

New York State Energy Research and Development Authority

New York's RGGI-Funded Programs Status Report

Quarter Ending September 30, 2011

February 2012

nyserda
Energy. Innovation. Solutions.

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.

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

Energy Technology Innovation & Business Development

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

Energy Education and Workforce Development

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

Energy and the Environment

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

Energy Data, Planning and Policy

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

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1 Introduction

To implement the Regional Greenhouse Gas Initiative (RGGI), New York State established its Carbon Dioxide (CO₂) Budget Trading Program through regulations promulgated by the Department of Environmental Conservation (DEC) and the CO₂ Allowance Auction Program through regulations promulgated by the New York State Energy Research and Development Authority (NYSERDA).¹ This report is prepared pursuant to the “Operating Plan for Investments in New York under the CO₂ Budget Trading Program and the CO₂ Allowance Auction Program” (Operating Plan),² and provides an update on the progress of programs through the quarter ending September 30, 2011. It contains an accounting of program spending, an estimate of program benefits, and a summary description of program activities and implementation. An amendment providing updated program descriptions and funding levels for the 2011 version of the plan was approved by NYSERDA’s Board of Directors on June 20, 2011.³

1.1 New York’s RGGI Funds⁴

As of September 30, 2011, New York sold nearly 140 million CO₂ allowances and received approximately \$327 million in auction proceeds. An additional \$1,034,063 in interest earnings also were realized on RGGI proceeds. These funds are reinvested for program implementation and are allocated to various RGGI programs. Detailed auction results are presented in Table 1-1, while total RGGI funds are shown in Table 1-2.

¹ For the DEC adopted regulations, see 6 NYCRR: CO₂ Allowance Auction Program Regulations.

² On June 21, 2010, NYSERDA Part 242: CO₂ Budget Trading Program Regulations; for the NYSERDA adopted regulations, see 21 NYCRR Part 507 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.

³ Please refer to the [2011 RGGI Operating Plan Amendment](#) for details.

⁴ 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 Results⁵

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
6/8/11	Current	\$1.89	4,519,648	\$8,542,135
	Future	\$1.89	383,114	\$724,085
9/7/2011	Current	\$1.89	2,689,151	\$5,082,495
	Future	n/a	0	\$0
Current Control Period Total			133,164,697	\$313,635,636
Future Control Period Total			6,417,617	\$13,057,930
TOTAL			139,582,314	\$326,693,566

Source: RGGI Inc.

⁵ 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.

Table 1-2. New York State's RGGI Funds through September 30, 2011

Fund Category	Cumulative Funds
RGGI Auction Proceeds	\$326,693,566
Allocated Interest	\$1,034,063
TOTAL	\$327,727,629

2 *Budget and Spending Status*

This section presents financial data for the approved RGGI programs through September 30, 2011. Table 2-1 reflects how the \$327.7 million of current funds are allocated across the four major program areas:

- Residential/Commercial/Industrial/Municipal
- Transportation
- Power Supply and Delivery
- 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 September 30, 2011 (\$ million)

	Allocation of Cumulative Funds ^a	Contract Commitments ^b	Funds Spent
Residential/Commercial/Industrial/Municipal			
Green Jobs/Green NY	96.7	96.7	10.0
Residential Energy Services	26.2	12.6	5.1
Municipal Water and Wastewater	3.5	1.6	1.0
Cleaner Greener Communities	16.9	-	-
Industrial Process Improvement	4.7	1.6	<0.1
Total Residential/Commercial/Industrial/Municipal	148.0	112.4	16.1
Transportation			
Transportation Research	2.0	1.1	0.3
Total Transportation	2.0	1.1	0.3
Power Supply and Delivery			
Statewide Photovoltaic Initiative	11.7	11.7	11.0
Advanced Power Technology	4.5	3.7	1.6
Total Electric Power Supply and Delivery	16.2	15.3	12.6
Multi-Sector			
Clean Technology and Industrial Development	13.8	4.5	1.8
Climate Research and Analysis	8.6	1.7	1.3
Total Multi-Sector	22.4	6.2	3.1
PROGRAM AREA TOTAL	188.5	135.1	32.1
Other Costs ^c			
Deficit Reduction Plan (DRP) Transfer ^d	90.0	90.0	90.0
Con Edison Smart Grid Program ^e	12.3	12.3	12.3
Program Administration ^f	16.7	12.8	7.6
Metrics and Evaluation	11.8	6.2	0.4
RGGI Inc. Costs ^g	4.3	3.9	3.0
New York State Cost Recovery Fee	4.0	2.8	1.1
OTHER COSTS TOTAL	139.2	127.9	114.4
TOTAL	327.7	263.0	146.5

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

^b 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.

^c 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.

^d 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.

^e 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.

^f Includes NYSERDA's upfront administrative expenses related to the development and implementation of the CO₂ Budget Trading Program, the CO₂ Allowance Auction program, and the Operating Plan.

^g 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 CO₂ 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 September 30, 2011 at the portfolio and program levels, respectively.⁶ 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 also will 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 reporting of funds spent. At this time, the program benefits include some projects that also are supported by other non-RGGI funding sources administered by NYSERDA.

Table 3-1. Summary of Cumulative Portfolio Benefits

Benefits	Results through September 30, 2011
Net Greenhouse Gas Emission Savings ¹ (Annual Tons CO ₂ e ²)	17,874
Net Electricity Savings (Annual MWh)	6,473
Renewable Energy Generation (Annual MWh)	4,205
Net Natural Gas Savings (Annual MMBtu)	40,683
Net Fuel Oil Savings (Annual MMBtu)	140,917
Net Propane Savings (Annual MMBtu)	4,818
Net Steam Savings (Annual MMBtu)	10,557
Net Wood Savings (Annual MMBtu)	439
Net Kerosene Savings (Annual MMBtu)	208
Net Gasoline Savings (Annual MMBtu)	---
Net Diesel Savings (Annual MMBtu)	---
Annual Energy Bill Savings to Participating Customers (\$ Million) ³	4.6

¹ 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.

² CO₂e stands for carbon dioxide equivalent and describes the amount of CO₂ 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.

³ This total excludes bill savings associated with steam for the Multifamily Performance Program.

Source: NYSERDA

⁶ 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

Program	Net Electricity Savings or Renewable Energy Generation (Annual MWh)	Net Energy Savings (Annual MMBtu)	Net Greenhouse Gas Emission Savings ¹ (Annual Tons CO₂e²)
<i>Residential, Commercial, Industrial & Municipal Sectors</i>			
<i>Green Jobs - Green New York</i>			
GJGNY - Single-Family Residential Audit Component ³	961	55,381	3,871
GJGNY - Single-Family Residential Loan Component ³	467	29,316	2,059
GJGNY - Multifamily Residential Audit Component ³	1,744	7,384	1,243
<i>Residential Energy Services</i>			
Multifamily Performance Program	3,260	113,172	9,393
EmPower New York SM	0	4,389	344
Home Performance with ENERGY STAR [®]	4.9	2,916	244
Green Residential Building Program ³	304	5,614	465
Solar Thermal Incentive & Outreach Program	0	928	65
<i>Power Supply & Delivery</i>			
Statewide Photovoltaic Program	4,205	0	1,737
Cross-Program Overlap ⁴	268	21,478	1,548
TOTAL	10,678	197,622	17,874

¹ 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.

² CO₂e stands for carbon dioxide equivalent and describes the amount of CO₂ 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.

³ At this time, the benefits for this program include some projects that also have been supported by other non-RGGI NYSERDA funding sources.

⁴ Cross-program overlap accounts for projects that received any combination of a GJGNY audit, a GJGNY loan, or a RGGI-funded incentive through the Home Performance with ENERGY STAR Program or the Multifamily Performance Program.

Source: NYSERDA

4 Program Activities and Implementation⁷

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 also is designed to support sustainable community development and create opportunities for green jobs. The GJGNY Annual Report was submitted to the New York State Legislature on September 30, 2011.⁸

Program Evaluation. The GJGNY Evaluation Operating Plan was approved by NYSERDA's Officers during the third quarter of 2010.⁹ One of the first tasks outlined in the GJGNY Evaluation Operating Plan, development of a program theory and logic model report, is now complete. The program theory and logic model report was developed by NYSERDA's evaluation contractors and presented to the Advisory Council by Energy Analysis staff on September 14, 2011. The logic model work was summarized in the October 2011 GJGNY Annual Report and the full program theory and logic model report is posted on NYSERDA's website.¹⁰ The program theory and logic model report identifies program inputs, activities, outputs and outcomes. It also lists indicators and research issues to help guide and focus future evaluations of the program.

Two other evaluation projects, a Residential Single Family Homes Process Evaluation and a Market Characterization and Assessment study, are currently underway and in the final stages of primary data collection. Primary data collection is expected to conclude and analysis will begin in December 2011. The estimated completion date for this study is March 2012.

Financing. The contract for the Green Jobs-Green New York Master Loan Servicer, selected under RFP 2198, is in final review. Once approved, PON 2350 will be issued seeking Participating Lenders to originate GJGNY residential energy loans, with collection services provided by the Master Loan Servicer. The result is expected to provide participants with the option of using a local lender or the statewide lender (EFS.)

Additionally, a competitive solicitation was released on March 11, 2011, which requested proposals from US Department of Energy (DOE) formula ineligible small municipalities in nine economic development regions to serve as a host community for NYSERDA's Revolving Loan Fund or to administer an energy

⁷ The metrics presented in this section are estimates made by program implementation staff and are not validated; evaluation results will be presented in the Annual Evaluation and Status Report.

⁸ For more information, see the [Green Jobs – Green New York Annual Report](#).

⁹ For more information, see the [Green Jobs – Green New York Operating Plan for Program Evaluation](#).

¹⁰ For more information, see the [Green Jobs – Green New York Program Logic Model Report](#).

efficiency loan fund of their own. Eleven proposals were received, representing eight of the nine economic development regions. On June 30, 2011, NYSERDA awarded funding for eight of the 11 proposals. Seven awards went to municipalities that will serve as host communities for NYSERDA's Revolving Loan Fund, and one municipality will administer its own energy efficiency loan fund. One economic development region did not submit a proposal in response to the solicitation; however, a neighboring economic development region was offered the opportunity to serve as host for this region. This award will make available \$689,214 for outreach/administration and \$6,202,922 for energy efficiency loans in the nine economic development regions. Contracts for five of the small municipalities are currently under review for approval, while NYSERDA continues to negotiate with three of the successful respondents.

On-Bill Recovery was signed into law by Governor Cuomo on August 4, 2011. NYSERDA is working with staff from the Department of Public Service and the utilities to develop the process to be used to implement the program. The Public Service Commission will approve billing and collection procedures within 150 days, with full implementation to occur no later than 300 days after signing. Participation will initially be limited to 0.5% of each utility company's customers, but NYSERDA can petition to increase the limit, provided the PSC finds On-Bill Recovery has not harmed the company or its ratepayers. As a result of this law, the maximum loan amounts for the GJGNY program will be amended to \$25,000 for residential 1-to-4-family homeowners and \$50,000 for small business/not-for-profit building owners for projects with paybacks of 15 years or less.

Single-Family Residential. Since its launch on November 15, 2010, the GJGNY Audit Program continues to be well received by New York State residents. Through September 30, 2011, 13,719 applications for free and reduced cost audits have been received. A total of 1,763 energy efficiency projects identified by the audits were completed through the end of the third quarter and are anticipated to save 960,950 kWh and 55,381 MMBtu annually.

Participants that meet the GJGNY eligibility criteria can obtain GJGNY loans from \$3,000 (or from \$1,500 for a household receiving Assisted Home Performance with ENERGY STAR subsidies) to \$13,000, with repayment terms of 5, 10, or 15 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 initially will be capitalized with a portion of New York's RGGI proceeds.

This financing component of the GJGNY program is being well received. Since January 2011, there have been a total of 2,322 financing applications submitted, of which 1,193 have been approved with others still being processed. During the third quarter of 2011, 219 loans closed, bringing the total number of GJGNY residential loans that are closed to 588. These loans represent a total of over \$4.8 million in financing for energy efficiency projects that are anticipated to save 466,892 kWh and 29,316 MMBtu per year.

Multifamily Residential. GJGNY provides funding for Multifamily Performance Program (MPP) audits and financing. Through September 30, 2011, the MPP GJGNY audit program received 78 audit applications and completed 44 audits. Eighteen projects have moved forward to contracts to have measures installed. Energy savings associated with installed measures total 1,743,963 kWh and 7,384 MMBtu per year.

The multifamily financing component of GJGNY was launched in June of 2011, which will be delivered through the Multifamily Performance Program. NYSERDA is currently seeking lenders for the Multifamily Financing Program.

Small Business and Not-for-Profit. The FlexTech program was expanded January 2011 in support of the GJGNY legislation. GJGNY energy audits are offered statewide at no charge to small businesses and not-for-profits with an average electric demand of 100kW or less and ten employees or less. For participants ineligible for GJGNY audit funding, FlexTech also uses American Recovery and Reinvestment Act (ARRA) funding to provide free energy audits to any small business or not-for-profit with an average electric demand of 100 kW or less. As of September 30, 2011, 445 GJGNY audits and 215 ARRA audits have been completed.

The Small Business/Not-For-Profit Energy Efficiency Financing Program was launched in June 2011. As of September 30, 2011, six lending institutions had signed up to be listed as participating lenders on the NYSERDA website.

Workforce Development. 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 with the processes of career planning, training, certification, and identifying energy employment opportunities. The most recent initiatives include incentives for job placement, mentoring, and other on-the-job training (OJT) to ensure workers are prepared to provide quality work based on sound principles and to provide maximum energy savings through the proper installation of energy efficiency measures. The training equipment, video conferencing, training/simulation houses, hands-on diagnostics, and other training approaches needed to master skills and pass certification exams also are provided, enabling businesses to find and employ workers that are trained to deliver quality work. In addition, NYSERDA is using video conferencing to communicate to GJGNY stakeholders and provide training through Department of Labor One-Stop Centers.

As of September 30, 2011, several contracts have been executed or are in negotiations resulting from GJGNY Workforce Development solicitations. The following GJGNY Workforce Development solicitations are currently available for open enrollment:

- **PON 1816 -Workforce Development Training Partnerships for Energy Efficiency Version 3.0** (\$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, six Training Partnership Agreements for GJGNY Worker Readiness training are executed and one additional proposal is under negotiation, and the funding category has been exhausted. NYSERDA also reviewed proposals and conducted interviews for Training and Field Testing Lab Houses and will fund four projects under that category.
- **RFP 2033- Internships/Apprenticeships/On-the-Job Training** (\$2,625,000 of RGGI/GJGNY funds): The solicitation was released on June 8, 2011 and to date, 33 applications for on-the-job training funds have been approved by NYSERDA and forwarded to NYS DOL Business Services. NYSERDA has issued five OJT contracts to date, the result of collaboration between the applicant and the DOL Business Services Representative and expects that additional contracts will be negotiated throughout October. Under Category A, curriculum enhancement, one proposal has been reviewed by the TEP and several notices of intent to apply have been received.

Outreach and Marketing. NYSERDA staff continues to finalize the contract packages for the nineteen CBOs selected through RFP 2038: Green Jobs – Green New York Outreach program and RFP 2327 (Green Jobs – Green NY Outreach Program – reissue).

4.1.2 Residential Energy Services

NYSERDA currently offers a suite of programs that provide 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 Energy Services 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 Energy Services program seeks to address environmental justice issues by directly targeting outreach to environmental justice communities and by referring CBOs that address environmental justice issues 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. Specifically, these funds are 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, 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 September 30, 2011, RGGI funds supported 25 completed energy efficiency projects that are expected to save a total of 113,172 MMBtu and 3,260,057 kWh per year.

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 to 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.

MCERP launched on April 4, 2011. As of June 30, nearly \$6 million in RGGI funding was allocated to 176 ongoing projects that are anticipated to serve 29,717 units in 370 buildings. This program is available to the entire state, but only five applications came from areas outside of the five boroughs of New York City (four from Westchester County and one from Nassau County).

EmPower New YorkSM. EmPower New YorkSM (EmPower) provides cost-effective energy reduction services to households with incomes at or below 60% 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 September 30, 2011, 225 energy efficiency projects were completed and are projected to save a total of 4,389 MMBtu per year. An additional 126 projects are currently in progress.

Home Performance with ENERGY STAR®. Home Performance with ENERGY STAR (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 September 30, 2011, 61 energy efficiency projects were completed, which are projected to save approximately 2,916 MMBtu and 4,897 kWh per year.

Green Residential Building Program. The Green Residential Building Program (GRBP)¹¹ is a market transformation initiative designed to change the building practices of the residential construction industry for single-family homes and multifamily homes with up to 11 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.

From its inception in September 2010 through the end of the third quarter of 2011, the GRBP received 106 applications and approved 81 incentives for payment.¹² Most projects that receive GRBP funding also receive incentives funded through NYSERDA's New York ENERGY STAR Homes Program, such that the projects' energy savings may not be solely attributable to the GRBP. Still, it should be noted that the GRBP is an important addition to NYSERDA's suite of residential programs, and helped effectuate the approximately 5,614 MMBtu and 303,925 kWh in energy savings associated with these projects through September 30, 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. Through September 30, 2011, 34 technicians were approved for program participation to certify GRBP building eligibility.

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

¹¹ Public Authorities Law Section 1872(4) directs NYSERDA to create and administer a green residential building program in New York

¹² Energy savings associated with these incentives and projects are currently captured in the System Benefits Charge and Energy Efficiency Portfolio Standard progress reports.

new and existing multifamily and single-family buildings. Incentives also will 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 64 approved installers. NYSERDA received 58 incentive applications totaling \$ 430,387 for RGGI-funded projects. As of September 30, 2011, 44 solar thermal projects were installed and are anticipated to save a total of 928 MMBtu annually. PON 2149 made \$550,035 available for funding incentives. This amount increased from the previous total of \$456,486 due to an additional \$93,549 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 Municipal Water and Wastewater Program

The purpose of the Municipal Water and Wastewater program is to reduce energy use through energy efficiency measures and improved maintenance practices. The Municipal Water and Wastewater program offers a set of coordinated initiatives designed to achieve cost-effective CO₂ reductions by providing technical support and implementation assistance to existing facilities and new construction projects.

Wastewater Energy Efficiency Program (WWEP). 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 September, 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 supported the technical energy analyses of 48 municipal wastewater treatment plants. Once installed, the measures currently recommended by the analyses are projected to save a total of 36,569 MWh and 54,355 MMBtu annually. Five technical energy analyses are ongoing, one of which is in the draft stage and is 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 planning teams will be competitively selected to develop Regional Sustainability Plans, one for each of the 10 Regional Economic Development Council regions. Each team selected will work closely with their corresponding Regional Economic Development Council(s) to ensure that the region's sustainability goals are coordinated with their Regional Economic Development Plans. Approximately 90% of the budget will be used to support the implementation component of the program.

Implementation of the regional sustainable growth plans also will 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 selected under NYSERDA's Request for Proposals (RFP) 2141 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 third quarter, NYSERDA made offers to successful proposers and notified unsuccessful proposers. Contracts are currently in the process of being developed and executed. It is anticipated contracts will be signed in the beginning of February 2012.

4.1.5 Industrial Process Improvement Program

The Industrial Process Improvement program is a longer-term initiative that will support development and demonstration of technologies with substantial greenhouse gas (GHG) reduction potential and technologies 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 presently not supported under SBC programs. For Industrial Process Improvements, projects will focus on technical innovations, including 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 also may 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 1641) and selected projects for RGGI funding. Twelve proposals were received and RGGI funding was approved for three projects that requested a total of \$888,610. While project contracting was ongoing, two proposers retracted their projects. Consequently, NYSERDA has contracted with the remaining project in the amount of \$547,487.

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 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. Project contracting is ongoing.

4.2 Transportation

4.2.1 Transportation Research

The goal of the Transportation Research 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 used for seven contracts in the transportation arena. These projects range from electric vehicle infrastructure, vehicle components and new fuels, as well as transportation optimization systems for both roadways and airports. NYSERDA has contracted a combined \$1.1 million toward these efforts, and has been invoiced \$341,253 to date.

Projects include electric vehicle charging infrastructure, development of products for the management of aircraft departures and taxiing for fuel reduction, biofuels, traffic light control, and fuel reduction in commercial fleets.

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.

Through September 30, 2011, the Statewide Photovoltaic Program supported the installation of 360 solar photovoltaic systems with a total capacity of approximately 3,361 kW. It is estimated these systems will produce 4,205 MWh of electricity annually. An additional 17 projects are approved.

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 has two RGGI-funded focus areas — advanced renewable energy, 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 supports projects that 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.

Four ongoing contracts are assessing renewable power generation technologies, including anti-reflective coatings and nano-conductors for photovoltaic sources, solar thermal generation, and a wind plant analyzer. A completed study has taken stock of small scale hydro sites for NYS with recommendations for further development. \$1.1 million of the approved \$1.7 million has been invoiced in this effort.

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 were conducted on behalf of a collaboration among 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 and project siting and development activities.

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; characterizing and testing the state's geological sequestration potential; and supporting 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 II continued with the completion of the seismic surveys along Interstate 87 and the New Jersey Turnpike.

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 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 tied to manufacturing the defined products in New York State. An additional project was selected in the final round of the competitive solicitation, and contract negotiations should be completed before the next quarter. The \$6 million in RGGI funds already awarded 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.

In the third quarter of 2011 the program completed a major climate adaptation project entitled, “Responding to Climate Change in New York State” (aka ClimAID). NYSERDA published a summary report of the project, and the full final report was published in the Annals of the New York Academy of Sciences. The Climate Research and Analysis Program continues to work on a major climate mitigation project. These projects have been instrumental in supporting climate-related initiatives throughout New York State, including the State’s Climate Action Plan. The interim Climate Action Plan was published on November 9, 2010¹³. Work continues on additional components of the Climate Action Plan and new initiatives are focusing on addressing research needs identified both in the plan as well as from additional stakeholder input. A Program Opportunity Notice will be issued for research related to climate adaptation in the fourth quarter.

¹³ 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 nyserda.ny.gov.

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State of New York
Andrew M. Cuomo, Governor

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Quarter Ending September 30, 2011

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