New York State Energy Research and Development Authority

New York's Regional Greenhouse Gas Initiative-Funded Programs Status Report

Quarter Ending June 30, 2014

Final Report

October 2014

The New NY WORKS for Energy

nyserda
Energy. Innovation. Solutions.

NYSERDA's Promise to New Yorkers:

NYSERDA provides resources, expertise, and objective information so New Yorkers can make confident, informed energy decisions.

Mission Statement:

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

Vision Statement:

Serve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives.

Core Values:

Objectivity, integrity, public service, partnership, and innovation.

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 and Renewable Energy Deployment

Helping New York State to achieve its aggressive energy efficiency and renewable energy goals – including programs to motivate increased efficiency in energy consumption by consumers (residential, commercial, municipal, institutional, industrial, and transportation), to increase production by renewable power suppliers, to support market transformation, and to provide financing.

Energy Technology Innovation and Business Development

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

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, youth education, 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 in New York State – 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 New York State policymakers and consumers have objective and reliable information to make informed energy decisions – including State Energy Planning, policy analysis to support the Regional Greenhouse Gas Initiative and other energy initiatives, emergency preparedness, and a range of energy data reporting.

NYSERDA Record of Revision

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New York's Regional Greenhouse Gas Initiative-Funded Programs Status Report
Quarter Ending June 30, 2014

Final Report

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New York State Energy Research and Development Authority

October 2014

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

AHPwES	Assisted Home Performance with ENERGY STAR®
CBO	constituency-based organization
CGC	Cleaner, Greener Communities
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
EEPS	Energy Efficiency Portfolio Standard
EFC	New York State Environmental Facilities Corporation
EPA	U.S. Environmental Protection Agency
ERP	Energy Reduction Plan
GJGNY	Green Jobs - Green New York
HPwES	Home Performance with ENERGY STAR®
kW	kilowatt
kWh	kilowatt-hour
LIPA	Long Island Power Authority
MMBtu	million British thermal units
MPP	Multifamily Performance Program
MW	megawatt
MWh	megawatt-hour
NYPA	New York Power Authority
NYS or State	New York State
NYSDOL	New York State Department of Labor (NYSDOL)
NYSERDA	New York State Energy Research and Development Authority
OBR	On-Bill Recovery Financing Program
PV	photovoltaic (related to solar electric)
RGGI	Regional Greenhouse Gas Initiative
RPS	Renewable Portfolio Standard
SBC	System Benefits Charge
ST	solar thermal
WFD	Workforce Training and Development

1 Introduction

To implement the Regional Greenhouse Gas Initiative (RGGI), New York State (NYS or the State) established its Carbon Dioxide (CO_2) Budget Trading Program through regulations promulgated by the Department of Environmental Conservation (DEC) and the CO_2 Allowance Auction Program through regulations promulgated by the New York State Energy Research and Development Authority (NYSERDA). This report is prepared pursuant to the New York's Regional Greenhouse Gas Initiative Investment Plan (2013 Operating Plan) and provides an update on the progress of programs through the quarter ending June 30, 2014. It contains an accounting of program spending, an estimate of program benefits, and a summary description of program activities, implementation, and evaluation. An amendment providing updated program descriptions and funding levels for the 2014 version of the Operating Plan was approved by NYSERDA's Board on June 24, 2014.

New York State invests RGGI proceeds to support comprehensive strategies that best achieve the RGGI CO_2 emission reduction goals. These strategies aim to reduce global climate change and pollution through energy efficiency, renewable energy, and carbon abatement technology. Deploying commercially available renewable energy and energy efficiency technologies helps to reduce greenhouse gas (GHG) emissions from both electricity and other energy sources in the short term. To move the State toward a more sustainable future, RGGI funds are used to empower communities to make decisions that prompt the use of cleaner and more energy efficient technologies that lead to lower carbon emissions as well as economic and societal co-benefits. RGGI helps to build capacity for long-term carbon reduction by training workers and partnering with industry. Using innovative financing, RGGI supports the pursuit of cleaner, more efficient energy systems and encourages investment to stimulate entrepreneurial growth of clean energy companies. All of these activities use funds in ways that accelerate the uptake of low-emitting technologies.

2 Summary of Portfolio and Program Benefits

An overview of the quantifiable benefits that are expected to be achieved with expended and encumbered funds through this quarter related to carbon dioxide equivalent (CO_2e) reductions, energy savings, and energy bill savings is presented in this section. For more information on the methodology used to calculate CO_2e reductions and energy bill savings, see Appendix A. Former program names are listed in Appendix B. Detailed benefits results are presented in Appendix C.

The estimated cumulative annualized and expected lifetime benefits as of June 30, 2014, at the portfolio and program levels, are shown in Table 1 and Table 2, respectively.[1] Investment benefits are further compared by fuel type in Figure 1. NYSERDA begins tracking program benefits once projects have been installed, and provides estimated benefits for projects under contract but not yet operational (pipeline benefits). These benefits are estimated based on the expected lifetime benefits from installed and pipeline savings. The metrics presented in this section are estimates and have not been evaluated. When evaluation results are available, they will be presented in future Evaluation and Status Reports, which will include these metrics along with macroeconomic indicators such as job creation resulting from program activity. 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 are also supported by other non-RGGI funding sources administered by NYSERDA.

Figure 1 shows energy savings, emission reductions, and participant energy bill savings realized through RGGI-funded projects by project fuel type as of June 30, 2014.

Key observations during this quarter:

- #2 oil comprised 35% of energy savings, 48% of emission reductions, and 52% of bill savings.
- Natural gas comprised 34% of energy savings, 33% of emission reductions, and 14% of bill savings.
- Energy efficiency comprised 16% of energy savings, 9% of emission reductions, and 17% of bill savings.
- Renewable generation comprised 12% of energy savings, 7% of emission reductions, and 13% of bill savings.

[1] Cumulative annual benefits are reflective of the annual impacts from all currently operational projects installed, projects under a signed contract and projects with an application received that are not yet operational since program inception. Expected lifetime benefits are reflective of the total impacts over the entire lifecycle from all currently operational projects installed, projects under a signed contract and projects with an application received that are not yet operational since program inception. Please see Table A-4 in Appendix A for the measure-life assumptions.

- Other fuels (including propane, steam, wood, kerosene, coal, and #6 oil) comprised 4% of energy savings, 4% of emission reductions, and 4% of bill savings.
- #2 oil accounts for a much larger share of emission reductions and bill savings than natural gas because natural gas emits less carbon dioxide and costs less per unit of energy produced.
- Renewable generation and energy efficiency are responsible for a relatively small share of emission reductions in part because the average emissions factor for in-state electricity generation has diminished over the past decade with the retirement of coal generators and addition of new renewable energy sources.

To highlight the diversity and effectiveness of the RGGI portfolio, this report includes success stories of projects that are advancing the previously stated strategies.

Table 1. Summary of Expected Cumulative Portfolio Benefits through June 30, 2014

Benefits through June 30, 2014[a]	Net Greenhouse Gas Emission Savings[b] (Tons CO_2e[c])	Total Net Fuel Savings (MMBtu)[f]	Net Efficiency Electricity Savings (MWh)	Net Renewable Energy Generation (MWh)	Total Net Electricity Savings/Generation (MWh)	Energy Bill Savings to Participating Customers ($ Million)[g]
Cumulative Annualized Installed Savings[d]	115,852	1,174,186	28,697	20,331	49,027	27.7
Cumulative Annualized Pipeline Savings[e]	43,166	372,671	18,708	12,547	31,255	10.4
Cumulative Annualized Committed Savings[f]	159,018	1,546,857	47,405	32,877	80,283	38.1
Expected Lifetime Total Savings[g]	2,907,115	29,971,581	695,822	821,937	1,517,759	779.8

[a] Cross-program overlap for projects that received any combination of a Green Jobs - Green New York (GJGNY) assessment, a GJGNY loan, or a RGGI-funded incentive through the Home Performance with ENERGY STAR® Program has been removed.

[b] 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. However, electric efficiency projects will reduce end-users' responsibility or footprint associated with emissions from electricity production.

[c] CO_2e stands for carbon dioxide equivalent and describes the amount of CO_2 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.

[d] Inclusive of savings from all currently operational projects installed since program inception.

[e] Inclusive of savings from all projects under a signed contract and projects with an application received that are not yet operational.

[f] The sum of Installed Savings and Pipeline Savings.

[g] The expected benefits over the lifetime of all operational projects, projects under a signed contract, and projects with an application received that are not yet operational. See Table A-4 in Appendix A for the measure-life assumptions.

Table 2. Summary of Expected Cumulative Annualized Program Benefits through June 30, 2014

Program	Costs (millions of dollars)		Net Energy Savings (Annualized MMBtu)					Net Electricity Savings or Renewable Energy Generation (Annualized MWh)					Net Greenhouse Gas Emission Savings[a] (Annualized Tons CO_2e[b])				
	Total Incentives[c]	Total Associated Costs[d]	Installed Savings[e]	Pipeline Savings[f]	Total Committed Savings[g]	$/MMBtu Savings[h]	$/MMBtu EXPECTED LIFETIME Savings[i]	Installed Savings[e]	Pipeline Savings[f]	Total Committed Savings[g]	$/MWh Savings[h]	$/MWh EXPECTED LIFETIME Savings[i]	Installed Savings[e]	Pipeline Savings[f]	Total Committed Savings[g]	$/Ton CO2e Savings[h]	$/CO2e EXPECTED LIFETIME Savings[i]
Residential, Commercial, Industrial & Municipal Sectors																	
Green Jobs - Green New York																	
GJGNY - Single-Family Residential Audit Component[j]	$15.8	$0.9	495,113	7,065	502,178	33	1	6,176	3,114	9,290	1,797	100	34,971	1,444	36,416	458	19
GJGNY - Single-Family Residential Loan Component[j]	$29.8	$4.5	268,543	21,626	290,169	118	5	3,964	320	4,283	7,996	421	19,194	1,544	20,738	1,652	73
GJGNY - Multifamily Residential Audit Component[j]	$3.5	$1.4	323,042	168,082	491,124	10	1	15,962	8,638	24,600	200	15	26,139	13,685	39,824	124	8
Residential Efficiency Services																	
Multifamily Performance Program	$10.8	$1.7	208,280	207,079	415,359	30	2	3,950	4,054	8,005	1,560	120	17,773	17,790	35,563	351	23
Multifamily Carbon Emissions Reduction Program[k]	$6.2	$0.2	-	-	-	-	-	-	-	-	-	-	18,555	6,175	24,730	256	20
EmPower New York	$6.8	$0.6	51,701	4,600	56,301	132	5	-	-	-	-	-	3,985	359	4,345	1,709	71
Home Performance with ENERGY STAR®	$10.0	$0.8	151,208	12,478	163,686	66	3	844	70	914	11,843	675	12,639	1,045	13,684	791	33
Green Residential Building Program	$2.5	$0.3	36,548	-	36,548	75	3	1,573	-	1,573	1,741	97	2,663	-	2,663	1,029	45
Solar Thermal Incentive Program	$0.9	$0.1	3,083	28	3,111	310	15	-	-	-	-	-	226	2	228	4,227	211
Low-Rise Residential New Construction Program	$0.6	-	3,076	3,500	6,576	92	4	166	202	368	1,639	91	263	303	565	1,067	47
Power Supply & Delivery																	
NYSERDA Photovoltaic Initative	$5.2	$0.1	-	-	-	-	-	2,050	34	2,084	2,537	101	641	11	651	8,119	325
LIPA Photovoltaic and Efficiency Initiative	$40.2	-	-	-	-	-	-	18,280	12,513	30,793	1,305	52	5,713	3,910	9,623	4,178	167
Multi-Sector																	
Regional Economic Development & GHG Reduction	$7.1	$3.3	-	5,812	5,812	1,789	99	-	3,687	3,687	2,821	157	-	1,542	1,542	6,746	375
Cross-Program Overlap[l]	N/A	N/A	-366,408	-57,599	-424,007	N/A	N/A	-3,939	-1,377	-5,316	N/A	N/A	-26,910	-4,643	-31,553	N/A	N/A
TOTAL Annualized Cumulative Benefits	**$139.3**	**$13.8**	**1,174,186**	**372,671**	**1,546,857**	**99**	**N/A**	**49,027**	**31,255**	**80,283**	**1,907**	**N/A**	**115,852**	**43,166**	**159,018**	**963**	**N/A**
TOTAL Expected Lifetime Cumulative Benefits	**$139.3**	**$13.8**	**23,863,050**	**6,108,531**	**29,971,581**	**N/A**	**5**	**930,010**	**587,749**	**1,517,759**	**N/A**	**101**	**2,196,545**	**710,570**	**2,907,115**	**N/A**	**53**

Table notes are on the next page

Table 2 continued

[a] 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. However, electric efficiency projects will reduce end users' responsibility or footprint associated with emissions from electricity production.

[b] CO_2e stands for carbon dioxide equivalent and describes the amount of CO_2 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.

[c] Inclusive of incentive dollars for expenditures, encumbrances, and contract pre-encumbrances.

[d] Inclusive of all non-incentive expenditures.

[e] Inclusive of savings from all currently operational projects installed since program inception.

[f] Inclusive of savings from all projects under a signed contract and projects with an application received that are not yet operational.

[g] The sum of Installed Savings and Pipeline Savings.

[h] The sum of Total Incentives and Total Associated Costs divided by Total Committed Savings.

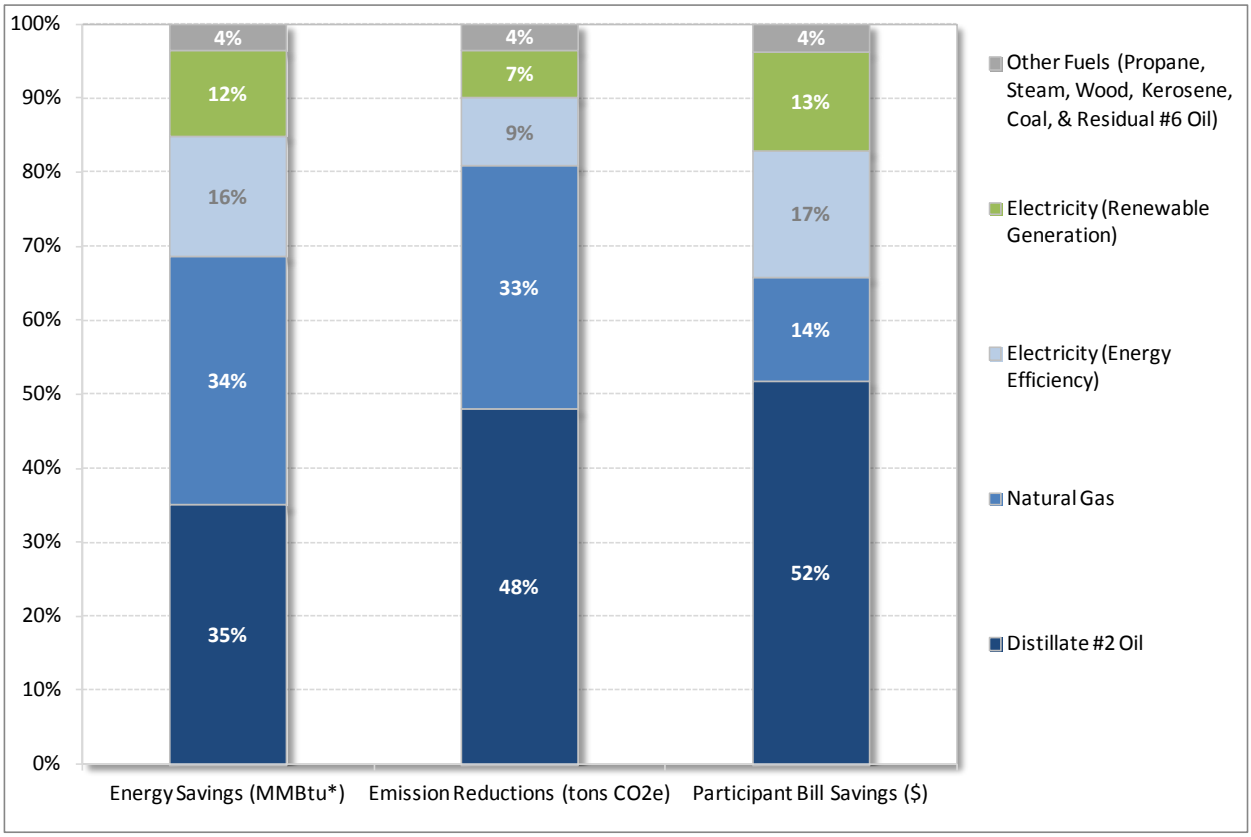
[i] The sum of Total Incentives and Total Associated Costs divided by the Expected Lifetime Total Committed Savings. Inclusive of cross-program overlap.

[j] The benefits for this program include some projects that have also been supported by other non-RGGI NYSERDA funding sources.

[k] The Multifamily Carbon Emissions Reduction Program is a fuel-switching program and does not claim any energy or bill savings.

[l] Cross-program overlap accounts for projects that received any combination of a GJGNY assessment, a GJGNY loan, or a RGGI-funded incentive through the Home Performance with ENERGY STAR® Program.

Figure 1. Percent Contribution by Fuel Type for Energy Savings, Emission Reductions, and Bill Savings through June 30, 2014



* To convert to source MMBtu, the kWh savings and generation for the electric measures were adjusted to account for savings at the source of generation. This approach enables an order of magnitude comparison between electric and fuel energy savings/generation. The source factor used is 9,860 Btu/kWh, which is based on a three-year rolling average (2009, 2010, and 2011) of the amount of fossil fuel energy generated to produce electricity over the three-year period, and includes a line loss factor of 7.2 percent.

3 Funds

3.1 Proceeds

As of June 30, 2014, New York State sold more than 258.7 million CO_2 allowances and received nearly $655.9 million in auction proceeds. In addition, more than $4.4 million in interest earnings were allocated on the RGGI portfolio and nearly $0.8 million in interest earnings were allocated on the Green Jobs - Green New York (GJGNY) program. These funds are re-invested for program implementation and are allocated to various RGGI programs. Detailed auction proceeds and total funds for NYS RGGI are presented in Appendix D and Appendix E, respectively. Total NYS RGGI funds are listed in Table 3, and detailed auction proceeds for NYS RGGI are visually displayed in Figure 2.

Table 3. New York State's RGGI Auction Results and Funds through June 30, 2014[a]

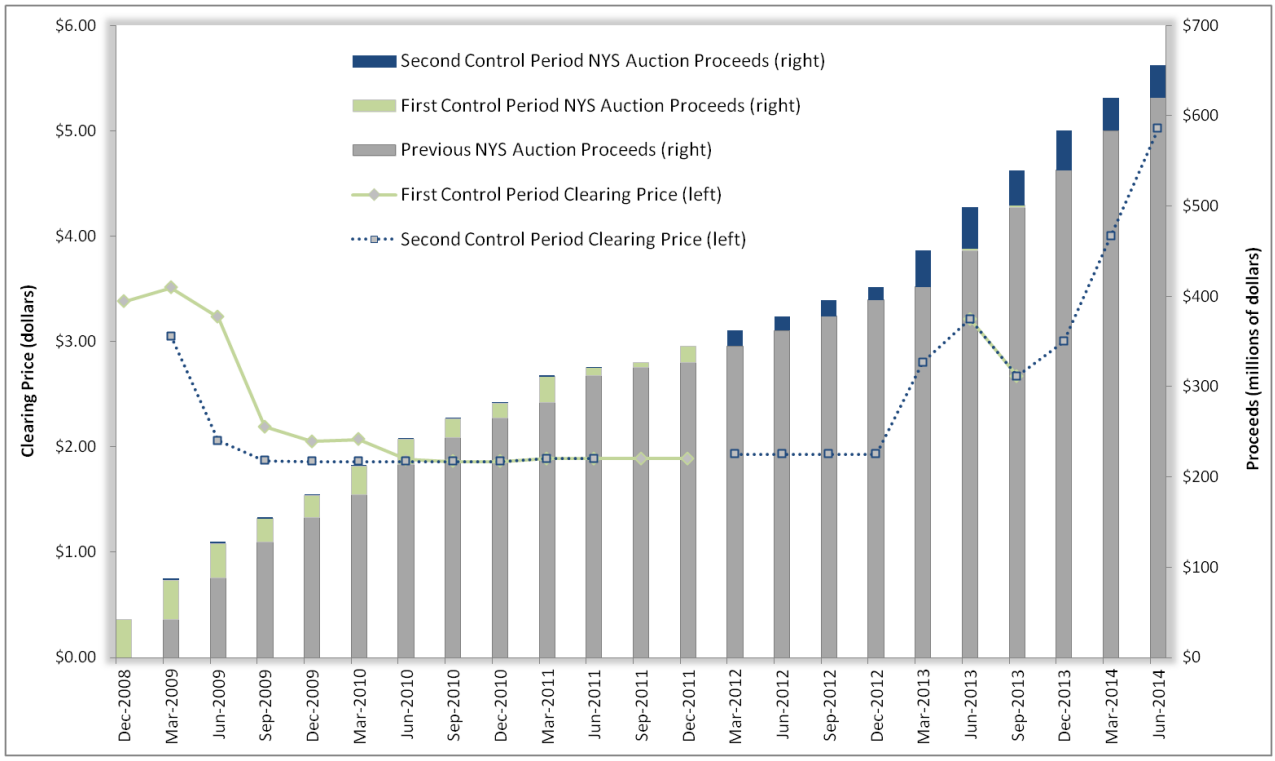
Source: RGGI, Inc. and NYSERDA

Fund Category	NYS Allowances Sold	Cumulative Funds
First Control Period Total	144,305,904	336,282,535
Second Control Period Total	114,418,247	319,572,664
RGGI Auction Proceeds	**258,724,151**	**655,855,199**
Interest Allocated to the RGGI Portfolio		$4,400,174
Interest Allocated to the GJGNY Program		$770,000
TOTAL Funds		**$661,025,373**

[a] The first control period for fossil-fuel-fired electric generators took effect on January 1, 2009 and concluded on December 31, 2011. The second control period took effect on January 1, 2012, and extends through December 31, 2014.

Figure 2. New York State's RGGI Auction Results through June 30, 2014

Source: RGGI, Inc.



3.2 Budget

Financial data for the approved RGGI programs through June 30, 2014 are presented in Table 4 through Table 6. Table 4 presents the current expended, encumbered, and committed funds for each program and reflects how $661.0 million of current funds are allocated across the four major program areas:

- Residential/Commercial/Industrial/Municipal.
- Transportation.
- Power Supply and Delivery.
- Multisector.

Table 5 and Table 6 present the financial data for the approved GJGNY program and NY Green Bank, respectively, through June 30, 2014.

Table 4. Available Funding and Financial Status through June 30, 2014 (millions of dollars)

Source: NYSERDA

	Budgeted Funds [a]	Expended Funds[b]	Open Encumbrances[c]	Pre-Encumbrances[d]	Committed Funds[e]	Uncommitted Funds[f]
Residential/Commercial/Industrial/Municipal						
Residential Efficiency Services	58.7	32.9	6.9	2.4	42.1	16.6
Municipal Water and Wastewater	1.7	1.2	0.4	-	1.6	0.01
Advanced Buildings	4.6	0.9	0.3	3.5	4.6	-
Industrial Innovations	13.0	2.6	4.1	6.4	13.0	-
Renewable Heat NY	2.3	-	-	-	-	2.3
Total Residential/Commercial/Industrial/Municipal	**80.3**	**37.6**	**11.6**	**12.2**	**61.4**	**18.9**
Transportation						
Transportation Research	3.1	1.5	0.5	0.5	2.5	0.6
Charge NY	1.0	-	-	-	-	1.0
Total Transportation	**4.1**	**1.5**	**0.5**	**0.5**	**2.5**	**1.6**
Power Supply and Delivery						
NYSERDA Photovoltaic Initiative	5.3	5.3	-	-	5.3	0.05
LIPA Photovoltaic and Efficiency Initiative	58.9	25.6	-	14.6	40.2	18.7
NY-Sun	13.5	-	-	-	-	13.5
Power Systems	12.4	7.2	1.6	-	8.8	3.6
Competitive Greenhouse Gas Reduction Pilot	14.5	-	-	14.5	14.5	-
Total Electric Power Supply and Delivery	**104.6**	**38.1**	**1.6**	**29.1**	**68.8**	**35.8**
Multi-Sector						
Climate Research and Analysis	9.2	3.6	2.2	1.5	7.3	2.0
Clean Energy Business Development	11.7	3.0	2.2	-	5.2	6.5
Regional Economic Development and Greenhouse Gas Reductions	10.4	3.8	6.4	-	10.3	0.1
Climate Smart Communities	4.8	2.6	0.6	-	3.2	1.6
Cleaner, Greener Communities	95.9	10.6	1.9	60.3	72.8	23.1
Economic Development Growth Extension	5.7	2.5	1.7	-	4.2	1.4
Total Multi-Sector	**137.7**	**26.2**	**15.0**	**61.8**	**103.0**	**34.7**
Other Costs [g]						
Deficit Reduction Plan (DRP) Transfer [h]	90.0	90.0	-	-	90.0	-
Con Edison Smart Grid Program [i]	16.0	16.0	-	-	16.0	-
Program Administration [j]	31.1	11.8	0.004	-	11.8	19.3
Metrics and Evaluation	16.1	0.9	3.3	1.4	5.7	10.4
RGGI Inc. Costs [k]	6.9	4.9	1.1	-	6.0	0.9
New York State Cost Recovery Fee	8.4	3.2	-	-	3.2	5.2
OTHER COSTS TOTAL	**168.6**	**126.9**	**4.4**	**1.4**	**132.7**	**35.9**
SUBTOTAL	**495.3**	**230.3**	**33.0**	**105.1**	**368.4**	**126.9**
Green Jobs - Green New York						
Green Jobs - Green New York	112.8	77.8	14.9	7.2	99.9	12.9
New York Green Bank						
New York Green Bank	52.9	1.2	-	-	1.2	51.8
TOTAL[l]	**661.0**	**309.3**	**47.9**	**112.2**	**469.4**	**191.6**

Table notes are on the next page

Table 4 continued

[a] Includes auction proceeds and allocated interest on the RGGI and GJGNY portfolios. The allocation is consistent with the three-year budget presented in the Operating Plan.

[b] Invoices processed for payment by NYSERDA.

[c] Remaining funding obligated under a contract, purchase order, or incentive award.

[d] Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates, adjusted so that the sum of the project commitments does not exceed Budgeted Funds. NYSERDA's annual audited financial statements may reflect project commitments in excess of Budgeted Funds. These commitments are expected to decrease over time due to project attrition and differences in estimated versus actual costs.

[e] The sum of Expended, Encumbered, and Pre-Encumbered funds.

[f] The difference between Budgeted Funds and Committed Funds.

[g] The values for Program Administration, Metrics and Evaluation, and the New York State Cost Recovery Fee represent aggregate funds and commitments for RGGI-funded activities, NOT including GJGNY. For information on GJGNY finances, refer to Table 5.

[h] 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.

[i] On December 22, 2009, NYSERDA's Board approved a proposed consent decree that resolves the legal challenge to the State's RGGI program. 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. The parties to the consent decree presently estimate that the total commensurate benefit for the calendar years 2009-2017 is $18.9 million and agreed to dedicate such funds for the development of smart grid technologies in the Con Edison territory. The budget reflects allocations that are intended to fund NYSERDA's estimated liability for each calendar year control period consistent with the timing of estimated cash payments due to Con Edison. NYSERDA is also responsible for certain additional costs that may be incurred through 2017. NYSERDA's annual audited financial statements show an amount expended of $18.9 million to reflect these additional estimated costs that were required to be recorded.

[j] Includes NYSERDA's upfront administrative expenses related to the development and implementation of the CO_2 Budget Trading Program, the CO_2 Allowance Auction program, and the Operating Plan.

[k] 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_2 Budget Trading Program.

[l] Totals may not sum exactly due to rounding.

Table 5. Green Jobs - Green New York Available Funding and Financial Status through June 30, 2014 (millions of dollars)

	Budgeted Funds [a]	Expended Funds[b]	Open Encumbrances[c]	Pre-Encumbrances[d]	Committed Funds[e]	Uncommitted Funds[f]
Workforce Development, Outreach and Marketing						
Workforce Development	8.0	4.7	1.5	0.25	6.5	1.5
Outreach and Marketing	15.5	9.3	3.1	1.3	13.7	1.8
Total Workforce Development, Outreach and Marketing	**23.5**	**14.0**	**4.7**	**1.6**	**20.2**	**3.3**
Residential						
Energy Assessment Incentive	15.1	14.1	-	1.1	15.1	-
Implementation Costs	1.0	0.9	0.04	0.1	1.0	-
Financing: Loans	32.9	54.2	-	3.2	57.4	
Financing: Loan Repayments	-	(5.3)	-	-	(5.3)	
Financing: Implementation Costs	-	3.4	0.6	-	4.0	
Financing: Bond Proceeds	-	(24.3)	-	-	(24.3)	
Financing: Bond Issue Costs	-	1.0	-	-	1.0	
Total Financing	**32.9**	**29.1**	**0.6**	**3.2**	**32.9**	**-**
Total Residential	**49.0**	**44.0**	**0.7**	**4.4**	**49.0**	**-**
Multifamily						
Energy Assessments	3.8	1.9	1.6	0.008	3.5	0.3
Implementation Costs	1.6	1.4	0.001	-	1.4	0.2
Financing: Loans	6.0	2.8	-	0.46	3.3	
Financing: Loan Repayments	-	(0.4)	-	-	(0.4)	
Financing: Implementation Costs	0.3	0.1	0.2	-	0.3	
Total Financing	**6.3**	**2.6**	**0.2**	**0.5**	**3.2**	**3.1**
Total Multifamily	**11.7**	**5.8**	**1.8**	**0.5**	**8.1**	**3.6**
Small Commercial						
Energy Assessments	8.7	3.4	5.2	-	8.6	0.1
Implementation Costs	2.3	0.5	0.5	-	1.0	1.3
Financing: Loans	1.9	0.3	-	-	0.3	
Financing: Loan Repayments	-	(0.04)	-	-	(0.04)	
Financing: Implementation Costs	0.3	0.2	0.3	-	0.5	
Total Financing	**2.2**	**0.5**	**0.3**	**-**	**0.8**	**1.4**
Total Small Commercial[g]	**13.2**	**4.3**	**6.0**	**-**	**10.4**	**2.8**
SUBTOTAL	**97.4**	**68.1**	**13.2**	**6.4**	**87.7**	**9.7**
Other Costs						
Program Administration	7.8	6.6	0.003	-	6.6	1.3
Program Evaluation	5.6	1.9	1.7	0.7	4.3	1.3
New York State Cost Recovery Fee	1.9	1.3	-	-	1.3	0.6
OTHER COSTS TOTAL	**15.3**	**9.7**	**1.7**	**0.7**	**12.2**	**3.2**
TOTAL[h]	**112.8**	**77.8**	**14.9**	**7.2**	**99.9**	**12.9**

Table notes are on the next page

Table 5 continued

[a] Includes auction proceeds and allocated interest on the Green Jobs - Green New York (GJGNY) funds. The allocation is consistent with the three-year budget presented in the 2013 RGGI Operating Plan.

[b] Invoices processed for payment by NYSERDA.

[c] Remaining funding obligated under a contract, purchase order, or incentive award.

[d] Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates, adjusted so that the sum of the project commitments does not exceed Budgeted Funds. NYSERDA's annual audited financial statements may reflect project commitments in excess of Budgeted Funds. These commitments are expected to decrease over time due to project attrition and differences in estimated versus actual costs.

[e] The sum of Expended, Encumbered and Pre-Encumbered funds.

[f] The difference between Budgeted Funds and Committed Funds.

[g] Actual Pre-Encumbrances towards the Solicitation for the contracting of implementation, quality assurance, and energy assessments contractors total $7.0 million. The total Pre-Encumbrances for the Small Commercial program presented in this table reflects additional funding from sources that include new funds, transfers, and funds disencumbered from current energy assessment contracts.

[h] Totals may not sum exactly due to rounding.

Table 6. NY Green Bank Available Funding and Financial Status through June 30, 2014 (millions of dollars)

	Budgeted Funds [a]	Expended Funds[b]	Open Encumbrances[c]	Pre-Encumbrances[d]	Committed Funds[e]	Uncommitted Funds[f]
Program Costs						
NY Green Bank	48.6	-	-	-	-	48.6
SUBTOTAL	**48.6**	**-**	**-**	**-**	**-**	**48.6**
Other Costs						
Program Administration	4.2	1.1	-	-	1.1	3.1
Program Evaluation	-	-	-	-	-	-
New York State Cost Recovery Fee	0.1	0.027	-	-	0.027	0.1
OTHER COSTS TOTAL	**4.4**	**1.2**	**-**	**-**	**1.2**	**3.2**
TOTAL[g]	**52.9**	**1.2**	**-**	**-**	**1.2**	**51.8**

[a] Includes auction proceeds on NY Green Bank funds. The allocation is consistent with the three-year budget presented in the RGGI Operating Plan. NY Green Bank funding being reported here is only NY Green Bank funds that were transferred from RGGI. The actual NY Green Bank budget is higher.

[b] Invoices processed for payment by NYSERDA.

[c] Remaining funding obligated under a contract, purchase order, or incentive award.

[d] Planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates, adjusted so that the sum of the project commitments does not exceed Budgeted Funds. NYSERDA's annual audited financial statements may reflect project commitments in excess of Budgeted Funds. These commitments are expected to decrease over time due to project attrition and differences in estimated versus actual costs.

[e] The sum of Expended, Encumbered, and Pre-Encumbered funds.

[f] The difference between Budgeted Funds and Committed Funds.

[g] Totals may not sum exactly due to rounding.

4 Program Descriptions and Accomplishments

4.1 Residential, Commercial, Industrial, and Municipal Sectors

4.1.1 Green Jobs - Green New York (GJGNY)

Green Jobs - Green New York provides funding for energy assessments, low-cost financing for energy upgrades, and technical and financial support to develop a clean energy workforce. GJGNY is a statewide effort to strengthen communities through energy efficiency and uses constituency-based organizations (CBOs) to support program outreach in underserved communities. GJGNY enables New Yorkers to make a significant difference in homes, businesses, and neighborhoods—making them more comfortable, more sustainable, and more economically sound. GJGNY is administered by NYSERDA and made available by the Green Jobs - Green New York Act of 2009. The GJGNY 2013 Annual Report was issued on October 1, 2013.[2] The report presents financial data for the approved GJGNY programs through June 30, 2013.

4.1.1.1 Assessments

One- to Four-Family Residential Buildings Program Assessments

Home Performance with ENERGY STAR® (HPwES) is a comprehensive energy efficiency services program for existing one- to four-family homes. Participating Building Performance Institute (BPI) GoldStar contractors conduct comprehensive home energy assessments and upgrades. Free and reduced-cost home energy assessments have been made available to homeowners in New York State through GJGNY funding, which drives increased participation in this program and cuts additional GHG emissions.

Key accomplishments during this quarter:

- 4,919 assessments were completed this quarter, bringing the total to 55,312 residential GJGNY assessments completed; 51,183 (93 percent) were provided at no cost to the customer.
- Of the 15,520 completed residential units served through HPwES resulting from a GJGNY assessment and/or GJGNY financing, 4,997 (32 percent) units are associated with income-qualified Assisted HPwES customers.
- CBOs assisted with the completion of 1,051 units, or 7 percent of all completed GJGNY projects.

[2] NYSERDA. 2013. "Green Jobs - Green New York 2013 Annual Report." http://www.nyserda.ny.gov/Publications/Program-Planning-Status-and-Evaluation-Reports/-/media/Files/EDPPP/Planning/GJGNY/Annual-Report-GJGNY/2013-gjgny-annual-report.pdf

- The HPwES program has been undergoing a 60-day "Early Wins" review and revision process that brings together a sizable number of resources within NYSERDA and input from stakeholders to improve program processes with the goal of allowing customers to move from interest in the program to a signed contract within one week. This currently can take several weeks. Changes include improvements to website and marketing materials, streamlining of the GJGNY audit application, improved contractor search functionality, reduced contract approval time, and streamlined financing approval.

Multifamily Performance Program Assessments

Through GJGNY, the Multifamily Performance Program provides financing and co-funding for comprehensive energy assessments and the development of an Energy Reduction Plan (ERP), serving market-rate and low- to moderate-income residential buildings with five or more units to increase adoption of clean energy in New York State. The needs of the multifamily sector are addressed by working with developers, building owners, and their representatives to improve the energy efficiency, health, safety, and security of multifamily residential buildings, targeting potential participants who are committed to the implementation of energy-related improvements. NYSERDA offers incentives to install eligible measures outlined within the ERP. Each incentive is subject to funding availability from the Energy Efficiency Portfolio Standard (EEPS) or RGGI. Per-unit incentives are available for projects predicted to achieve the 15 percent energy reduction threshold. Additional Performance Payments apply to eligible projects that predict and achieve savings of more than 15 percent.

Key accomplishments during this quarter:

- The total number of assessments completed through June 30, 2014 is 296; of these, 55 percent are associated with affordable housing.
- A total of 335 projects are contracted to have measures installed; of these, 58 percent are associated with affordable housing.

Small Commercial Energy Efficiency Program Assessments

The GJGNY Small Commercial Energy Efficiency Program offers energy assessments and technical assistance to help small businesses and not-for-profit organizations improve their energy efficiency and reduce their energy costs in support of the goal to increase adoption of clean energy projects in New York State. The program offers free energy assessments, along with technical assistance, to help identify economically viable improvements that may yield substantial annual energy savings. GJGNY energy assessments are offered to small businesses and nonprofits with an average electric demand of 100 kW or less and 10 employees or fewer. Assessments and technical assistance are provided by regional firms competitively selected by NYSERDA.

Key accomplishments during this quarter:

- 97 new energy assessments were completed during this quarter, bringing the total number of completed assessment to 2,098.
- NYSERDA conservatively estimates that 20 percent of energy efficiency improvements recommended on energy assessments are implemented by small business and not-for-profit customers, resulting in an estimated total of 420 completed projects through June 30, 2014.

4.1.1.2 Financing

One- to Four-Family Residential Buildings Program Financing

GJGNY financing is available to participants in Home Performance with ENERGY STAR® (HPwES) to finance the installation of recommended energy efficiency improvements that may be repaid through energy savings. The Smart Energy Loan and the innovative On-Bill Recovery (OBR) Loan are the two low-interest rate financing options available through GJGNY, which enable more projects resulting in greater reductions of GHG emissions than might otherwise have been achieved.

Key accomplishments during this quarter:

- 518 loans were issued this quarter, bringing the total to 5,580 loans issued with a total loan value of $54.14 million.
- 28 percent of the loans issued are associated with Assisted HPwES customers, representing 22 percent of the total loan funds.
- Through June 30, 2014, a total of 1,683 energy efficiency OBR Loans have closed, valued at approximately $18 million.
- Through June 30, 2014, a total of six (solar electric) PV Loans have closed, valued at $104,503.
- Through June 2014, 94 solar electric contractors have completed registration with Energy Finance Solutions to provide their customers access to GJGNY financing.

Multifamily Performance Program Financing

Launched in 2011, financing through the Multifamily Performance Program under GJGNY includes programs and incentives for owners, facility managers, developers, and condo/co-op boards of multifamily buildings with five or more units in support of the goal to increase adoption of clean energy in New York State. These programs make it easier to assess, fund, implement, and measure energy efficiency upgrades that improve building performance and reduce costs. The program makes participation loans available in which a participating lender issues a loan to a multifamily building owner for a qualifying energy efficiency project, with NYSERDA participating in the funding of 50 percent of the loan (up to a maximum of $5,000 per unit or $500,000 per building) at zero percent interest, and the lender setting the interest rate on its share of the loan.

Key accomplishments during this quarter:

- Through June 30, 2014, 14 loans have closed with a total value of $9.2 million. NYSERDA's share of the total loan value is $2.8 million.

Small Commercial Energy Efficiency Program Financing

The GJGNY Small Commercial Energy Efficiency Program offers low-interest financing to help small businesses and not-for-profit organizations improve their energy efficiency and reduce their energy costs in support of the goal to increase adoption of clean energy in New York State. In June 2011, NYSERDA launched the Participation Loan product to small business and not-for-profit customers, in which NYSERDA provides 50 percent of the loan principal, up to $50,000, at zero percent interest and the participating lender provides the remaining loan principal at the market interest rate. In June 2012, NYSERDA launched the OBR Loan for small business and not-for-profit customers, making available a NYSERDA loan of up to $50,000 at 2.5 percent interest to finance recommended energy efficiency improvements. Customers can then repay their loan through a charge on their utility bill. Six lenders have agreed to offer both Participation Loans and OBR loans.

Key accomplishments during this quarter:

- A total of two OBR Loans have been closed with a total value of $63,320. NYSERDA's share of the total value is the full amount.
- A total of 9 Participation Loans have been closed with a total value of $513,905. NYSERDA's share of the total value is $237,563.
- Through the Small Commercial Energy Efficiency Program, eligible small business and not-for-profit customers participating in NYSERDA's NY-Sun Incentive Program can now access low-interest GJGNY financing to install solar electric systems of up to 200 kW.

4.1.1.3 Workforce Development, Outreach, and Marketing

Workforce Development

The GJGNY Workforce Training and Development (WFD) initiative complements other NYSERDA and New York State Department of Labor (NYSDOL) programs targeted at preparing individuals for energy efficiency, solar thermal, and solar electric careers in New York State. WFD programs also help to build New York State's capacity for long-term carbon reduction and facilitate energy education programs that will help build the State's clean energy future. Specifically, WFD efforts under GJGNY seek to expand energy-specific content in New York State Registered Apprenticeship and third-party accredited building trades programs, to increase access to technical training workshops for skills enhancement and certification, and to bridge the gap between training and employment through on-the-job training incentives for businesses seeking to hire and train new workers while reaching out to low-income neighborhoods to expand training opportunities to these communities.

Key accomplishments during this quarter:

- NYSERDA has executed on-the-job training agreements with 42 businesses seeking to hire new employees or advance incumbent workers under GJGNY. As of June 30, 2014, 158 people have been hired from NYSDOL's Career Center lists, and 13 incumbent workers have been advanced due to training. Approximately $1.33 million in wage and training subsidies has been awarded. The average wage of workers hired under the program is $16.39 per hour.
- Training partners have trained over 2,000 New Yorkers for careers in energy efficiency, weatherization, and solar thermal technology. Courses have covered a broad range of subjects from basic energy efficiency to advanced technical training for professionals. Subject matter includes, but is not limited to: operations and building maintenance, oil heat training, solar thermal installation, advanced air sealing, and training for individuals performing energy efficiency outreach to potential customers.

Outreach and Marketing

GJGNY provides for community-based outreach, enabling one-to-one assistance with the process of participating in the program in order to deliver services in underserved communities. GJGNY provides outreach services in targeted communities through CBOs, which locate residents, businesses, not-for-profits, multifamily building owners, and potential workforce candidates to participate in the program. This community-based approach, combined with statewide marketing, is expected to increase the reach of the program, particularly among disadvantaged populations and those not traditionally participating in energy efficiency programs. Participating in the programs empowers these communities in their transition toward sustainability, while producing lower carbon emissions.

Key accomplishments during this quarter:

- Through June 30, 2014, CBOs were responsible for 3,930 completed assessments, which resulted in 1,051 completed retrofits. Approximately 49 percent of those retrofits were for Assisted HPwES customers.
- Work continues on the Energy Champions Referral Program pilot, which will allow individuals to become "Energy Champions" and nonprofits to become "Energy Champion Partner Organizations" when they refer homeowners to the HPwES Program. Energy Champions as well as Partner Organizations will receive monetary as well as non-monetary benefits from the Home Performance contractor for successfully recruiting homeowners who complete a retrofit. The pilot is to be implemented in the Downstate market to encourage more Home Performance Program activity.
- CBO monthly webinars continue as scheduled, covering a variety of topics essential for outreach and marketing success such as Building Performance Institute (BPI) contractor success stories, new residential electric rates to further electric vehicle penetration, an overview of the Low- to Moderate-Income PV Working Group and Community Solar program, updates on contractor BPI accreditation, Small Commercial Program updates overview, and performance payment clarification.

4.1.2 Residential Efficiency 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. RGGI funds are used in combination with Energy Efficiency Portfolio Standard (EEPS) funds, which offer incentives to implement electric and gas efficiency measures, to supplement these resources to reach petroleum fuel opportunities as well as renewable energy opportunities. Coordination of these funding sources allows for efficiency contractors to provide comprehensive energy efficiency services to the home, expands the number of households served, and ensures that opportunities for carbon reduction measures are not lost.

4.1.2.1 Multifamily Performance Program

The Multifamily Performance Program (MPP) serves residential buildings with five or more units. Funds are targeted at efficiency measures that help to reduce on-site oil, non-firm natural gas, steam, and propane energy demand in multi-unit residential buildings. All buildings receive program support for energy assessments to determine cost effective measures, expected energy savings, and installation costs. Projects also receive implementation incentives to support the installation of measures identified by program supported assessments.

Key accomplishments during this quarter:

- The total number of completed energy efficiency projects completed through June 30, 2014 is 44.

4.1.2.2 Multifamily Carbon Emission Reduction Program

The Multifamily Carbon Emissions Reduction Program (MCERP) is currently providing financial assistance and technical support to owners of multifamily buildings converting their heating systems from #6 fuel oil to cleaner fuel alternatives. Less carbon-intensive fuels include #2 fuel oil, biodiesel and biodiesel blends, natural gas, and renewable energy (geothermal and solar thermal). Converting #6 fuel oil-heated buildings to cleaner fuels will reduce carbon emissions, improve air quality, and produce positive public health benefits. MCERP was positioned to encourage early adoption of New York City's phase-out of #6 oil and, as such, has contributed to an overall improvement in New York City's air quality. City-wide conversions have resulted in 69 percent and 23 percent reductions in airborne sulfur dioxide and soot concentrations, respectively. These benefits are concentrated in low-income areas of New York City, where poor air quality leads to higher rates of asthma and other respiratory illnesses, especially in children and the elderly.

Key accomplishments during this quarter:

- In total, 133 multifamily buildings have converted through MCERP from burning #6 oil to cleaner alternatives, primarily natural gas or a blend of natural gas and #2 oil.

4.1.2.3 EmPower New York

NYSERDA's EmPower New York (EmPower) program offers no-cost energy efficiency services to low-income (i.e., HEAP-eligible) homeowners and renters. These services include electric reduction and home performance measures such as appliance replacement, energy efficient lighting, insulation and air-sealing. EmPower uses RGGI funding to serve low-income applicants that heat with oil and propane and are ineligible for EEPS funding. These energy efficiency measures aid in the reduction of GHG emissions and provide long-term carbon reductions. On-site energy education offers customers additional strategies for managing their energy costs. Services are provided by participating contractors that are accredited through the Building Performance Institute. Currently, 165 EmPower contractors are assisting in RGGI-funded projects.

Key accomplishments during this quarter:

- 205 households across New York State were served during this quarter, bringing the total to 1,905 households served under EmPower New York to date with RGGI funding.

4.1.2.4 Home Performance with ENERGY STAR® (HPwES)

Home Performance with ENERGY STAR (HPwES) is a comprehensive energy efficiency services program for existing one- to four-family homes and low-rise[3] residential buildings. The program uses a network Building Performance Institute (BPI) GoldStar contractors to perform diagnostic testing on the home, recommend improvements, determine the payback period for those improvements, and install improvements selected by the homeowner. Currently, 204 contractors are participating in HPwES. The 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 GHG emissions from oil and propane consumption. Income-qualified homeowners are eligible for higher incentive rates to make energy improvements. HPwES applicants may also qualify for GJGNY assessment and financing programs.

[3] HPwES low-rise buildings encompass buildings with three stories or less, with eight units or less, and are constructed using building techniques common to one- to four-family homes. They must be served by residential-scale heating equipment with a maximum rating of 300,000 Btu. Taller residential buildings that fit these criteria are also eligible. Examples include brownstones, row housing, and other urban-style buildings.

Key accomplishments during this quarter:

- 523 energy efficiency projects were completed during this quarter at a contracted value of $5 million, bringing the total to 4,546 energy efficiency projects completed at a contracted value of $43.1 million.
- 37 percent of RGGI-funded HPwES projects were eligible for Assisted Home Performance with
- ENERGY STAR.
- 34 percent of all HPwES projects were RGGI-funded, which is an increase of 20 percent from 2012.

4.1.2.5 Solar Thermal Incentive Program

NYSERDA's Solar Thermal Incentive Program incentivizes the installation of solar thermal (ST) technologies for the production of hot water that displaces electrically heated hot water systems. System incentives are capped at $4,000 per site/meter for residential systems and $25,000 per site/meter for nonresidential applicants. In this program, 88 contractors participate. Accounting for funding from the Renewable Portfolio Standard (RPS) program to displace electrically heated domestic hot water, RGGI support for the Solar Thermal Incentive Program is used to displace heating fuels other than electricity. GJGNY financing is also available for these projects.

Key accomplishments during this quarter:

- No new solar thermal hot water systems were installed during this quarter, keeping the total at 107 system installations.

4.1.2.6 Low-rise Residential New Construction Program

NYSERDA's Low-rise Residential New Construction Program[4] (LRNCP) includes the New York ENERGY STAR® Certified Homes Program and the New York Energy $mart designation for certain low-rise, multi-unit buildings and gut rehabilitation projects. These programs are designed and intended to encourage the construction of new single-family homes and low-rise residential dwelling units that operate more energy efficiently and reduce long-term GHG emissions, are more durable, and provide a healthier environment for their occupants than would otherwise be achieved. Nine builders are participating in this program. Starting in July 2013, RGGI funds have been used to pay the MMBtu savings component of the LRNCP incentive for projects using propane or oil as the primary heating fuel.

[4] Low-rise residential new construction is defined as the ground-up new construction of dwelling unit(s) contained within residential buildings of not more than three (3) stories in height. Additionally, residential buildings which are more than three (3) stories in height and determined to be eligible to participate in the EPA's ENERGY STAR® Certified Homes program will be considered for eligibility on a case-by-case basis. Dwelling units which will be "gut-rehabbed" or fully rehabilitated will also be considered by NYSERDA for eligibility on a case-by-case basis.

Key accomplishments during this quarter:

- 6 new dwelling units were constructed, bringing the cumulative total of new dwelling units constructed to date to 93.
- $26,136 in private sector funds were levered, making the program total to date to $405,108.

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 and process improvement measures. The program offers coordinated assistance designed to achieve cost-effective CO_2 reductions by providing technical support and implementation assistance to existing facilities and new construction projects.

4.1.3.1 Wastewater Energy Efficiency Program

The Wastewater Energy Efficiency Program (WWEP) provides a unique opportunity to coordinate RGGI climate change goals and funding with U.S. Environmental Protection Agency (EPA) goals as well as funding while installing infrastructure that will improve the environment and keep New York State waters clean and healthy. This program is co-managed by the New York State Environmental Facilities Corporation (EFC) and NYSERDA. EFC has secured Green Project Reserve Funds offered by EPA to bolster efforts to finance water and wastewater infrastructure via the Clean Water State Revolving Fund Program. Manufacturing plants financed with Green Project Reserve monies will be constructed energy efficiently, thus minimizing carbon emissions and improving their economic and environmental performance.

Selected projects receive RGGI-funded technical analysis to identify costs and savings associated with energy efficiency, process improvement, and carbon abatement opportunities, as well as Green Project Reserve 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.

Key accomplishments during this quarter:

- No new technical energy analyses were conducted during this quarter, keeping the total to 59 completed analyses.
- Projected annual savings are 46,290 MWh and 56,409 MMBtu, pending installation of currently recommended measures.

4.1.4 Industrial Innovations Program

The Industrial Innovations program is a longer-term program that supports development and demonstration of technologies with substantial GHG reduction potential and technologies that are relevant to New York State 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 State's manufacturing base, and are likely to be cost effective. 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 input and development of advanced controls, provided that they directly bring about GHG reductions.

In late 2013, NYSERDA issued a solicitation for Industrial Innovations under the Advanced Buildings program, the first of three rounds of this solicitation offering. PON 2846 (Innovations in Data Center, Information and Communications Technology Energy Efficiency) seeks proposals in three rounds for research, product development, and demonstration projects of energy efficiency innovations for data center and enterprise information and communications technology (ICT). The objective of this solicitation is to overcome barriers and speed the technical/market readiness of promising early-stage technologies and techniques that can improve energy efficiency in data centers and ICT used by NYS businesses.

Key accomplishments during this quarter:

- 6 projects were selected for awards to collectively receive $840,000 of RGGI Industrial Innovations funds and will be leveraging $860,000 of proposers' funds.
- Since program inception, the RGGI Industrial Innovations program has awarded 20 projects (half of these have fully-executed contracts, the other half are in various stages of contract negotiation) to collectively receive $11.5 million and will be leveraging $125 million of proposers' funds.
- In April 2014, NYSERDA made 3 awards under the Advanced Buildings program PON 2846 totaling $635,433. Projects include: Data Center Quick Assessment Tool and New IT Efficiency Metric, System Level Integration and Optimization of Warm Water Cooling Technologies, and Computer Room Air Conditioner (CRAC) By-Pass Fans for Air Management in Enclosed Aisle Data Centers. The projects are currently in the contract development stage.

4.1.5 Renewable Heat NY

The Renewable Heat NY initiative is a long-term commitment to help the high efficiency, low-emission biomass heating industry reach scale. The long-term market development strategy for Renewable Heat NY includes the following objectives:

- Raise consumer awareness.
- Develop large-scale anchor customers to expand the wood fuel bulk delivery market.
- Promote supply chain development including workforce training and support for product development, manufacturing, laboratory and field testing, and equipment certification.
- Leverage NYSERDA's issuance of the Biomass Heating Roadmap to accelerate the use of biomass for heating using the most efficient low-emission technologies.
- Provide financial incentives to consumers for advanced efficiency and low-emission technologies to reduce upfront costs in the early years, which will phase down as the market achieves scale and upfront costs decrease.
- Provide support so that sustainable forestry practices are available and followed by small and large landowners.

Renewable Heat NY will challenge communities to develop clustered approaches for sustainable biomass heating markets through Cleaner, Greener Communities, a competitive grant program, and develop long-term, reasonably-priced private sector financing, potentially utilizing support from NY Green Bank.

Renewable Heat NY will provide supply chain and service network development (i.e., workforce development, training, and research and development), along with consumer incentives and financing. These activities are not geared toward resource acquisition, but rather will position the market to takeoff and be sustainable over the long term. As the program metrics indicate success, investments of incentives and staff resources will be reduced as the private market develops.

Key accomplishments during this quarter:

- Completed design and market strategy for the initial program offerings under Renewable Heat NY, which includes incentives for residential pellet stoves; retirement of residential outdoor and indoor wood boilers and replacement with advanced cord wood boilers with full thermal storage; and commercial pellet boilers.
- Conducted training sessions in hydronic biomass heating, which is the first step in becoming a qualified contractor/installer for this program.

4.1.6 NY-Sun Initiative (Community Solar NY and K-Solar)

Community Solar NY seeks to empower community projects across New York State that will use aggregation, group purchasing, and other existing and emerging strategies to make solar more accessible and affordable. The program will support projects organized by school districts, municipalities, nonprofit organizations, and other community institutions. In coordination with the New York Power Authority, K-Solar will offer targeted resources to help schools implement solar and act as hubs for community projects.

Key accomplishments during this quarter:

- NYSERDA convened a Low-to-Moderate Income (LMI) Solar Working Group to identify and address market barriers for LMI households in New York State.
- NYSERDA staff continued the development of the Community Solar NY program design in consultation with stakeholders and practitioners. The program structure has been reviewed and approved by NYSERDA senior management, and implementation planning is underway.

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. Activities include product development, performance validation, field testing, policy development, and business assistance to help emerging technologies achieve successful commercialization.

Key accomplishments during this quarter:

- LCE Bioenergy's investigation on the feasibility of demonstrating dimethyl ether (DME) as a highway fuel in New York State produced preliminary results. DME is a nontoxic potential fuel source for gasoline and diesel engines with handling properties similar to propane produced from the gasification of locally-grown hybrid willow feedstock. LCE Bioenergy's preliminary results indicate that significant subsidies would be necessary to build a bio-refinery and run the vehicle demonstration.
- SUNY's Regenerative Shock Absorber project team developed a prototype and performed preliminary tests aboard a vehicle. Their goal is to develop a shock absorber that produces electricity, using energy that conventional shock absorbers dissipate as heat. Generated electricity would power auxiliary systems or augment operation of a hybrid-electric powertrain. They also presented findings at several conferences and initiated discussions with manufacturers interested in the technology.
- EDO Corporation developed a hybrid pneumatic drivetrain as a more efficient alternative to hybrid-electric and hybrid-hydraulic systems with a preliminary focus on refuse trucks. Preliminary system design and market analysis are complete, and transfer case design, motor and compressor-detailed design, and controller design are underway.

4.2.2 Charge NY

With RGGI funding for Charge NY, NYSERDA will pursue two main strategies to promote plug-in electric vehicle (PEV) adoption. First, NYSERDA will implement an outreach and education campaign to build interest in PEVs among key audiences, such as employers, car dealers, and the general public. Forging connections between these groups and aligning their incentives is a critical element of greater PEV adoption that has been lacking in New York State and one that is essential to spur more private investment in PEV purchases and PEV charging stations. Second, NYSERDA will support the installation of PEV charging stations throughout the State by establishing a purchasing collaborative to help bring down the costs of charging stations through bulk purchasing. RGGI funds will be used for additional incentives for charging stations at targeted location types, such as workplaces, municipal lots, and multifamily buildings, that have been seen to be effective drivers for PEV adoption based on usage data reported from previous installations. RGGI funds may also be used to initiate the deployment of a network of DC fast charge stations across the State.

Key accomplishments during this quarter:

- NYSERDA worked with NYPA and a wide range of stakeholders to develop the Charge NY program for expanding PEV infrastructure and engaging with employers, car dealers, the general public, and other key audiences. The plan is still under development, with programs and solicitations expected to begin in late 2014 or early 2015.

4.3 Power Supply and Delivery

The objective of the two power supply and delivery (PSD) programs is to help reduce greenhouse gas (GHG) emissions from the electric power sector in New York State. 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 and include the 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 Solar Electric Programs Across New York State

4.3.1.1 NYSERDA Solar Electric Programs

NYSERDA's solar electric (or photovoltaic or PV) programs focus on reducing GHG emissions in the long term by helping to establish a sustainable market for solar energy throughout New York State that includes targeted financial incentives. The solar electric programs support 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. These projects assist New York State communities that empower clean energy, healthy communities and empower economic development. These funds supplement and do not supplant Renewable Portfolio Standard (RPS) funds, particularly in regions that do not pay into the RPS.

Key accomplishments during this quarter:

- A total of 128 solar electric systems have been installed using RGGI funding from the inception of the RGGI solar electric program through June 30, 2014.

4.3.1.2 LIPA Photovoltaic and Efficiency Initiative

These funds enhance the ability of the Long Island Power Authority (LIPA) to provide energy efficiency and renewable energy services to LIPA customers in accordance with the approved LIPA budget. As the LIPA Solar Pioneer and Solar Entrepreneur PV incentive programs transition to a statewide PV program through NY-Sun in 2014, these RGGI funds will be used primarily for energy efficiency programs administered by PSEG Long Island that are consistent with PSEG-Long Island's clean energy programs and Reforming Energy Vision plan. Funding and reporting requirements are established through a Memorandum of Understanding between NYSERDA, LIPA and PSEG Long Island.

Key accomplishments during this quarter:

- A total of 1,588 solar electric systems have been installed from inception through June 30, 2014.

4.3.2 Power Systems

The Power Systems Program is designed to reduce GHG emissions in the long term. The program has two RGGI-funded focus areas: (1) advanced renewable energy, and (2) carbon capture, recycling, and sequestration.

4.3.2.1 Advanced Renewable Energy Program

The Advanced Renewable Energy Program supports projects that foster the market introduction of a broad range of promising new and advanced renewable energy technologies, including advanced biomass, tidal, and offshore wind technologies.

The Photovoltaic Manufacturing Consortium (PVMC) is a $5 million effort with more than 40 industrial collaborators as members or affiliates. Its goal is to accelerate the development, commercialization, manufacturing, field testing and deployment of next-generation solar electric and lightweight photovoltaic systems.

Key accomplishments during this quarter:

- The Research Foundation for the State University of New York in Binghamton has identified a silicon sputtering process in manufacturing-worthy roll-to-roll equipment to support production of a low thermal conductivity form of silicon for thermoelectric energy generation. A progress report is due next quarter.
- The PVMC executed a new membership agreement with SoloPower.
- Solar Frontier approved a Supply Agreement for Sample Products, the first of several electric module deliveries by Solar Frontier.
- Stion, GSE, and MiaSole have each donated modules in support of ongoing projects.
- Stion began reviewing the statement of work. PVMC membership will likely center on the Indoor Accelerated Testing (IALT) project.
- PVMC personnel attended and staffed an exhibitor booth at the DOE SunShot Grand Challenge Summit.
- PVMC personnel attended and staffed an exhibitor booth at Institute of Electrical & Electronic Engineers – Photovoltaic Specialist Conference (IEEE-PVSC). They also presented seven papers and posters, one of which ("Evaluation of mounting mechanisms for the installation of lightweight PV systems on commercial rooftops") was selected for an oral presentation, and another ("Cost and Market Analysis of Integrative Lightweight PV Systems for Low-Slope Commercial Rooftops") that was awarded Best Poster.

4.3.2.2 Carbon Capture, Recycling, and Sequestration

This program area aims to build New York State's capacity for long-term GHG emissions reduction by researching strategies to prevent emissions from being released into the atmosphere. The program focuses 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 State. Currently, the program's largest supported project is TriCarb, which is located in Rockland County, NY. TriCarb is leveraging NYSERDA funding with more than $8 million of U.S. Department of Energy funds to investigate the potential for geological sequestration in the Newark Basin.

Success Story 1: State's Support Helps SUNY Binghamton's Research Foundation Set Groundwork for on Greenhouse Gas Reducing Thermoelectric Generation

Thermoelectric generators are designed to produce electricity from solar heat and waste heat. Through support from RGGI proceeds, a Binghamton organization has set the groundwork for future developments in thermoelectric generation that will reduce greenhouse gas emissions. The Research Foundation for the State University of New York in Binghamton developed a multilayer thin film structure that introduces atoms in a silicon lattice at random locations. In addition to reducing greenhouse gases, this process offers the potential to increase efficiency of the thermoelectric generator and lower the cost of the manufacturing process.

Key accomplishments during this quarter:

- Well logging and geochemical experiments continued for two of the geological characterization wells drilled for the TriCarb project. The information gathered will help refine the geomechanical model being developed to simulate the injection of CO_2 into the basin rock formations.

4.3.3 Competitive Greenhouse Gas Reduction Pilot

This pilot program is designed to support market-ready projects that reduce GHG emissions at electric generating facilities in New York State. Projects will be selected based on a combination of requested dollar-per-ton GHG emission reduction, expected level of GHG emission reduction, and the technical merit/replication of the project across the power plant fleet in New York State. It is anticipated that projects could include, but will not be limited to, supply-side energy efficiency, and advanced controls that will result in cost effective GHG emissions reductions.

Key accomplishments during this quarter:

- Progress continues on the development of the first solicitation for the Competitive Greenhouse Gas Reduction Pilot. All stakeholder input has been collected and the solicitation is expected to be released in the fourth quarter of 2014.

4.4 Multisector Programs

4.4.1 Clean Energy Business Development

The Clean Energy Business Development program seeks to support emerging business opportunities in clean energy and environmental technologies while maintaining the goal of carbon mitigation. Key elements of the program include providing financial support to lever private investment in early-stage and expansion-stage clean-energy companies in New York State and accelerate the market introduction of innovative energy efficiency, renewable energy, or carbon abatement technologies; advancing the transition of clean-energy technologies or technologies that improve the energy efficiency of industrial processes from the development/demonstration stage to the launch of commercial-scale manufacturing or application; and developing and supporting a portfolio of programs designed to translate clean energy technology research into commercially viable business enterprises.

Key accomplishments during this quarter:

- As part of a Start-up Showcase held on June 18, 2014, during New York Energy Week, 40 companies were recognized for their leadership and potential. The companies represent the cleanweb (11), efficiency (9), and renewable (5) industries along with storage (4), finance (3), and chemicals (8). Seventeen companies are from Upstate New York, and 23 are from the New York City region.

4.4.2 Climate Research and Analysis Program

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.

Key accomplishments during this quarter:

- Activity this quarter focused primarily on outreach and information transfer activities.
- A Project Advisory Committee (PAC) webcast for the New York State Climate Science Clearinghouse was conducted, as well as a PAC meeting for the storm surge modeling projects with Columbia University and the consulting firm Dewberry.
- NYSERDA staff attended a meeting of New York State agencies and institutions to discuss ongoing and planned initiatives related to climate change issues. The meetings occur every two months and are critical to sharing information and providing opportunities to build upon the work of others.
- An overview of Climate Research and Analysis activities was presented at a meeting of the Regional Greenhouse Gas Initiative Advisory Group
- A climate research update was also provided at meeting of New York State environmental groups, hosted by NYSERDA Board member Elizabeth Thorndike.
- The Adirondack Research Consortium Conference was the site of the premier of "The Resilient Ones – A Generation Takes on Climate Change." This documentary was primarily funded by NYSERDA and was produced by Mountain Lake PBS.

4.4.3 Regional Economic Development and Greenhouse Gas Reduction Program

The Regional Economic Development and Greenhouse Gas Reduction (REDGHG) Program supports projects that are identified as priority initiatives consistent with Governor Andrew M. Cuomo's Regional Economic Development Council (REDC) initiative, and which are not otherwise provided financial support by other NYSERDA programs or initiatives. REDGHG provides cost-share funding for energy efficiency, clean and renewable energy, and/or innovative carbon abatement projects that address the regional priorities of the REDCs, results in strategic investments, and builds the capacity within the region to participate in the State's clean energy economy. REDGHG focuses on several end uses, including transportation, manufacturing and industrial process, buildings, agriculture, municipal processes, renewable electric generation, and district energy.

Key accomplishments during this quarter:

- 15 projects received awards from program inception through June 30, 2014.
- 1 contract was executed, bringing the total number of executed contracts to 15.
- 3 projects have been completed.

4.4.4 Climate Smart Communities

Established in 2009, the Climate Smart Communities (CSC) Program is comprised of a network of local governments across the State that have committed, by adopting the Climate Smart Communities Pledge, to reduce greenhouse gas (GHG) emissions and better prepare for unavoidable changes in climate. In addition to NYSERDA, the CSC program works in partnership with five other New York State agencies: the Department of Environmental Conservation (DEC), Department of State (DOS), Public Service Commission (PSC), Department of Transportation (DOT), and the Department of Health (DOH).

In March 2011, NYSERDA issued a competitive solicitation to select contractors for a three-year CSC Regional Coordinators Pilot Program. The goal of this pilot program is to create and implement a strategic plan for engaging local governments in the CSC program, producing measurable results for climate protection and adaptation within each region, and developing important elements of guidance for local governments. The pilot program is now entering into its third and final year.

Key accomplishments during this quarter:

- The number of Climate Smart Communities was increased to 135 across the State.
- The second year of the CSC pilot program came to a close. Highlights of activities that took place during the second year include the following:
    - 187 one-on-one consultation meetings held with communities.
    - 41 presentations made to broad audiences.
    - 25 climate action plans developed.
    - 28 community-level greenhouse gas inventories completed.
    - 21 government operations-level greenhouse gas inventories completed.
    - 33 different guidance documents created and shared.
    - 14 templates developed and shared.
    - 13 training conducted.
    - 20 new Climate Smart Communities recruited.

Success Story 2: RGGI Funds Help Facilitate Greenhouse Gas Inventories as Starting Points for Community Climate Action Plans

RGGI funds have helped communities analyze their greenhouse gas levels to help curtail emissions. In its second year, the three-year pilot for Climate Smart Communities facilitated the development of 28 community-level and 21 government operations-level greenhouse gas inventories. These inventories account for, analyze, and provide baseline reports on greenhouse gas emissions resulting from day-to-day operations of a local government or community. This information provides a starting point for developing climate mitigation strategies or a climate action plan that can lead to improve ability to manage energy use and cost savings.

4.4.5 Cleaner, Greener Communities

The Cleaner, Greener Communities (CGC) program was announced by Governor Cuomo in his 2011 State of the State address. It builds 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 State as a whole toward a more environmentally sustainable future. The program encourages communities to use public-private partnerships and develop regional sustainable growth strategies in areas such as emission control, energy efficiency, renewable energy, low-carbon transportation, and other carbon reductions. The program emphasizes activities associated with smart growth, such as creating green jobs, building green infrastructure, investing in environmental justice communities, and strengthening environmental protection.

Key accomplishments during this quarter:

- NYSERDA finalized Statements of Work for 32 CGC awards, including awards for comprehensive planning activities and large-scale sustainability projects, and expects to execute contracts in Q3 2014.
- NYSERDA received nine new applications and paid incentives to four municipalities adopting streamlined permitting of solar electric systems. NYSERDA also received and approved the first electric vehicle supply equipment streamlined permitting incentive.
- NYSERDA issued, and received proposals for, the second round of funding ($30 million) for Phase II of the CGC program.

Success Story 3: West Harlem Facility Developing More Efficient Batteries to Reduce Greenhouse Gas Emissions through RGGI Support

Rechargeable battery systems have improved through the help of RGGI funds and their usage can reduce greenhouse gas emissions. The West Harlem Rechargeable Battery Manufacturing Plant recently was established through a Regional Economic Development Council initiative, providing research and development capabilities as well as testing and assembly of low-cost, lead-free zinc anode rechargeable batteries and battery systems. The company also is developing batteries that can accommodate regenerative braking and on-demand charging used in fuel-efficient, microhybrid vehicles that can improve gas mileage by more than 10 percent and reduce air pollution in high-traffic areas. In addition, zinc anode batteries can be integrated with renewable energy sources, such as solar and wind power, further advancing the reduction of greenhouse gas emissions in New York State.

4.4.6 NY Green Bank

NY Green Bank, a division of NYSERDA, is a $1 billion initiative proposed by Governor Cuomo in his 2013 State of the State address. NY Green Bank is a central component of Governor Cuomo's strategic statewide vision to scale up clean energy markets, enhance New York State's competitiveness for clean energy businesses, and make the State's energy systems more resilient. NY Green Bank operates in the wholesale financing markets in partnership with private sector sources of capital. It fosters greater private sector investment in projects deploying proven energy, renewable energy, efficiency, and other clean technologies. NY Green Bank officially opened for business on February 5, 2014.

Key accomplishments during this quarter:

- Receipt and review of an increasing number of proposals in response to NY Green Bank's open and continuing Request for Proposals.
- Continued outreach efforts to potential clients and partners, as well as the market in general as part of ongoing origination and development of the investment pipeline.
- Completed detailed Strategy and Business Planning process for the period June 2014 – June 2015.
- Participated in a public technical conference organized by the New York State Department of Public Service to present and solicit input on NY Green Bank's proposed metrics on May 29, 2014.
- Filed the Business Plan with the PSC on June 19, 2014, as required by the December 2013 PSC Order authorizing NY Green Bank's initial capitalization.
- Filed NY Green Bank's Metrics, Reporting & Evaluation Plan with the PSC on June 19, 2014 as required.
- Continued active recruitment efforts to hire staff with required skills to fill out personnel ranks to meet organizational needs.
- Moved into NY Green Bank's permanent office space at 1359 Broadway in New York City (the NY Clean Energy Hub).

4.4.7 Economic Development Growth Extension Program (EDGE)

The Economic Development Growth Extension (EDGE) Program facilitated by Regional Outreach Contractors (ROCs) performs on-the-ground outreach, education, and marketing of NYSERDA program opportunities to residents, businesses, institutions, and local governments across the State to promote the value of energy efficiency, sustainable growth practices, clean energy technologies, and innovations using carefully constructed public-private partnerships. The program is aligned with Governor Cuomo's Regional Economic Development Council (REDCs) initiative and provides direct support to advance the strategic priorities and regionally significant projects identified in each region. Through this new alignment with the REDCs, NYSERDA can provide a greater level of education and adoption of energy-efficiency and renewable energy practices at the community level.

Key accomplishments during this quarter:

- 115 new partnerships that may help to identify and assist in customer engagement were developed, bringing the total to 680 partnerships.
- 261 project referrals from partners were received, bringing the total to 1,416 project referrals.
- 137 public outreach activities, such as events, presentations or other speaking engagements were conducted, bringing the total to 612 public outreach activities.
- 401 projects were referred to various NYSERDA programs, bringing the total number of referrals to 1,878.
- Outreach and program support was provided to the REDCs on 31 projects, bringing the total to 136.

4.5 Program Evaluation

Several RGGI evaluation studies are underway or in the planning stages as of the second quarter of 2014. The study objectives and timing are discussed in the following sections. Other study plans are also in development and will be detailed in future quarterly reports. The following types of evaluation activities are being performed:

- **Impact Evaluation** measures the outcomes and benefits of a program, calculates the cost-effectiveness of the program, and compares the outcomes to the program goals.
- **Market Evaluation** develops an understanding of markets and market actors, provides information to support program design and delivery, and tracks changes in markets over time.
- **Process Evaluation** reviews oversight and operations, gauges customer satisfaction, and recommends process and efficiency improvements.
- **Logic Model Reports** inform evaluation work by documenting the relationships between program activities; activity outputs; and the short, medium, and long-term outcomes the program intends to induce.
- **Evaluation Readiness Reviews**[5] help identify whether a program has various factors or, when these will be in place, that will ensure an evaluation is justified, feasible, and likely to provide useful information.

In addition, two major baseline studies are underway with support from RGGI evaluation funds and are described herein.

4.5.1 Evaluation of Energy Efficiency and Other Deployment Programs

- Cleaner, Greener Communities (CGC) Program: The CGC Process Evaluation will utilize -in-depth interviews, surveys, and secondary data collection to determine whether Phase I plans provide a sound foundation for achieving the regions' stated goals, and whether the plans and planning process support rapid commitment to the goals and engagement in the planned activities. Understanding success factors and challenges will help optimize ongoing investments of monetary and nonmonetary resources in the State through the CGC initiative. This study will kick-off in July 2014, with a completion date of March 2015.

[5] Formerly known as Evaluability Assessment.

- GJGNY Small Commercial Energy Efficiency Program: NYSERDA is beginning an Impact Evaluation to quantify the measure adoption rate over time and the degree to which the audit program influenced participants' decision-making regarding recommended measures that they have installed. The study is expected to be completed in the first half of 2015. This Impact Evaluation has been prioritized ahead of the Phase 2 Process/Market Evaluation study.
- Multifamily Performance Program: A major Impact Evaluation of the System Benefits Charge (SBC)/EEPS-funded MPP is being levered to assess the effects of RGGI fuel efficiency incentives. The study includes measurement and verification of energy savings, and attribution analysis of projects completed from 2009 through 2011. The study is expected to be completed in the second half of 2014. A major Process/Market Evaluation of the SBC/EEPS-funded MPP is also being used to assess the RGGI fuel efficiency incentive activity and GJGNY assessment/loan activity. The study is also expected to be completed in the second half of 2014.
- Multifamily Carbon Emission Reduction Program: NYSERDA is conducting an Impact Evaluation to measure and verify the energy and emission effects attributable to the program. The evaluation is expected to be completed in early 2015.
- Home Performance with ENERGY STAR Program: An Impact Evaluation of the Green Jobs – Green New York "assessment only" participants is currently underway. This evaluation seeks to identify those who may have received a GJGNY-funded audit and installed measures on their own in the absence of incentives. NYSERDA is also undertaking an Impact Evaluation to measure and verify effects attributable to RGGI fuel incentives. These studies will leverage major, in-progress evaluation of the SBC/EEPS-funded HPwES Program. The completion date for the Impact Evaluation work is planned for second quarter 2015. A major Process/Market Evaluation of the SBC/EEPS-funded HPwES is also being used to assess the RGGI fuel efficiency incentive activity and GJGNY assessment/loan activity. The Process/Market Evaluation study is expected to be completed in the first quarter 2015. The impact and process evaluations will be occurring at the same time and the evaluation teams are collaborating to use survey efforts to gain efficiencies and reduce survey fatigue.
- GJGNY Constituency-Based Organization (CBO) Program: The assessment of CBO-related activities will be addressed as a part of the above HPwES process evaluation and includes surveys with CBO-affiliated HPwES participants, partial participants (GJGNY audit recipients), and contractors. These CBO samples will be strata within the HPwES process evaluation, market characterization and impact evaluation surveys. The completion date for this evaluation effort is planned for the first quarter 2015.
- Residential Non-Energy Impact Study: A study is currently underway to identify and begin to quantify measurable non-energy effects from residential programs, including possibly HPwES and the Green Residential Building Program. This study is jointly supported with RGGI and other NYSERDA funds. The study is expected to be completed in 2014 and is expected to help inform future non-energy impact analysis and reporting for RGGI programs.

4.5.2 Evaluation of Technology/Business Development and Research Programs

- Advanced Transportation Research: A Logic Model report is expected to be completed in the third quarter of 2014, with an Evaluation Readiness Review directly following that activity.
- Industrial Innovations: For the Manufacturing component of the program, a Logic Model report is expected to be completed in the third quarter of 2014, with an Evaluation Readiness Review directly following that activity. A Market Evaluation study is expected to commence in the third quarter of 2014 and be completed in first quarter of 2015. The study will determine the manufacturing readiness levels of program participants prior to their participation as well as identify external factors that may influence program outcomes. Evaluation activities for the Data Centers component of the program will be phased in following the Manufacturing component efforts.

- Clean Energy Business Development: A follow-up Evaluation Readiness Review is underway and is expected to be completed in the third quarter of 2014. A Market Evaluation of the clean energy industry is planned to commence in the third quarter of 2014 and be completed in the first quarter of 2015. A social network analysis is planned for the same timeframe, and will describe the strength of the links between NYSERDA program participants and other market actors in the larger clean energy network. Results of the social network analysis will feed into a market impact assessment for CEBD-funded incubators, where firms will be selected for in-depth case studies.
- Power Systems Program: For the Advanced Renewable Energy component of the program, a Logic Model report and Evaluation Readiness Review are currently underway. Both activities are expected to be completed by the end of the third quarter of 2014.

4.5.3 Baseline Studies

NYSERDA is also conducting two major baseline studies to assess residential and commercial markets across a broad range of customer segments and energy measures. The goals of these studies are: 1) to better understand building stock and associated energy use, including saturations of energy-consuming measures, penetrations of energy-efficient equipment, building characteristics and energy management practices; and 2) use this information to estimate the technical, economic and achievable energy efficiency opportunities in New York State in the next three and five years. Although these large studies are being supported by SBC funding, RGGI funds are supplementing the budget to allow for robust data collection on fuel measures.

The Residential Baseline study is currently underway and in the field with telephone and Web-based surveys of homeowners, tenants, and property owners or managers. Further, onsite data collection continues for both single and multifamily, and new and existing construction types. Preliminary results are expected in late 2014.

The Commercial Baseline study request for proposals was released in the fourth quarter of 2013, and proposals were received in the first quarter of 2014. Contract negotiation is underway and study planning and implementation for the Commercial Baseline is expected to begin in late 2014 after an agreement is finalized with the selected contractor.

Appendix A: Savings Calculations Methodology

This appendix describes the general methods and assumptions that are used to calculate the energy savings, emission reductions, bill savings, and cost-effectiveness metrics presented in the New York's Regional Greenhouse Gas Initiative Investment Plan (2013 Operating Plan).

A.1 Energy Savings

Annual energy savings values are based on the past performance of publicly funded energy efficiency programs and information obtained from various sources of technical literature.

A.2 CO_2 Reductions

Emissions factors are used to translate the energy savings data into annual GHG emissions reduction values. The GHGs evaluated in the report include carbon dioxide, methane, and nitrous oxide. Because each of these gases has a different global warming potential,[6] emissions for gases other than carbon dioxide are converted into carbon dioxide equivalent units (CO_2e) through multiplication with their appropriate Intergovernmental Panel on Climate Change (IPCC) global warming potential value,[7] shown in Table A-1.

Table A-1. Global Warming Potentials

These values represent a 100-year time horizon.

Source: Intergovernmental Panel on Climate Change. 1995. Second Assessment: Climate Change.

Gas	Global Warming Potential
Carbon dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310

6 A global warming potential is a measure that estimates how much a given mass of a GHG contributes to global warming. It is calculated over a specific time interval, which is 100 years for the IPCC Second Assessment Report values.

7 Intergovernmental Panel on Climate Change. 1995. Second Assessment: Climate Change 1995. According to EPA guidance, this inventory uses potentials from the IPCC Second Assessment report, rather than values from the more current Third Assessment: Climate Change 2001 report. New York DEC regulation Part 242 1.2 (49) uses the Third Assessment values. Reconciliation between these two methodologies will be investigated as part of the program implementation and evaluation process.

NYSERDA uses the emission factors shown in Table A-2 to calculate emissions from onsite fuel combustion, which are derived from U.S. Environmental Protection Agency (EPA) emission coefficients. The CO_2e values represent aggregate CO_2, CH_4, and N_2O emissions. If a program covers more than one sector, then the estimated reduction is based on a calculated average emission factor for the affected sectors.

Table A-2. Fuel Combustion Emission Factors by Sector

Sources: EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2006, Annexes 2 & 3 and EPA State Climate Energy Program's State Inventory Tools released on 1/3/2011

	Transport (lb CO_2e/MMBtu)	Residential (lb CO_2e/MMBtu)	Commercial (lb CO_2e/MMBtu)	Industrial (lb CO_2e/MMBtu)
Coal	N/A	224.89	211.43	207.58
Natural Gas	117.25	117.14	117.14	113.38
#2 Oil/Distillate/ Diesel	163.22	163.78	163.78	161.80
#6 Oil/Residual	N/A	N/A	166.28	174.20
Kerosene	N/A	162.10	162.10	159.89
Propane	140.51	136.94	136.94	139.45
Gasoline	159.09	N/A	N/A	N/A
Aviation Fuel	160.86	N/A	N/A	N/A
Wood	N/A	15.79	15.79	3.92
Steam	N/A	139.30	139.30	N/A

An average emission factor of 625 pounds of CO_2e/MWh is used to estimate emission reductions associated with electricity use reductions for all sectors. This value includes emissions from in-state electricity generation as well as emissions associated with net imports of electricity.[8] Although electricity savings may not lead to near-term emission reductions under the RGGI CO_2 cap, savings will potentially reduce imports of electricity to New York State; the demand for CO_2 allowances, leading to a possible future reduction in the cap; and the carbon-footprint of end-users, as they will be responsible for a smaller percent of the emissions associated with electricity production.

[8] The emission factor for electricity is based on data from *Patterns & Trends - New York State Energy Profiles: 1997 – 2011* (NYSERDA 2013) and methodology from the *GHG Inventory and Forecast* prepared for the 2014 Draft New York State Energy Plan (April 2014).

A.3 Bill Savings

Annual bill savings values for each program are estimated by multiplying the energy savings by sector-specific fuel price data.

Table A-3 shows fuel prices by sector. Electricity and natural gas prices represent average values for six service territories weighted by the percentage of RGGI projects located in each utility area. Basic service charges have been excluded.

Table A-3. Fuel Prices by Sector[a]

Sector	Electricity ($/kWh)	Natural Gas ($/MMBtu)	Fuel Oil / Distillate ($/MMBtu)	Propane ($/MMBtu)
Residential	0.18	8.57	25.59	34.21
Commercial	0.16	5.09	24.51	26.04
Industrial	0.12	5.09	23.39	30.32
Transportation	0.05	N/A	27.58	N/A
C&I	0.14	5.09	23.95	28.18

Sector	Residual ($/MMBtu)	Kerosene ($/MMBtu)	Wood ($/Cord)	Coal ($/Ton)
Residential	N/A	28.13	7.83	N/A
Commercial	17.41	28.13	N/A	5.78
Industrial	17.41	24.56	N/A	4.74
Transportation	N/A	N/A	N/A	N/A
C&I	17.41	26.35	N/A	5.26

[a] For electricity and natural gas, prices are an average of July 2012 and January 2013 prices as reported by the NYS Department of Public Service billing data http://www3.dps.ny.gov/W/PSCWeb.nsf/All/C56A606DB183531F852576A50069A75D?OpenDocument. For all other fuel types, prices reflect 2011 retail prices as reported in NYSERDA's *Patterns and Trends- New York State Energy Profiles: 1997-2011* (NYSERDA 2013)

Table A-4. Program Measure Life Assumptions

Average savings-weighted measure life, shown by program, is used to calculate expected lifetime benefits.

Program	Electricity Measure Life	Fuels Measure Life
GJGNY - Single-Family Residential Assessment Component	18	24
GJGNY - Single-Family Residential Loan Component	19	23
GJGNY - Multifamily Residential Assessment Component	13	15
GJGNY Small Commercial Loan Component	13	21
RGGI - Multifamily Performance Program	13	15
RGGI - Multifamily Carbon Emissions Reduction Program	N/A	13
RGGI - EmPower New York	N/A	24
RGGI - Home Performance with ENERGY STAR®	18	24
RGGI - Green Residential Building Program	18	24
RGGI - Solar Thermal Incentive Program	N/A	20
RGGI - Low-rise Residential New Construction Program	18	24
RGGI - NYSERDA Solar Photovoltaic Initiative	25	N/A
LIPA Photovoltaic and Efficiency Initiative	25	N/A
Regional Economic Development and GHG Reduction	18	18

Appendix B: Former Program Names

Table B-1. Former Program Names

Current Program Name	Formerly Known As
Residential Efficiency Services	Residential Space and Water Heating
Municipal Water and Wastewater	Water and Wastewater Efficiency; Water and Wastewater Energy Efficiency
Industrial Innovations	Industrial Process Improvements; Advanced Building Systems and Industrial Process Improvements
Transportation Research	Advanced Transportation Development
Clean Energy Business Development	Clean Technology and Industrial Development
Power Systems	Advanced Power Technology Program (APTP)

Appendix C: Summary of Portfolio Benefits

Table C-1. Summary of Portfolio Benefits

Quarter	Cumulative Annual MMBtu	Cumulative Annual MWh Saved	Cumulative Annual MWh Generated	Cumulative Annual Tons of CO_2e Mitigated	Cumulative Annual Bill Savings Realized by Participating Customers ($)
Qrt 2	3,409	4,371	-	2,100	700,000
Qrt 3	47,332	4,371	-	5,630	1,200,000
Qrt 4	91,471	838	4,316	9,310	2,900,000
Qrt 1	115,763	1,213	3,903	10,950	2,700,000
Qrt 2	152,501	5,233	3,992	15,553	4,000,000
Qrt 3	197,622	6,473	4,205	17,874	4,600,000
Qrt 4	256,980	8,126	4,218	23,805	6,000,000
Qrt 1	318,273	13,363	4,218	31,194	7,800,000
Qrt 2	411,462	13,702	4,248	40,368	9,400,000
Qrt 3	519,144	15,023	4,278	51,353	10,700,000
Qrt 4	577,025	16,895	4,345	56,764	12,000,000
Qrt 1	651,564	18,206	4,305	60,349	16,300,000
Qrt 2	770,186	20,038	4,386	69,068	18,100,000
Qrt 3	889,027	24,385	16,710	96,916	21,200,000
Qrt 4	985,379	26,545	16,752	100,934	23,100,000
Qrt 1	1,089,306	28,206	16,752	108,844	25,500,000
Qrt 2	1,174,186	28,697	20,331	115,852	27,700,000

Table C-2. Summary of Fuel Savings by Type

Quarter End Date	Quarter	Fuel Type	Cumulative Annual (MMBtu)	Cumulative Annualized Pipeline (MMBtu)[a]
6/30/2010	Qrt 2	Diesel	-	
6/30/2010	Qrt 2	Gasoline	-	
6/30/2010	Qrt 2	Natural Gas	-	
6/30/2010	Qrt 2	Oil	3,409	
6/30/2010	Qrt 2	Propane	-	
9/30/2010	Qrt 3	Diesel	-	
9/30/2010	Qrt 3	Gasoline	-	
9/30/2010	Qrt 3	Natural Gas	-	
9/30/2010	Qrt 3	Oil	47,332	
9/30/2010	Qrt 3	Propane	-	
12/31/2010	Qrt 4	Diesel	-	
12/31/2010	Qrt 4	Gasoline	-	

Table C-2 continued

Quarter End Date	Quarter	Fuel Type	Cumulative Annual (MMBtu)	Cumulative Annualized Pipeline (MMBtu)[a]
12/31/2010	Qrt 4	Natural Gas	3,926	
12/31/2010	Qrt 4	Oil	74,691	
12/31/2010	Qrt 4	Propane	301	
12/31/2010	Qrt 4	Steam	12,553	
3/31/2011	Qrt 1	Diesel	-	
3/31/2011	Qrt 1	Gasoline	-	
3/31/2011	Qrt 1	Natural Gas	18,206	
3/31/2011	Qrt 1	Oil	85,998	
3/31/2011	Qrt 1	Propane	1,280	
3/31/2011	Qrt 1	Steam	10157	
3/31/2011	Qrt 1	Wood	122	
6/30/2011	Qrt 2	Diesel	-	
6/30/2011	Qrt 2	Gasoline	-	
6/30/2011	Qrt 2	Kerosene	27	
6/30/2011	Qrt 2	Natural Gas	20481	
6/30/2011	Qrt 2	Oil	118,963	
6/30/2011	Qrt 2	Propane	2,272	
6/30/2011	Qrt 2	Steam	10,557	
6/30/2011	Qrt 2	Wood	201	
9/30/2011	Qrt 3	Diesel	-	
9/30/2011	Qrt 3	Gasoline	-	
9/30/2011	Qrt 3	Kerosene	208	
9/30/2011	Qrt 3	Natural Gas	40,683	
9/30/2011	Qrt 3	Oil	140,917	
9/30/2011	Qrt 3	Propane	4,818	
9/30/2011	Qrt 3	Steam	10,557	
9/30/2011	Qrt 3	Wood	439	
12/31/2011	Qrt 4	Diesel	-	
12/31/2011	Qrt 4	Gasoline	-	
12/31/2011	Qrt 4	Kerosene	285	
12/31/2011	Qrt 4	Natural Gas	88,439	
12/31/2011	Qrt 4	Oil	150,163	
12/31/2011	Qrt 4	Propane	7,344	
12/31/2011	Qrt 4	Steam	10,157	
12/31/2011	Qrt 4	Wood	592	
3/31/2012	Qrt 1	Diesel	-	

Table C-2 continued

Quarter End Date	Quarter	Fuel Type	Cumulative Annual (MMBtu)	Cumulative Annualized Pipeline (MMBtu)[a]
3/31/2012	Qrt 1	Gasoline	-	
3/31/2012	Qrt 1	Kerosene	285	
3/31/2012	Qrt 1	Natural Gas	108635	
3/31/2012	Qrt 1	Oil	186,637	
3/31/2012	Qrt 1	Propane	11,810	
3/31/2012	Qrt 1	Steam	10,157	
3/31/2012	Qrt 1	Wood	749	
6/30/2012	Qrt 2	Diesel	-	
6/30/2012	Qrt 2	Gasoline	-	
6/30/2012	Qrt 2	Kerosene	285	
6/30/2012	Qrt 2	Natural Gas	140,597	
6/30/2012	Qrt 2	Oil	246,477	
6/30/2012	Qrt 2	Propane	12,798	
6/30/2012	Qrt 2	Steam	10,157	
6/30/2012	Qrt 2	Wood	1,000	
6/30/2012	Qrt 2	Residual Oil	144	
9/30/2012	Qrt 3	Diesel	-	
9/30/2012	Qrt 3	Gasoline	-	
9/30/2012	Qrt 3	Kerosene	285	
9/30/2012	Qrt 3	Natural Gas	183,379	
9/30/2012	Qrt 3	Oil	303,649	
9/30/2012	Qrt 3	Propane	14,187	
9/30/2012	Qrt 3	Residual Oil	144	
9/30/2012	Qrt 3	Steam	15,901	
9/30/2012	Qrt 3	Wood	1,599	
12/31/2012	Qrt 4	Diesel	-	
12/31/2012	Qrt 4	Gasoline	-	
12/31/2012	Qrt 4	Kerosene	1,026	
12/31/2012	Qrt 4	Natural Gas	203,118	
12/31/2012	Qrt 4	Oil	337,096	
12/31/2012	Qrt 4	Propane	16,593	
12/31/2012	Qrt 4	Residual Oil	144	
12/31/2012	Qrt 4	Steam	15,969	
12/31/2012	Qrt 4	Wood	3,079	
3/31/2013	Qrt 1	Diesel	-	-
3/31/2013	Qrt 1	Gasoline	-	-

Table C-2 continued

Quarter End Date	Quarter	Fuel Type	Cumulative Annual (MMBtu)	Cumulative Annualized Pipeline (MMBtu)[a]
3/31/2013	Qrt 1	Kerosene	1,359	353
3/31/2013	Qrt 1	Natural Gas	231,225	90,488
3/31/2013	Qrt 1	Oil	378,533	317,149
3/31/2013	Qrt 1	Propane	18,848	7,747
3/31/2013	Qrt 1	Steam	15,969	37,123
3/31/2013	Qrt 1	Wood	5,129	1,338
3/31/2013	Qrt 1	Residual Oil	144	27
3/31/2013	Qrt 1	Coal	357	-
6/30/2013	Qrt 2	Diesel	-	-
6/30/2013	Qrt 2	Gasoline	-	-
6/30/2013	Qrt 2	Kerosene	1,270	138
6/30/2013	Qrt 2	Natural Gas	313,287	76,148
6/30/2013	Qrt 2	Oil	411,518	262,809
6/30/2013	Qrt 2	Propane	21,051	7,341
6/30/2013	Qrt 2	Steam	15,969	30,232
6/30/2013	Qrt 2	Wood	6,550	935
6/30/2013	Qrt 2	Residual Oil	144	20
6/30/2013	Qrt 2	Coal	397	-
9/30/2013	Qrt 3	Diesel	-	-
9/30/2013	Qrt 3	Gasoline	-	-
9/30/2013	Qrt 3	Kerosene	1,365	356
9/30/2013	Qrt 3	Natural Gas	415,512	182,146
9/30/2013	Qrt 3	Oil	424,549	239,750
9/30/2013	Qrt 3	Propane	23,656	24,099
9/30/2013	Qrt 3	Steam	15,969	13,112
9/30/2013	Qrt 3	Wood	7,497	2,203
9/30/2013	Qrt 3	Residual Oil	144	-
9/30/2013	Qrt 3	Coal	335	-
12/31/2013	Qrt 4	Diesel	-	-
12/31/2013	Qrt 4	Gasoline	-	-
12/31/2013	Qrt 4	Kerosene	1,490	203
12/31/2013	Qrt 4	Natural Gas	466,754	128,549
12/31/2013	Qrt 4	Oil	466,125	236,933
12/31/2013	Qrt 4	Propane	25,403	5,491
12/31/2013	Qrt 4	Steam	15,969	15,977
12/31/2013	Qrt 4	Wood	8,981	1,111
12/31/2013	Qrt 4	Residual Oil	144	-
12/31/2013	Qrt 1	Coal	514	-

Table C-2 continued

Quarter End Date	Quarter	Fuel Type	Cumulative Annual (MMBtu)	Cumulative Annualized Pipeline (MMBtu)[a]
3/31/2014	Qrt 1	Diesel	-	-
3/31/2014	Qrt 1	Gasoline	-	-
3/31/2014	Qrt 1	Kerosene	1,594	80
3/31/2014	Qrt 1	Natural Gas	509,205	130,012
3/31/2014	Qrt 1	Oil	523,876	228,057
3/31/2014	Qrt 1	Propane	27,788	5,869
3/31/2014	Qrt 1	Steam	15,969	14,733
3/31/2014	Qrt 1	Wood	10,270	580
3/31/2014	Qrt 1	Residual Oil	144	-
6/30/2014	Qrt 1	Coal	458	-
6/30/2014	Qrt 2	Diesel	-	-
6/30/2014	Qrt 2	Gasoline	-	-
6/30/2014	Qrt 2	Kerosene	1,715	56
6/30/2014	Qrt 2	Natural Gas	545,195	126,749
6/30/2014	Qrt 2	Oil	569,438	225,510
6/30/2014	Qrt 2	Propane	28,521	4,969
6/30/2014	Qrt 2	Steam	15,969	14,733
6/30/2014	Qrt 2	Wood	12,322	654
6/30/2014	Qrt 2	Residual Oil	144	-
6/30/2014	Qrt 2	Coal	882	-

[a] Tracked beginning first quarter of 2013

Appendix D: NYS RGGI Auction Proceeds

Table D-1. NYS RGGI Auction Proceeds[a]

Auction Date	Control Period	Clearing Price	New York State Allowances Sold	New York State Auction Proceeds
12/17/2008	First	$3.38	12,422,161	$41,986,904
3/18/2009	First	$3.51	12,422,161	$43,601,785
3/18/2009	Second	$3.05	776,385	$2,367,974
6/17/2009	First	$3.23	11,861,849	$38,313,772
6/17/2009	Second	$2.06	776,385	$1,599,353
9/9/2009	First	$2.19	11,861,849	$25,977,449
9/9/2009	Second	$1.87	776,385	$1,451,840
12/2/2009	First	$2.05	11,861,850	$24,316,793
12/2/2009	Second	$1.86	571,423	$1,062,847
3/10/2010	First	$2.07	15,136,022	$31,331,566
3/10/2010	Second	$1.86	740,167	$1,376,711
6/9/2010	First	$1.88	15,136,022	$28,455,721
6/9/2010	Second	$1.86	756,801	$1,407,650
9/8/2010	First	$1.86	11,421,736	$21,244,429
9/8/2010	Second	$1.86	464,418	$863,817
12/1/2010	First	$1.86	8,678,724	$16,142,427
12/1/2010	Second	$1.86	414,863	$771,645
3/9/2011	First	$1.89	15,153,524	$28,640,160
3/9/2011	Second	$1.89	757,676	$1,432,008
6/8/2011	First	$1.89	4,519,648	$8,542,135
6/8/2011	Second	$1.89	383,114	$724,085
9/7/2011	First	$1.89	2,689,151	$5,082,495
12/7/2011	First	$1.89	9,621,954	$18,185,493
3/14/2012	Second	$1.93	8,895,733	$17,168,765
6/6/2012	Second	$1.93	8,265,426	$15,952,272
9/5/2012	Second	$1.93	9,315,659	$17,979,222
12/5/2012	Second	$1.93	7,568,550	$14,607,302
3/13/2013	Second	$2.80	14,252,818	$39,907,890
6/5/2013	First	$3.21	750,000	$2,407,500
6/5/2013	Second	$3.20	14,252,818	$45,751,546
9/4/2013	First	$3.21	769,253	$2,053,906
9/4/2013	Second	$3.20	14,578,296	$38,924,050
12/4/2013	Second	$3.00	14,578,295	$43,734,885
3/5/2014	Second	$4.00	9,119,837	$36,479,348
6/4/2014	Second	$5.02	7,173,198	$36,009,454
First Control Period Total			**144,305,904**	**$336,282,535**
Second Control Period Total			**114,418,247**	**$319,572,664**
TOTAL			**258,724,151**	**$655,855,199**

[a] New York did not offer allowances for sale in the RGGI auction held on December 25, 2008, where the clearing price for 2009 vintage allowances was $3.07. The first control period for fossil-fuel fired electric generators took effect on January 1, 2009 and concluded on December 31, 2011. The second control period took effect on January 1, 2012 and extends through December 31, 2014

Appendix E: Total NYS RGGI Funds

Table E-1. NYS RGGI Funds

Quarter End Date	Quarter	Fund Category	Cumulative Funds ($)
9/30/2010	Qrt 3	Interest Allocated to the RGGI Portfolio	$940,276
9/30/2010	Qrt 3	RGGI Auction Proceeds	$265,358,611
12/31/2010	Qrt 4	Interest Allocated to the RGGI Portfolio	$940,276
12/31/2010	Qrt 4	RGGI Auction Proceeds	$282,272,683
3/31/2011	Qrt 1	Interest Allocated to the RGGI Portfolio	$940,276
3/31/2011	Qrt 1	RGGI Auction Proceeds	$312,344,851
6/30/2011	Qrt 2	Interest Allocated to the RGGI Portfolio	$1,034,063
6/30/2011	Qrt 2	RGGI Auction Proceeds	$321,611,071
9/30/2011	Qrt 3	Interest Allocated to the RGGI Portfolio	$1,034,063
9/30/2011	Qrt 3	RGGI Auction Proceeds	$326,693,566
12/31/2011	Qrt 4	Interest Allocated to the RGGI Portfolio	$1,034,063
12/31/2011	Qrt 4	RGGI Auction Proceeds	$344,879,060
3/31/2012	Qrt 1	Interest Allocated to the RGGI Portfolio	$1,998,557
3/31/2012	Qrt 1	RGGI Auction Proceeds	$362,047,824
6/30/2012	Qrt 2	Interest Allocated to the RGGI Portfolio	$1,998,557
6/30/2012	Qrt 2	RGGI Auction Proceeds	$378,000,097
9/30/2012	Qrt 3	Interest Allocated to the RGGI Portfolio	$1,998,557
9/30/2012	Qrt 3	RGGI Auction Proceeds	$395,979,318
12/31/2012	Qrt 4	Interest Allocated to the RGGI Portfolio	$3,026,525
12/31/2012	Qrt 4	Interest Allocated to the GJGNY Program	$770,000
12/31/2012	Qrt 4	RGGI Auction Proceeds	$410,586,620
3/31/2013	Qrt 1	Interest Allocated to the RGGI Portfolio	$3,026,525
3/31/2013	Qrt 1	Interest Allocated to the GJGNY Program	$770,000
3/31/2013	Qrt 1	RGGI Auction Proceeds	$450,494,510
6/30/2013	Qrt 2	Interest Allocated to the RGGI Portfolio	$3,026,525
6/30/2013	Qrt 2	Interest Allocated to the GJGNY Program	$770,000
6/30/2013	Qrt 2	RGGI Auction Proceeds	$498,653,556
9/30/2013	Qrt 3	Interest Allocated to the RGGI Portfolio	$3,026,525
9/30/2013	Qrt 3	Interest Allocated to the GJGNY Program	$770,000
9/30/2013	Qrt 3	RGGI Auction Proceeds	$539,631,512
12/31/2013	Qrt 4	Interest Allocated to the RGGI Portfolio	$3,026,525
12/31/2013	Qrt 4	Interest Allocated to the GJGNY Program	$770,000
12/31/2013	Qrt 4	RGGI Auction Proceeds	$587,162,922
3/31/2014	Qrt 1	Interest Allocated to the RGGI Portfolio	$4,400,174
3/31/2014	Qrt 1	Interest Allocated to the GJGNY Program	$770,000
3/31/2014	Qrt 1	RGGI Auction Proceeds	$619,845,745
6/30/2014	Qrt 2	Interest Allocated to the RGGI Portfolio	$4,400,174
6/30/2014	Qrt 2	Interest Allocated to the GJGNY Program	$770,000
6/30/2014	Qrt 2	RGGI Auction Proceeds	$655,855,199

Appendix F: Closed RGGI-Funded Programs and Completed Evaluations

F.1 Closed Programs

F.1.1 Green Residential Buildings Program (GRBP)

The Green Residential Building Program (GRBP), established under Public Authorities Law 1872, 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 dwelling units. The GRBP offers incentives to building owners who build and obtain certification that their newly constructed residences meet or exceed Leadership in Energy and Environmental Design (LEED®) or National Green Building Standard guidelines, as well as other GRBP program-specific energy efficiency and health and safety requirements. Buildings meeting GRBP requirements will help to reduce energy use and greenhouse gas emissions, save water and other natural resources, use sustainable building materials, reduce waste, and improve indoor air quality. In this program, 69 contractors participate. Per the enabling law, applications had to be received by October 31, 2013; therefore, the program is now closed to new applications. The following data represent only those projects where the incentive was funded by RGGI, which represents 82 percent of the program activity.

Key accomplishments:

- 440 RGGI-funded projects were completed.

F.2 Completed Evaluations

F.2.1 Green Jobs-Green New York Jobs Quantification Study

This study quantified the direct, indirect, and induced jobs created/retained from the GJGNY program, including those in disadvantaged communities. The study also examined changes in worker skill level and wages resulting from GJGNY. NYSERDA issued the final reports for both phases of the study in November 2013. Both Phase 1 and Phase 2 reports are posted on NYSERDA's website.[9]

[9] The GJGNY jobs quantification studies, Phase 1 and Phase 2, are on NYSERDA's website: http://www.nyserda.ny.gov/Publications/Program-Planning-Status-and-Evaluation-Reports/NYE$-Evaluation-Contractor-Reports/2013-Reports/NMR-Group.aspx.

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New York's Regional Greenhouse Gas Initiative-Funded Programs Status Report

Quarter Ending June 30, 2014

Final Report
October 2014

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