9, 2010.<sup>12</sup> Additional components of the Climate Action Plan will be completed in the first half of 2011. New initiatives will focus on addressing research needs identified in the plan.

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<sup>12</sup> For more information, see the [New York State Climate Action Plan Interim Report](#).



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## New York's RGGI-Funded Programs

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Status Report Year Ending December 31, 2010  
April 2011 • RGGI-Annual-2010-r

State of New York

Andrew M. Cuomo, Governor

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