

New York's Regional Greenhouse Gas Initiative Operating Plan Amendment for 2016

Background

In New York, responsibility for implementing the State's participation in the Regional Greenhouse Gas Initiative (RGGI) is shared by three departments of State government: the Department of Environmental Conservation (DEC); the Department of Public Service, and the Energy Research and Development Authority (NYSERDA). DEC and NYSERDA program responsibilities are contained in coordinated regulations:

- DEC established New York's CO₂ Budget Trading Program and the State's share of the total regional cap through a new rule (6 NYCRR Part 242) and revisions to an existing rule (6 NYCRR Part 200, General Provisions). Part 242 establishes the cap-and-trade provisions, as well as program compliance responsibilities and other program aspects.
- NYSERDA set up the CO₂ Allowance Auction Program through regulations (21 NYCRR Part 507). Part 507 establishes administrative procedures for the auction process and provides that proceeds from the sale of the allowances will fund projects and programs for "energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential, and for reasonable administrative costs incurred by the Authority."

The NYSERDA regulations include a provision to convene a group of stakeholders representing a broad array of energy and environmental interests to advise it on how best to utilize RGGI funds to achieve the goals of the program. The Operating Plan is reviewed and revised on an annual basis. NYSERDA holds an open stakeholder meeting each year, inviting input on how to achieve greater scale of implementation, expand private investments and partnerships and address barriers to program success.

The 2015 review resulted in an Operating Plan Amendment that was approved by NYSERDA's Board in June 2015. The 2015 Operating Plan was then compiled based on the NYSERDA Board approval and posted to NYSERDA's website. This document represents the proposed 2016 Operating Plan Amendment, and it provides program descriptions and funding levels for the June 2016-March 2018 timeframe. It is anticipated that a final draft of this 2016 Amendment will be considered by the Board at its January 2017 meeting.

Funding Assumptions

The planning horizon for the 2016 Operating Plan is two fiscal years. It is difficult to reliably estimate proceeds levels further into the future due to market volatility, and the uncertain impact of potential market speculation related to Federal carbon regulations.

This section provides an explanation of the funding assumptions used to prepare the 2016 Amendment. For planning purposes, it is assumed that the average allowance price for fiscal year 2016-2017 (FY16-17) will be \$4.52/allowance (reflecting actual results for the June, September and December 2016 auctions and a projection of \$5.48/allowance prices for the March 2017 auction). This figure represents a reasonable estimate based upon consideration of auction performance in 2016.

For fiscal year 2017-2018 (FY17-18), the average allowance price is estimated be \$7.00/allowance. This estimate is based on modeling output that has been conducted in the ongoing 2016 RGGI Program Review process. While the Program Review process is currently ongoing and a number of different scenarios are under consideration, for purposes of completing an estimated program budget, one of these scenarios was selected to develop a conservative estimate for program planning purposes. This 2016 Operating Plan has used the allowance price shown for the 2.5% low emissions case, which the output price was \$7.57/allowance; the Operating Plan then applies a conservative estimate to this modeling output, in consideration of the uncertainty related to pending decisions from the ongoing RGGI Program Review process.

In consideration of the number of allowances anticipated to be sold in upcoming auctions, these allowance price projections result in proceeds estimates of \$102.1 million for FY16-17 and \$153.4 million for FY17-18. Based on the funding allocations assumptions noted later in this Amendment, the deficit calculated as a result of this planning scenario is approximately \$47.3 million in FY16-17 and approximately \$18.7 million in FY17-18. NYSERDA projects that there will be sufficient cash balances to cover projected RGGI program expenditures for FY16-17 and FY17-18.

Review of Programs and Budgets for the 2016 Operating Plan

New York State invests RGGI proceeds to support comprehensive strategies that best achieve the RGGI greenhouse gas emission reduction goals, through energy efficiency, renewable energy, and carbon abatement strategies, pursuant to 21 NYCRR Part 507. The programs described below represent a portfolio of initiatives that support the pursuit of the State's greenhouse gas emissions reduction goals by:

- Deploying commercially available energy efficiency and renewable energy technologies
- Building the State's capacity for long-term carbon reduction
- Empowering New York communities to reduce carbon pollution, and transition to cleaner energy
- Stimulating entrepreneurship and growth of clean energy and carbon abatement companies in New York
- Creating innovative financing to increase adoption of clean energy and carbon abatement in the State.

The initiatives described below represent a continuation of a program activity in the 2015 Operating Plan or an evolution of current programs that are designed to take advantage of important new opportunities. The funding level for each program for both FY16-17 and FY17-18 is reflected in Table 1 below. This year's Amendment also reflects the linkage of RGGI with the new Clean Energy Fund (CEF).

The funding allocation values represented in Table 1 provide an estimate of when funds will be assigned to each program. These figures do not reflect when funds will be spent or when contracts will be signed. The table also reflects cumulative funding allocations through March 31, 2015, the original funding allocations approved for FY15-16, and the actual allocations for FY15-16.

Multi-year programs with remaining funds available for program expenditures in FY16-17 that are not receiving additional funding under this Plan are not described below. Those programs will continue on their planned spending trajectory for use of their previously allocated funding as outlined in the 2015 RGGI Operating Plan.¹ For more information on the status of these programs see Table 3.

¹ These programs include New York Green Bank, NYS Generation Attributes Tracking System, and Industrial Innovations. For more detail see New York's Greenhouse Gas Initiative-Funded Programs Annual Report, Quarter ending **December 31, 2015**.

For all RGGI-funded activities, NYSERDA will provide timely progress reports utilizing best practice protocols for project tracking and evaluation.

Program Descriptions

Green Jobs-Green New York

The Green Jobs – Green New York (GJGNY) Program, created under the Green Jobs-Green New York Act of 2009, provides New Yorkers with access to energy assessments, installation services, low interest financing, and pathways to training for various green-collar careers. The GJGNY program was originally funded with \$112 million of RGGI funds, of which \$26 million was allocated to a residential revolving loan fund to provide low interest financing for residential energy efficiency improvements, residential solar photovoltaic (PV) systems (effective April 2014), solar thermal systems, and high efficiency pellet stove heating systems (through the Renewable Heat NY program). An additional \$34 million was subsequently added to the revolving loan fund through March 31, 2016. For FY16-17, NYSERDA proposes to transfer an additional \$41 million to the revolving loan fund.

The revolving loan funds are used to fund program loans until they are financed with the proceeds of bonds and notes. Energy efficiency “Tier 1” loans (using traditional loan underwriting standards) are financed through financing assistance through the New York State Environmental Facilities Corporation Clean Water State Revolving Fund program. Tier 1 PV loans are financed through bonds issued under a current credit facility provided through M&T Bank. However, due to the program loan interest rates currently offered, in order to meet bond debt service coverage requirements, the bond proceeds are less than the principal amount of loans issued, requiring additional funds to be added to fund the depletion of the revolving loan fund. Other “tier 2” energy efficiency and PV loans issued (using slightly more flexible loan underwriting criteria serving consumers not likely eligible to access traditional financing) are funded from the revolving loan fund and must be held for a period of time until their performance allows them to be financed.

The GJGNY program has issued approximately \$165 million in residential loans to more than 14,000 consumers through March 31, 2016. Based on projected loan volume, NYSERDA anticipates that it will issue approximately \$115 million in residential energy efficiency and PV loans during the fiscal year ended March 31, 2017, with \$74 million funded from bond proceeds and requiring \$41 million in RGGI funds. NYSERDA worked with the GJGNY Advisory Council to implement changes to the program loan interest rates, which became effective for loan applications received September 1, 2016, to ensure that the RGGI funds achieve maximum benefits, including providing support for low-to-moderate income consumers and enabling access to consumers who do not have access to traditional financing. For fiscal year 2017-18, NYSERDA anticipates that it will issue \$102 million in residential energy efficiency and PV loans, with \$75 million funded from bond proceeds and requiring \$27 million in RGGI funds.

Transfer to State – Clean Energy Tax Credits

The 2016 New York State Budget was enacted in April 2016, and directs a \$23 million transfer of RGGI funding to support clean energy tax credits.

Electric Generation Facility Cessation Mitigation Program

The Electric Generation Facility Cessation Mitigation Program was enacted in the 2015-2016 New York State Budget, and is designed to support communities that are transitioning local economies that have been reliant on fossil fuel power plants as a source of financial support. The Program will be administered by the New York Empire State Development Corporation (“ESDC”), supported with \$30 million from NYSERDA. The Program is designed to provide grants to eligible municipal corporations and school districts that realize at least a 20 percent reduction in property tax collections or receipts from payments in lieu of taxes (“PILOTs”) caused by the permanent closure of, or a judicial determination concerning the tax liability and/or PILOTs owed by, a fossil fuel electric generation facility. This Program will mitigate the financial impact to municipal corporations but are not intended to fully restore lost tax revenues, with approved grants possible for up to five years with no more than 80 percent of any documented loss awarded in the first year. The Program commenced with the enactment of its authorizing legislation on June 25, 2015, and will end on July 1, 2025, or such earlier date as funding is expended. ESDC will accept and review program applications continuously through the program, and applications will be considered on a first come, first served basis.

Clean Energy Fund

Reforming the Energy Vision (REV) is the State’s comprehensive energy strategy aimed at building a next generation energy system that is clean, resilient and affordable for all New Yorkers. As approved by the NYS Public Service Commission (PSC), the Clean Energy Fund (CEF) is intended to serve as one of the essential pillars of REV. To deliver on its primary missions to reduce greenhouse gas emissions and attract greater private investment in clean energy, the CEF investment portfolios are designed to achieve scale in clean energy markets, including energy efficiency and clean distributed generation. These key CEF objectives dovetail with the RGGI investment parameters, creating a unique opportunity to leverage CEF and RGGI funds to help achieve overall REV objectives.

Historically RGGI funds have been implemented alongside certain existing energy efficiency programs (e.g. Home Performance with Energy Star, Empower NY, and Multifamily Performance Program), to allow customers in those sectors to address energy efficiency opportunities as they exist in their homes or buildings, capturing opportunities for on-site electric, natural gas or petroleum fuel efficiency. By integrating RGGI funds with ratepayer-supported programs, the energy efficiency industry has been able to develop business models and service packages that offer consumers ‘whole building’ services, often capturing the highest-value energy savings and greenhouse gas emission reduction opportunities. By directing a level of RGGI funds to the CEF, RGGI will continue to leverage ratepayer-supported activities, including clean energy market development under the CEF on a ‘fuel neutral’ basis.

The CEF, took effect on January 1, 2016. The identified \$25 million of RGGI funding dedicated to the CEF will be allocated to support the CEF initiatives outlined therein. The financial tables in this document reflect fiscal years, therefore, the \$25 million in Table 1 reflects funding for the last three quarters of calendar year 2016 and the first quarter of calendar year 2017.

Renewable Energy

NY-Sun

NY-Sun is a \$1 billion statewide solar initiative to expand the deployment of solar capacity throughout the state,

utilizing public funds in a strategic manner to build a self-sustaining solar market. NY-Sun provides financial support for solar electric systems installed by NY-Sun eligible contractors, as well as a comprehensive approach to reducing solar costs and barriers. The goal of NY-Sun is to install three gigawatts (GW) of solar by 2023 while building a self-sustaining solar industry.

RGGI funds expand access statewide to customers served by the Long Island Power Authority, customers served by the New York Power Authority, customers served by municipal utilities, and other customers that do not have access to Clean Energy Fund activities, of which NY-Sun is a primary component. Such allocations allow for a coordinated statewide solar program that drives growth in the solar industry and increases the affordability of solar PV technology.

Energy Efficiency

Clean Energy Workforce Opportunity Program

The Clean Energy Workforce Opportunity Program will dedicate \$15 million to workforce training that will support New York's advancement of its clean energy goals, including 40% reductions in greenhouse gas emissions by 2030. This new initiative will facilitate the development of clean energy markets towards those goals through educating and training 10,000 new clean energy economy workers to feed the growing demand for energy efficiency services, as well as solar, wind and other clean energy industry jobs across the State. Run by the State University of New York (SUNY) this program will work closely with clean energy companies to develop a job training and certification program, whose graduates will receive an industry-recognized certification. The initiative will also support the expansion of faculty and the purchase of cutting-edge equipment, including electro-mechanical and mechatronic simulator training, for the program's students.

LIPA Efficiency Services

These funds enhance the portfolio of clean energy activities for energy consumers on Long Island, as approved by the Long Island Power Authority (LIPA) and administered by PSEG-Long Island. Funding and reporting requirements are established through a Memorandum of Understanding between NYSERDA and LIPA, which ensure that RGGI funds meet the requirements on the RGGI regulations that funds are used to support energy efficiency and clean energy activities.

Home Performance with Energy Star

To maintain statewide access to fuel neutral, whole buildings energy efficiency opportunities, these funds will maintain support for customers of municipal utilities to access Home Performance with ENERGY STAR® (HPwES) as a comprehensive energy efficiency services program for existing one- to-four family homes. RGGI funding will allow HPwES to target customers using oil and propane for space and domestic water heating purposes. The funds will offset part of the cost for consumers to replace inefficient oil and propane heating equipment and other measures that have a direct impact on reducing oil and propane consumption (e.g., insulation, air sealing).

EmPower

Similar to HPwES, funds to support EmPower New York, which provides energy efficiency services for low-income New Yorkers, are targeted to households heating with oil, propane, kerosene, wood or coal, but may also be applied to homes heating with natural gas, and which are also targeted to customers of municipal utilities. Measures supported by EmPower include insulation, air sealing, and heating system upgrades.

Innovative Greenhouse Gas Abatement Strategies

ChargeNY

ChargeNY will pursue three main strategies to promote plug-in electric vehicle (PEV) adoption by consumers across New York. First, NYSERDA will develop and implement a rebate program for PEVs starting in 2017, accelerating purchases of PEVs by reducing higher upfront costs. Second, NYSERDA will invest in marketing and awareness-building activities to build interest in PEVs among the general public. A focus on building greater public knowledge and awareness of the capabilities of PEVs is essential to spur more private investment in PEV purchases and PEV charging stations. This work may also include other market development activities, such as policy and business model development studies that support new ways for critical stakeholders, such as utilities, local governments, and car dealers, to get involved in the PEV market. Third, NYSERDA will also support the installation of PEV charging stations at workplaces, municipal lots, and multi-family buildings -- location types that have been seen to be effective drivers for PEV adoption based on usage data reported from previous installations. Regions of the state that have seen faster PEV adoption will be identified for additional charging station support, which ensure that investments in infrastructure support areas with the greatest potential for additional PEV drivers. ChargeNY will also initiate the deployment of a network of direct current (DC) fast charge stations across the State.

76 West

As outlined in the 2015 State of the State address, 76West is a \$20 million clean energy business competition in the Southern Tier, whose purpose is to catalyze a clean energy business cluster that builds on the region's technology, manufacturing, and natural resource assets. The program is configured as a business competition, open to early-stage clean energy companies from around the world that will award \$10 million in prizes over four years to winning companies that show the prospect for significant job creation in the Southern Tier.

In addition to the prize money, the 76West program will support regional programs in business incubation, entrepreneurial training, development and deployment of business mentors, relationship building with investors and corporate strategic partners, university-industry collaboration, and other activities designed to coalesce a supportive business community around startup and early-stage firms.

Brookhaven National Laboratory Ion Collider

In collaboration with Brookhaven National Laboratory (BNL), RGGI investments will help support the potential to attract and award from the U.S. Department of Energy (DOE) to design, construct and operate and electron-ion collider

(EIC), which will be used to study the fundamental components of matter at BNL's facilities in Upton, New York. The potential DOE award is \$700 million in capital investment for construction and \$200 million per year over a 20-year period to support facility operations. An integral component of the project is the construction of an energy recovery linear accelerator (ERL) – which will be supported with the \$25 million RGGI investment. The ERL has the potential to reduce the electrical peak demand of the EIC facility by 35 MW and result in annual electric energy savings of 140,000 MWh.

Community Clean Energy and Climate Action

Clean Energy Communities

In 2015, the third and final round of the Cleaner, Greener Communities (CGC) program awarded three contracts for regionally-based outreach and technical assistance services to support NYSERDA's new Clean Energy Communities program. These services will expand upon the efforts undertaken through the current contractors under Climate Smart Communities (CSC) and Economic Development Growth Extension (EDGE). In addition, communities that receive the Clean Energy Communities designation will be eligible to apply for grants to implement innovative clean energy projects.

As the Clean Energy Communities program ramps up, RGGI funds from this plan will be used to fulfill final activities of predecessor programs, and transition to similar activities under Clean Energy Communities as follows:

Climate Smart Communities: Services to support communities taking the pledge will continue to be provided for regionally-based outreach and technical assistance under the new Clean Energy Communities Program.

Economic Development Growth Extension: EDGE will continue to provide support in its current form through April 2016. Thereafter, services will continue to be provided by the regionally-based outreach and technical assistance for the new Clean Energy Communities Program.

The statewide Clean Energy Communities program, which is also supported through the Clean Energy Fund (CEF), will advance the Governor's New York State Community Partnership, providing local governments with a common platform and the coaching, facilitation, technical assistance, and expertise for implementing the local-level policies, planning and activities needed to drive a future clean energy market. These local-level actions roll-up and help to deliver the regional sustainable growth strategies encouraged by the CGC program, consistent with the regional sustainability and economic development plans. The Clean Energy Communities program will complement DEC's CSC Certification Program by providing assistance to communities working toward certification.

Energy to Lead

Governor Cuomo's **Energy to Lead Competition** challenges colleges and student-led coalitions across the state to develop and implement innovative plans and activities to advance clean energy on their campuses or in their local communities.

The three teams that propose the best solutions for an innovative clean energy project in energy efficiency, renewables or greenhouse gas emission reduction were awarded \$1 million each in May of 2016 to help implement their plans. Awards were made to Bard College, University at Buffalo and SUNY Broome Community College.

Applicants were required to demonstrate innovation in one or more of the following areas: project design, business model, partnerships, and/or curriculum integration. They were also asked to describe the project’s impact on greenhouse gas emissions, how they would measure success and how they would use the \$1 million award to advance the project.

Bard College’s “Microhydro for Macro Impact” project will show how novel microhydro power generators can dramatically reduce greenhouse gas emissions, can be financed in different ways and are integrated into student curricula and workforce training. The project is expected to result in the avoidance of 335 metric tons of greenhouse gas emissions annually, and will also include the launch of an online public information resource “NY Microhydro” to help others install microhydro throughout the state.

The University at Buffalo’s “Localizing Buffalo’s Renewable Energy Future” project will demonstrate how a college or university can partner with its community to transform the local energy ecosystem, all while providing students with valuable research and workforce training opportunities. In partnership with the city of Buffalo and several not-for-profit and educational partners, the project’s goal is to install 100 megawatts of solar power throughout the city and college and university campuses and is expected to result in the avoidance of 82,000 metric tons of greenhouse gas emissions annually.

SUNY Broome Community College’s “Geothermal Learning Laboratory” project will show how a geothermal system can harness the energy stored in the earth to heat and cool a campus, serve as a hands-on learning resource for college and secondary school students, and generate energy bill savings that can be reinvested in energy conservation measures. The project is expected to result in the avoidance of 135 metric tons of greenhouse gas emissions annually.

Collectively, the three winning college projects are expected to reduce greenhouse gas emissions by the equivalent of taking 17,000 cars off the road each year.

Current Actual and Anticipated Future Funding Allocations

Actual and Estimated Revenues

The Revenues and Funding Allocations are presented below in Table 1. Additionally, the table presents program administration and evaluation costs, ongoing RGGI, Inc. costs, State Cost Recovery Fees, and other factors. After such accounting, allocations exceed revenues in each of FY16-17 and FY17-18.

Table 1: Actual and Estimated Revenues

Category	Program	Cumulative 03/31/15	Original FY 15- 16 Plan	Actual FY 15- 16	FY 16-17 Plan	FY 17-18 Plan
Proceeds	Number of allowances	278,976,994	23,411,109	27,303,956	22,604,117	21,909,983
	Allowance price	\$2.72	\$5.44	\$6.07	\$4.52	\$7.00
	RGGI Auction Proceeds	760,186,643	127,421,612	165,659,930	102,116,950	153,369,881
	Interest Earnings	5,900,165	-	3,435,134	2,672,236	239,379
	Total Revenues	766,086,808	127,421,612	169,095,064	104,789,186	153,609,260
Renewable Energy	NY SUN NYPA Customer Incentives	10,000,000	10,000,000	10,000,000	-	-
	NY SUN Community Solar/K-solar	9,500,000	-	-	-	-
	NY SUN Long Island Incentives	36,972,431	17,287,568	17,287,568	5,240,000	500,001
	Renewable Heat NY	3,961,094	8,955,830	6,838,989	(500,000)	-
	Advanced Renewable Energy	2,893,674	-	-	(37,600)	-
	NYS Generation Attributes Tracking System	1,509,357	-	-	-	-
Energy Efficiency	NYSDERDA PV incentives	5,319,821	-	-	-	-
	Clean Energy Workforce Opportunity Program	-	-	-	15,000,000	-
	LIPA Efficiency and RE	67,883,181	21,535,569	20,566,819	34,600,000	30,600,000
	EmPower NY	18,548,667	5,377,059	7,377,059	1,204,422	-
	Home Performance with Energy Star	19,274,293	3,724,454	2,515,861	3,005,603	-
	Multifamily Performance Program	19,374,590	1,820,772	1,820,772	(2,830,257)	-
	Multifamily Carbon Emissions Reduction	6,330,988	-	-	(497,967)	-
	Solar Thermal Incentive	4,634,197	-	-	(291,520)	-
	Municipal Water/Wastewater	1,245,242	-	-	-	-
	Green Residential Buildings	2,744,601	-	-	-	-
Innovative GHG Abatement Strategies	Electric Vehicle/Charge NY	4,000,000	3,000,000	3,000,000	3,000,000	7,000,000
	Southern Tier Competition (76 West)	2,421,736	-	3,765,764	250,000	4,250,000
	Brookhaven National Lab- ION Collidor	-	-	-	25,000,000	-
	Advanced Buildings	4,638,574	-	-	(3,066,326)	-
	Industrial Innovations	13,831,117	-	(787,130)	-	-
	Climate Research & Analysis	10,424,873	1,198,914	1,198,914	(3,032,630)	-
	Competitive GHG Reduction Pilot	14,500,000	-	-	(13,486,467)	-
	Clean Energy Business Development	15,823,353	5,745,005	(3,500,000)	(4,065,429)	-
	Transportation Research	4,250,000	1,125,000	1,125,000	(87,650)	-
	PV Manufacturing consortium	8,500,000	-	-	-	-
Community Clean Energy	Carbon Sequestration	1,000,000	-	-	-	-
	Cleaner Greener Communities	100,634,090	5,433,025	5,433,025	(2,900,000)	-
	Climate Smart Communities	6,034,999	1,640,000	1,312,000	328,000	328,000
	Economic Development Growth Extension	7,015,517	1,800,000	1,440,000	(1,212,470)	360,000
	Energy to Lead	-	-	3,000,000	-	-
Clean Energy Fund	Regional Economic Development & GHG Reduction	10,400,000	-	(106,770)	-	-
	Transfer to Clean Energy Fund	-	6,250,000	6,250,000	25,000,000	25,000,000
Directed	Transfer to NY Green Bank	52,926,434	-	-	-	-
	Transfer to State - Env. Tax Credits	-	41,000,000	41,000,000	23,000,000	23,000,000
	Electric Generation Facility Cessation Mitigation Program	-	-	-	30,000,000	-
	Transfer to Green Jobs-Green NY- Original Legislation	112,000,000	-	-	-	-
	Transfer to Green Jobs-Green NY- Additional Funding	5,226,707	27,000,000	30,708,593	41,689,975	27,000,000
Administration and Other Non-Program Costs	NYS Budget Transfer	90,000,000	-	-	-	-
	Program Administration	20,905,975	2,126,864	2,126,865	3,600,000	5,000,000
	Program Evaluation	11,250,471	2,658,580	2,658,581	(2,153,623)	-
	Commensurate Benefit/Litigation reserve	19,462,374	1,499,934	1,499,936	1,907,867	-
	RGGI Inc Startup Costs	1,598,204	-	-	-	-
	RGGI Inc pro-rata costs	6,066,944	1,021,005	(453,163)	760,999	1,021,005
	State Cost Recovery	11,612,859	1,329,290	2,200,810	(5,089,221)	1,019,966
Total Funding Allocations	744,716,363	171,528,869	168,279,493	174,335,706	125,078,972	
Surplus/(Shortfall) of Revenues over Funding Allocations	21,370,445	(44,107,257)	815,571	(69,546,520)	28,530,288	
Cumulative Surplus(Shortfall)	21,370,445	(22,736,812)	22,186,016	(47,360,504)	(18,830,216)	

Notes: Totals may not sum exactly due to rounding. Fiscal years begin on April 1st and end on March 31st.

Cash Flow Analysis

NYSERDA projects that there will be sufficient cash balances to cover projected RGGI program expenditures for FY16-17 and FY17-18. As of March 31, 2016, Total Revenues for the RGGI program was \$935.2 million, of which \$667.7 million were expended, resulting in \$267.5 million cash balance in that year. Given this cash balance, the anticipated net deficit at the end of FY 16-17 totaling \$47.3 million, and the net deficit of \$18.7 million at the end of FY 17-18 represents a manageable commitment level compared to projected revenues, and will be considered in presenting future RGGI Operating Plans. Furthermore, modifications to the RGGI program as a result of the 2016 Program Review have the potential to diminish or eliminate the deficit, but it is too early to predict the magnitude of those impacts at this time. The following table includes estimates of the expenditures, anticipated cash balances, and minimum future proceeds necessary for the program funding allocations presented in Table 2.

Table 2: RGGI Cash Flow

	<u>Cumulative</u> <u>3/31/16</u>	<u>FY 16-17</u>	<u>FY 17-18</u>	<u>FY 18-19</u>	<u>FY 19-20</u>	<u>FY 20-21</u>	<u>FY 21-22</u>
Number of allowances	306,281,380	22,604,117	21,909,983				
Allowance price	\$3.02	\$4.52	\$7.00				
RGGI Auction Proceeds	925,846,573	102,116,950	153,369,881	-	-	15,545,547	4,275,812
Interest Earnings	9,335,299	2,672,236	254,610	-	-	-	-
Total Revenues	935,181,872	104,789,186	153,624,491	-	-	15,545,547	4,275,812
Total Expenses	667,696,636	224,731,777	162,943,359	86,116,481	44,117,347	23,535,495	4,275,812
Cash Increase/(Decrease)	267,485,236	(119,942,591)	(9,318,868)	(86,116,481)	(44,117,347)	(7,989,948)	-
Cash Balance	267,485,236	147,542,645	138,223,777	52,107,295	7,989,948	-	-

Financial Status

A Financial Status Report as of March 31, 2016 is presented below in Table 3.

Table 3: RGGI Financial Status Report as of March 31, 2016

Category	Program	Funding Allocations	Expended	Encumbered	Contract Pre-encumbrances	Solicitation Pre-encumbrances	Budget Balance
Renewable Energy	NY SUN NYPA Customer Incentives	20,000,000	78,230	7,152,587	7,875	-	12,761,308
	NY SUN Community Solar/K-solar	9,500,000	208,791	104,619	157,887	-	9,028,703
	NY SUN Long Island incentives	54,259,999	31,023,407	13,111,232	707,228	-	9,418,132
	Renewable Heat NY	10,800,083	2,326,040	5,204,231	1,350,699	550,000	1,369,113
	Advanced Renewable Energy	2,893,674	2,826,927	29,147	-	-	37,600
	NYS Generation Attributes Tracking System	1,509,357	-	789,933	402,820	-	316,604
	NYSDERDA PV incentives	5,319,821	5,288,571	31,250	-	-	-
Energy Efficiency	Clean Energy Workforce Opportunity Program	-	-	-	-	-	-
	LIPA Efficiency and RE	88,450,000	79,800,000	-	-	-	8,650,000
	EmPower NY	25,925,726	21,260,632	69,271	5,389,661	-	(793,838)
	Home Performance with Energy Star	21,790,154	19,357,413	475,509	684,398	-	1,272,834
	Multifamily Performance Program	21,195,362	10,218,725	7,422,455	883,276	-	2,670,906
	Multifamily Carbon Emissions Reduction	6,330,988	5,832,938	36,162	-	-	461,888
	Solar Thermal incentive	4,634,197	3,503,040	842,501	-	-	288,656
	Municipal Water/Wastewater	1,245,242	1,245,242	-	-	-	-
Innovative GHG Abatement Strategies	Green Residential Buildings	2,744,601	2,744,601	-	-	-	-
	Electric Vehicle/Charge NY	7,000,000	-	-	1,499,999	-	5,500,001
	Southern Tier Competition (76 West)	6,187,500	47,572	55,026	-	-	6,084,902
	Advanced Buildings	4,638,574	1,075,778	445,870	-	-	3,116,926
	Industrial Innovations	13,043,987	6,257,990	6,386,096	400,000	-	(99)
	Climate Research & Analysis	11,623,787	5,422,631	2,368,526	-	-	3,832,630
	Competitive GHG Reduction Pilot	14,500,000	-	1,013,533	-	13,500,000	(13,533)
	Clean Energy Business Development	12,323,353	4,007,787	1,191,138	2,975,363	-	4,149,065
	Transportation Research	5,375,000	2,192,860	387,753	775,432	1,941,405	77,550
	PV Manufacturing consortium	8,500,000	8,000,000	500,000	-	-	-
Community Clean Energy	Carbon Sequestration	1,000,000	1,000,000	-	-	-	-
	Cleaner Greener Communities	106,067,115	18,417,239	46,028,816	33,550,254	-	8,070,806
	Climate Smart Communities	7,346,999	4,284,524	151,417	-	-	2,911,058
	Economic Development Growth Extension	8,455,517	4,671,101	334,691	-	-	3,449,725
	Energy to Lead	3,000,000	-	-	-	3,000,000	-
Clean Energy Fund	Regional Economic Development & GHG Reduction	10,293,230	8,205,038	2,088,192	-	-	-
	Transfer to Clean Energy Fund	6,250,000	6,250,000	-	-	-	-
Directed	Transfer to NY Green Bank	52,926,434	52,926,434	-	-	-	-
	Transfer to State - Env. Tax Credits	41,000,000	41,000,000	-	-	-	-
	Electric Generation Facility Cessation Mitigation Program	-	-	-	-	-	-
	Transfer to Green Jobs-Green NY- Original Legislation	112,000,000	112,000,000	-	-	-	-
	Transfer to Green Jobs-Green NY- Additional Funding	35,935,300	35,935,300	-	-	-	-
	NYS Budget Transfer	90,000,000	90,000,000	-	-	-	-
Administration and Other Non-Program Costs	NYS Temporary Budget Transfer	-	22,975,609	-	-	-	(22,975,609)
	Program Administration	23,032,840	19,478,325	51,508	-	-	3,503,007
	Program Evaluation	13,909,052	3,159,019	2,833,063	-	5,700,000	2,216,970
	Commensurate Benefit/Litigation reserve	20,962,310	20,781,889	-	-	-	180,421
	RGGI Inc Startup Costs	1,598,204	1,598,204	-	-	-	-
	RGGI Inc pro-rata costs	5,613,781	5,134,868	218,907	-	-	260,006
	State Cost Recovery	13,813,669	7,159,910	-	-	-	6,653,759
Total Funding Allocations		912,995,856	667,696,636	99,323,433	48,784,892	24,691,405	72,499,490

Notes: Totals may not sum exactly due to rounding. Fiscal years begin on April 1st and end on March 31st.

* 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 as a deficit reduction measure following the global financial crisis.

*** The litigation settlement values represent \$20,781,889 paid through April 1, 2016 and estimated obligations through FY15-16.