

New York State Energy Research and Development Authority

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# New York State's Regional Greenhouse Gas Initiative Funded Programs

Status Report  
Quarter Ending March 31, 2011

July 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*.

# 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 quarter ending March 31, 2011. 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 March 31, 2011, New York had sold nearly 132 million CO<sub>2</sub> allowances and received approximately \$312 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
3/9/11	Current	\$1.89	15,153,524	\$28,640,160
	Future	\$1.89	757,676	\$1,432,008
<b>TOTAL</b>			<b>131,990,401</b>	<b>\$312,344,851</b>

Source: RGGI Inc.

**Table 1-2. New York State's RGGI Funds through March 31, 2011**

Fund Category	Cumulative Funds
RGGI Auction Proceeds	\$312,344,851
Allocated Interest	\$940,276
<b>TOTAL</b>	<b>\$313,285,127</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 March 31, 2011. Table 2-1 reflects how the \$313.3 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 March 31, 2011**  
**(\$ 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	3.2
Residential Space and Water Heating Efficiency	22.6	6.9	2.8
Commercial, Industrial, Municipal and Institutional	3.5	1.6	0.7
Cleaner Greener Communities	10.5	-	-
Climate Smart Communities	1.7	-	-
Advanced Building Systems and Industrial Process Improvements	2.0	0.8	<0.1
<b>Total Residential/Commercial/Industrial/Municipal</b>	<b>137.0</b>	<b>106.0</b>	<b>6.7</b>
<b>Transportation</b>			
Transportation Efficiency (and Electrified Rail Efficiency)	-	-	-
Advanced Transportation Development	2.0	0.9	0.2
<b>Total Transportation</b>	<b>2.0</b>	<b>0.9</b>	<b>0.2</b>
<b>Power Supply and Delivery</b>			
Statewide Photovoltaic Initiative	11.8	11.8	10.7
Advanced Power Technology	4.5	2.7	0.4
<b>Total Electric Power Supply and Delivery</b>	<b>16.3</b>	<b>14.5</b>	<b>11.1</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	12.8	4.5	-
Climate Research and Analysis	8.6	1.5	1.1
<b>Total Multi-Sector</b>	<b>21.4</b>	<b>6.0</b>	<b>1.1</b>
<b>PROGRAM AREA TOTAL</b>	<b>176.6</b>	<b>127.5</b>	<b>18.0</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>	12.3	7.7	7.7
Program Administration <sup>f</sup>	15.5	12.2	6.1
Metrics and Evaluation	11.1	5.8	0.2
RGGI Inc. Costs <sup>g</sup>	3.9	3.0	2.7
New York State Cost Recovery Fee	3.8	2.6	4.4
<b>OTHER COSTS TOTAL</b>	<b>136.6</b>	<b>121.2</b>	<b>111.1</b>
<b>TOTAL</b>	<b>313.3</b>	<b>248.7</b>	<b>129.1</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

### 3 Summary of Portfolio and Program Benefits

Table 3-1 and Table 3-2 show the estimated cumulative annual benefits as of March 31, 2011 at the portfolio and program levels, respectively.<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 also have been supported by other non-RGGI NYSERDA funding sources.

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

Benefits	Results through March 31, 2011
Net Greenhouse Gas Emission Savings <sup>1</sup> (Annual Tons CO <sub>2</sub> e <sup>2</sup> )	10,950
Net Electricity Savings (Annual MWh)	1,213
Renewable Energy Generation (Annual MWh) <sup>3</sup>	3,903
Net Natural Gas Savings (Annual MMBtu)	18,206
Net Fuel Oil Savings (Annual MMBtu)	85,998
Net Propane Savings (Annual MMBtu)	1,280
Net Steam Savings (Annual MMBtu) <sup>4</sup>	10,157
Net Wood Savings (Annual MMBtu)	122
Net Gasoline Savings (Annual MMBtu)	---
Net Diesel Savings (Annual MMBtu)	---
Annual Energy Bill Savings to Participating Customers (\$ Million) <sup>5</sup>	2.7

<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> These MWh savings have decreased since last quarter due to a reclassification of project status for some projects that have not been completed.

<sup>4</sup> These MMBtu savings have decreased since last quarter due to a reclassification of some savings from steam to oil.

<sup>5</sup> This total excludes bill savings associated with steam for the Multifamily Performance Program. The total has decreased since last quarter based on the latest available energy price data.

Source: NYSERDA

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

**Table 3-2. Summary of Cumulative Program Benefits**

<b>Program</b>	<b>Net Electricity Savings or Renewable Energy Generation (Annual MWh)</b>	<b>Net Energy Savings (Annual MMBtu)</b>	<b>Net Greenhouse Gas Emission Savings<sup>1</sup> (Annual Tons CO<sub>2</sub>e<sup>2</sup>)</b>
<b><i>Residential, Commercial, Industrial &amp; Municipal Sectors</i></b>			
<i>Green Jobs - Green New York</i>			
GJGNY - Residential Audit Component <sup>3</sup>	224	10,598	730
GJGNY - Residential Loan Component <sup>3</sup>	161	8,367	598
<b><i>Residential Space &amp; Water Heating Efficiency</i></b>			
Multifamily Performance Program	737	93,092	7,709
EmPower New York <sup>SM</sup>	0	2,020	156
Home Performance with ENERGY STAR <sup>®</sup>	0.2	506	41
Green Residential Building Program <sup>3</sup>	147	3,471	264
Solar Thermal Incentive & Outreach Program	0	90	7
<b><i>Power Supply &amp; Delivery</i></b>			
Statewide Photovoltaic Program	3,903	0	1,612
Cross-Program Overlap <sup>4</sup>	57	2,382	168
<b>TOTAL</b>	<b>5,116</b>	<b>115,763</b>	<b>10,950</b>

<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> At this time, the benefits for this program include some projects that also have been supported by other non-RGGI NYSERDA funding sources.

<sup>4</sup> Cross-program overlap accounts for projects that received both a GJGNY audit and loan as well as projects that received a GJGNY loan and a RGGI-funded incentive through the Home Performance with ENERGY STAR<sup>®</sup> Program.

Source: NYSERDA

# 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 the System Benefits Charge (SBC), Energy Efficiency Portfolio Standard (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 free/reduced cost audit and financing components of GJGNY were launched on November 15, 2010 with services delivered through the Home Performance with ENERGY STAR<sup>®</sup> Program.

Applicants that meet the GJGNY eligibility criteria can obtain loans from \$3,000 (or from \$1,500 for a household receiving Assisted Home Performance with ENERGY STAR<sup>®</sup> subsidies) to \$13,000, with repayment terms of five, ten, or fifteen years. The current interest rate is 3.99% with monthly repayment by check, or 3.49% for borrowers who opt for automated monthly repayments. GJGNY loans are funded from a \$51 million revolving loan fund (RLF), half of which is targeted at the residential sector. The RLF will initially be capitalized with a portion of New York's RGGI proceeds.

Through the end of March 2011, the GJGNY single-family residential free/reduced cost audit program has received 6,991 applications, approved 6,326 applications, and completed 2,200 the audits. Nine hundred of these audit clients have proceeded to having work scopes approved for cost-effective energy efficiency projects. A total of 403 energy efficiency projects identified by the audits that have been completed, and are anticipated to save 224,074 kWh and 10,598 MMBtu annually.

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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](#).

The GJGNY residential financing program has received 920 loan applications, with 519 of these loans now in the pre-approved stage. This represents an obligation of approximately \$4.2 million. During the first quarter of 2011, 142 loans closed, bringing the total number of GJGNY residential loans that have closed to 151. These loans represent a total of \$1.2 million in financing for energy efficiency projects that are anticipated to save 161,015 kWh and 8,367 MMBtu per year.

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 first quarter of 2011, 25 audits were completed through the Multifamily Performance Program, which also had another 38 ongoing GJGNY projects as of March 31.

NYSERDA workforce development efforts funded under GJGNY are aligned with program strategies that promote the widespread implementation of energy efficiency and clean energy measures. The program is designed to help provide meaningful employment opportunities for displaced workers, the long-term unemployed, and new workforce entrants. Workforce training initiatives are underway to assist people through the processes of career planning, training, certification, and identifying energy employment opportunities. Subsequent steps include job placement, mentoring, and other on-the-job (OJT) training to ensure workers are prepared to provide quality work based on sound principles and provide maximum energy savings through the proper installation of energy efficiency measures. Funds are available for training equipment, training/simulation houses, hands-on training, and other training approaches needed to master skills and pass certification exams, enabling businesses to find and employ workers that are trained to deliver quality work. NYSERDA is also using video conferencing to communicate to GJGNY stakeholders and provide training through Department of Labor One-Stop Centers.

The first five Program Opportunity Notices (PONs) and Requests For Proposals (RFPs) listed below have been released and contractors hired, encumbering about half of the total GJGNY \$8 million workforce training budget. The remaining funding will be used for two additional solicitations, RFPs 2032 and 2033, which are to be released later this spring.

- **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. Four projects have been funded through this PON and will be delivered through Monroe Community College, Ulster County BOCES, Sullivan County BOCES, and the Research Foundation of SUNY.
- **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. To date, seven applications for GJGNY Worker Readiness training have been received, and the funding category has been exhausted. Worker readiness trainings executed to date include the Northern Manhattan Improvement Corporation, Solar One, Mason Tenders Training Fund, and The Outsource Center. NYSERDA anticipates funding the construction of four or five lab houses for field training and is currently negotiating with proposers.

- **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. Ten projects are being funded as a result of this solicitation. Three contracts, two for Small Commercial Energy Audit and one for Oil Heat Training, are to be funded by GJGNY. Contract negotiations are underway.
- **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 August 31, 2010. NYSERDA is negotiating two contracts as a result of this solicitation, with one contractor conducting curriculum inventory research under a letter of pre-agreement.
- **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 Contractor Exchange Workshops. The PON closed on September 21, 2010, and NYSERDA is currently working with the Building Performance Institute (BPI) to implement five Contractor Exchange workshops. The first workshop will be held in Albany this summer.
- **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 technical certification, and to develop certification standards. This RFP will be released in late spring 2011.

Note: The Building Performance Contractors Association (BPCA) recently concluded a survey of past building analyst training participants to help NYSERDA better understand the gaps and barriers that dissuade students from completing certification and/or becoming participating Home Performance Contractors. More than 175 past training participants completed the survey and, based on the preliminary results, there appears to be an excellent opportunity to address some of the barriers identified (i.e., needing more hands-on training, etc.) through RFP 2032.

- **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. This solicitation will be released in June 2011.

Three additional GJGNY RFPs focusing on outreach and marketing activities have also been released:

- **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 statewide 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. Seven proposals were received, and the Conservation Services Group was selected by a technical evaluation panel (TEP) that was held on October 28. Contract negotiations are nearing final execution.

- **RFP 2038 Green Jobs – Green New York Outreach Program** (\$6,000,000 of RGGI/GJGNY funds): This solicitation was released on November 16, 2010, and targets constituency based organizations that will recruit small businesses, not-for-profits, residential, and multi-family building owners into the audit and financing programs and encourages workers to take advantage of training opportunities. The due date for this RFP was February 22, 2011, and 24 proposals were received that addressed 12 target regions throughout the state. The Upstate TEP was held on March 30 to review the merit of the submitted proposals. The Downstate TEP will be held on April 6.
- **RFP 1224 Mini Bid to Pre-Qualified Marketing Contractors** (\$144,000 of RGGI/GJGNY funds): This RFP will provide services for the marketing of GJGNY program components. Brand Cool was awarded the contract in January 2011.

*Small Business and Not-for-Profit.* The FlexTech Audit Program has been expanded in support of the GJGNY legislation. Energy audits are offered statewide at no charge to small businesses and not-for-profits that have an average electric demand of up to 100kW and employ up to ten staff members.

The expanded audit program was launched in January, and 68 audits were completed by the end of the first quarter, along with contract modifications for audit service providers. FlexTech Audit Program materials were also updated, including the application, fact sheet, and web page.

#### **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 SBC and 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 March 31, 2011, RGGI funds supported ten fully-completed energy efficiency projects that are expected to save a total of 69,282 MMBtu and 696,109 kWh per year.<sup>9</sup> An additional eight ongoing projects have installed measures that are anticipated to save 23,810 MMBtu and 40,921 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 converts 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 April 2011. The program is expected to have a budget of approximately \$7,000,000, including \$6,500,000 in incentives, 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 March 31, 2011, 86 energy efficiency projects had been completed, which are projected to save a total of 2,020 MMBtu per year. An additional 124 projects are currently in progress.

*Home Performance with ENERGY STAR<sup>®</sup>.* Home Performance with ENERGY STAR<sup>®</sup> (HPwES) is a comprehensive energy efficiency services program for existing one-to-four family homes. The program 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 HPwES Program uses RGGI funds for cost-effective oil and propane efficiency measures, such as replacing inefficient oil and propane heating equipment and other measures that have a direct impact on reducing oil and propane consumption. Through March 31, 2011, ten energy efficiency projects have been completed, which are projected to save approximately 506 MMBtu and 179 kWh per year.

*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

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

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

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 the first quarter of 2011, 17 GRBP applications were received and 17 incentives were paid. Since program inception, the GRBP has received 47 applications and paid 46 incentives.<sup>11</sup> Some projects that receive GRBP funding may also receive incentives through the 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 SBC/EEPS programs, and have helped effectuate approximately 3,472 MMBtu and 147,338 KWh of energy savings through March 31, 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 GRBP is ongoing. Technician 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 March 31, 2011, 33 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 for the Solar Thermal Program (PON 2149) was released on December 10, 2010. Currently there are 43 approved installers. NYSERDA has received 17 incentive applications totaling \$152,150 for RGGI-funded projects. The PON has a total of \$423,957 available for funding incentives. This amount increased from the previous total of \$240,000 due to an additional \$183,957 in unspent funding for PV projects becoming available. This funding will be used for solar thermal units that can displace between 50% and 80% of the fossil fuels used to produce domestic hot water.

#### **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

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

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 March, NYSERDA and EFC continued to initiate outreach to municipalities in order to discuss the WWEP and the benefits of participation in the program. 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. Twenty-six additional technical energy analyses are ongoing, of which nine have reached the draft stage and are currently being reviewed by NYSERDA and EFC.

#### **4.1.4 Cleaner Greener Communities**

This program was announced by Governor Cuomo in his 2011 State of the State address. It will build on the Climate Smart Communities program, providing enhanced support for development and implementation of regional sustainability plans to help ensure that the State's ongoing and substantial investments in infrastructure help to move communities and New York as a whole toward a more environmentally sustainable future. The program will encourage communities to use public-private partnerships and develop regional sustainable growth strategies in areas such as emissions control, energy efficiency, renewable energy, low-carbon transportation, and other carbon reductions. The program will emphasize activities such as revitalizing urban areas through smart growth, creating green jobs, building green infrastructure, and strengthening environmental justice and protection.

The program will have two primary components: (1) development of, and updating to, regional sustainable growth plans; and (2) implementation of the sustainability plans. At least 10 region-specific plans will be competitively selected, one for each of the 10 Regional Economic Development Council regions. Support for additional plans will be considered for unique regions within, or that span multiple, Regional Economic Development Council regions (*e.g.*, the Adirondacks). For each regional plan, the corresponding Regional Economic Development Council(s) will provide an advisory role to assist in coordination of the municipalities contained within. Approximately 90% of the budget will be used to support the implementation component of the program.

Implementation of the regional sustainable growth plans will also be a competitive program. Support will be provided for project proposals that address specific items within the regions' sustainability plan. Projects that have garnered community buy-in, as well as those that include public-private partnerships, will be encouraged. Consideration will be given to support implementation projects in multiple types of communities (*i.e.*, rural, suburban, and urban communities). RGGI proceeds can be used for the implementation of plan elements that fall within the scope of the permissible use of RGGI proceeds (energy efficiency, renewable energy and innovative carbon reduction programs).

Outreach and community support for the overall Cleaner, Greener Communities initiative will be provided in part through Climate Smart Communities and Energy Smart Communities.

*Climate Smart Communities.* 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. During the first quarter, NYSERDA issued an RFP for CSC contractors. Proposals are due on April 4.

#### **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 March 31, contracting for seven projects had been completed and the projects were underway, while contract negotiations for the remaining projects were ongoing. Projects that commenced during the first quarter include the development of regenerative shock absorbers for light duty vehicles.

### **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<sup>12</sup>**

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.

Through March 31, 2011, the Statewide Photovoltaic Program had supported the installation of 347 solar photovoltaic systems with a total capacity of approximately 3,104 kW. It is estimated that these systems will produce 3,903 MWh of electricity annually. An additional 34 projects have been approved.

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

The Advanced Power Technology Program (AFTP) 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 AFTP 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 \$1,740,642 contracted through the end of March. During the first quarter, work began on a project involving wind turbine analysis systems.

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

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<sup>12</sup> The number of installed systems, installed kW, and MWh of generation for the Statewide Photovoltaic Program have decreased since last quarter due to a reclassification of project status for some projects that have not been completed.

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. Phase I of the project has been completed, which included identification and characterization of drilling and seismic sites. Phase II commenced with the start of seismic surveys of the Newark Basin.

## **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>13</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>13</sup> For more information, see the [New York State Climate Action Plan Interim Report](#).

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.

*To learn more about NYSERDA programs and funding opportunities visit [www.nyserdera.org](http://www.nyserdera.org).*

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**State of New York**  
Andrew M. Cuomo, Governor

## New York State's Regional Greenhouse Gas Initiative Funded Programs

Status Report Quarter Ending March 31, 2011  
July 2011

**New York State Energy Research and Development Authority**  
Vincent A. Delorio, Esq., Chairman | Francis J. Murray, Jr., President and CEO