

New York State Energy Research and Development Authority

New York's System Benefits Charge Programs Evaluation and Status Report

Quarterly Report to the Public Service Commission
Quarter Ending September 30, 2011

Final Report
November 2011

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1 Introduction

1.1 Introduction

This report provides an update on the progress of the New York State Energy Research and Development Authority's (NYSERDA) System Benefits Charge (SBC) funded programs toward meeting their stated goals. It contains evaluation results on activities completed through the quarter ending September 30, 2011. The last full annual report on progress (through December 31, 2010) was issued in March 2011.¹

The 13-year **New York Energy Smart**SM Program, administered by NYSERDA, was initiated in 1998 by order of the New York State Public Service Commission² (Commission) and embodies three funding cycles.³ The Program portfolio consists of numerous initiatives promoting energy efficiency and demand management, facilitating renewable energy development, providing energy services to low-income New Yorkers, and conducting research and development. The activities pursued by the Program include disseminating information to increase consumer energy awareness, marketing, providing financial incentives, developing and testing new products, commercializing new technologies, and gathering data and information.

In its June 23, 2008 Order⁴, the Commission established the State's Energy Efficiency Portfolio Standard (EEPS) and approved a subset of "Fast Track" programs to commence immediately. The Order also directed NYSERDA to submit a supplemental revision to its SBC Operating Plan

¹New York State Energy Research and Development Authority, *New York's System Benefits Charge Program Evaluation and Status Report, Final Report*, March 2011.

²Case 94-E-1052, *et al.*, In the Matter of Competitive Opportunities Regarding Electric Service, Opinion 98-3, issued January 30, 1998.

³The most recent cycle was initiated with the New York State Public Service Commission order in Case 05-M-0900, In the Matter of the System Benefits Charge III, *Order Continuing the System Benefits Charge (SBC) and the SBC-funded Public Benefit Programs*, issued and effective December 21, 2005.

⁴Case 07-M-0548, Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard, *Order Establishing Energy Efficiency Portfolio Standard and Approving Programs*, issued and effective June 23, 2008.

incorporating the Fast Track programs, including enhancements to the SBC Fast Track programs. The supplemental revision, approved by the Department of Public Service (DPS) on March 12, 2009, served as the vehicle to incorporate the Fast Track programs into NYSERDA's existing SBC Program portfolio.⁵

A series of other Commission Orders issued during the latter half of 2009 and early 2010 authorized NYSERDA to further expand and add to its programs. In addition to the electric SBC, the Commission commenced collection of a natural gas SBC in order to allow NYSERDA and other program administrators to broaden or begin offering services for gas efficiency measures. In total, the additional NYSERDA program approvals constitute \$447 million in funding through 2011 to support electric and natural gas programs. By the end of 2011, the SBC funds and interest earnings from the three **New York Energy Smart**SM Program rounds and the approved NYSERDA-administered EEPS programs will have provided more than \$2.4 billion to support a full range of programs to help the State meet its energy challenges.⁶

In September 2010, NYSERDA submitted a proposal to the Commission requesting approval for a continuation, with modifications, of the current **New York Energy Smart**SM Program and approval of a new program portfolio. In this proposal, NYSERDA requested a six-month extension of the **New York Energy Smart**SM Program to December 31, 2011 to coincide with the conclusion of the current EEPS Program. In addition, the proposal requested Commission approval to transfer eight **New York Energy Smart**SM resource acquisition programs into the EEPS portfolio at current funding levels given their similarity in implementation to existing EEPS programs.⁷ Lastly, the proposal introduced a new Technology and Market Development (T&MD) program portfolio that would include programs designed to support innovative technologies and services, such as clean energy technologies and services as well as codes and

⁵New York State Energy Research and Development Authority, *System Benefits Charge Supplemental Revision for New York Energy Smart*SM *Programs (2008-2011) As Amended August 22, 2008 and revised March 12, 2009.*

⁶In addition to NYSERDA's **New York Energy Smart**SM and EEPS programs, funded through the SBC, the Public Service Commission also provided funding for New York utilities to administer EEPS programs. Furthermore, the New York Power Authority (NYPA) and Long Island Power Authority (LIPA) each offer complementary public benefits programs of their own. The three authorities coordinate program design and delivery wherever practicable to maximize the use of public funds and to ensure a coordinated statewide effort to meet public policy goals. The results of the utility, NYPA, and LIPA programs are not included in this report.

⁷These programs included Residential Multifamily Building Performance, Low-Income Multifamily Building Performance, EmPower NY, Existing Facilities, New Construction; FlexTech; Single Family Home Performance, and Low-Income Single Family Home Performance.

standards. The proposed funding level for the T&MD portfolio was \$82 million per year through December 31, 2016.

In its December 30, 2010 Order in response to this proposal, the Commission approved the six-month extension of the **New York Energy SmartSM** Program through December 31, 2011 and authorized the transfer of eight **New York Energy SmartSM** programs into the EEPS program portfolio pending approval of a revised SBC (**New York Energy SmartSM**) Operating Plan due in the first quarter of 2011. The revised Operating Plan submitted by NYSERDA included updates to program goals to reflect the six-month extension and presented a revised budget adding \$40.9 million to the **New York Energy SmartSM** Program. NYSERDA also revised and resubmitted its EEPS Operating Plans to reflect the additional six months of funding for those programs totaling \$49.2 million. The revised SBC/**New York Energy SmartSM** and most of the revised EEPS operating plans were approved by DPS in April 2011, and the additional six-month funding and goals have been reflected in this quarter's evaluation and status report.

The Commission deferred its decision on the T&MD portfolio and ordered NYSERDA to submit a T&MD Operating Plan that would incorporate input from interested stakeholders through an intensive outreach process led by NYSERDA. NYSERDA submitted the T&MD Operating Plan on May 16, 2011, and on June 8, 2011 the Commission issued a Notice of Proposed Rulemaking requesting public comment on the Operating Plan by July 25, 2011. Comments received on the Operating Plan during this public comment period will assist the Commission in making a decision regarding the Plan. Further, on August 15, 2011, NYSERDA submitted responses to questions posed by DPS to provide additional detail on the activities outlined in the T&MD Operating Plan.

This document combines reporting requirements of the original **New York Energy SmartSM** programs with the additional reporting requirements for the approved EEPS programs. For purposes of this report, the "**New York Energy SmartSM** Program" refers to the original 13-year program, and the "EEPS Program" refers to the recently approved EEPS Programs. The "SBC Program" refers to the portfolio of programs and includes both **New York Energy SmartSM** and EEPS funding sources. Thus, this evaluation report provides an update for the **New York Energy SmartSM** Program as well as the approved EEPS Programs.

Given the six-month extension of the current **New York Energy SmartSM** Program funding period and the largely retrospective nature of impact evaluation activities, future evaluation and

status reports will more fully define the ultimate achievements and effectiveness of this round of program activity. The future reporting will incorporate results of several current impact evaluation studies and will provide an up-to-date assessment of progress against stated goals, cost effectiveness and economic impacts of the programs.

1.2 Organization of the Report

This report was prepared by NYSERDA staff with contributions from a team of independent third-party evaluation contractors. The evaluation contractors work closely with NYSERDA's program implementation staff and contractors, customers, and market and trade allies to develop an understanding of the Program offerings and to conduct independent assessments of the Program's impacts and progress toward the established public policy goals. The evaluation functions covered by the specialty contractor teams are: impact evaluation; market characterization and assessment; and process assessment and evaluation management. This report is divided into the following sections:

Section 1 – Introduction

Section 2 – Portfolio-Level Reporting

Section 3 – Commercial and Industrial Programs

Section 4 – Residential and Low-Income Programs

Section 5 – Research and Development Programs

Appendix A – Evaluation Adjustment Factors

The more detailed quarterly narrative and numeric (*i.e.*, Scorecard) progress updates required by DPS in its June 29, 2009 *Energy Efficiency Program Information Reporting Manual* for the EEPS Programs have been filed with the Commission for Quarter 3 2011 under separate cover.

2 Portfolio-Level Reporting

The System Benefits Charge (SBC) portfolio includes numerous program initiatives that individually and collectively help the State progress toward achieving its energy policy goals. This section presents findings and results for the portfolio of SBC programs. More specific findings and results from evaluations of individual programs are presented separately in Sections 3, 4 and 5.

Table 2-1 aligns current spending with energy savings to show progress toward goals at the portfolio level for the current program funding cycles. Overall, at the portfolio level, the programs are tracking well as percent of funds spent relates to percent of goals achieved through September 30, 2011. The remainder of Section 2 highlights budget and spending status and program achievements in more detail for both the **New York Energy SmartSM** and Energy Efficiency Portfolio Standard (EEPS) portions of NYSERDA's SBC portfolio.

Table 2-1. Summary of SBC Program Spending and Progress by Funding Source for Current Funding Periods through September 30, 2011

	Total Budget (\$ million) ¹	Total Funds Spent (\$ million) ¹	% of Budget Spent	Energy Savings Goal	Energy Savings Achieved	% of Goal Achieved
New York Energy SmartSM Program (July 1, 2006 – December 31, 2011)	\$1,223.0	\$841.4	69%	2,102 GWh ^{2,3}	2,054 GWh	98%
EEPS Electric Programs ⁴	\$347.6	\$106.8	29%	2,909 GWh ⁵	1,079.8 GWh	37%
EEPS Gas Programs ⁶	\$124.3	\$32.7	33%	4,074,101 MMBtu ⁷	1,380,143 MMBtu	34%

¹Inclusive of Administration, Evaluation and other portfolio level costs. Enhanced SBC evaluation and DPS evaluation consultant funding, as provided for in EEPS orders issued June 23, 2008 and June 24, 2009 (Case 07-M-0548 and Case 05-M-0090), are included in the NYE\$ row budget.

²Certain **New York Energy SmartSM** programs also have demand reduction and fuel savings goals. Only the electric goals are shown in this table due to the broad contribution of programs toward those achievements. Individual program goals and progress for demand reduction and fuel savings are shown in Sections 3 and 4 of this report.

³This overall goal for the **New York Energy SmartSM** Program is based on NYSERDA's February 28, 2011 revised operating plan (resubmitted with revisions April 6, 2011).

⁴Budget and spending in this row do not include General Awareness. Energy savings achieved include some ancillary electric benefits from natural gas funding. Ancillary savings amounts per program are shown in Sections 3 and 4 of this report, and in NYSERDA's scorecard filing.

⁵NYSERDA filed several revised EEPS operating plans with the Commission on March 30, 2011 to incorporate an additional six months of funding approved by the Commission's December 30, 2010 Order. Electricity savings goals increased with the additional funds. Goals for EEPS programs are reflective of the March 30, 2011 Operating Plans.

⁶Budget and spending in this row do not include General Awareness. Energy savings achieved include some ancillary natural gas benefits from electric funding. Ancillary savings amounts per program are shown in Sections 3 and 4 of this report, and in NYSERDA's scorecard filing.

⁷The EEPS Gas Programs goal includes the MMBtu goal for the Agriculture Gas program, which is not yet reporting energy savings.

2.1 System Benefits Charge Budget and Spending Status

This section presents financial data for the SBC-funded Program. Table 2-2 provides summary level budget and spending data for both the **New York Energy SmartSM** and EEPS Programs. Sections 2.1.1 and 2.1.2 provide further breakout of budget and spending for each individual **New York Energy SmartSM** and EEPS-funded program, respectively.

Table 2-2. Summary of SBC Program Budget and Spending Status through September 30, 2011 (\$ million)

	Total Budget	Total Funds Spent	% of Budget Spent
New York Energy Smart SM Program (13-Year Budget)	\$1,928.2	\$1,546.6	80.2%
EEPS Programs (electric and natural gas)	\$493.1	\$146.5	29.7%
Total SBC Programs	\$2,421.3	\$1,693.1	69.9%

Totals may not sum exactly due to rounding.

Source: NYSERDA

2.1.1 New York Energy SmartSM Program Budget Spending Status

This financial overview of the **New York Energy SmartSM** Program presents budget and funding status from 1998 through September 30, 2011. The 13-year budget is approximately \$1.93 billion, of which \$1.71 billion is allocated to four major program areas – Commercial/Industrial (C/I), Residential, Low-Income, and Research and Development (R&D) – and a general awareness campaign. The budgets for these program areas are presented in Table 2-3 along with the costs for program administration, program evaluation, the Environment Disclosure Program¹, and the New York State Cost Recovery Fee².

Table 2-4 shows the financial status of **New York Energy SmartSM** through September 30, 2011. Spending relative to the 13-year budget is: C/I 77.0%; Residential 95.1%; Low-Income 88.3%; and R&D 65.2%.

¹This program provides electricity commodity suppliers with data for informing customers about the fuel mix and associated environmental impacts of their electricity sources.

²The New York State Cost Recovery Fee is assessed for services to public authorities. The fee is determined by the New York State Division of Budget and imposed and collected by the Department of Taxation and Finance.

Financial status of individual programs within C/I, Residential, Low-Income and R&D is shown in Sections 3, 4, and 5, respectively.

**Table 2-3. New York Energy SmartSM Program Budget as of September 30, 2011
(\$ million)**

	Budget ¹			% of Program Area Budget	% of Total Budget
	SBC I & SBC II ²	SBC III ³	Total Budget		
Program Areas					
Commercial/Industrial	247.1	388.3	635.4	37.1%	33.0%
Residential	165.4	156.8	322.2	18.8%	16.7%
Low-Income	86.6	234.2	320.8	18.7%	16.6%
Research and Development	105.9	296.6	402.5	23.5%	20.9%
General Awareness ⁴ (Marketing)	15.9	15.2	31.0	1.8%	1.6%
Program Areas Total	\$620.9	\$1,091.1	\$1,711.9	100.0%	88.8%
Other Costs					
Program Administration	59.8	71.7	131.6	-	6.8%
Metrics and Evaluation	14.5	39.0	53.5	-	2.8%
Environmental Disclosure	0.8	1.1	1.9	-	0.1%
NYS Cost Recovery Fee ⁵	9.2	16.9	26.1	-	1.4%
DPS Evaluation Consultant	-	1.1	1.1	-	0.1%
Statewide Evaluation Protocol Development	-	2.1	2.1	-	0.1%
Other Costs Total	\$ 84.3	\$132.0	\$216.3	-	11.2%
Total New York Energy SmartSM	\$705.2	\$1,223.0	\$1,928.2	-	100.0%

¹Reflects carryover in funds and reallocation as approved by the Public Service Commission in 2007.

²SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

³SBC III: July 1, 2006 through December 31, 2011.

⁴General Awareness previously included in Residential Program Area.

⁵The New York State Cost Recovery Fee is assessed for services to public authorities. The fee is determined by the New York State Division of Budget and imposed and collected by the Department of Taxation and Finance.

Totals may not sum due to rounding.

Source: NYSERDA

Table 2-4. Financial Status of New York Energy SmartSM Program through September 30, 2011 (\$ million)

	Total 13-Year Budget ¹	Funds Spent			Encumbered Funds ⁴ % of Budget Encumbered	Committed Funds ⁵ % of Budget Committed
		SBC I & SBC II ^{1,2}	SBC III ³	Total Spent & % of Budget		
Program Areas						
Commercial/Industrial	635.4	247.1	242.3	489.4 77.0%	585.4 92.1%	613.9 96.6%
Residential ⁵	322.2	165.4	135.8	301.3 95.1%	311.3 99.5%	313.9 97.4%
Low-Income	320.8	86.6	196.8	283.3 88.3%	303.4 95.0%	308.6 96.2%
Research and Development	402.5	105.9	152.1	258.0 65.2%	337.1 85.8%	396.5 98.5%
General Awareness ⁶ (Marketing)	31.0	15.9	9.6	25.5 81.5%	31.0 100.0%	31.0 100.0%
Program Areas Total	1,711.9	\$620.9	\$736.6	1,357.5 79.3%	1,568.1 91.6%	1,664.0 97.2%
Other Costs						
Program Administration	131.6	59.8	70.7	130.6 99.3%	130.8 100.0%	130.8 100.0%
Metrics and Evaluation	53.5	14.5	15.3	29.8 55.6%	34.5 64.5%	43.0 80.3%
Environmental Disclosure	1.9	0.8	-0.8	<0.1 2.5%	<0.1 2.5%	<0.1 2.5%
NYS Cost Recovery Fee	26.1	9.2	17.8	26.9 103.2%	26.9 102.4%	26.9 103.2%
DPS Evaluation Consultant	1.1	-	0.9	0.9 81.3%	1.1 100.0%	1.1 100.0%
Statewide Evaluation Protocol Development	2.1	-	0.8	0.8 40.3%	0.9 44.2%	1.3 63.2%
Other Costs Total	\$216.3	\$84.3	\$104.8	\$189.1 87.4%	\$194.3 92.0%	\$203.2 93.9%
Total New York Energy SmartSM	\$1,928.2	\$705.2	\$841.4	\$1,546.6 80.2%	\$1,762.5 93.0%	\$1,867.2 96.8%

¹ Reflects carryover in funds and reallocation as approved by the PSC in 2007.

² SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

³ SBC III: July 1, 2006 through December 31, 2011.

⁴ Encumbered funds associated with signed contracts and purchase orders.

⁵ Committed funds associated with encumbered funds and pending contracts.

⁶ General Awareness previously included in Residential Program Area.

Totals may not sum exactly due to rounding.

Source: NYSERDA

2.1.2 EEPS Program Budget Spending and Status

This section presents financial data for the EEPS Programs from their initiation through September 30, 2011. Budgets and spending for EEPS electric and natural gas programs are presented in aggregate in Table 2-5 by major program area, including C/I, Residential and Low-Income, Workforce Development, and General Awareness.

Financial status of individual EEPS programs within the C/I, Residential and Low-Income areas is presented in Sections 3 and 4, respectively. Spending for the current quarter is further disaggregated per the DPS EEPS reporting guidelines within NYSERDA's scorecard report, which is filed under separate cover for the third quarter of 2011.

**Table 2-5. Financial Status of the EEPS Programs through September 30, 2011
(\$ million)**

		Total Budget	Total Funds Spent	% of Budget Spent	Encumbered Funds % of Budget Encumbered	Committed Funds % of Budget Committed
Program¹						
Commercial/Industrial	Electric	229.3	54.1	23.5%	137.0 59.6%	179.5 78.3%
	Gas	24.2	3.8	15.9%	19.4 80.3%	21.8 90.1%
Residential	Electric	34.6	14.3	42.4%	16.0 47.9%	16.9 48.8%
	Gas	53.8	14.1	26.3%	17.3 49.7%	20.7 38.5%
Low-Income	Electric	35.1	16.5	47.5%	19.7 49.7%	53.8 53.8%
	Gas	31.4	9.2	29.4%	11.3 36%	18.1 57.6%
Workforce Development		5.8	0.9	14.9%	4.1 70.8%	4.3 74.1%
Subtotal		\$414.0	\$112.9	27.4%	\$224.9 54.3%	\$279.9 67.6%
General Awareness		19.6	6.9	34.8%	18.1 100.0%	19.6 108.3%
Program Total		\$433.7	\$119.9	27.6%	\$243.0 56.2%	\$299.6 69.1%
Other Costs						
Program Administration		35.8	22.3	71.3%	22.3 71.3%	22.3 62.3%
Metrics and Evaluation		23.7	4.3	20.2%	7.6 33.1%	16.9 71.3%
Other Costs Total		\$59.4	26.6	50.5%	29.9 55.8%	39.2 66.0%
Total EEPS Program		\$493.1	\$146.5	29.7%	\$272.9 55.5%	\$338.8 68.7%

¹Program budgets exclude administration and evaluation dollars. Administration and evaluation dollars are summed across programs and included in the Other Costs section of the table. Administration funds spent includes the EEPS allocable share of NYS Cost Recovery Fee.

Totals may not sum exactly due to rounding.

Source: NYSERDA

2.2 Portfolio-Level Findings

This section discusses portfolio-level findings related to progress toward overarching public policy goals, energy savings achievements, and economic analyses. These findings were compiled based on the cumulative work of NYSERDA and its evaluation contractor teams over the past several years.

2.2.1 Energy, Demand and Fuel Savings Achieved

The energy, peak demand, and fuel savings from the SBC Program portfolio (including both the **New York Energy SmartSM** and the EEPS programs) from 1998 through September 30, 2011 are presented in Table 2-6. The portfolio has achieved 5,455 GWh of cumulative annual electricity savings, and 6.5 million MMBtu of natural gas, fuel oil and other fuel savings. In addition, there are 108 GWh of electricity being generated through renewables. The SBC portfolio has reduced peak demand by 1,977 MW.

The reductions in energy use translate into:

- \$989 million in annual energy bill savings (electric, oil and natural gas) for program participants;
- 2,500 tons of annual nitrogen oxide (NO_x) emission reductions;
- 5,000 tons of annual sulfur dioxide (SO₂) emission reductions; and
- 2.6 million tons of annual carbon dioxide (CO₂) emission reductions, which are equivalent to removing 491,000 automobiles from New York's roadways.

Table 2-6. Cumulative SBC Benefits from Installed Measures through September 30, 2011 (New York Energy SmartSM and EEPS)

Benefits	Through Year-End 2007a	Through Year-End 2008	Through Year-End 2009	Through Year-End 2010	Through September 30, 2011
Electricity Savings from Energy Efficiency and On-Site Generation (Annual GWh)	3,070	3,220	3,820	4,584a	5,455
Peak Demand Reduction ¹ (MW)	1,200	1,275	1,415	1,765a	1,977a
Permanent Measures (MW)	650	700b	824	1,035a	1,060a
Curtable ²	550	575	590	729	917
Net Fuel Savings (Annual MMBtu)	4,460,000	5,400,000	4,600,000b	5,810,000a	6,548,584
Annual Energy Bill Savings to Participating Customers (\$ Million)	\$570	\$590	\$680	\$804	\$989
Renewable Energy Generation (Annual GWh)	106	106	106	106	108
Net Additional Jobs ³	2,917	3,060	3,542	4,077	4,077
NO _x Emissions Reductions (Annual Tons) ⁴	2,570	2,800	3,030	2,130	2,500
SO ₂ Emissions Reductions (Annual Tons) ⁴	4,720	5,120	5,710	4,180	5,000
CO ₂ Emissions Reductions (Annual Tons) ⁴	2,000,000	2,200,000	2,300,000	2,220,000	2,600,000
Equivalent number of cars removed from NY roadways	400,000	435,000	464,000	445,000	506,000

a Savings for the **New York Energy SmartSM** Products Program are estimated based on market data, survey research, and deemed savings values. An update to this analysis has been incorporated into this report. New savings values reflect appliance and lighting sales attributable to the program in 2008 and 2009, although savings for those prior years have not been back-adjusted in this report. The Q4 2011 report will add savings for 2007 lighting purchases that have not yet been accounted for.

b Fuel savings decreased over year-end 2008 due to the installation of two large combined heat and power facilities through the FlexTech Program.

¹Does not include 11.7 MW of renewable energy generation capacity.

²Curtable MW has decreased due to a reassessment of the impact of the Enabling Technologies Program. MW enabled under the SBC2 program Enabling Technologies for Price Responsive Load was not required to persist beyond the period of the contract. As such, the MWs available have steadily declined since the program's close.

³Figures in this row represent jobs created through year-end 2010 for the **New York Energy SmartSM** Program only, based on the methodology updated in 2011. Results for the years previous to 2010 have been restated in this table (from those published in 2010 quarterly and annual reports) to be consistent with the updated methodology.

⁴These emission reductions are associated with both electric and fossil fuel saving measures. Under a cap-and-trade system, the total number of emission allowances is determined by regulation. Regulated entities can purchase allowances and collectively emit up to the cap that is currently in place. Therefore, in the near term, electric efficiency projects may not decrease the overall amount of emissions going into the atmosphere. Nevertheless, electric efficiency projects will reduce end-users' responsibility or environmental footprint associated with emissions from electricity production. Beginning in Q1 2010, NYSERDA now estimates reductions in emissions of carbon dioxide (CO₂), nitrogen oxides (NO_x), and sulfur dioxide (SO₂) associated with electric efficiency projects based on average emission rates that include emissions associated with imports of electricity. In the past, NYSERDA has reported emissions reductions using marginal emission factors; this transition to average emission factors was performed to be consistent with a footprint reduction framework.

Figure 2-1 and Figure 2-2, respectively, show electricity and demand savings by utility service area for the **New York Energy SmartSM** programs. The National Grid (36%) and Con Edison (32%) service areas show the highest percentages of electricity savings. The same service areas, Con Edison (34%) and National Grid (36%), are also seeing the highest percentages of the overall demand reductions. Both of these figures are based on the cumulative annual savings achieved through September 30, 2011. For certain upstream market transformation and informational programs representing about 32% of the portfolio electricity savings and 16% of the demand reductions, savings were apportioned to utility areas based on incentive dollars.

Figure 2-3 and Figure 2-4, respectively, show electricity and demand savings by utility service area for the EEPS funded programs, through September 30, 2011. The Con Edison (46%) and National Grid (23%) service areas show the highest percentages of electricity savings. For overall demand reductions, the Con Edison (40%) and National Grid (24%) service areas also show the highest percentages.

Figure 2-1. New York Energy \$martSM Electricity Savings by Utility through September 30, 2011

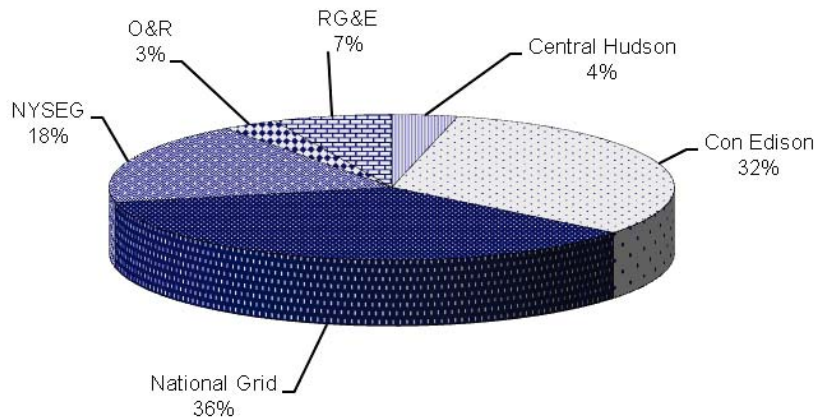


Figure 2-2. New York Energy \$martSM Demand Savings by Utility (includes callable MW) through September 30, 2011

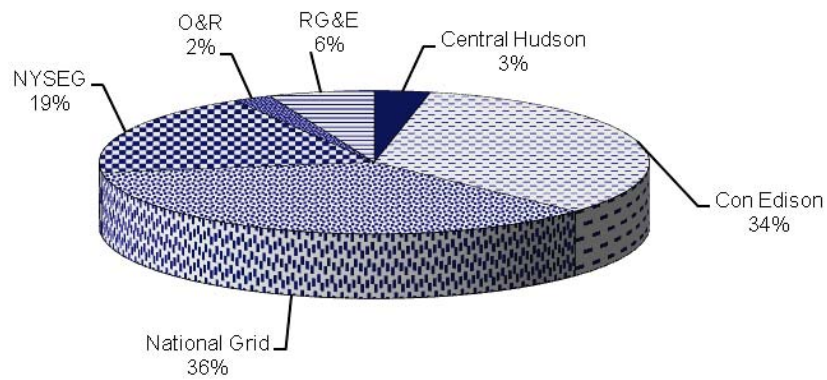


Figure 2-3. EEPS Electricity Savings by Utility through September 30, 2011

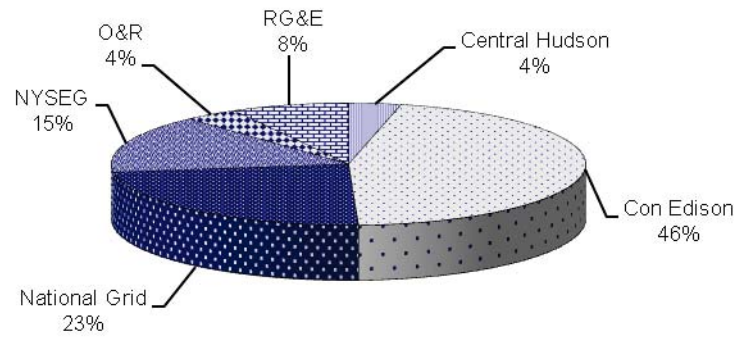


Figure 2-4. EEPS Demand Savings by Utility (includes callable MW) through September 30, 2011

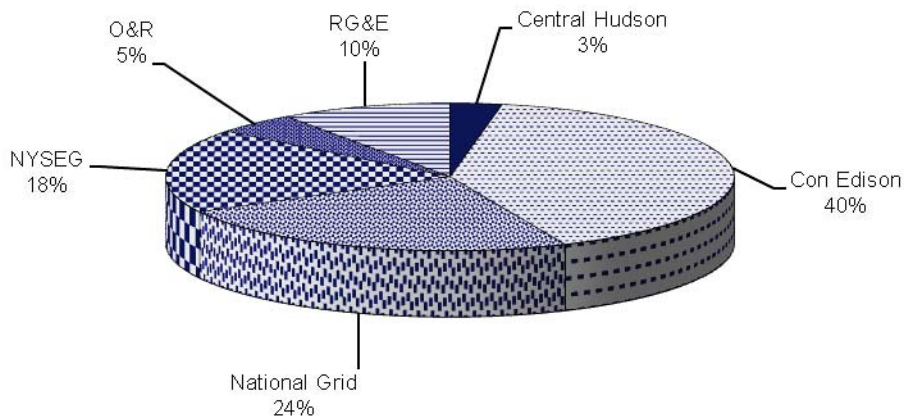


Table 2-7 shows the cumulative annual electricity savings, demand reductions, and other fuel savings from each SBC program, including the **New York Energy SmartSM** and EEPS programs. Entries for Renewable Energy represent clean generation rather than reductions in use.

Table 2-7. Adjusted Cumulative SBC Annual Savings by Program through September 30, 2011

Program	Adjusted Cumulative Annual Savings		
	GWh	MW	MMBtu
Existing Facilities: Permanent	1,607.8	335.9	-43,424a
Existing Facilities: Callable	N/A	653.9	N/A
New York Energy \$martSM Business Partners	130.2	33.6	N/A
New York Energy \$martSM Loan Fund and Financing	87.9	52.0	598,666
New Construction Program	466.8	114.9	254,661
Flex Tech Technical Assistance: Permanent	1,279.2	234.4	3,844,738
Flex Tech Technical Assistance: Curtailable	N/A	164.2	N/A
Industry and Process Efficiency	158.7	20.9	301,034
Agriculture	0.2	0	0
C/I Sector Overlap Removed	276.4	56.4	168,938
Subtotal Commercial/Industrial	3,454.4	1,553.4	4,787,210
Single Family Home Performance	70.7	25.4	2,496,475
Multifamily Building Performance	130.7	13.8	1,066,290
Market and Community Support Program	776.2	157.6	444,103
CFL Expansion	755.9	66.9	N/A
EmPower New York Program	66.7	10.0	209,019
Subtotal Residential and Low Income	1,800.3	273.8	4,215,886
DG-CHP Demonstration Program	550.9	100.3	-3,743,438
Enabling Technologies for Price Responsive Load	N/A	99.0	N/A
Demand Response and Innovative Rate Research	0	1.0	N/A
Renewable Energy Production	107.9	11.7	N/A
Subtotal R&D	658.8	212.0	-3,743,438
Cross Sector Overlap Removed	350.4	49.7	-1,295,093
SBC Portfolio	5,563c	1,989c	6,554,752

N/A – not applicable, the energy source is not reduced for the particular program.

a Up to this point, EFP has not tracked ancillary fuel savings or use resulting from installation of electric saving measures. The negative fuel savings shown here represent additional fuel use due to the installation of on-site generation at a very small number of projects that were recently evaluation for impacts. In the future, EFP will begin tracking both fuel saving and use more consistently.

b Because the electricity saved by the DG/CHP projects replaces electricity formerly purchased from the grid, the program has reduced fuel used at central generating stations, for a net decrease statewide due to greater efficiency of the DG/CHP systems at sites where imported fuel is used. The fuel avoided at the central generating plant is determined from the electricity generated by the DG/CHP installations. Furthermore, at additional projects such as waste water treatment plants, electricity generation is powered fully or partially by digester gas produced on site. Such fuel switching achieves natural gas conservation above and beyond what is achieved through efficiency alone.

c This sum includes 107.9 GWh and 11.7 MW of renewable energy production, whereas the portfolio-level electricity and demand savings from energy efficiency and on-site generation shown in Table 2-6 does not.

2.3 Workforce Development

2.3.1 Program Description

In its June 2009 *Order Authorizing Workforce Development Initiatives*³, the Commission approved a Workforce Development (WFD) Program to be administered by NYSERDA. The goals of the program are to overcome the barriers to workforce training and to expand the existing energy efficiency technical training infrastructure across New York State. An additional goal is to increase employment opportunities for underserved populations in energy efficiency occupations in New York through the Career Pathways for Disadvantaged Workers program. These program efforts will provide the present and future workforce with the technical skills necessary to serve the needs of the portfolio of programs funded through the Energy Efficiency Portfolio Standard (EEPS).

Career Pathways and Technical training, targeted to reach 6,237 participants, is being delivered through a network of training partners chosen through both open enrollment and competitive solicitations. To date, NYSERDA has contracted more than 40 training partnership agreements under open enrollment solicitation PON 1816 and nine training partnerships under the EEPS component of competitive solicitation PON 1817. NYSERDA has partnered with experienced education providers including, but not limited to, community colleges, Board of Cooperative Educational Services (BOCES), trade unions, and not-for-profits, with the goal of rapidly ramping up training capacity through its state-wide network of training providers.

The Workforce Development Program continues to roll out contracted training and, as courses are completed, student success stories are highlighted in regular reports. The Osborne Association offers Contextualized Excel and the national ROOTS to Success: Environmental Literacy courses to disadvantaged individuals in the Bronx. Osborne's ROOTS program is highly regarded and program graduates often move on to advanced technical training through groups like the Association for Energy Affordability or Solar One. The recently completed HVAC Excellence program at Capital Region BOCES garnered media attention as a number of the graduates were offered jobs in the HVAC field and others were rewarded with advancement by their current employers. Coming this winter and fall, NYSERDA will sponsor high-demand professional

³Case 07-M-0548 Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard, *Order Authorizing Workforce Development* initiatives, issued June 22, 2009.

trainings including Certified Energy Manager (CEM) and Certified Energy Auditor at locations in Manhattan and Malta, NY.

Another important goal of the WFD Program is bridging the gap between training and employment through on-the-job training (OJT), offered through internships and apprenticeships. These programs provide the hands-on experience employers demand. The WFD Operating Plan called for NYSERDA to implement 15 new sustainable internship/apprenticeship programs; 10 new programs have been initiated to date. Each program includes employer outreach and career development/coaching services to help develop institutional relationships between training providers and local employers. Several new internship programs are planned to be contracted during the next quarter.

2.3.2 Program Accomplishments

Table 2-8 shows WFD program goals and progress to date as a percentage of the levels set in the Program Operating Plan.

Table 2-8. Workforce Development Program - Goals and Achievements

WFD Training Categories	Program Goals January 1, 2010 - December 31, 2012 ¹	Contracted To Date January 1, 2010 - September 30, 2011 ²	Achieved To Date January 1, 2010 - September 30, 2011	% of Goal Achieved
Number of Students Trained (Technical Training)	2,225	3,839	640	29%
Number of Students Trained (Career Pathways)	1,797	4,203	880	49%
Number of Students earning Certifications ³	2,215	440	600	27%
Total Number of Students Trained	6,237	8,482	2,120	34%

¹Program Goals - the number of participants to be trained as outlined in the EEPS Workforce Development Operating Plan under the June 22, 2009 Order Authorizing Workforce Development Initiatives (CASE 07-M-0548)

²Contracted To Date - the number of participants to be trained per contract agreements with NYSERDA training partners. These show the current status of contracting with training providers and thus show progress toward operating plan goals.

³Certifications - this category reflects reimbursement issued to individuals who have achieved a nationally recognized energy efficiency credential such as, but not limited to, those issued by the Building Performance Institute, Association of Energy Engineers, U.S. Green Building Council or the Residential Energy Services Network.

Table 2-9 shows the status of a number of key program outputs from the WFD Operating Plan, including the total funds allocated to this specific program output compared to the amount encumbered and paid to date.

Table 2-9. Key Program Outputs from Program Inception to September 30, 2011

Program Outputs	Operating Plan	Achieved To Date January 1, 2010 - September 30, 2011
Program Dollars Committed (PON 1816) ¹	\$3,812,410	\$2,524,779
Program Dollars Committed (PON 1817) ¹	\$1,250,000	\$1,097,500
Number of Training Partners contracted	N/A	41
Number of Internship/Apprenticeship Programs	15	10

¹Committed refers to program funds that are encumbered and actually paid to contractors-in this case the training partners contracted through the WFD Program.

3 Commercial/Industrial Programs

3.1 Commercial/Industrial (C/I) Evaluation Activities

No evaluation projects were completed on the Commercial/Industrial programs in the third quarter.

In coming quarters, NYSERDA expects to complete the following evaluation projects:

- Market characterization and assessment evaluations on the Existing Facilities, Business Partners, Industrial and Process Efficiency and Workforce Development programs;
- Process evaluations on the Business Partners, New Construction, and Workforce Development¹ programs; and
- Impact evaluation studies on Existing Facilities, FlexTech, Industry and Process Efficiency, New Construction, Energy Smart Focus (Benchmarking) and Business Partners (Lighting) programs, as well as a C/I Nonparticipant Spillover study.

NYSERDA will summarize evaluation results from these projects in future evaluation and status reports.

3.2 Summary of Commercial/Industrial Program Budget and Spending Status

Table 3-1 presents detailed budget and funding information for the **New York Energy SmartSM** C/I programs. Table 3-2 presents the same information for EEPS programs.

¹This study is being jointly conducted as a process and market characterization/assessment effort.

Table 3-1. Commercial/Industrial Programs – New York Energy SmartSM Financial Status through September 30, 2011 (\$ million)

Program	Budget ¹			Funds Spent			Encumbered Funds ⁴ % of Budget Encumbered	Committed Funds ⁵ % of Budget Committed
	SBC I & SBC II ²	SBC III ³	Total Budget	SBC I & SBC II ²	SBC III ³	Total Funds Spent		
Existing Facilities ⁶	135.4	164.6	300.0	135.4	96.7	232.1 77.4%	280.9 93.6%	295.5 98.5%
New York Energy SmartSM Business Partners	21.1	24.7	45.7	21.1	16.1	37.1 81.1%	40.5 88.6%	41.5 90.7%
Loan Fund and Financing	12.3	31.3	43.7	12.3	26.3	38.7 88.6%	40.8 93.4%	41.6 95.2%
Vertical Outreach	4.8	18.5	23.4	4.8	13.7	18.6 79.5%	22.1 94.4%	22.7 97%
New Construction Program	53.1	119.3	172.4	53.1	73.6	126.6 73.4%	160.9 93.3%	170.1 98.7%
FlexTech Technical Assistance	20.4	29.8	50.2	20.4	15.9	36.4 72.3%	40.2 80.1%	42.6 84.8%
Total Commercial & Industrial	\$247.1	\$388.3	\$635.4	\$247.1	\$242.3	\$489.4 77.0%	\$585.4 92.1%	\$613.9 96.6%

¹Reflects carryover in funds and reallocation as approved by the PSC in 2007. NYSERDA, *System Benefits Charge Operating Plan for New York Energy SmartSM Programs (July 1, 2006 – December 31, 2011)*, As Amended February 28, 2011, Revised April 6, 2011.

²SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

³SBC III: July 1, 2006 through December 31, 2011.

⁴Encumbered funds associated with signed contracts and purchase orders.

⁵Committed funds associated with encumbered funds and pending contracts.

⁶Existing Facilities Program (EFP) was formed by merging the Peak Load Management and Enhanced Commercial/Industrial Performance (ECIPP) programs.

Totals may not sum exactly due to rounding.

Source: NYSERDA

Table 3-2. Financial Status of the EEPS Commercial/Industrial Programs through September 30, 2011 (\$ million)

		Total Budget	Total Funds Spent	% of Budget Spent	Encumbered Funds % of Budget Encumbered	Committed Funds % of Budget Committed
Program¹						
Existing Facilities	Electric	35.2	12.7	35.7%	26.1 73.2%	32.0 90.9%
	Gas	3.6	0.6	17.4%	2.6 72.5%	3.4 94.4%
Commercial New Construction Program	Electric	69.7	10.0	14.3%	23.3 33.4%	55.6 79.8%
	Gas	3.7	0.2	6.5%	0.6 15.6%	0.6 16.2%
FlexTech Expansion	Electric	17.8	6.3	35.1%	15.0 83.6%	16.1 90.0%
	Gas	1.6	0.4	27.4%	1.3 82.4%	1.4 87.5%
Industry and Process Efficiency	Electric	92.8	24.6	26.5%	65.9 71.0%	67.7 72.9%
	Gas	14.8	2.5	16.8%	14.8 99.8%	16.1 108.4%
Benchmarking		9.8	<0.1	0.5%	5.2 52.9%	6.3 64.3%
Agriculture	Electric	4.0	0.4	10.8%	1.6 40.4%	1.8 46.4%
	Gas	0.4	<0.1	9.1%	0.1 24.7%	0.4 81.5%
Total Commercial/Industrial		\$253.5	\$57.9	22.8%	\$156.4 61.5%	\$201.4 79.2%

¹Program budgets exclude administration and evaluation dollars.

Totals may not sum exactly due to rounding.

Source: NYSERDA

3.3 Summary of Commercial/Industrial Evaluation Results

3.3.1 Energy, Peak Demand, and Fuel Savings

Tables 3-3 through 3-8 summarize the estimated electricity savings, peak demand reduction, and other fuel savings for each of the C/I sector programs, both **New York Energy SmartSM** and EEPS. Note that individual program savings are not adjusted for program overlaps. To avoid double counting in the total sector-level savings estimates, the amount of overlap among the individual program savings estimates is subtracted at the bottom of the table.

Table 3-3 and Table 3-4 show progress for the **New York Energy SmartSM** and EEPS funded programs, respectively, toward their established goals for electricity savings. Overall, two out of six **New York Energy SmartSM** programs (Existing Facilities and FlexTech) have exceeded their five-and-a-half-year **New York Energy SmartSM** goals. EEPS electric-funded programs continue to make good progress toward their goals.

Table 3-5 and Table 3-6 show progress for the **New York Energy SmartSM** and EEPS funded programs, respectively, toward attaining peak demand reductions, as well as percent of the **New York Energy SmartSM** demand reduction goals that have been achieved. Overall, four out of six **New York Energy SmartSM** programs (Business Partners, New Construction and FlexTech) have exceeded their five-and-a-half-year **New York Energy SmartSM** peak demand reduction goals. Peak demand savings goals were not set for the EEPS electric-funded programs.

Table 3-7 and Table 3-8 show fuel savings achieved by the **New York Energy SmartSM** and EEPS funded programs, respectively, including progress of EEPS-funded programs at achieving their ultimate natural gas targets. Fuel savings goals were not set for the **New York Energy SmartSM** programs. EEPS natural gas-funded programs have just begun reporting savings and future reports will continue to show progress toward the EEPS natural gas goals for these programs. Fuel savings reported for the **New York Energy SmartSM** programs include savings for fuels such as oil and natural gas whereas fuel savings reported for the EEPS-funded programs are for natural gas only.

Table 3-3. New York Energy SmartSM C/I Program Cumulative Annual Electricity Savings through September 30, 2011 and Progress toward Goals

Program	Energy Savings (GWh)				
	Savings Achieved through			5.5 Year Goal (by December 31, 2011) ²	Progress Toward Goal (% achieved)
	June 30, 2006	September 30, 2011	July 1, 2006 through September 30, 2011		
Existing Facilities Program	837.0a	1,524.7	687.7	484	142%
Business Partners Program	54.1	130.2	76.0	105	72%
Loan Fund and Financing	49.6	87.9	38.2	N/A	N/A
Vertical Outreach	N/A ³	N/A ³	N/A ³	53	0%
New Construction Program	188.1b	451.5	263.4	356	74%
Flex Tech Technical Assistance	644.1	1,227.9	583.8	409	143%
Overlap Removed¹	126.7	276.4	149.7	N/A	N/A
Statewide C/I Total	1,646.3	3,145.8	1,499.5	1,407	106.6%

¹Overlap factors were updated in Q1 2008.

²Goals for the New York Energy SmartSM Program are specified in NYSERDA's February 28, 2011 revised operating plan (resubmitted with revisions April 6, 2011).

³Energy Smart Focus is primarily a sector-based energy information and services program. Energy and demand savings that may be attributable to the Focus Program are currently tracked and reported under the other New York Energy SmartSM programs.

a Savings reported previously included projects funded through the Con Edison Power Savings Partners Program. These savings have been removed to more accurately reflect accomplishments.

b These savings were adjusted following an extensive clean-up of the program database, which resulted in a change to the program realization rate.

Totals may not sum exactly due to rounding.

Table 3-4. EEPS C/I Program Cumulative Annual Electricity Savings through September 30, 2011 and Progress toward Goals

Program	Energy Savings (GWh)		
	Savings Achieved through September 30, 2011a	Goal ¹	Progress Toward Goal (% achieved)
Existing Facilities Program: Electric Funding	83.1	221.9	37%
Existing Facilities Program: Ancillary Benefits from Gas Funding	0.1	N/A	N/A
New Construction Program: Electric Funding	15.3	310.0	5%
Flex Tech Technical Assistance: Electric Funding	51.3	320.1	16%
Industry and Process Efficiency: Electric Funding	158.7	840	19%
Agriculture: Electric	.2	5.0	4%
Statewide C/I Total	308.7	1,697.0	18.2%

a The EEPS programs shown in this table began reporting electricity savings in the following months: Existing Facilities in April 2010; New Construction Program in August 2009; Flex Tech in July 2010; Industry and Process Efficiency in June 2009; and Agriculture in August 2011.

¹The time frames for achieving savings goals vary by program. For the Existing Facilities Program, the savings goal is through December 31, 2014; for the New Construction Program and FlexTech Program, the savings goals are through December 31, 2015; for the Industry and Process Efficiency Program, the savings goal is through December 31, 2013.

Totals may not sum exactly due to rounding.

Table 3-5. New York Energy SmartSM C/I Program Cumulative Peak Demand Savings through September 30, 2011 and Progress toward Goals

Program	Peak Demand Savings (MW)				
	Savings Achieved through		July 1, 2006 through September 30, 2011	5.5 Year Goal (by December 31, 2011) ⁴	Progress Toward Goal (% achieved)
	June 30, 2006 (Cumulative)	September 30, 2011 (Cumulative)			
Existing Facilities Program Permanent	175.0a	315.7	140.7	123	114%
Existing Facilities: Callable ¹	421.1a	653.9	232.8	239	97%
Business Partners Program	11.8	33.6	21.8	21	104%
Loan Fund and Financing	14.3	52.0	37.7	N/A	N/A
Vertical Outreach	N/A ³	N/A ⁴	N/A ⁴	10	0%
New Construction Program	41.0b	110.8	69.8	41	170%
Flex Tech TA	120.9	224.9	104.0	83	125%
Flex Tech TA: Callable	10.2	164.2	154.0	N/A	N/A
Overlap Removed²	24.5	56.4	31.9	N/A	N/A
Statewide C/I Total	769.9	1,498.7	728.9	517	140.9%

Note: N/A means not applicable (*i.e.*, a goal has not been set for this program).

¹EFP MW reductions were adjusted for Q2 2011 reporting to collect callable MW that were formerly reported as permanent. 135 MW were moved from permanent to callable.

²Overlap factors were updated in Q1 2008.

³Goals for the New York Energy SmartSM Program are specified in NYSERDA's February 28, 2011 revised operating plan (resubmitted with revisions April 6, 2011).

⁴Energy Smart Focus is primarily a sector-based energy information and services program. Energy and demand savings that may be attributable to the Focus Program are currently tracked and reported under the other New York Energy SmartSM programs.

a Savings reported previously included projects funded through the Con Edison Power Savings Partners Program. These savings have been removed to more accurately reflect accomplishments.

b These savings were adjusted following an extensive clean-up of the program database, which resulted in a change to the program realization rate.

Totals may not sum exactly due to rounding.

Table 3-6. EEPS C/I Program Cumulative Peak Demand Savings through September 30, 2011

Program	Peak Demand Savings (MW)
	Savings Achieved through September 30, 2011
Existing Facilities Program	20.2
Existing Facilities Program: Ancillary benefits from gas funding	0.02
New Construction Program	4.1
Flex Tech TA	9.5
Industry and Process Efficiency	20.9
Statewide C/I Total	54.7

Note: There are no EEPS goals for peak demand savings.

Totals may not sum exactly due to rounding.

Table 3-7. New York Energy \$martSM C/I Program Cumulative Annual Fuel Savings through September 30, 2011a

Program	Fuel Savings (MMBtu)
	Savings Achieved through September 30, 2011
Existing Facilities Program	-71,870b
Loan Fund and Financing	598,666
New Construction Program	8,786
Flex Tech Technical Assistance ¹	3,378,759
Overlap Removed	168,938
Statewide C/I Total	3,745,403

Note: There were no New York Energy \$martSM goals for fuel savings for Commercial/Industrial sector programs.

¹The methodology to assess impacts focuses on developing samples based on electricity savings, rather than fuel, resulting in a less than optimal sample for fuel-savings projects and fluctuation over time in the calculated impacts. Also, the program recommends on-site generation, which would result in an increase in fuel use, offsetting fuel reductions achieved.

a New York Energy \$martSM MMBtu savings reported in this table include savings for fuels such as oil and natural gas.

b EFP has not tracked ancillary fuel savings or use resulting from installation of electric saving measures. The negative fuel savings shown here represent additional fuel use due to the installation of on-site generation at a very small number of projects that were recently evaluated for impacts. In the future, EFP will begin tracking both fuel saving and use more consistently.

Totals may not sum exactly due to rounding.

Table 3-8. EEPS C/I Program Cumulative Annual Natural Gas Savings September 30, 2011 and Progress toward Goals¹

Program	Natural Gas Savings (MMBtu) ²		
	Savings Achieved through September 30, 2011a	Goal ³	Progress toward Goal (% Achieved)
Existing Facilities Program: Gas funding	28,446	155,927	18%
Existing Facilities Program: Ancillary benefits from electric funding	473	N/A	N/A
New Construction Program: Gas funding	85	285,743	<1%
New Construction Program: Ancillary benefits from electric funding	245,790	N/A	N/A
Flex Tech Technical Assistance: Gas funding	33,756	381,963	9%
Flex Tech Technical Assistance: Ancillary benefits from electric funding	432,223	N/A	N/A
Industry and Process Efficiency: Gas funding	301,034	1,682,265	18%
Statewide C/I Total	1,041,807	2,505,898	41.6%

¹The MMBtu savings for EEPS-funded programs presented consist of natural gas only, and these figures do not include savings for other fuels such as oil and propane.

²EEPS natural gas goals and impacts are typically tracked in therms and have been converted to MMBtu units in this report so total impacts can be summed with those from **New York Energy SmartSM** programs for NYSERDA's entire System Benefits Charge portfolio.

³For the Existing Facilities Program, the savings goal is through December 31, 2013; for the New Construction and Flex Tech programs, savings goals are through December 31, 2015; for the Industrial and Process Efficiency Program, the savings goal is through December 31, 2013. EEPS gas goals and impacts were originally stated in therms and have been converted to MMBtu units so total impacts can be summed with those from **New York Energy SmartSM** programs.

a The EEPS programs shown in this table began reporting natural gas savings in the following months: Existing Facilities in October 2010; FlexTech in July 2010; and Industry and Process Efficiency in April 2010.

3.3.2 Summary of Other Key Program Impacts and Results

Across the programs, eleven additional five-and-a-half-year goals were set for other key metrics besides energy savings, such as the number of business partners participating, number of Loan Fund lenders and number of participants receiving assistance through the Focus program. The programs are making good progress toward these goals with five out of 11 goals exceeded.

3.4 Existing Facilities Program

3.4.1 Program Description

The Existing Facilities Program (EFP)² offers performance-based and pre-qualified incentives for a variety of energy projects to customers or ESCOs for electric efficiency, natural gas efficiency, demand response, and combined heat and power (CHP) projects. Allowing customers, ESCOs and contractors access to multiple incentive strategies to support their energy projects will enable the New York ESCO community to continue to grow the market in existing facilities for energy efficiency and non-building efficiency measures. Demand response incentives cover equipment and technical solutions that enable significant demand reduction resources and require participation in New York Independent System Operator (NYISO) demand response programs.

3.4.2 Program Accomplishments

With EFP being the product of merging two programs, continued tracking of those original, individual programs³ goals is no longer possible. Nevertheless, NYSERDA does track EFP outputs that somewhat parallel the former programs' goals and those similar outputs have been merged into program-wide goals to be achieved by December 31, 2011. As can be seen in Table 3-9, goals for customer projects and leveraged funds have been surpassed.

² EFP is a consolidation of two precursor NYSERDA programs -- the Peak Load Management Program (PLMP) and the Enhanced Commercial and Industrial Performance Program (ECIPP). Building upon the success of these two programs, the July 1, 2008 merger provides a less complicated, more accessible program presentation to potential customers in the marketplace.

³ PLMP had a goal of 750 customers receiving assistance and ECIPP's goal was to have 3,300-3,500 customer projects. ECIPP also had a leveraged funds goal of \$400-\$450 million.

Table 3-9. Existing Facilities Program – Program Outputs

Output	Program Goals (July 1, 2006 through December 31, 2011)	Achieved (July 1, 2006 through September 30, 2011)	% of Goal Achieved
Customer Projects	4,500 – 4,800	5,305	>100%
Leveraged Funds (\$ million)	\$400 - \$450 million	\$515 million	>100%

3.4.3 Follow-Up on Evaluation Recommendations

There are no recent Existing Facilities evaluation recommendations to report. Any new program evaluation recommendations will be included in future quarterly and annual reports, including information on their status and NYSERDA's response to the recommendation.

3.5 New York Energy SmartSM Business Partners

3.5.1 Program Description

The New York Energy SmartSM Business Partners Program is a consolidation of the Commercial Lighting Program (CLP), Premium Efficiency Motors (PEM) Program, the Commercial HVAC Program, and the Innovative Opportunities Program. This new program focuses on market development. New York Energy SmartSM business partners are allies that agree to work with NYSERDA to promote energy-efficient products and services. In exchange, business partners gain access to special training, tools, guidelines, and performance incentives. NYSERDA works with its business partners to help them differentiate their businesses in a highly competitive marketplace, while assuring appropriate quality control mechanisms. The strategy of partnering with businesses helps to strengthen the market infrastructure leading to increased energy-efficient product and service availability and demand. Thus, business partner efforts will also drive greater activity in NYSERDA's customer-targeted programs.

3.5.2 Program Accomplishments

Table 3-10 shows the Business Partners Program goal to sign up 1,800 partners between July 1, 2006 and June 30, 2011. The number of partners signed up since July 1, 2006 is not necessarily indicative of the program's overall network. Although more than 800 allies are currently participating in the commercial lighting program element, only 281 of them have signed up since July 1, 2006.

Table 3-10. New York Energy \$martSM Business Partners Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through June 30, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Business Partners (signed up)	1,800	432	24%

3.5.3 Follow-Up on Evaluation Recommendations

There are currently no outstanding business Partners evaluation recommendations. Any new program evaluation recommendations will be included in future quarterly and annual reports.

3.6 New York Energy \$martSM Loan Fund and Financing Program

3.6.1 Program Description

The now closed New York Energy \$martSM Loan Fund and Financing Program expanded the availability of low-interest capital to help implement energy-efficiency projects and process improvements. Lenders enrolled in the program by signing participation agreements to reduce the interest rates on energy-related loans in exchange for a lump sum subsidy paid by NYSERDA. The Program’s ongoing training of the financial sector included tools to allow lenders to calculate the cash flow advantages their customers would gain from making energy-efficiency improvements. The Green Jobs-Green New York Program now offered by NYSERDA will provide continued financing mechanisms for customers wishing to make energy related improvements to their buildings or facilities.

3.6.2 Program Accomplishments

Table 3-11 highlights the Loan Fund’s five-and-a-half-year goals and accomplishments as of September 30, 2011. The Program surpassed its goals to sign up 75 lenders and leverage \$60 million through closed loans in the commercial and industrial sector. Although the number of commercial/industrial loans was in line with expectations, projects were much larger than anticipated. The Loan Fund per-project cap remained unchanged, but the loan amounts were larger than projected.

Table 3-11. New York Energy SmartSM Loan Fund and Financing Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Customers receiving assistance (closed commercial/industrial loans)	550	292	53%
Participating lenders (signed participation agreements)	75	151	>100%
Leveraged loan amount (for closed commercial/industrial loans)	\$60 million	\$106 million	>100%

3.7 Vertical Outreach

3.7.1 Program Description

The NYSERDA Vertical Outreach effort, previously referred to as Energy Smart Focus, provides services to facilitate and encourage sector-specific energy-efficiency improvements and practices.

FlexTech Vertical Outreach is an offering aimed to encourage and facilitate greater energy efficiency awareness and penetration to targeted verticals across New York State. Strategies may include (1) key account management (2) outreach and one-on-one interactions, (3) targeted program materials and messages, (4) partnerships with trade associations, (5) integration with regional and national efforts, (6) development of tools and resources, (7) training, and (8) limited technical assistance. FlexTech Outreach leverages the energy and non-energy priorities and benefits of each vertical to deliver vertical-specific guidance and resources. Below is a description of current Outreach verticals.

Commercial Real Estate (CRE): NYSERDA CRE Outreach assists commercial building owners, managers and consultants with vertical-specific guidance about improving energy efficiency and property value and facilitates NYSERDA participation by providing information about and participation support for funding opportunities.

Hospitality: NYSERDA Hospitality Outreach addresses hotel and motel and restaurant facilities by providing guidance on energy efficiency and NYSERDA Programs. NYSERDA works closely with the NYS Hospitality and Tourism Association and the NY Restaurant Associations to promote the programs and services offered by NYSERDA.

Institutions: NYSERDA Institutions Outreach works with Schools (K-12) and State Facilities. Activities include educational outreach, training, limited technical assistance, development of tools and resources, support of several executive orders, and direct assistance for the NY-New York Collaborative for High Performance Schools Program (NY-CHPS).

Water and Wastewater: NYSERDA Municipal Water and Wastewater Outreach encourages municipal water and wastewater facilities to adopt technology that is more energy efficient and economical, while preserving environmental standards. NYSERDA partners with institutions such as the New York Environmental Facilities Corporation, the NYS Department of Environmental Conservation, and the NYS Department of Health. Activities include training to provide new operators with exposure to the benefits and opportunities of energy efficiency in their plants, with an emphasis on identification of easily implemented energy efficiency improvements.

Industry: NYSERDA Industry Outreach targets facilities used in manufacturing and information technology. It assists customers with identifying and implementing cost-effective projects that improve energy efficiency and productivity at manufacturing and data center facilities. Projects that reduce energy usage per unit of production or computing are encouraged.

Healthcare: NYSERDA Healthcare Outreach addresses hospitals and other healthcare facilities. It assists the healthcare industry with reducing energy costs and improving the environment while enhancing the treatment of patients by communicating energy and non-energy benefits that align with the objectives and goals of New York State healthcare institutions.

Local Government: NYSERDA Local Government Outreach addresses villages, town, city, and county level buildings and assists participants in the planning, financing and implementation of strategies to reduce their environmental footprint and lower their energy costs.

Table 3-12. New York Energy \$martSM Vertical Outreach Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Participants Receiving Assistance	24,000	5,589	27%
Focus Sector Partnerships ¹	N/A	1,234	N/A

¹This metric was not part of the original SBC3 Operating Plan goals.

Table 3-13 shows the number of new projects brought into other NYSERDA programs by the Vertical Outreach Program during the third quarter of 2011 and cumulatively to date.

Table 3-13. Projects Brought into Other NYSERDA Programs by Focus¹

Focus Sector	Number of 3rd Quarter Projects	Total Projects to Date (cumulative)
Colleges and Universities	1	93
Commercial Real Estate	10	212
Healthcare	14	132
Hospitality	0	206
Industrial	0	206
Institutions	0	177
Water and Wastewater	14	76
Total	39	1,102

¹Programs include Existing Facilities, FlexTech, Solar PV and New Construction.

3.7.2 Sector Highlights

As a sector-based energy information and services program, metrics of success can be difficult to quantify for the Vertical Outreach Program. Still, achievements are presented within this section in the context of sector highlights. While not quantifiable, these activities and achievements are indicative of success in penetrating the market and influencing the energy efficiency of individual sectors.

Commercial Real Estate (CRE)

During the third quarter of 2011, CRE conducted outreach meetings with 14 existing and potential new clients discussing energy conservation projects, NYSERDA programs, and the benefits of participating in CRE. Ten directly-referred projects in the third quarter will affect over 12 million square feet.

Healthcare

In the third quarter of 2011, Healthcare contractors presented program information at a seminar titled Green Healthcare Forum hosted by NYSERDA Outreach Coordinators and Chambers Design, an architectural firm.

Water and Wastewater

The Vertical Water and Wastewater Outreach program has been focusing on both utility staff and elected officials to expand awareness of the benefits of energy efficiency and NYSERDA programs at Water and Wastewater Treatment Plants. The following items represent a sampling of activities completed in the third quarter of 2011:

- Forty-seven attendees trained at conferences
- Four facilities received direct assistance - site visits
 - These site visits represent:
 - 29 million gallons per day of wastewater design flow served under Outreach to Large Facilities - Energy Walkthroughs
 - Over 907,000 people serviced by water systems impacted under Outreach to Large Facilities

3.8 New Construction Program

3.8.1 Program Description

The New Construction Program (NCP) was established to encourage energy-efficient design and building practices among architects and engineers and to urge them to inform building owners about the long-term advantages of building to higher energy-efficiency standards. The program aims to create long-term changes in design practices by integrating energy efficiency and green building concepts into new building designs. The program offers a performance-based approach in which incentives are determined by total electricity savings and are tiered to reward progressively better designs. Through design team

incentives and recognition, the program promotes green building and Leadership in Energy and Environmental Design (LEED) and New York – Collaborative for High Performance Schools (NY-CHPS) certification projects. In early 2009, Energy Efficiency Portfolio Standard (EEPS) funds were added to expand NCP as one of NYSERDA’s Fast Track programs.

3.8.2 Program Accomplishments

The NCP continues to monitor three key non-energy metrics to assess their growth as a proxy for program expansion. Table 3-14 shows the five-and-a-half-year goals for these metrics and their current status. Overall, these measures continue to show progress over time, corresponding with program growth.

Table 3-14. New Construction Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011) ¹	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Customers receiving assistance (completed projects)	1,272	648	51%
Construction market affected (square feet)	127 million	69.3 million	55%
Participating Architecture and Engineering (A&E) firms (completed projects)	1,357	1,037	76%

¹Goals through December 2011 from the SBC III Operating Plan for New York Energy SmartSM Programs: July 2006-December 31, 2011. Revised February 28, 2011

3.8.3 Follow-up on Evaluation Recommendations

Table 3-15 presents a summary of NCP recommendations resulting from the process evaluation completed in fall 2010. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 3-15. New Construction Program Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status	Program Implementer Response to Recommendation and Adoption Decision Rationale
Research Into Action, New Construction Process Evaluation Report, November 2010	The NCP should focus on finding solutions in two problem areas – enrolling projects at the optimal time in the design and finding ways to ensure that scoping meetings, TA tasks, and Notices to Proceed run as efficiently as possible.	Adopted	<p>NCP staff have increased their presence at project scoping meetings to have better knowledge of OPC and TA on-site performance. Recent trainings have included feedback from these meetings in a continuous improvement process for TA and OPC interactions with customers. NCP is working with OPCs to streamline the scoping agenda, placing emphasis on the customer’s project earlier in the meeting. The purpose is to strengthen the customer’s understanding that NYSERDA places the customer’s project ahead of process, and to encourage customers to pursue deeper energy savings. NCP is currently formulating several options for issuing Notices to Proceed earlier in the process, and will review the options with NYSERDA contracts and legal staff. NCP received approval to provide financial support for Technical Assistants who also serve as a customer’s Engineer of Record, which will encourage these TAs to bring more projects into the program at the optimal time.</p> <p>The ongoing OPC marketing push continues to identify projects earlier in design. For 2011 Q1 and Q2 this has resulted in leads 484% ahead, and applications 150% ahead of the same period in 2010.</p>

3.9 FlexTech Technical Assistance Program

3.9.1 Program Description

The FlexTech Technical Assistance (TA) Program is a consolidation of services previously offered under the FlexTech, TA, and the Energy Audit Programs. The Program provides commercial and industrial customers with objective and customized information to facilitate wiser energy efficiency, energy procurement, and financing decisions. Cost-shared technical assistance is provided for detailed energy efficiency studies from energy engineers and experts. Small customers are eligible for quick walk-through energy audits, with the cost share reimbursed upon implementation of recommendations. Participants may use NYSERDA-contracted or customer-selected consultants. In early 2009, EEPS funds were added to expand Flex Tech as one of NYSERDA’s Fast Track programs.

3.9.2 Program Accomplishments

FlexTech TA continues to monitor the number of customers receiving assistance to assess its progress. Table 3-16 shows this metric and its current status.

Table 3-16. FlexTech TA Program – Goal and Achievement

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Customers receiving assistance (approved proposals)	3,025	3,831	> 100%

3.9.3 Follow-up on Evaluation Recommendations

Table 3-17 presents a summary of the FlexTech Program recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 3-17. FlexTech Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
<p>Navigant Consulting, FlexTech TA Program MCA Evaluation Report, June 2011</p>	<p>NYSERDA staff should continue efforts to refine existing general awareness and target marketing campaigns to drive additional program participation and generate increased market awareness of program benefits. Marketing efforts should target the key sources for investment ideas within customer organizations – primarily senior management and facilities management staff – as well as the final project decision-makers – primarily the organizations’ boards of directors and senior management.</p>	<p>Adopted</p>	<p>An integrated marketing communications program is underway, targeting C-suite and management level individuals within key vertical markets.</p>
<p>Navigant Consulting, FlexTech TA Program MCA Evaluation Report, June 2011</p>	<p>NYSERDA staff should refine existing marketing collateral to clearly emphasize the availability of program incentives and other financial benefits of program participation (e.g., likely payback terms for energy efficiency investments). In addition, NYSERDA should continue efforts to generate broader market awareness of its program offerings.</p>	<p>Adopted</p>	<p>NYSERDA has developed a campaign centered around the measurable results of energy efficiency measures, with emphasis on case studies and messaging focused on greater return on investment and simple payback.</p>
<p>Navigant Consulting, FlexTech TA Program MCA Evaluation Report, June 2011</p>	<p>FlexTech Program staff should encourage the trend of increasing use of customer-selected technical service providers.</p>	<p>Adopted</p>	<p>NYSERDA will continue to encourage customers to use their own or NYSERDA-contracted service providers based on customer needs.</p>
<p>Navigant Consulting, FlexTech TA Program MCA Evaluation Report, June 2011</p>	<p>The market is gaining awareness of the different energy efficiency program administrators and related program offerings available in New York; however, confusion exists regarding the relationships between the various administrators and programs and NYSERDA should consider this when developing future</p>	<p>Adopted</p>	<p>Joint programs, between NYSERDA and ConEdison and NYSERDA and National Grid, were executed in 2010-2011. Partnerships are portfolio-based and not specific to FlexTech or any program. Efforts to address future utility partnerships are ongoing and greatly dependent upon future EEPs Orders for the years 2012 and beyond. No specific action regarding FlexTech is currently planned or expected. Future utility partnerships are anticipated to be</p>

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
	marketing strategies and program participation forecasts. NYSERDA staff should also continue efforts to develop joint programmatic initiatives with the utilities where the FlexTech Program is used to identify efficiency opportunities at customer organizations and present NYSERDA and utility implementation program options for customers.		portfolio- not program-based.
Navigant Consulting, FlexTech TA Program MCA Evaluation Report, June 2011	One of the four bills recently passed as part of New York City's Greener, Greater Buildings Plan requires private buildings over 50,000 square feet to conduct energy audits once every ten years and to undertake retro-commissioning measures, while all city-owned buildings over 50,000 square feet are required to complete energy retrofits with a simple payback of seven years or less as identified in an energy audit. NYSERDA staff should consider conducting market research to identify those buildings that are eligible to participate in NYSERDA's programs and required to complete an energy audit in any given year, and then target FlexTech services to representatives of those buildings.	Adopted	The PSC Ordered a separate Benchmarking and Operations Efficiency Program which addressed this market. That program targeted these customers and received good customer participation through outreach efforts conducted by participating service providers. The DPS EEPS White Paper recommended subsuming these services into FlexTech, which NYSERDA is now enacting. NYSERDA has met and will continue to meet with representatives from the New York City Office of Long Term Planning to coordinate efforts on the requirements that the City has legislated.

3.10 Industrial and Process Efficiency

The Industrial and Process Efficiency (IPE) Program, which began in early 2009, is an EEPS-funded Fast Track program designed to increase industrial process efficiency activity. The program is implemented as an additional component to the EFP and provides performance-based incentives for cost-effective process improvements that reduce energy use per unit of production. This industrial and process efficiency

component is the implementation path for process improvement projects developed through the FlexTech TA Program, or brought to this program independently. Potential for process improvements will be predominantly in industrial facilities and data centers.

3.10.1 Follow-Up on Evaluation Recommendations

The conclusions and recommendations of the second phase of the IPE Process evaluation were presented last quarter, since there are three phases in the IPE Process evaluation, and recommendations provided at the various phases are considered intermediate until the full evaluation is completed. Thus, follow up and NYSERDA response to the recommendations will not be presented until the conclusion of all phases of this process evaluation.

3.11 FlexTech Benchmarking Pilot

The FlexTech Benchmarking Pilot provides benchmarking and onsite operational assessments. Selected FlexTech Consultants will benchmark participating facilities and develop site-specific reports recommending operational or system modifications that may result in energy savings. Commercial, industrial and institutional facilities 50,000 square feet or greater are eligible. Multifamily facilities are also eligible.

3.12 Agriculture Energy Efficiency Program

The Agriculture Energy Efficiency Program (AEEP) provides comprehensive, flexible energy efficiency services to this underserved market segment. The program supports electric and natural gas efficiency improvements and was designed to be available to all farms and on-farm producers, including but not limited to: orchards, dairies, greenhouses, vegetables, vineyards, grain dryers, maple producers, and poultry/egg. Since 98% of New York State farms are located upstate, the majority of the activity is expected to occur in that region. The program was launched in January 2011 and closed on March 25, 2011 due to successful application response. Additional information can be found in NYSERDA's EEPS Program Narrative Report for Quarter 3, 2011.

4 *Residential and Low-Income Programs*

4.1 Residential and Low-Income Evaluation Activities

During the third quarter of 2011, the following evaluation projects were completed on the Residential and Low-Income programs:

- Impact evaluation on the CFL Expansion Program
- Process evaluation of the **New York Energy SmartSM** Products component of the Market and Community Support Program

Evaluation studies and activities expected to be completed in the coming quarters are:

- Impact evaluations for the Home Performance, ENERGY STAR Homes, Multifamily and EmPower programs
- Market characterization and assessment and process evaluation of the Workforce Development Program
- An update to the market characterization and assessment of the **New York Energy SmartSM** Products component of the Market and Community Support Program to add 2007 lighting impacts to the program savings estimate

NYSERDA will summarize evaluation results from these projects in future evaluation and status reports.

4.2 Summary of Residential Program Budget and Spending Status

Table 4-1 presents detailed budget and funding information for the **New York Energy SmartSM** Residential and Low-Income programs. Table 4-2 shows the same information for EEPS Residential and Low-Income programs.

Table 4-1. Residential & Low-Income Programs - New York Energy SmartSM Financial Status through September 30, 2011 (\$ million)

Program	Budget ¹			Funds Spent			Encumbered Funds ⁴ % of Budget Encumbered	Committed Funds ⁵ % of Budget Committed
	SBC I & SBC II ²	SBC III ³	Total Budget	SBC I & SBC II ²	SBC III ³	Total Funds Spent		
Residential Programs								
Single Family Home Performance	47.4	62.0	109.4	47.4	57.4	104.8 95.8%	105.7 96.6%	105.7 96.6%
Multifamily Building Performance	18.3	29.3	47.6	18.3	24.2	42.6 89.5%	44.6 93.7%	45.6 95.8%
Market and Community Support Residential	96.5	55.6	152.2	96.5	45.6	142.2 93.4%	148.3 97.5%	149.7 98.4%
Communities and Education	3.2	9.9	13.0	3.2	8.5	11.7 89.9%	12.7 96.9%	12.9 99.2%
Subtotal Residential	\$165.4	\$156.8	\$322.2	\$165.4	\$135.8	\$301.3 93.5%	\$311.3 96.6%	\$313.9 97.4%
Low-Income Programs								
Single Family Home Performance	22.3	53.5	75.8	22.3	41.0	63.2 83.4%	66.7 88.0%	68.3 90.2%
Multifamily Building Performance	45.4	115.7	161.1	45.4	96.7	142.0 88.1%	156.5 97.1%	159.6 99.2%
EmPower New York	14.3	53.1	67.4	14.3	49.7	63.9 94.8%	64.2 95.3%	64.4 95.6%
Buying Strategies & Energy Awareness	4.7	11.9	16.6	4.7	9.5	14.1 84.9%	15.9 95.8%	16.2 97.8%
Subtotal Low-Income	\$86.6	\$234.2	\$320.8	\$86.6	\$196.8	\$283.6 88.3%	\$303.4 94.5%	\$308.6 96.2%
TOTAL Residential and Low-Income	\$252.0	\$391.0	\$643.1	\$252.0	\$332.7	\$584.7 90.9%	\$614.6 97.4%	\$623.5 96.9%

¹Reflects carryover in funds and reallocation as approved by the PSC in 2007. NYSERDA, *System Benefits Charge Operating Plan for New York Energy SmartSM Programs (July 1, 2006 – December 31, 2011)*, As Amended February 28, 2011, Revised April 6, 2011.

²SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

³SBC III: July 1, 2006 through June 30, 2011.

⁴Encumbered funds associated with signed contracts and purchase orders.

⁵Committed funds associated with encumbered funds and pending contracts.

Totals may not sum exactly due to rounding. Source: NYSERDA

Table 4-2. Financial Status of the EEPS Residential and Low-Income Programs through September 30, 2011 (\$ million)

	Total Budget ¹	Total Funds Spent	% of Budget Spent	Encumbered Funds % of Budget Encumbered	Committed Funds % of Budget Committed
Residential Programs					
CFL Expansion	17.2	12.6	73.1%	13.3 77.6%	13.3 77.6%
Home Performance with ENERGY STAR	21.7	7.6	34.9%	9.3 42.8%	9.3 42.8%
New York ENERGY STAR Homes	Electric	1.2	4.7%	0.1 4.7%	0.1 8.2%
	Gas	16.0	31.4%	8.1 50.8%	8.1 50.8%
MPP Market Rate	Electric	2.7	10.6%	0.8 28.5%	1.6 58.9%
	Gas	16.0	9.4%	2.3 14.1%	3.2 20.0%
Geothermal	2.1	0.3	13.3%	0.3 16.0%	0.3 16.0%
Electric Reduction in Master Metered Buildings	11.6	1.1	9.5%	1.5 13.4%	1.5 13.0%
Subtotal Residential	\$88.4	\$28.4	32.5%	\$35.7 40.9%	\$37.5 42.1%
Low-Income Programs					
Assisted Home Performance with ENERGY STAR	8.0	4.8	59.4%	5.4 67.5%	5.4 67.5%
EmPower	Electric	28.0	55.9%	16.3 57.7%	17.1 60.6%
	Gas	8.6	28.6%	2.7 31.8%	2.7 31.8%
MPP Low Income	Electric	6.5	11.4%	1.0 15.3%	1.6 24.2%
	Gas	13.7	14.8%	3.2 23.2%	9.9 72.0%
Assisted New York ENERGY STAR Homes	Electric	0.6	0.3%	<0.1 0.3%	<0.0 0.3%
	Gas	1.1	1.1%	<0.1	0.01

	Total Budget ¹	Total Funds Spent	% of Budget Spent	Encumbered Funds % of Budget Encumbered	Committed Funds % of Budget Committed
Residential Programs					
				1.1%	1.1%
Subtotal Low-Income	\$65.0	\$25.7	39.6%	\$35.7 40.9%	\$36.7 56.4%
Total Residential and Low-Income	\$152.3	\$54.1	35.5%	\$55.5 40.0%	\$73.4 48.2%

¹Program budgets exclude administration and evaluation dollars.
Totals may not sum exactly due to rounding.
Source: NYSERDA

4.3 Residential and Low-Income Evaluation Findings

Significant progress is being made by the Residential and Low-Income portfolio. This section summarizes key evaluation findings from the latest set of evaluation activities, and from the cumulative body of work conducted by NYSERDA and its evaluation contractors over the past several years.

4.3.1 Energy, Peak Demand and Fuel Savings

Tables 4-3 through 4-8 summarize the estimated electricity savings, peak demand reductions, and fuel savings for each of the Residential and Low-Income programs, both **New York Energy SmartSM** and EEPS. Savings for the Low-Income program elements are broken out in the footnotes to each table.

Table 4-3 and Table 4-4 show progress for the **New York Energy SmartSM** and EEPS-funded programs, respectively, toward their established goals for electricity savings. Overall, two out of six **New York Energy SmartSM** Residential and Low-Income programs (New York ENERGY STAR Homes, and Market and Community Support) have exceeded their five-and-a-half-year **New York Energy SmartSM** electricity goals. EEPS electric-funded programs are also making good progress overall toward their goals.

Table 4-5 and Table 4-6 show progress for the **New York Energy SmartSM** and EEPS funded programs, respectively, toward attaining peak demand reductions. Peak demand savings goals were not set for the **New York Energy SmartSM** nor EEPS electric-funded programs.

Table 4-7 and Table 4-8 show progress for the **New York Energy SmartSM** and EEPS-funded programs, respectively, toward their established goals for fuel savings. Overall, two out of six **New York Energy SmartSM** programs (Home Performance with ENERGY STAR and New York ENERGY STAR Homes) have exceeded their five-and-a-half-year fuel savings goals. EEPS-funded programs continue to make good progress toward those goals. Fuel savings reported for the **New York Energy SmartSM** programs include savings for fuels such as oil, propane and natural gas whereas fuel savings reported for the natural gas EEPS-funded programs include MMBtu savings for natural gas only.

Table 4-3. New York Energy SmartSM Residential and Low-Income Program Cumulative Annual Electricity Savings through September 30, 2011 and Progress toward Goals

Program	Energy Savings (GWh)				
	Savings Achieved through		July 1, 2006 through September 30, 2011	5.5 Year Goal (by December 31, 2011) ¹	Progress Toward Goal (% achieved)
	June 30, 2006	September 30, 2011			
Single Family Home Performance Program: Existing Homes ²	13.5	31.4	17.9	31.1	58%
Single Family Home Performance Program: New Homes	7.3	39.3a	32.0	13.1	245%
Multifamily Performance Program: Existing Buildings ³	29.8	125.2	95.4	361.3	26%
Multifamily Performance Program: New Buildings	0	2.6	2.6	24	11%
Market and Community Support Program ⁴	539.1b	776.2	237.2	234	101%
EmPower New York	20.1	54.1	34.0	34.9	97%
Statewide Residential & Low-Income Total	609.8	1,028.9	419.1	698.4	60.0%

¹Goals for the New York Energy SmartSM Program are specified in NYSERDA's February 28, 2011 revised Operating Plan (resubmitted with revisions April 6, 2011).

²Savings for the low-income Assisted Home Performance Program (16.4 GWh) are included in this row.

³Savings for the low-income Assisted Multifamily Program (55.6 GWh) are included in this row, the remainder are savings from the closed Residential Comprehensive Energy and Direct Install programs and the new Multifamily Performance Program.

⁴Savings for the New York Energy SmartSM Products Program are estimated based on market data, survey research, and deemed savings values. An update to this analysis has been incorporated into this report and the Q4 2011 report will add savings for 2007 lighting purchases that have not yet been accounted for.

a Electricity savings changed only marginally in the 3rd quarter of 2011 as electric projects were supported by EEPS funding.

b This baseline savings figure does not match the 2nd quarter 2006 published value. The impacts for the New York Energy SmartSM Products component of this program are derived annually from market data, and the 2nd quarter savings value was estimated retrospectively to provide a more accurate baseline for measuring progress.

N/A – Not Applicable

Totals may not sum exactly due to rounding.

Table 4-4. EEPS Residential and Low-Income Program Cumulative Annual Electricity Savings through September 30, 2011 and Progress toward Goals

Program	Energy Savings (GWh)		
	Savings Achieved through September 30, 2011a	Goal ¹	Progress Toward Goal (% achieved)
Multifamily Performance Program: Market Rate			
Electric Funding	0.4	17.8	2%
Ancillary impacts from Gas funding	0.3	N/A	N/A
Multifamily Performance Program: Low-Income			
Electric Funding	1.8	28.8	6%
Ancillary benefits from Gas funding	0.4	N/A	N/A
CFL Expansion Program ²	755.9	1,083.4	70%
EmPower New York			
Electric Funding	12.6	34.9	36%
Ancillary benefits from Gas funding	<.1	N/A	N/A
Statewide Residential & Low-Income Total	771.4	1,164.9	66%

a The EEPS programs shown in this table began reporting electricity savings in the following months: Multifamily Performance Program in September 2010; Low Income Multifamily Performance Program in May 2010; CFL Expansion in July 2009; and EmPower in June 2009.

¹The time frames for achieving savings goals vary by program. For the EmPower Program, the savings goal is through December 31, 2011; for the Multifamily Performance Program and the CFL Expansion Program, the savings goals are through December 31, 2012.

²Savings for the CFL Expansion Program incorporate a 1.6 net-to-gross ratio based on a baseline evaluation study. As NYSERDA's current CFL Expansion Program evaluation is completed in the coming months, this net-to-gross estimate will be updated.

N/A – Not Applicable

Totals may not sum exactly due to rounding.

Table 4-5. New York Energy SmartSM Residential and Low-Income Program Cumulative Peak Demand Reductions through September 30, 2011

Program	Demand Savings (MW)	
	Savings Achieved through	
	June 30, 2006	September 30, 2011
Single Family Home Performance Program: Existing Homes ¹	2.0	8.0
Single Family Home Performance Program: New Homes	0.9	17.4a
Multifamily Performance Program: Existing Buildings ²	3.9	12.7
Multifamily Performance Program: New Buildings	0.0	0.9
Market and Community Support Program	104.3	157.6b
EmPower New York	2.5	8.7
Statewide Residential & Low-Income Total	113.6	205.3

Note: No peak demand savings goals were set for residential and low-income New York Energy SmartSM programs.

a Demand reduction changed only marginally in the 3rd quarter of 2011 as electric projects were supported by the EEPS funding.

b Savings for the New York Energy SmartSM Products Program are estimated based on market data, survey research, and deemed savings values. An update to this analysis has been incorporated into this report and the Q4 2011 report will add savings for 2007 lighting purchases that have not yet been accounted for.

¹Includes 3.0 MW from the low-income Assisted Home Performance Program.

²Savings for the low-income Assisted Multifamily Program are included in this row. They represent 6.6 MW of these savings.

Totals may not sum exactly due to rounding.

Table 4-6. EEPS Residential and Low-Income Program Cumulative Peak Demand Reductions through September 30, 2011

Program	Demand Savings (MW)
	Savings Achieved through September 30, 2011
Multifamily Performance Program: Market Rate	
Electric funding	0.05
Ancillary impacts from Gas funding	0.01
Multifamily Performance Program: Low-Income	
Electric funding	0.1
Ancillary benefits from Gas funding	0.01
CFL Expansion ¹	66.9
EmPower New York	1.3
Statewide Residential & Low-Income Total	68.3

Note: No peak demand savings goals were set for residential and low-income EEPS programs.

¹Savings for the CFL Expansion Program incorporate a 1.6 net-to-gross ratio based on a baseline evaluation study. As NYSERDA's current CFL Expansion Program evaluation is completed in the coming months, this net-to-gross estimate will be updated.

Totals may not sum exactly due to rounding.

Table 4-7. New York Energy SmartSM Residential and Low-Income Program Cumulative Annual Fuel Savings through September 30, 2011 and Progress toward Goals¹

Program	Fuel Savings (MMBtu)				
	Savings Achieved through		July 1, 2006 through September 30, 2011	5.5 Year Goal (by December 31, 2011) ²	Progress Toward Goal (% achieved)
	June 30, 2006	September 30, 2011			
Single Family Home Performance Program: Existing Homes ³	454,958a	1,212,363	757,406	743,981	102%
Single Family Home Performance Program: New Home	376,103b	990,721	614,618	409,952	119%
Multifamily Performance Program: Existing Buildings ⁴	43,932	1,006,740	962,808	6,791,300	14%
Multifamily Performance Program: New Buildings	0.0	22,891	22,891	649,000	4%
Market and Community Support Program ⁴	241,998c	444,103d	202,105	300,000	67%
EmPower New York ⁵	38,151e	194,564	156,413	210,441	74%
Statewide Residential & Low-Income Total	1,155,142	3,871,382	2,716,241	9,104,674	30%

¹New York Energy SmartSM MMBtu savings reported in this table include savings for all fuels including oil, propane and natural gas.

²Goals for the New York Energy SmartSM Program are specified in NYSERDA's February 28, 2011 revised operating plan (resubmitted with revisions April 6, 2011).

³Energy savings for the low-income Assisted Home Performance Program are included in this row. They represent 548,521 MMBtu of these savings.

⁴Energy savings for the low-income Assisted Multifamily Program are included in this row. They represent 378,781 MMBtu of these savings.

a This value does not match an earlier published value due to changes made to the program tracking database in response to evaluation completed by the M&V contractor.

b This value does not match earlier published values as the realization rate for MMBtu was reassessed during this period to a lower level and applied retroactively in order to accurately reflect progress.

cThe value shown for savings through June 30, 2006 does not match earlier published values, as an error in the tracking data was found and repaired.

d Savings for the New York Energy SmartSM Products Program are estimated based on market data, survey research, and deemed savings values. An update to this analysis has been incorporated into this report and the Q4 2011 report will add savings for 2007 lighting purchases that have not yet been accounted for.

eThe MMBtu savings for EmPower was reduced to exclude some non-SBC sources through June 30, 2006, so the value shown here will not match earlier published values.

Table 4-8. EEPS Residential and Low-Income Program Cumulative Annual Fuel Savings through September 30, 2011 and Progress toward Goals¹

Program	Fuel Savings (MMBtu)		
	Savings Achieved through September 30, 2011a	Goal ²	Progress Toward Goal (% achieved)
Single Family Home Performance Program: Existing Homes	99,501	401,815	25%
Single Family Assisted Home Performance Program: Existing Homes	46,191	58,053	80%
Single Family Home Performance Program: New Homes	141,530	428,767	33%
Multifamily Performance Program: Market Rate			
Gas funding	21,091	377,285	6%
Ancillary effects from Electric funding	7,321	N/A	N/A
Multifamily Performance Program: Low-Income			
Gas funding	12,144	204,522	6%
Ancillary effects from Electric funding	-3,896	N/A	N/A
EmPower New York			
Gas funding	16,996	84,584	20%
Ancillary effects from Electric funding	-2,541	N/A	N/A
Statewide Residential & Low-Income Total	338,337	1,555,026	22%

¹The MMBtu savings for EEPS-funded programs presented consist of natural gas only, and these figures do not include savings for other fuels such as oil and propane.

²The time frames for achieving savings goals vary by program. For the Single Family Home Performance Program and the EmPower Program, the savings goals are through December 31, 2011; for the Multifamily Performance Program, the savings goals are through December 31, 2012.

a The EEPS programs shown in this table began reporting natural gas savings in the following months: Single Family Home Performance Existing and New Homes in May 2010; Multifamily Performance Program in September 2010; Low Income Multifamily Performance Program in May 2010; and EmPower in April 2010.

N/A – Not Applicable

4.3.2 Summary of Other Key Program Impacts and Results

Across the programs, 28 additional goals were set for other key metrics besides energy savings, such as the number of customers receiving assistance, funds leveraged, allies participating, and outreach activities completed. Overall, the programs are making progress with respect to these other goals. The majority of the goals have already been surpassed (*e.g.*, the number of new independent retailers signed up, ENERGY STAR market share increases, number of market rate households served through Home Performance with ENERGY STAR, number of teachers trained) or have reached expected levels at this point in the program (*e.g.*, number of market rate New York ENERGY STAR Homes built, number of households served

through EmPower). Still, progress on some goals is less than expected (*e.g.*, number of low-income ENERGY STAR homes built, number of existing market rate multifamily units receiving energy efficiency services) at this point. The results of each program's progress toward its stated goals are shown in table format in the subsequent sections.

4.4 Home Performance Program

4.4.1 Program Description

This program, which addresses one- to four-unit homes, includes the Home Performance with ENERGY STAR Initiative (HPwES) for existing homes, and the New York ENERGY STAR Homes Initiative (NYESH) for newly constructed homes.¹ On the supply side, these initiatives support market development through recruitment, training and incentives for contractors and builders, in order to encourage them to offer energy-efficient options. On the demand side, these initiatives market the benefits of energy efficiency, in addition to health and safety, to residential consumers and reduce the barriers of participation to increase demand for efficient products and services. Both HPwES and NYESH have low-income components providing additional incentives for households earning between 60 and 80% of New York State or area median income.

4.4.2 Program Accomplishments

Table 4-9 shows the **New York Energy SmartSM** Program's five-and-a-half-year goals and performance since July 1, 2006. The program is making good or excellent progress on most goals, but is falling somewhat behind expectations in terms of goals specific to the low-income residential new construction segment.

¹ The NYESH Program also addresses residential multifamily new construction three stories or less.

Table 4-9. New York Energy \$martSM Home Performance Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
New York ENERGY STAR Homes Initiative			
New ENERGY STAR Homes built (market rate only)	10,069	10,866a	>100%
New low-income ENERGY STAR Homes built	1,316	639	49%
Home Performance with ENERGY STAR Initiative			
Existing homes served (receiving treatment) (market rate only)	17,945	19,921	>100%
Existing low-income homes served (receiving treatment)	13,866	8,544b	62%

a During the first quarter there was a reclassification of projects from Market Rate to Assisted resulting in a reduction in achievements for the market rate program between year-end 2010 and first quarter 2011.

b During the second quarter there was a database error that reported a higher number of existing low income projects that were completed in second quarter 2011.

4.4.3 Follow-Up on Evaluation Recommendations

Home Performance with ENERGY STAR

Table 4-10 presents a summary of Home Performance with ENERGY STAR recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 4-10. Home Performance with ENERGY STAR Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
Nexant, HPwES M&V, June 2007	The program database should maintain the utility account information for all homes in the program. Information for both electric and fossil fuel accounts are unique identifiers for a home. Additionally, for multi-family units, all utility account information should be included so that homes with multiple meters can be easily identified.	Plan to Adopt	Staff acknowledges the need for meter information on the multifamily side and is looking into implementing this recommendation. Note the volume of 2-4 family homes in Home Performance is minimal.
Summit Blue Consulting, HPwES MCA, February 2009	Recognize that homeowners are installing energy efficiency measures outside of the program. Reasons for homeowners' measure installation actions taken outside of the program were not directly assessed within this study, but could provide valuable insights for future program design and effectiveness improvement purposes. As part of such additional assessment, how these installation actions may have varied if the customer had not received a CHA would also be important to capture.	Plan to Adopt	NYSERDA will attempt to investigate this issue in future program evaluations.

New York ENERGY STAR Homes

Table 4-11 presents a summary of recommendations resulting from New York ENERGY STAR Homes program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 4-11. New York ENERGY STAR Homes Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
Nexant, NYESH M&V, June 2007	Data from REM/Rate files should be included in CSG’s database for all homes, including detailed equipment and appliance information and square footage of each home. CSG indicated that this recommendation will be incorporated into a future version of the program database. In addition, NYSERDA should periodically conduct quality control checks to verify that the information in the database is correct.	Plan to Adopt	NYESH Program staff have been assessing ways to facilitate the export of data from the REM/Rate software in a meaningful way into the implementation database. Some success has been made in the LIPA ENERGY STAR Homes Program to accomplish this, and NYSERDA staff has been using its experience to accomplish the task.

4.5 Multifamily Performance Program

4.5.1 Program Description

The Multifamily Performance Program provides a single point of entry for multifamily building owners and developers interested in improving the energy efficiency of new and existing buildings. The ENERGY STAR Multifamily Building Initiative – the track for new buildings (and complete gut-rehabilitation projects) – concentrates on providing technical assistance to mid-stream market participants and incorporates renewable technologies, advanced metering technologies, real-time pricing strategies, and combined heat and power systems, especially for electrically-heated buildings with base domestic hot water loads. The Multifamily Building Performance Initiative – the track for existing buildings – develops market-based business opportunities for building auditors, financial packagers, designers, architects, and construction inspectors in order to enhance the energy services infrastructure. Both the new construction and existing buildings tracks provide incentives to the building owner and include a low-income component, providing increased incentives. The program results in reduced energy bills and health and safety benefits for occupants.

4.5.2 Program Accomplishments

As shown in Table 4-12, several long-term non-energy goals have been set for the **New York Energy SmartSM** Multifamily Performance Program. Achievements include ongoing activities completed during this time period for the Assisted Multifamily Program (AMP). Progress has been slow due to time initially devoted to program design, as well as lengthy timelines for individual projects.

Table 4-12. New York Energy SmartSM Multifamily Performance Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Number of existing market rate multifamily units receiving energy efficiency services (completed projects)	61,600	14,724	23%
Number of new market-rate multifamily units receiving energy efficiency services (completed projects)	7,500	1,585	17%
Tenant energy savings per year – existing and new market rate (at \$250/unit)	\$17,275,000	3,592,500	21%
Number of existing low-income multifamily units receiving energy efficiency services (completed projects)	248,600	68,228	27%
Number of new low-income multifamily units receiving energy efficiency services (completed projects)	12,700	5,340	42%
Low-income tenant energy savings per year – existing and new (at \$195/unit)	\$65,325,000	\$14,345,760	22%

4.6 Market and Community Support Program

4.6.1 Program Description

The Market and Community Support Program provides support services to the building performance and low-income programs by increasing the availability of energy-efficient products and by increasing consumer demand. There are two major components to the Market and Community Support Program: 1) the **New York Energy SmartSM** Products Initiative, which seeks to increase the availability and sales of residential energy-efficient appliances, lighting and home electronics products; and 2) Residential Program Marketing Support, which, in partnership with NYSERDA’s Marketing and Economic Development Group, implements marketing initiatives for all the residential programs, as well as

workforce development and training, Energy Smart Students, marketing campaigns in coordination with DPS campaigns, and mid-stream partners.

4.6.2 Program Accomplishments

Table 4-13 shows the Program’s five-and-a-half-year goals and performance since July 1, 2006. The program has made excellent progress, exceeding all four of its goals.

Table 4-13. New York Energy \$martSM Market and Community Support Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
New manufacturing partners signed up	21	59	>100%
New retail partners (independent) signed up	103	280	>100%
New retail partners (big box, mass merchandisers) signed up	6	25	>100%
ENERGY STAR market share increase on targeted products (on average, across products)	28%	51%	>100%

4.6.3 Process Evaluation

During the third quarter of 2011, Research Into Action (RIA) completed a process evaluation of the Upstream HVAC Partners Program (Upstream HVAC). The goal of this evaluation was to provide context for the Upstream HVAC Program and to present the findings from the process evaluation of the program’s first complete year in operation. Between April and June 2011, RIA interviewed two NYSERDA program staff, two Lockheed Martin implementation staff, 16 program participants, and four nonparticipants. The evaluation team also reviewed secondary literature to understand upstream HVAC programs offered by other organizations.

In the first year of the program, 33 discrete partnerships were formed, exceeding the initial goal of enrolling 20 partners in the first year. By 18 months, 39 discrete program partnerships were formed. The level to which program partners took advantage of the activities and resources NYSERDA offered ranged from simply enrolling in the program but not conducting an activity, to completing six different activities through the program. According to the program database maintained by Lockheed Martin, about two-

thirds of Upstream HVAC Program partners enrolled but did not participate in a program-sponsored activity.

Through the interviews and surveys, RIA found that respondents who had participated in at least one program activity were generally satisfied with the program. Respondents viewed several program aspects very favorably. First, program partners perceived sharing a common purpose with NYSERDA – to increase market share of energy-efficient equipment (i.e. high-end, more profitable models) sold, which appears to have been an asset of the program. Respondents also reported interest in and effective use of cooperative marketing funds. On the other hand, more than three quarters of participants did not seem to recognize the potential value of training offered through the program.

Contacts also suggested improvements to increase the program’s impacts. In particular, they highlighted the following: expanding the Eligible Products Table, helping them use program funds more effectively (particularly through provision of examples of other firms’ experiences with the program), increasing public awareness of the benefits of energy efficiency, and expanding the program’s support for the installation of “better” and “best” equipment that could drive demand for energy-efficient products.

Based on its research about the Upstream HVAC Program, the evaluation team has the following conclusions and recommended actions to address each of them.

Conclusion: Program goals are not clearly defined. Although program and implementation staff were consistent in describing the program as a market transformation effort with the overall goal “to build the market” for energy efficient HVAC equipment, specificity around desired market changes is not well documented or understood. For example, program materials do not describe the metrics that would be used to answer the question: When the HVAC market is transformed, how will you know?

Recommendation: Develop a program logic model that illustrates intended program flow from program activities to short and long-term objectives to overall market transformation goal(s). An effective program logic model should create a visual map leading from activity to short/long-term outcome to overall market transformation goal. One example might be:
Cooperative advertising → increased public awareness of energy efficiency → higher consumer

demand for energy efficient² products → increased manufacturer supply of energy efficient product options → increased market share of energy efficient HVAC products.

Conclusion: The Eligible Products Table is an evolving document. Some program partners were confused about how the approved products were selected, and how a new product can be added to the table. This appears to make it difficult for full partner engagement, as some do not understand how and why certain products become eligible.

Recommendation: Clearly define the selection criteria for eligible products. Explain the Eligible Products Table to existing and prospective program partners and the selection criteria for new products. These criteria ideally would flow from a well-developed program logic model.

Conclusion: NYSERDA should better align the market changes it seeks with the marketing strategies currently used by market actors. For example, many upstream market actors reported providing “good, better, and best” options to potential customers, with “best” equipment being both most profitable for the company and most energy-efficient for the end-user.

Recommendation: Consider this industry insight-driven sales mechanism when working to clarify the program’s specific market transformation goals. For example, should the desired market effect be to grow the market for “best” equipment, to minimize the market for “good” equipment, or to improve the efficiency of available “better” models (since sales of these mid-range models seem to represent a significant portion of the market)?

Conclusion: Participants did not seem to be aware of the full range of opportunities available through the Upstream HVAC Program to help them promote their most energy-efficient products, i.e., those products appearing on the Eligible Products list maintained by the program. About two-thirds of Upstream HVAC partners did not participate in any program-sponsored activity.

Recommendation: Investigate opportunities for improved partner outreach to raise awareness about the variety of activities, assistance, and training opportunities available through the program. Provide “real-world” examples of the types of promotions and activities

² Program materials, including its logic model, should clearly define the criteria for a product to be considered “energy efficient.”

other program partners have done. NYSERDA might consider developing a partner forum or newsletter for sharing program experiences among participants.

Conclusion: Barriers to energy efficiency exist at all stages of the HVAC supply chain. Although NYSERDA's midstream (Business Partners) HVAC program is quite new, NYSERDA has a valuable opportunity to carefully and deliberately coordinate the Upstream HVAC with other NYSERDA programs.

Recommendation: The Upstream HVAC Program and the Business Partners Program should consider designing their program offerings in concert. A more coordinated effort might improve information flow throughout the HVAC supply chain and improve overall industry awareness and knowledge of energy-efficient HVAC equipment.

4.6.4 Follow-Up on Evaluation Recommendations

Table 4-14 presents a summary of the **New York Energy SmartSM** Products Program recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis. Since the process evaluation described in Section 4.6.3 was just completed, recommendations from this study will be included in the follow up next quarter.

Table 4-14. New York Energy SmartSM Products Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
Navigant, NYES Products Market Characterization and Assessment (MCA), June 2011	Survey results indicated that nearly all purchases were conducted in-person at the retail store. Although 98% of retailers reportedly train salespeople about energy efficiency, the majority of consumers do not recollect active promotion of ENERGY STAR [®] products by salespeople. The MCA team recommends NYSERDA emphasize to retail partners the importance of salespeople recommending ENERGY STAR when discussing appliance options with consumers.	Adopted	This recommendation is already in place and program staff will continue to reinforce the importance of recommending ENERGY STAR among their retail partners.
Navigant, NYES Products MCA, June 2011	Only about 9% of fixtures sold in the NYSERDA territory are sold at NYESP Program partner stores, while national partners in the NYSERDA territory make up 73%. The MCA team recommends NYSERDA promote the benefits of the Program to a wider array and volume of lighting sellers in New York.	Adopted	Program staff will continue to promote the program to additional lighting retailers in New York.
Navigant, NYES Products MCA, June 2011	While prices could take a while to come down as demand continues to increase, the MCA team recommends that the Program target some of its marketing efforts on conveying the message that ENERGY STAR rated products save money in the long run.	Adopted	Program staff will address this to the extent marketing funds are available.
Navigant, NYES Products MCA, June 2011	Another issue that the MCA team recommends addressing is the small but increasing minority of customers who definitely would not purchase ENERGY STAR again and definitely would not recommend ENERGY STAR. A follow up study to understand the concerns of this group could lead to more effective target marketing that could dispel some of the perceptions that act as barriers to the adoption of ENERGY STAR	Plan to Adopt	Program Staff will work with evaluation staff to address this recommendation.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
	products.		
Navigant, NYES Products MCA, June 2011	Survey data show that TV commercials are the most effective means of advertising to create awareness of ENERGY STAR, which could be problematic for NYSERDA partners, which tend to consist of small, non-chain stores with limited budgets. The MCA team recommends NYSERDA consider how it might provide television advertising on behalf of these smaller retailers.	Not Adopting	Given the cost of television advertising, sufficient funds are not available to address this recommendation.

4.7 CFL Expansion Program

The CFL Expansion Program is an Energy Efficiency Portfolio Standard (EEPS)-funded program designed to increase the sales of CFLs in New York State. The program, a component of the Market and Community Support Program, is designed to increase marketing and cooperative advertising promotions with retail stores and lighting manufacturers; continue to increase the network of retail partners and manufacturers; increase consumer accessibility to a wider variety of CFLs by providing incentives to retailers to increase the number of CFLs sold and increase permanent shelf space for these products; increase in-store promotions and point-of-purchase information to educate consumers; increase participation in the CFL Collection Center Program; and promote the manufacture, sale, and usage of high power factor CFLs.

4.7.1 CFL Expansion Multistate Modeling Evaluation

During the third quarter of 2011, an evaluation study was completed by NMR Group, Inc. (NMR) in support of the multistate Compact Fluorescent Lamp (CFL) modeling effort, highlighting the results as they pertain to the net-to-gross ratio (NTG) for the CFL Expansion Program in New York State (less New York City and Nassau and Suffolk Counties, hereafter NYS) and New York City (NYC). The modeling

effort drew on data from 15 different geographic areas in the United States, but was written specifically for NYSERDA.³ The analyses were based on data collected from 1,495 households that took part in onsite saturation surveys. The NYSERDA evaluation focused on the January 2009 to June 2010 time period.

The results of the selected eighteen-month CFL purchase model yield a NTG ratio for the period of January 2009 to June 2010 of 0.45 for NYS and 0.36 for NYC. The model limited to the first half of 2010 suggests a NTG ratio of 1.05 for NYS when the variable for prior program support is included, and -4.73 when this variable is set equal to zero. Similarly for NYC, the 2010 model points to a NTG of 0.73 with the prior program support variable included, and -3.29 when it is set equal to zero. The difference in the estimates of NTG reflect economic, statistical, and programmatic factors, namely the improvement in the economy, the inclusion or exclusion of the variable that captures the impact of prior program activity, and the launch of new programs outside of the NYSERDA service territory, and a program revision within the NYSERDA service territory that altered CFL purchase behavior between 2009 and early 2010.

For purposes of estimating NTG, the 2009 model is superior to the 2010 model, as evidenced by the larger maximum likelihood R^2 of 0.18 for the former compared to 0.12 for the latter. This may be at least partially because respondents could not accurately differentiate CFL purchases in 2009 from purchases in the first six months of 2010, whereas they could give more accurate estimates for the entire eighteen-month period. The evaluators recommend using the NTG of 0.45 for NYS and 0.36 for NYC. Should NYSERDA wish to combine these estimates to represent its entire service area, the evaluators recommend the use of a NTG ratio of 0.41. This NTG is substantially lower than the NTG ratio produced in the 2008 multistate modeling effort (1.60), but the reduction in NTG is in keeping with the trends in other mature CFL program areas, such as California and Massachusetts, which also saw NTG ratios decrease significantly in a short period of time.

The CFL market is changing rapidly, and CFLs are increasingly accepted as a “regular” lighting purchase, at least by a large number of consumers for many lighting needs. The significant program impact identified in the models and the fact that the model limited to the first-half of 2010 point to continued

³ The Sponsors of this study included the following: Ameren Illinois (Ameren IL); Ameren Missouri (Ameren MO); ComEd; Consumers Energy in Michigan (Consumers); Dayton Power and Light (DP&L); EmPower Maryland (EmPower); the five program administrators of the Massachusetts ENERGY STAR[®] Lighting Program (Massachusetts) which are the Cape Light Compact, NSTAR, National Grid in Massachusetts, Unitil, and Western Massachusetts Electric; National Grid in Rhode Island; the New York State Energy Research and Development Authority (NYSERDA); and the Salt River Project (SRP).

program impact even after controlling for prior program activity suggest the continued need for CFL program activity. NYSERDA may want to revise the program, however, to target those sockets and market segments that could be converted to CFLs with additional education and incentives.

Follow-Up on Evaluation Recommendations

Table 4-15 presents a summary of the CFL Expansion Program recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation already has been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 4-15. CFL Expansion Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	Continue outreach messaging to CFL users encouraging additional purchases of CFLs rather than focusing on improving consumer awareness. Future marketing campaigns may want to educate committed current CFL users on the benefits of further increasing the number of sockets where they install CFLs.	Plan to Adopt	Program staff will continue to build on this message if sufficient EEPS funds are available.
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	(1) Continue to incentivize the bulk purchase of CFLs as there is a small but committed group that still purchases more than 25 CFLs per household. Still, the successful, non-incented sales of CFLs at home improvement and discount stores suggests that NYSERDA may want to continue its program focus on smaller retailers rather than allocating limited program resources to retailers who will likely still sell large amounts of CFLs without NYSERDA support. (2) If NYSERDA decides to target specialty CFLs, however, they may wish to pursue agreements with these large retailers, who nationally have shown a greater propensity to carry specialty products when incented by CFL programs.	(1) Not Adopting (2) Plan to Adopt	(1) Program staff does not plan on continuing to incentivize standard CFLs through this EEPS program. Instead, program staff plan on focusing on specialty CFLs (2).
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	(1) Continue outreach messaging to CFL users focusing on the energy savings benefits and comparable quality of light to incandescent bulbs, which may discourage stockpiling the bulbs as the federal standard goes into effect. (2) Also, NYSERDA should track actual incandescent	(1) Adopted (2) Adopted	Program staff will continue to promote this messaging (1) and will continue to track the influence of EISA to evaluate its impact against the baseline (2).

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
	storage behavior and its relationship to awareness of EISA and intent to hoard.		
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	Continue to incentivize products to encourage consumers to purchase CFLs. Specifically, target replacement of exterior lighting with CFLs to increase penetration of CFLs in this segment.	Adopted/Plan to Adopt	Through this EEPS program, staff plan on focusing on speciality CFLs for all residential applications.
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	Continue incentives for multipacks of CFLs so that households can easily have extra CFLs available. Because most consumers prefer to keep bulbs on hand, if they can reach for a CFL without making a special trip to a retailer, they will be more likely to use one the next time a bulb burns out.	Not Adopting	Program staff does not plan on continuing to incentivize standard CFLs through this EEPS program.
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	To capture program savings from CFLs in multipacks immediately, consumer outreach can also educate consumers about the value of replacing incandescent bulbs with CFLs right away, rather than waiting for them to burn out.	Adopted	Program staff will continue to promote this message.
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	Consider increasing support for selected specialty bulbs, while maintaining support for standard CFLs. Substantial potential could be reached with A-shaped specialty CFLs in those sockets that at least some households find unattractive when filled with a standard spiral CFLs.	Adopted	Program staff will continue to support this recommendation.
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey	Consider increasing the support for common LED lighting applications in tandem with consumer outreach to educate	Adopted	Program staff will continue to support this recommendation.

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status (Adopted, Plan to Adopt, or Not Adopting)	Program Implementer Response to Recommendation and Adoption Decision Rationale
Results, June 2011	consumers about the value of this emerging lighting technology.		
NMR Group, CFLExpansion Random Digit Dial and Onsite Survey Results, June 2011	Promote the environmental or 'green' benefits of CFL adoption in the continued outreach to consumers.	Adopted	Program staff will continue to promote this message; however, it will be a secondary focus of program messaging.

4.8 Communities and Education Program

4.8.1 Program Description

The Communities and Education Program offers market infrastructure development for both short-term program support and long-term market development for residential energy efficiency, with the aim of helping to develop an energy-conscious society. The two major components are the Energy Smart Students (ESS) Initiative and **New York Energy Smart** Communities (NYE\$C). ESS provides energy efficiency curricula for teachers of students in grades K-12. ESS is part of NYSERDA's effort to offer comprehensive services to K-12 schools, including educational curriculum support, facilities improvements, and transportation efficiency improvements. ESS offers teacher workshops to introduce hands-on, project-based lessons aligned with the New York State teaching standards. NYE\$C facilitates bringing organizations and agencies together to develop and support local projects that serve as demonstrations of energy efficiency and renewable technologies, and show how these projects create economic, social, and environmental benefits. NYE\$C also provides face-to-face education to the community on various energy topics and **New York Energy SmartSM** programs. Finally, NYE\$C has primary responsibility for recruiting mid-stream partners for **New York Energy SmartSM** residential programs.

4.8.2 Program Accomplishments

As shown in Table 4-16, seven long-term non-energy goals have been set for the Communities and Education Program. The Program has exceeded all its goals.

Table 4-16. New York Energy \$martSM Communities and Education Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Teachers trained	6,050	8,647	>100%
Total students reached	184,125	1,040,095	>100%
Portion of total estimated to be low-income students	131,125	416,038	>100%
Community events held statewide	1,250	2,579	>100%
Recruiting seminars held statewide	545	713	>100%
Home performance contractors, technicians, builders and raters recruited for the Home Performance Program ¹	888	1,666	>100%
Building analysts, designers, energy consultants, equipment installers, etc. recruited for Multifamily Building Performance Program ¹	100	582	>100%

¹ Refers to number of individuals attending recruiting seminars or meetings

4.9 EmPower New YorkSM

4.9.1 Program Description

The EmPower New YorkSM program provides energy efficiency services to utility customers earning at or below 60% of the New York State median income and households enrolled in utility low-income payment assistance programs, targeting both owners and tenants of one- to four-family homes and multifamily buildings with fewer than 100 units. The program coordinates with the delivery of federal weatherization services through New York State Division of Housing and Community Renewal (DHCR). In early 2009, as a result of the Commission’s EEPS proceeding, NYSERDA expanded the EmPower Program to provide more widespread energy efficiency services to low-income customers.

4.9.2 Program Accomplishments

The EmPower Program continues to monitor a key non-energy metric to assess its growth as a proxy for program expansion. Table 4-17 shows these metrics and progress over time.

Table 4-17. EmPower New YorkSM Program – Goals and Achievements

Activity	Time Frame for Goal	Goal	Achieved through September 30, 2011a	% of Goal Achieved
Households served (New York Energy Smart SM) ¹	July 1, 2006 – December 31, 2011	34,362b	34,260	99.7%
Households served (EEPS electric)	April 1, 2009 – December 31, 2011	22,782	13,654	60%
Households served (EEPS natural gas)	April 1, 2010 – December 31, 2011	2,115	594	28%

a Rows are not additive because households could be served by more than one funding source.

¹The revised SBC Operating Plan added 251 households to the target of households served to estimate the number of households that heat with fuels other than electricity or natural gas.

4.9.3 Follow-up on Evaluation Recommendations

Table 4-18 presents a summary of EmPower recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation has already been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis.

Table 4-18. EmPower Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status	Program Implementer Response to Recommendation and Adoption Decision Rationale
Nexant, EmPower M&V, April 2007	Devise a methodology to automate the electronic transfer of results from the EmPower New York SM Calculator to the EmPower New York SM database.	Plan to Adopt	Staff are currently reviewing the EmPCalc tool, the current version of the NY State Technical Manual, and audit tools under consideration for the Home Performance Program. Changes related to this recommendation are on hold pending outcome of this review and completion of current program evaluations. Still pending

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status	Program Implementer Response to Recommendation and Adoption Decision Rationale
Nexant, EmPower M&V, April 2007	Devise a methodology to incorporate the AHAM baseline energy usage data, adjusted for degradation for refrigerators and freezers in to the EmPower New York SM Calculator to avoid the manual data entry errors while transferring results from REFRIGERATION [®] software to the EmPower New York SM Calculator.	Plan to Adopt	These revisions are on hold pending the process described for the above recommendation.

4.10 Buying Strategies and Energy Awareness Program

4.10.1 Program Description

The Buying Strategies and Energy Awareness Program consists of four initiatives: 1) the Buying Strategies Initiative, which assists the Office of Temporary and Disability Assistance (OTDA) to negotiate discounts on purchases of home heating oil by the Low-Income Home Energy Assistance Program (HEAP), and also includes a preventive maintenance component for oil-fired heating systems;⁴ 2) the Targeted Marketing and Outreach Initiative, which seeks to increase participation in all NYSERDA, New York State, federal, utility, and community-based low-income energy efficiency and energy assistance programs, by targeting hard-to-reach (HTR) customers such as the elderly, the low-income population, and the non-English speaking population; 3) Low-Income Forum on Energy (LIFE), which provides a forum – large statewide conferences, smaller regional meetings, and steering committee meetings – where energy industry professionals, policy makers, agencies serving the low-income population, and energy program implementers can discuss energy issues relevant to the low-income sector; and 4) contributions of funding to the Energy Smart Students Initiative (described in Section 4.8.1).

⁴ Administration and funding of the Buying Strategies Program was transitioned to the OTDA on July 1, 2010. All SBC funds represented in the table below were spent on the program prior to that date.

4.10.2 Program Accomplishments

Table 4-19 shows the Program’s goals and performance. The program is showing excellent performance, having already exceeded all of its four goals.

Table 4-19. New York Energy \$martSM Buying Strategies and Energy Awareness Program – Goals and Achievements¹

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Funds leveraged through Buying Strategies initiative	\$20 million	\$22.5-24 million	>100%
Additional low-income individuals reached via newsletters, weekly newspapers, etc. (readership)	5 million	25.3 million	>100%
Additional low-income individuals reached via seminars and workshops (attendees)	15,000	633,182	>100%
Additional contractors and other partners recruited in low-income districts	137	1,837	>100%

¹ The first row shows Buying Strategies as financed by SBC funds through July 1, 2010. The remaining rows show the continuing progress of the remaining program elements as they continue under SBC funding

5 *Research and Development Programs*

5.1 Overview of the Research and Development Programs

New York Energy SmartSM Research and Development (R&D) activities target the following areas: (1) transmission and distribution, (2) clean energy infrastructure, (3) power systems, (4) combined heat and power, (5) demand response, (6) electric transportation, (7) environmental monitoring, (8) industrial process, (9) water and wastewater, and (10) emerging technologies. Projects funded by the programs generally fall under one of four project types: demonstrations, business development, product development, and information dissemination/research study. These types are defined as follows:

- **Demonstrations:** Demonstration of a new product in its intended environment. The goal is to increase sales/usage of that particular product in the market. Results are used for product commercialization or to generate objective performance information for policy makers or end-users. This category includes demonstrations of on-site power generation.
- **Business Development:** Business development involves evaluating a business and then helping it realize full potential using such tools as marketing, information management and customer service. Activities include but are not limited to: assessment of market opportunities; intelligence gathering on customers and competitors; and advising on, drafting and enforcing sales policies and processes.
- **Product Development:** The process of bringing new products or services to the market or the improvement of existing products. This category ranges from proof of concept, product design, to detailed engineering.
- **Information Dissemination/Research Study:** A paper study or outreach activity, including environmental research studies, feasibility studies to examine technical gaps, feasibility studies to example installation of equipment at a specific site, a market potential studies for a specific technology, or activities to disseminate information.

5.2 R&D Program Evaluation Activities

The **New York Energy SmartSM** R&D program evaluation consists of an integrated, multi-faceted approach to assess the processes used by NYSERDA to conduct the work, determine the impacts of the product development and demonstration projects, conduct macro-level impact analyses of the projects on the New York State economy, and design and construct a database for collecting and storing project-by-project data and information necessary for further conduct of the impact and process evaluations.

Evaluation activities underway for the R&D programs include:

- R&D Program Metrics Database (Phase 2). The second phase includes: building reports, fully integrating historical and financial database systems, developing the RPS Main-Tier module, implementing the interface on NYSERDA's website for Research Project Updates (RPU), building web forms to collect metrics from contractors, and integrating document management functionality, and
- Process and market characterization/assessment evaluations for the DG/CHP Demonstration Program.

Results will be reported when they become available.

5.3 Summary of R&D Program Budget and Spending Status

Table 5-1 presents detailed budget and funding information for the Research, Development, and Demonstration (RD&D or R&D) programs.

Table 5-1. Research & Development Programs – New York Energy \$martSM Financial Status through September 30, 2011 (\$ million)

Program	Budget ¹			Funds Spent			Encumbered Funds ⁴ % of Budget Encumbered	Committed Funds ⁵ % of Budget Committed
	SBC I & SBC II ²	SBC III ³	Total Budget	SBC I & SBC II ²	SBC III ³	Total Funds Spent % Funds Spent		
Public Benefit Power Transmission and Distribution Research	0.0	14.8	14.8	0.0	4.5	4.5 30.2%	9.0 60.8%	14.4 97.2%
End Use Renewable Energy Market ⁶	19.0	24.9	43.8	19.0	23.5	42.4 96.8%	43.8 100.0%	43.8 100.0%
Clean Energy Infrastructure	0.0	53.0	53.0	0.0	23.6	23.6 44.4%	40.8 77.0%	51.0 96.2%
Distributed Energy Resources: Products and Demonstrations ⁷	34.0	119.3	153.2	34.0	52.8	86.7 56.6%	124.3 81.1%	154.8 101.0%
Demand Response and Innovative Rate Research	0.0	6.0	6.0	0.0	0.7	0.7 11.9%	2.1 35.0%	6.2 104.1%
Electric Transportation	0.0	6.0	6.0	0.0	2.6	2.6 42.5%	4.9 81.6%	7.4 124.1%
Environmental, Monitoring, Evaluation, and Protection	17.7	25.6	43.3	17.7	15.6	33.3 78.6%	39.2 90.5%	40.4 93.1%
Industrial and Municipal Process Efficiency ⁸	0.0	15.4	15.4	0.0	8.3	8.3 53.9%	11.0 71.4%	13.5 87.7%
Next Generation and Emerging Technologies	18.3	28.2	46.5	18.3	17.8	36.1 77.6%	41.4 89.0%	44.5 95.7%
Wholesale Renewable Energy Market	16.5	3.6	20.0	16.5	2.9	19.4 96.6%	20.0 99.5%	20.0 100.0%
Other ⁹	0.4	-	0.4	0.4	<0.1	0.4 100.2%	0.4 100.0%	0.4 100.5%

Program	Budget ¹			Funds Spent			Encumbered Funds ⁴ % of Budget Encumbered	Committed Funds ⁵ % of Budget Committed
	SBC I & SBC II ²	SBC III ³	Total Budget	SBC I & SBC II ²	SBC III ³	Total Funds Spent % Funds Spent		
TOTAL Research & Development	\$105.9	\$296.6	\$402.5	\$105.9	\$152.1	\$258.0 64.1%	\$337.1 83.8%	\$396.5 98.5%

¹ Reflects carryover in funds and reallocation as approved by the PSC in 2007. NYSERDA, *System Benefits Charge Operating Plan for New York Energy SmartSM Programs (July 1, 2006 – December 31, 2011)*, As Amended February 28, 2011, Revised April 6, 2011.

² SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

³ SBC III: July 1, 2006 through June 30, 2011.

⁴ Encumbered funds associated with signed contracts and purchase orders.

⁵ Committed funds associated with encumbered funds and pending contracts.

⁶ Over committed amounts will be reclassified to the approved Renewable Portfolio Standard (RPS) Customer Sited Tier budget.

⁷ This includes the DG/CHP Demonstration Program and Power Systems Product Development.

⁸ This includes the Industrial Process and Product Innovation Program and Municipal Water and Wastewater Program.

⁹ Other: Projects transferred from the Empire State Electric Energy Research Corp. (ESEERCO) Program closed.

Totals may not sum due to rounding.

Source: NYSERDA

5.4 Program Results Summary

Significant progress is being made by the R&D portfolio. This section summarizes key evaluation findings from the latest set of evaluation activities, and from the cumulative body of work conducted by NYSERDA and its evaluation contractors over the past several years.

5.4.1 Energy, Peak Demand and Fuel Savings and Clean Generation

Through NYSERDA's Impact Evaluation activities, independent third-party contractor teams assessed the energy and peak demand savings and clean generation reported for the DG-CHP Demonstration, Clean Energy Infrastructure, and Demand Response and Innovative Rate Research programs. Methods used in this assessment included on-site verification of equipment installation and functionality, and review of NYSERDA's files for reasonableness and accuracy. Based on this review, the contractors adjusted the savings reported by NYSERDA. In turn, the contractors further adjusted these figures, based on primary research, to account for freeridership and spillover. Table 5-2 summarizes the estimated net electricity savings and clean generation for each of the two applicable R&D programs. Table 5-3 summarizes peak demand reductions. Table 5-4 shows natural gas impacts for the R&D programs.

Table 5-2. New York Energy SmartSM R&D Program Electricity Savings and Clean Generation through September 30, 2011

Program	Energy Savings (GWh)	
	Savings Achieved through	
	June 30, 2006	September 30, 2011
DG-CHP Demonstration Program ¹	82.7	550.9
Renewable Energy Production	103.8	107.9
Statewide R&D Total	186.5	658.8

¹Savings shown in this row are inclusive of overlap with the FlexTech Technical Assistance Program. This cross-sector overlap is subtracted out of the portfolio level results presented in Section 2 of this report.

Table 5-3. New York Energy SmartSM R&D Program Cumulative Peak Demand Savings through September 30, 2011

Program	Demand Savings (MW)				
	Savings Achieved through		Progress Toward Goal		
	June 30, 2006	September 30, 2011	July 1, 2006 through September 30, 2011	5.5 Year Goal (by December 31, 2011) ¹	(% achieved)
DG-CHP Demonstration Program ²	18.1	100.3	82.2	101.0	81.4%
Enabling Technologies for Price Response Load ³	137.2	99.0	-	-	-
Demand Response and Innovative Rate Research	-	1.0	1.0	25.0	4%
Renewable Energy Production	8.1	11.7	3.6	N/A	N/A
Statewide R&D Total	163.4	212.0	86.8	126.0	68.9%

¹Goals for the New York Energy SmartSM Program are specified in NYSERDA's February 28, 2011 revised operating plan (submitted with revisions on April 6, 2011).

²Savings shown in this row are inclusive of overlap with the FlexTech Technical Assistance Program. This cross-sector overlap is subtracted out of the portfolio level results presented in Section 2 of this report.

³ MWs enabled under this SBC2 program were not required to persist beyond the period of the contract. As such, the available MWs have steadily declined since the program's close. This program was replaced by the Demand Response and Innovative Rate Research Program.

Table 5-4. New York Energy \$martSM R&D Program Natural Gas Impacts through September 30, 2011

Program	Fuel Savings (MMBtu)	
	Savings Achieved through	
	June 30, 2006	September 30, 2011
DG-CHP Demonstration Program ¹	-571,310	-3,743,438
Statewide R&D Total	-571,310	-3,743,438

¹This table shows the negative natural gas impacts from DG-CHP demonstration projects due to an increase in on-site gas use resulting from project operations. Although other R&D programs result in positive natural gas impacts, these impacts are not verified and therefore are not reported here. Because the electricity saved by the DG-CHP projects replaces electricity formerly purchased from the grid, the program has reduced fuel used at central generating stations, for a net decrease statewide due to greater efficiency of the DG-CHP systems at sites where imported fuel is used. The fuel avoided at the central generating plant is determined from the electricity generated by the DG-CHP installations. Furthermore, at additional projects such as wastewater treatment plants, electricity generation is powered fully or partially by digester gas produced on site. Such fuel switching achieves natural gas conservation above and beyond what is achieved through efficiency alone. Impacts shown in this row are inclusive of overlap with the FlexTech Technical Assistance Program. This cross-sector overlap is removed from the portfolio level results presented in Section 2 of this report.

5.4.2 Follow up on R&D Program Portfolio Level Evaluation Recommendations

Table 5-5 presents a summary of R&D Program recommendations resulting from program evaluations. This table also provides the status of each recommendation (*i.e.*, if a recommendation has already been adopted, if it will be adopted in the future, or if it will not be adopted) as well as a response from program staff to each recommendation. These recommendations come from a recently completed process evaluation on R&D Program funding opportunities issued in August 2010. The full report is available on NYSERDA's website at [http://www.nyserdera.ny.gov/Page-Sections/Program-Evaluation/NYE\\$-Evaluation-Contractor-Reports/2010-NYE\\$-Evaluation-Contractor-Reports/~/_media/Files/EDPPP/Program%20Evaluation/2010ContractorReports/2010%20funding%20process%20report.ashx](http://www.nyserdera.ny.gov/Page-Sections/Program-Evaluation/NYE$-Evaluation-Contractor-Reports/2010-NYE$-Evaluation-Contractor-Reports/~/_media/Files/EDPPP/Program%20Evaluation/2010ContractorReports/2010%20funding%20process%20report.ashx) and is summarized in the Q3 2010 report. Per DPS quarterly and annual reporting guidelines, these program recommendations will be revisited with program staff and updated, as applicable, on a quarterly basis. Recommendations that have already been addressed and discussed in prior reports are not included here.

Table 5-5. R&D Program Portfolio Level Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendation	Status	Program Implementer Response to Recommendation and Adoption Decision Rationale
RIA, Research and Development Program Funding Opportunities, Process Evaluation, August 2010	Continue to explore ways to make requirements clear and easy to follow; <i>e.g.</i> , conduct research on what of the commercialization requirements need clarification.	In Process	R&D program staff are researching ways to define and guide proposers through the solicitation process, in particular stage gates that will direct proposers to apply for funding appropriate to their stage of commercialization.
	Consider waiving or lowering cost-share requirements for not-for-profits.	Under consideration	R&D program staff are considering this as an option for future solicitations.
	Continue to allow direct contact with program staff members but encourage proposers to attend public information sessions, teleconferences, and webinars.	Adopted	R&D program staff offer webinars, teleconferences and in-person meetings to answer questions.
	Annually review procedures for requesting and scheduling debriefings and for communicating those procedures to proposers, and subsequently review those procedures with all R&D staff to ensure that the procedures are understood and followed.	Plan to Adopt	R&D program staff intends to implement this recommendation.
	Carry out the ORDB update as planned, and as possible incorporate features and conventions to ensure consistent data entry and include fields to record technical and non-technical contacts, entity type, and type of interest in funding opportunities and to mark records that should be excluded from surveys. Revise existing records to comply with convention.	In Process	Marketing staff are in the process of implementing a Customer Relationship Management System. R&D has representation on the implementation team.
	Develop ways to update existing records after adding new fields, such as by sending email requests or allowing individuals to update their database records on line.	In Process	Marketing staff are in the process of implementing a Customer relationship Management System. R&D has representation on the implementation team.
	Generate an individualized email to each recipient of a broadcast email announcement.	Plan to Adopt	R&D program staff intends to implement applicable parts of this recommendation.

5.4.3 Summary of Other Key Results

Across the **New York Energy SmartSM** R&D programs, long-term goals, encompassing the period July 1, 2006 to December 31, 2011, were established in the SBC III Operating Plan.¹ Overall, the programs are also performing well with respect to these goals. Results of each program's progress toward its goals are shown in table format in the subsequent sections.

An overview of progress is presented below and is related to each program's goals in the following sections:

- Under the Public Benefit Power Transmission and Distribution Research Program, 35 projects have been selected to pursue development of advanced technologies that will improve the efficiency and delivery of power for electric customers across the state. The Program has succeeded in collaborating with major stakeholders. The program has funded projects in several of the utility companies, is working with the NYISO's newly formed R&D group to prioritize critical technology needs, and is partnering with the U.S. Department of Energy (DOE) on smart grid projects and technology evaluation.
- The Clean Energy Infrastructure Program has helped develop four accredited training institutions, offered 27 training workshops, supported 160 companies in their efforts to expand renewable business networks, and helped 10 manufacturing companies expand their operations.
- The Power Systems Program has funded 71 projects, launched 11 new products and completed nine field demonstrations.
- The DG-CHP Demonstration Program has funded 71 projects representing 145MW of anticipated installed capacity.
- Demand Response and Innovative Rate Research Program has enlisted the participation of 5,330 apartments for time-sensitive electric rate pilot programs.
- The Electric Transportation Program has issued 11 solicitations and selected 34 projects for funding.
- The Environmental Monitoring, Evaluation, and Protection Program has issued 12 solicitations, resulting in 64 contracts and \$13 million in co-funding. Thirty-three research reports, five summary communications, and 95 journal articles have been published.
- The IPPI Program has issued seven solicitations resulting in 60 projects.

¹ NYSERDA, *System Benefits Charge Operating Plan for New York Energy SmartSM Programs (July 1, 2006 – December 31, 2011)*, As Amended February 28, 2011, Revised April 6, 2011.

- The Municipal Water and Wastewater Efficiency Program has selected 14 projects for funding. The program goal of providing information to 1,000 individuals serving the municipal wastewater and water treatment sectors was achieved in 2008.
- Under the Next Generation and Emerging Technologies Program, 16 advanced building projects, five daylighting design assistance, two solar thermal projects, and 23 emerging technologies projects have commenced.

5.5 Public Benefit Power Transmission and Distribution Research

5.5.1 Program Description

The Public Benefit Power Transmission and Distribution Research Program supports transmission and distribution (T&D) research that has broad statewide benefits. Projects provide improvements in energy efficiency, power reliability, quality and security, and reduce the cost of energy and energy delivery. NYSERDA is coordinating with all key stakeholders including the New York State Independent System Operator (NYISO), the New York State Department of Public Service (DPS) and the electric utilities to implement a comprehensive R&D strategy to optimize performance of the electric power delivery system.

Funding for the time period July 1, 2006 through December 31, 2011 is \$14.8 million.

5.5.2 Progress Toward Goals

The program was initiated in 2007. Three solicitations have been issued seeking projects to:

1. Demonstrate and develop technologies that improve the performance of the electric power delivery system in New York.
2. Develop strategies that support sustainable investment, equitable and efficient electric energy markets, and continued improvement of the electric power delivery system in New York.

Program goals and progress are described in Table 5-6. Shown in Table 5-7 is the status of projects approved for funding to date.

Table 5-6. Public Benefit Power Transmission and Distribution Research Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Issue annual solicitations	35 or more projects resulting in progress toward program objectives	<p>Three solicitations were completed (total of five rounds), resulting in 32 projects.</p> <p>The American Recovery & Reinvestment Act (ARRA) of 2009 provided a unique opportunity to leverage funding. Three (3) additional projects used ARRA funding for a variety of research activities. All projects are in various stages of development or have been completed.</p>	91%
Technology transfer	Identify successful projects and undertake outreach and knowledge transfer activities aimed at utilities	<p>Knowledge transfer activities have begun as projects near completion.</p> <p>General Electric presented results from its Greenhouse Gas study to the NYS Smart Grid Consortium and at the 2010 CIGRE conference (International Council on Large Electric Systems).</p> <p>Seven final reports for completed projects were posted on the NYSERDA website for information dissemination.</p> <p>Beacon Power Corp achieved its full 20MW capacity on June 12, 2011 at its flywheel energy storage plant in Stephentown, NY.</p> <p>A Smart Grid Group Meeting was held at NYSERDA on September 26, 2011 for all NYS utilities to discuss and disseminate lessons learned from their projects funded under the Public Benefit Power Transmission and Distribution Research Program.</p>	N/A

Table 5-7. Status of Public Benefit Power T&D Research Program Projects

Number of SBC-funded Projects Approved	Number of Signed Active Contracts	Number of Unsigned Contracts	Number of Withdrawn or Terminated Contracts	Number of Completed Projects
35	27	6	0	8

Round One of PON 1913 “Smart Grid Program” received 17 proposals, requesting total funding of approximately \$14.5 million. Seven projects were approved to receive \$4.7 million. As of this quarter, two contracts have been signed.

5.6 Clean Energy Infrastructure

5.6.1 Program Description

The previous End-Use Renewables Program (EUR) provided the foundation for the creation of the Clean Energy Infrastructure Program. Clean Energy Infrastructure efforts will be closely integrated with other SBC-funded efforts, such as Power Systems Program, to develop and commercialize clean energy technologies. The ultimate goal of these programs is to reach the point at which the value of the technology is worth the investment required by the consumer, and the market infrastructure is in a position to deliver and support the technology over the long term. This program is complementing efforts under the Renewable Portfolio Standard (RPS) by supporting training, education and market development for RPS-eligible technologies such as photovoltaics. The Clean Energy Infrastructure funds may also be used to reduce the installation and operating cost of systems not eligible for RPS funding.

Funding for the time period July 1, 2006 through December 31, 2011 is \$53.0 million.

5.6.2 Progress Toward Goals

The Clean Energy Technology Manufacturing and Business Development programs increased the number of companies developing and manufacturing clean energy technologies to ten. Business development support services serving the clean energy businesses in New York, increased from 22 in 2008 to 146 as of the end of the second quarter 2011. This includes the entrepreneurs in residence program (funded under PON 995) and the clean tech executives (funded under PON 1216).

In the Education, Consumer Awareness, and Market Development programs, there are currently 40 training partners around the state, including the four training institutions with accreditation: Bronx Community College for PV, Hudson Valley Community College for PV, SUNY Delhi for PV, and SUNY Farmingdale for PV.

As of September 30, 2011, a total of 269 PV installers are eligible to participate in NYSERDA’s PV incentive program, including 45 individuals NABCEP certified, 198 eligible, and 72 with provisional status.

Several non-energy goals have been set for the Clean Energy Infrastructure Program. These five-year goals, as well as cumulative performance through September 30, 2011 are shown in Table 5-8. The Program is performing well with respect to its goals.

Table 5-8. Clean Energy Infrastructure Program Goals achieved from July 1, 2006 through September 30, 2011

Activity	Program Goals (July 1, 2006 through December 31, 2011)		Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Education, Consumer Awareness and Market Development				
New accredited training institutions	4	Self-sustaining accredited training and certification programs for clean energy technologies in addition to PV	4	100%
New certification exams	4		3	75%
Training workshops	34		27a	79%
Renewable Resource Applications				
Stakeholder workshops	10	Addressing knowledge and technical barriers currently impeding installation and operation of wholesale and end-use clean energy technologies	13	>100%
Competitive research solicitations	10		14	>100%
Clean Energy Technology Manufacturing and Business Development				
Companies receiving NYSERDA assistance directly, through supported incubators, or through other supported business services	70	Increase the number of companies developing and manufacturing clean energy technologies, and serving the clean energy businesses in New York	160	>100%
Companies expanding manufacturing	10		10	100%

a This program goal does not include the many clean energy renewable and efficiency training workshops throughout the state held by NYSERDA’s training partners.

5.7 Power Systems

5.7.1 Program Description

The goal of this program is to work with New York technology companies to develop distributed generation and storage products, and to expand the number of marketable competitive products that reduce peak load, improve power quality, and provide improved cost-effective environmental performance. The Power Systems Program supports New York businesses in all aspects of product development necessary to create and commercialize power generating products that are clean, efficient, reliable, and cost effective, as well as other products that reduce peak demand or improve end user power quality. Additionally, the program focuses on New York specific issues such as economic development and job creation in New York State; targets technologies and opportunities that are not being addressed by the market; addresses regulatory barriers to the adoption of superior new technologies; and, emphasizes the development of economically-competitive options for end users.

5.7.2 Progress Toward Goals

Several long-term non-energy goals have been set for the Power Systems Product Development Program. Goals and accomplishments are shown in Table 5-9. The program is performing well with respect to its goals.

Table 5-9. Power Systems Product Development Program Goals achieved from July 1, 2006 through September 30, 2011

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Number of contracts signed between July 1, 2006 through December 31, 2011	81	71	88%
New products launched between July 1, 2006 through September 30, 2011a	6	11	>100%
Sales revenue from new products launched between July 1, 2006 through September 30, 2011a	\$54 million	TBD	TBD
Number of completed field demonstrations between July 1, 2006 through September 30, 2010a	16	9	56%
Projects successfully completing milestones	27	TBD	TBD
Number of technology assessment studies funded between July 1, 2006 through September 30, 2010	22	7	32%

a Includes results from projects funded prior to July 1, 2006.

This quarter we expanded on a wind modeling project that will allow more accurate siting of small scale wind turbines in congested areas, guaranteeing better placement and higher output. Another project is examining the re-establishment of fused silicon production in Buffalo, New York. Fused Silicon is in high demand, primarily because of its use in photovoltaic cells.

5.8 DG-CHP Demonstration

5.8.1 Program Description

The DG-CHP Demonstration Program supports the growth of combined heat and power and other distributed generation applications in New York. The program provides funding for single and multi-site demonstrations, and seeks to improve awareness among end-users and project developers of DG-CHP. The program also seeks to address DG-related issues such as DG permitting; Standard Interconnection Requirements (SIR); utility standby service; tariffs; technology risk; renewable fuel options such as anaerobic digesters and landfill gas; and the impact of fluctuating prices of natural gas. The program uses financial incentives to encourage customer-sited DG using commercially available DG technologies such as reciprocating engines, steam turbines, gas turbines and microturbines. The program is coordinated with similar offerings from RPS Customer-Sited Tier and other System Benefits Charge programs such as the Multifamily Performance and the Existing Facilities Programs.

Funding for the time period July 1, 2006 through December 31, 2011 is \$119.3 million.

5.8.2 Progress Toward Goals

Two important non-energy goals have been set for the DG-CHP Program. These goals and progress are shown in Table 5-10. The program is making good progress toward achieving its long-term goals.

Table 5-10. DG-CHP Demonstration Program Near-Term Goals

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Issue annual solicitations and incentive offers	Fund 51 or more CHP demonstrations with a cumulative capacity of 101 MW and associated efficiency and environmental benefits, and 50 MW downstate.	Six solicitations, since 2006, have resulted in 71 funded projects with a total of 145 MW (41 are active projects, representing 54.5 MW). Within the active projects, 28 are in the Consolidated Edison service area, representing 15.5 MW.	>100% (Number of projects funded) >100% (MW goal) 31% (downstate MW goal)
Technology transfer	Conduct technology transfer and outreach activities to broaden acceptance of DG and CHP. Hold annual workshops and publish at least 10 final reports per year.	Currently, site-specific performance data is posted on http://chp.nyscrda.org for 54 projects. A U.S. Environmental Protection Agency (EPA) CHP Partnership meeting was held in October 2009 and NYSERDA sponsored a CHP Roundtable. A CHP Programs Brochure has been developed and is distributed at appropriate conferences.	N/A

During the third quarter of 2011, five contracts were executed. Also, PON 2373 was released with a due date of October 4, 2011.

5.9 Demand Response and Innovative Rate Research (DR and IRR)

5.9.1 Program Description

This program addresses technology and market barriers that hinder retail customers from being active participants in a smart grid by: 1) participating in energy markets as demand response resources (*i.e.*, load curtailment, demand response generation, etc.), 2) managing and responding to market-based electric rates, and 3) having access to real-time, direct and in-home feedback on energy consumption. Novel load control technologies and techniques can enable more retail electric loads to participate as demand response resources and also respond to dynamic rates. Load controls often yield substantial energy efficiency and can be self-financed from the market-based DR revenues and cost avoidance. The new In-Home Energy Feedback research seeks to quantify the effects of providing NYS households with direct real-time feedback on their electrical consumption and cost, as may be accomplished with smart metering.

Funding for the time period July 1, 2006 through December 31, 2011 is \$6.0 million.

5.9.2 Progress Toward Goals

Two long-term non-energy goals have been set for the Demand Response and Innovative Rate Research Program. These five-year goals and progress are shown in Table 5-11. Shown in Table 5-12 is the solicitation activity for the program.

Table 5-11. Demand Response and Innovative Rate Research Program – Goals and Achievements

Goal	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Increase small customer participation in wholesale and local demand response programs	25 MW	1 MW	4%
Increase the number of multifamily apartment units participating in real-time and other time-sensitive electric rate pilots	3,000 apartment units	5,330 units participating in the demonstration	>100%

Table 5-12. Demand Response and Innovative Rate Research Program Project Status

	Number of SBC-funded Projects Approved	Number of Signed Active Contracts	Number of Unsigned Contracts	Number of Withdrawn or Terminated Contracts	Number of Completed Projects
PON 1151 “Innovations in Demand Response, Load Management and Dynamic Rates” (four rounds)	12	4	7	1	0
PON 1772 “ Next Generation Emerging Technologies for End-Use Efficiency” (three rounds)*	5	3	2	0	0

*PON 1772 was issued under the Next Generation and Emerging Technologies Program and used Demand Response and Innovative Rate Research funds for five of the funded projects, which are listed above.

During the past summer, the smart building load control system was tested in a New York City cooperative multi-family building. The system controlled the 230 smart room air conditioners, reducing the building’s peak demand by 10%. The building was enrolled in the NYISO demand response program and participated in its curtailment events.

In August, NYSERDA hosted a meeting with representatives from NYS Department of Public Service, Consolidated Edison, the Electric Power Research Institute, Brookhaven National Laboratory, Lawrence Berkeley National Laboratory, KEMA and the NYISO at a day-long Technical Review Group Meeting to

discuss the direction of NYSERDA's R&D demand response related activities. The group noted the growing importance of integrating demand response into a smarter grid. A number of demand response activities were discussed, including the NYS Public Service Commission's Demand Response Initiative proceeding, demand response market reforms by FERC and the NYISO, development of Smart Grid Interoperability Standards for demand response by the National Institute of Standards and Technology (NIST), and support for open integration standards by utilities and leading building controls companies. NYSERDA's role in development of technologies that allow automated responses to price and reliability signals and in demonstrating the value of demand response were discussed.

5.10 Electric Transportation

5.10.1 Program Description

This program supports emerging technologies from inception through field testing and pre-commercial deployment. The benefits of the electric transportation program will include peak load reduction in the New York City load pocket and permanent energy use reductions. These reductions will further result in cost savings for the subway and commuter rail systems and reduced transmission congestion in the region. Additionally, many projects are expected to lower transportation costs and emissions from petroleum-fueled vehicles.

Funding for the time period July 1, 2006 through December 31, 2011 is \$6.0 million.

5.10.2 Progress Toward Goals

The ultimate goals of the Electric Transportation Program are to:

- Improve the energy efficiency of the New York's current electrically powered commuter rail and subway system in the New York City load pocket, and
- Reduce costs of power transmission by allowing unused off-peak capacity to generate revenue and reduce transportation petroleum use, greenhouse gases, and air emissions.

As shown in Table 5-13, five metrics are being monitored for the Electric Transportation Program.

Table 5-13. Electric Transportation Program Goals achieved from July 1, 2006 through September 30, 2011

Activity	Achievements from July 1, 2006 through September 30, 2011
Solicitations released	11
Proposals reviewed	71
Projects funded	34 awarded, 32 contracted
Funding for contracted projects	\$5.28 million
Customer co-funding of contracted projects	\$12.24 million

This past quarter, Brooklyn Motorized received funds for phase two of vehicle development. Their electric motorcycle is unique in that its removable batteries make in-home charging easy when public charging is still difficult to find. Other projects exploring electric vehicle charging impacts on the grid continued to make progress this quarter, as did energy storage projects for fast electric vehicle charging.

On the rail side, projects in regenerative braking (battery and ultracap) have made progress, as did projects involving electrical insulator cleaning mechanisms, and off-peak subway utilization. In the marine environment, projects exploring hybrid tugboats and solar powered recreation boats continue to make headway.

5.11 Environmental Monitoring, Evaluation, and Protection (EMEP) Program

5.11.1 Program Description

This program commenced in the late 1990s as an effort to increase understanding of the environmental impacts of electricity production. EMEP initiatives are building on past efforts and evolving to support policy-relevant research in five primary areas: ecosystem response to sulfur, mercury, and nitrogen deposition; health- and energy-related research on air quality, particulate matter (PM), ozone, and co-pollutants; climate change; environmental impacts of alternative energy; and crosscutting environmental science and technology projects. The Program is guided by a steering committee comprised of major stakeholder groups. In addition, a separate science advisory committee continues to provide technical review. The Program has maintained a robust science and policy communication component to deliver

program findings to policy-makers, scientists, and the public. The EMEP closely collaborates with regional and national entities to leverage funds for pertinent research projects.

Funding for the time period July 1, 2006 through December 31, 2011 is \$25.6 million.

5.11.2 Progress Towards Goals

Table 5-14 shows the EMEP Program accomplishments toward its long-term goals.

Table 5-14. Environmental Monitoring, Evaluation, and Protection Program Goals achieved from July 1, 2006 through September 30, 2011

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Develop detailed multi-year EMEP research plan with input from policymakers, scientists, and stakeholders	Complete EMEP research plan and update research plan as needed to ensure relevancy	EMEP's research plan, developed with assistance from the New York Academy of Sciences, was released in September 2007. The Alternative Energy section was updated in 2008 with impacts of wind power development on wildlife in the state.	N/A
Develop, contract, and manage research projects aimed at priority energy-related environmental research areas	<ul style="list-style-type: none"> ▪ Issue six to 12 solicitations ▪ Contract 60 projects ▪ Leverage \$20 million into New York, help build a knowledge-based research infrastructure in New York 	12 solicitations have been issued. 64 projects have been contracted, leveraging more than \$13 million in outside co-funding.	100% of solicitation goal >100% of projects goal 65% of leveraged funds goal
Sponsor workshops, conferences, and seminars	10-15	EMEP has co-sponsored or hosted: five workshops, two seminars, nine conferences and one collaborativemeeting	>100%
Provide web-based EMEP data and information	200,000 total customer visits, inquiries, and downloads to the EMEP website	EMEP websites had 170,000 hits during this period, totalling 327,000 hits and more than 63,000 downloads since inception.	>100%
Publish NYSERDA research reports	40	33 research reports and five summaries were published, including one on RGGI emission allowance auction.	83%
Publish peer-reviewed journal articles	100	95 articles published: 41 on Air Quality/Health Effects, 47 on Ecosystems, two on Climate Change, and five crosscutting research articles.	95%
Provide briefings to decision makers	20	25 briefings were held with various regulators, policymakers, and other decision-makers relevant to EMEP research.	>100%

5.11.3 Follow-Up on Evaluation Recommendations

The process evaluation completed by Research into Action in 2010 focused on the information transfer component of NYSERDA's EMEP, which has been part of the **New York Energy SmartSM** Program since 1999.² The process evaluation specifically sought to understand how EMEP information products are perceived and how they are used by several key contact populations. As part of this effort, the research team also sought to identify areas where EMEP could improve the access, usability, and/or relevance of the information products that flow from the program-sponsored research. The process evaluation report is now posted on NYSERDA's website.

Based on the report's findings and conclusions, the process evaluation made the recommendations presented in Table 5-15.

² Research Into Action, Process Evaluation: Environmental Monitoring, Evaluation and Protection Program, June 2010.

Table 5-15. EMEP Evaluation Recommendations and Status

Source of Recommendation (Contractor, Report Title, Date)	Recommendations	Status	Program Implementer Response to Recommendation and Adoption Decision Rationale
RIA, Process Evaluation of EMEP, June, 2010	Program staff members should focus on networking as an outreach activity and encourage others involved in the program to provide information about the program directly to their peers.	Under review	These recommendations were presented to the EMEP Program. Advisory Group who provided feedback to staff. Outreach Contractors were hired to help implement some of the recommendations.
	Continue to require that EMEP researchers submit a final report that is appropriate for the project, the scope of which will vary on a case-by-case basis.	Under review	
	Consider strategies for simplifying the review process associated with finalizing reports when indicated by project characteristics.	In process of being adopted	
	Regardless of the level of technical review or the number of reviewers, project managers should continue to be alert for opportunities to collect and summarize comments; to minimize the number of document revisions; and ensure that each successive review is providing marginal improvement sufficient to justify the time required of the researcher and NYSERDA staff.	Under review	
	Define the purpose of quarterly reports and what NYSERDA expects these reports to contain, and consider ways to facilitate the quarterly reporting process for researchers, recognizing that they may not be accustomed to tracking budgets and research progress in this way.	Under review	
	Consider milestone reports and payments rather than quarterly reports if appropriate, given the anticipated workflow associated with individual research projects.	In process of being adopted	
	Consider a facilitated meeting with advisors to create a statement of focus or mission and otherwise clarify their role and what the program expects of them.	Under review	
	Clarify for advisors NYSERDA’s expectations for dissemination of results, document review tasks, and promotion of EMEP efforts.	Under review	
	Improvements in constituent tracking would be valuable for implementing improvements to EMEP’s overall outreach strategy.	Under review	

5.12 Industrial Process & Product Innovation Program

5.12.1 Program Description

The Industrial Process & Product Innovation (IPPI) Program³ supports feasibility studies and technology demonstrations and commercialization that (1) improve energy productivity and competitiveness of New York manufacturers (minimize cost per unit of output), (2) encourage capital investment and employment growth in New York facilities, (3) introduce New York-manufactured goods into new markets, and (4) encourage adoption of process changes that minimize waste. Cost-shared demonstration projects reduce risk and encourage manufacturers to adopt innovative and underused product and process alternatives. IPPI addresses product development as well as industrial process improvements. Occasionally, in addition to the general-industry IPPI solicitation, the program also offers a sector-specific solicitation such as PON 1236, “Energy Productivity in Innovative Local Food Production Systems”.

Funding for the time period July 1, 2006 through December 31, 2011 is \$12.0 million.

5.12.2 Progress Toward Goals

Table 5-16 shows long-term goals and progress for the Program. The Program is making excellent progress with regard to the first goal. The second and third goals are being monitored over the longer-term.

³ This program was formerly known as the Industrial Research, Development and Demonstration Program.

Table 5-16. Industrial Process & Product Innovation Program – SBC III Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Issue annual solicitations	Fund 35 to 45 cost-shared projects.	Total of 60 projects approved for funding	>100%
Technology transfer	Conduct technology transfer and outreach activities to broaden the acceptance of successful technologies and technical approaches via participation in at least two workshops. Publish six final reports as projects are completed.	Final reports: 11 Training sessions: 3 Conferences papers/presentations: 8 Site tours: 4 Open House: 1 Trade Journal articles: 2 Press release: 3 Excellence award: 1	N/A
Program metrics	Projects supported during the SBC III period are expected to result in cumulative annual energy savings of \$6 million, and project-related sales of \$12 million.	Seventeen projects completed: - Realized Energy savings: \$1.6 Million - Realized Non-energy savings: \$0.3 Million - Realized Project-related sales: \$3 Million - Anticipated energy savings: \$1.0 Million - Anticipated project-related sales: \$2.5 Million	Realized Energy: 24% Realized Sales: 30%

As shown in Table 5-17, 60 projects (from various NYSERDA solicitations) have been approved for funding. At this time, there are 23 signed contracts that are active and 19 projects have been completed.

Table 5-17. Status of IPPI Projects by Solicitation through September 30, 2011

	Number of SBC-funded Projects Approved	Number of Signed Active Contracts	Number of Terminated Contracts	Number of Completed Projects
PON 998: Industrial Process & Productivity Improvement	11	0	8	3
PON 1130: Industrial Research, Development and Demonstration	13	5	1	7
PON 1190: Industrial Process & Product Innovation	15	6	1	8
PON 1206: Data Center and Server Efficiency	2	1	1	0
PON 1236: Energy Productivity in Innovative Local Food Production Systems	3	2	1	0
PON 1276: Industrial Process and Product Innovation	14	9	4	1
PON 2250: Innovation in the Manufacturing of Clean Energy Technologies	1	0	0	0
Other – one purchase order for Agriculture Worksheets	1	0	0	1
All Solicitations	60	23	16	20

PON 998 was issued in 2006 with total funding of \$4 million.
 PON 1130 was issued in 2007 with total funding exceeding \$5.7 million.
 PON 1190 was issued in 2007 with total funding of \$5.5 million.
 PON 1206 was issued in 2008 with total funding of \$3 million.
 PON 1236 was issued in 2008 with total funding of \$1.5 million.
 PON 1276 was issued in 2009 with total funding of \$2.75 million.
 PON 2250 was issued in 2011 with total funding of \$2.5 million.

Table 5-18 shows the distribution of active contracted projects by type.

Table 5-18. Active IPPI projects by Project Type (July 1, 2006 to September 30, 2011)

	Number of Projects Encumbered	Funds Encumbered (\$Million)
Research Studies (feasibility studies, market assessments, etc.)	21 (50%)	\$1.8 (18%)
Process Improvement Demonstrations	11 (26%)	\$3.5 (45%)
Product Development	10 (24%)	\$3.03 (37%)
Total	42 (100%)	\$8.25 (100%)

This past quarter, the IPPI Program sent one contract out for signature, completed two projects, closed one project and terminated one project. One project was approved for SBC funding from Round 1 of PON 2250. Twenty-two proposals were received for PON 2250, Round 2 on September 15, 2011.

5.13 Municipal Water and Wastewater Efficiency

5.13.1 Program Description

The Municipal Water and Wastewater Efficiency Program supports the development and demonstration of new technologies for the water/wastewater treatment sector. Studies and technology transfer activities, designed to accelerate the adoption of energy efficiency technologies, are also supported. In New York, the water/wastewater treatment sector uses 2.5 to 3 billion kWh annually. On average, treatment of water and wastewater represents 35% of a municipality's energy budget.

This R&D program is closely coordinated with programs offered through NYSERDA's Energy Efficiency Services Group. The FlexTech Program (formerly known as the Technical Assistance Program) has served the municipal water/wastewater sector since 1997 and has provided funding for 92 site-specific feasibility analyses to date. Also, equipment incentives are available through NYSERDA's Existing Facilities Program. In addition, technology transfer and outreach, through the **Energy SmartSM** Focus Program, will continue to play a key role in encouraging the adoption of innovative and energy-efficient technologies and practices.

Funding for the time period July 1, 2006 through December 31, 2011 is \$3.35 million.

5.13.2 Recent Program Accomplishments

Several goals have been set for the Municipal Water and Wastewater Efficiency Program. Since July 1, 2006, the Program has been making good progress toward all of its long-term goals as are shown in Table 5-19.

Table 5-19. Municipal Water and Wastewater Efficiency Program SBC III Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Issue annual solicitation	Select and fund 12 or more projects. Provide assistance to a minimum of 12 municipal wastewater and water treatment facilities.	14 projects, directly affecting 14 facilities, have been funded. Two additional projects are in the negotiations phase, which will directly affect two facilities.	>100%
Technology transfer	Provide critical information to 1,000 individuals serving the municipal wastewater and water treatment sector in New York on ways to optimize energy use at municipal wastewater and water treatment facilities.	<ul style="list-style-type: none"> - 21 presentation with over 1,300 participants - two webcasts with over 100 participants - one management training with 70 participants - one web-based report on submetering of wastewater plants - one publication - six conferences dedicated to wastewater - one meeting with policy makers <p><u>On-going:</u> The Vertical Outreach (Energy Smart Focus) program is providing customized services to support energy efficiency in the sector, offering outreach materials and training to individuals associated with the sector statewide.</p>	>100%
Energy and cost savings	On average, projects take five to seven years from conception to implementation.		

PON 2202 was issued in February 2011 with \$1.6 million in total available funding. The PON specifically targeted the development or demonstration of innovative technologies associated with anaerobic wastewater treatment, energy-efficient nutrient removal from wastewater, and harnessing electric power from water and wastewater treatment systems.

5.14 Next Generation and Emerging Technologies

5.14.1 Program Description

This program emphasizes discrete and integrated end-use technologies for buildings, daylighting applications, solar thermal applications, and emerging technologies for industry and buildings not covered elsewhere in NYSERDA's **New York Energy SmartSM** portfolio of programs. The bulk of funds for this program is being administered through narrowly defined competitive solicitations focusing on advanced building demonstrations, discrete building technologies, solar thermal applications, daylighting

applications, and emerging technologies. The program emphasis is on funding developers of energy-efficient technologies that would be commercially available to end users. Demonstration solicitations are open to all end-use customers, particularly those with high electric loads.

Funding for the time period July 1, 2006 through December 31, 2011 is \$28.2 million.

5.14.2 Progress Toward Goals

Several long-term goals have been set for the Next Generation and Emerging Technologies Program. These goals and progress are shown in Table 5-20. Overall, the Program is making good progress toward achieving its long-term goals.

Table 5-20. Next Generation and Emerging Technologies Program – Goals and Achievements

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Advanced Building Program	Three solicitations Four demonstration test beds Three product development projects	Eight solicitations completed. The advanced building solicitations have explored building systems such as whole-house ventilation, compression-less air conditioning, window improvements, and micro-CHP. Under PON 1096, Demonstration of High Performance Residential Homes, four teams were formed to design, build, and demonstrate high-performance residential homes to illustrate the importance of tight building envelopes and improved construction practices. Nine product development projects are underway	>100% of solicitations goal >100% of demo test beds goal >100% of product development projects
Daylighting Applications	15 -20 design assistance projects Eight daylighting implementations in buildings	Nineteen clients have received daylighting design assistance services. One daylighting implementation project is underway.	95% of the design assistance goal 13% of the daylighting goal
Solar Thermal Applications	One solicitation Six demonstrations	One solicitation (PON 1085) completed. Five out of six installations are complete from two demonstration projects.	50% of the solicitations goal >40% of the goal for demonstration projects

Activity	Program Goals (July 1, 2006 through December 31, 2011)	Achieved July 1, 2006 through September 30, 2011	% of Goal Achieved
Emerging Technologies (Discrete Building Technologies)	Six solicitations 30 product development projects	Seven solicitations have been completed to date. Solicitations have funded a wide variety of product development and demonstrations of end-use technologies including thermo-photovoltaic applications, micro-CHP, solid copper rotor electric motors, high-efficiency billboard displays, and solar thermal air conditioning. Twenty-One product development projects are underway.	>100% of the solicitations goal 70% of the projects goal

Shown in Table 5-21, by activity area, is the contract status of approved projects.

Table 5-21. Status of Next Gen Projects by Solicitation

	Number of Signed Active Contracts	Number of Unsigned Contracts	Number of Completed Projects
Advanced Building Program	16	4	9
Daylighting Applications	5	0	1
Solar Thermal Applications	2	0	0
Emerging Technologies	23a	8	6
Total	46b	12	16

a Four of these projects are funded with Demand Response funds.

b The total number of active project declined relative to last quarter due to adjustments reflecting eight projects that were terminated or cancelled.

As of this quarter, PON 1772: Next Generation Emerging Technologies for End-Use Efficiency, has three contracts in negotiation and four signed contracts.

PON 2254, which was a result of the Deep Energy Retrofit Pilot work in Utica, received 14 proposals totaling \$1.8 million. Six proposals were selected and received funding, four are funded with SBC. Also the Heating and Cooling PON 2219 received a total of 27 proposals totaling \$5.1 million. Six proposals were selected and received funding, four supported with SBC funds.

Appendix A: Evaluation Adjustment Factors

This appendix was created in lieu of tables previously presented in Sections 3, 4, and 5 of each quarterly report showing the adjustments applied to each program’s reported savings for measurement and verification (M&V) and attribution (net-to-gross) evaluation assessments. Only the final net program savings, with all adjustments applied, are presented within the main body of this quarterly report, but these adjustment factors are provided so the reader can understand the extent to which M&V realization rates and the attribution work on freeridership and spillover affect the overall program achievements.

Table A-1. Commercial/Industrial Program Evaluation Adjustment Factors

Program	Savings Metric	Realization Rate	Freeridership	Spillover	Net-to-Gross Ratio
Existing Facilities (New York Energy Smart SM)	MWh	N/A ¹	N/A ¹	N/A ¹	N/A ¹
	MW	N/A ¹	N/A ¹	N/A ¹	N/A ¹
	Curtable MW	N/A ¹	N/A ¹	N/A ¹	N/A ¹
	MMBtu	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Existing Facilities (EEPS electric and natural gas)	MWh	1.0	N/A	N/A	0.90a
	MW	1.0	N/A	N/A	0.90a
	MMBtu	1.0	N/A	N/A	0.90a
Business Partners: Small Commercial Lighting	MWh	0.94	39%	79%	1.10b
	MW	1.0	39%	79%	1.10b
Business Partners: Premium Efficiency Motors	MWh	1.0	67%	168%	0.88
	MW	1.0	67%	113%	0.70
Business Partners: Commercial HVAC	MWh	N/A	N/A	N/A	N/A
	MW	N/A	N/A	N/A	N/A
Business Partners: Hospitality Lighting	MWh	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated
	MW	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated

Program	Savings Metric	Realization Rate	Freeridership	Spillover	Net-to-Gross Ratio
Loan Fund	MWh	0.81c	27%	20%	0.93
	MW	1.73c	27%	20%	0.93
	MMBtu	1.59	27%	20%	0.93
New Construction (New York Energy Smart SM)	MWh	1.03d	39%	89%	1.22d
	MW	0.97d	39%	89%	1.22d
	MMBtu	1.0d	39%	89%	1.22d
New Construction (EEPS electrical and natural gas)	MWh	1.03	39%	89%	1.22
	MW	0.97	39%	89%	1.22
	MMBtu	1.0	N/A	N/A	0.9a
Flex Tech (New York Energy Smart SM)	MWh	1.0d	25%	48%	1.14d
	MW	1.0d	25%	48%	1.14d
	Curtable MW	1.0d	25%	48%	1.14d
	MMBtu	1.0	25%	48%	1.14
Flex Tech (EEPS electric and natural gas)	MWh	1.0	N/A	N/A	1.14
	MW	1.0	N/A	N/A	1.14
	MMBtu	1.0	N/A	N/A	0.9a
Industry and Process Efficiency (EEPS)	MWh	1.0	N/A	N/A	0.9a
	MW	1.0	N/A	N/A	0.9a
	MMBtu	1.0	N/A	N/A	0.9a

¹Realization rates and Net-to-Gross ratios are applied to the several individual predecessor components of this program and savings are reported at an aggregate level.

a DPS directed NTG ratio of 0.9 until evaluation of program is done.

b Net-to-Gross Ratio = (1-Freeridership) * (1+Spillover).

c The realization rates calculated only apply to the custom measure kWh and kW savings. Savings arising from pre-qualified measures have a realization rate of 1.0.

d Adjustment factors shown here do not include separate adjustments made to a subset of large energy saving projects that were separately evaluated.

Table A-2. Residential and Low-Income Program Evaluation Adjustment Factors

Program	Savings Metric	Realization Rate	Freeridership	Spillover	Net-to-Gross Ratio
New York ENERGY STAR Homes (New York Energy Smart SM)	MWh	1.10	28%	48%	1.17
	MW	2.32	28%	48%	1.17
	MMBtu	0.74	28%	48%	1.17
Home Performance with ENERGY STAR (New York Energy Smart SM)	MWh	1.00	26%	41%	1.12
	MW	1.04	26%	41%	1.12
	MMBtu	0.86	26%	41%	1.12
New York ENERGY STAR Homes (EEPS natural gas)	MMBtu	1.0	N/A	N/A	0.9a
Home Performance with ENERGY STAR (EEPS natural gas)	MMBtu	1.0	N/A	N/A	0.9a
Assisted Multifamily	MWh	0.97	27%	15%	0.84
	MW	1.26	27%	15%	0.84
	MMBtu	1.0	27%	15%	0.84
Comprehensive Energy Management	MWh	0.57	2%	18%	1.16
	MW	0.82	2%	18%	1.16
Low Income Direct Installation	MWh	1.0	N/A	N/A	0.9a
	MW	1.0	N/A	N/A	0.9a
Multifamily Performance Program (New York Energy Smart SM)	MWh	1.0	N/A	N/A	0.9a
	MW	1.0	N/A	N/A	0.9a
	MMBtu	1.0	N/A	N/A	0.9a
Market Rate Multifamily Performance (EEPS electric and natural gas)	MWh	1.0	N/A	N/A	0.9a
	MW	1.0	N/A	N/A	0.9a
	MMBtu	1.0	N/A	N/A	0.9a
Low Income Multifamily Performance (EEPS electric and natural gas)	MWh	1.0	N/A	N/A	0.9a
	MW	1.0	N/A	N/A	0.9a
	MMBtu	1.0	N/A	N/A	0.9a

Program	Savings Metric	Realization Rate	Freeridership	Spillover	Net-to-Gross Ratio
New York Energy Smart SM Products and Marketing	MWh	N/A	N/A	N/A	N/A
	MW	N/A	N/A	N/A	N/A
	MMBtu	N/A	N/A	N/A	N/A
Keep Cool	MWh	1.0	18%	15%	0.94
	MW	1.0	18%	15%	0.94
Bulk Purchase	MWh	2.03	10%	5%	0.95
	MW	1.62	10%	5%	0.95
	MMBtu	0.71	10%	5%	0.95
CFL Expansion (EEPS electric)	MWh	Not Evaluated	N/A	N/A	1.6 b, c
	MW	Not Evaluated	N/A	N/A	1.6 b, c
Empower (New York Energy Smart SM)	MWh	N/A d	N/A	N/A	Not Evaluated
	MW	1.0	N/A	N/A	Not Evaluated
	MMBtu	1.0	N/A	N/A	Not Evaluated
Empower (EEPS electric and natural gas)	MWh	0.81e	N/A	N/A	1.0e
	MW	1.0	N/A	N/A	1.0e
	MMBtu	1.0	N/A	N/A	0.9a

a DPS directed NTG ratio of 0.9 until evaluation of program is done.

b NTG estimation is based on sales from service territories compared with sales from one or more non-program comparison areas, sometimes selected to be demographically similar to the program area. The NTG equals the CFL sales in the program area minus CFL sales in the comparison area all divided by program-supported sales in the program area.

c The NTG estimate for the CFL Expansion Program is based on baseline conditions. As NYSERDA's current CFL Expansion Program evaluation is completed, this net-to-gross estimate will decrease.

d **New York Energy SmartSM** EmPower impacts include EmPower New York and Weatherization Network Initiative (WNI) programs, which have different realization rates for MWh/year.

e The last EmPower impact evaluation conducted for the **New York Energy SmartSM** program resulted in a 0.81 realization rate. Net-to-gross was not evaluated. Thus, the total adjustment being applied to EEPS reported savings, based on prior evaluation results, is currently a 0.81. An updated impact evaluation will be completed for the EmPower program in 2011, which is expected to result in new adjustment factors.

Table A-3. Research & Development Program Evaluation Adjustment Factors

Program	Savings Metric	Realization Rate	Freeridership	Spillover	Net-to-Gross Ratio
End Use Renewables	MWh	1.04	N/A	N/A	1.0
	MW	0.85	N/A	N/A	1.0
Wholesale Renewables	MWh	1.0	N/A	N/A	1.0
	MW	1.0	N/A	N/A	1.0
DG-CHP	MWh	0.9a	N/A	N/A	1.07a
	MW	0.98a	N/A	N/A	1.07a
	MMBtu	0.89a	N/A	N/A	1.07a
Demand Response and Innovative Rate Research	MW	0.50	N/A	N/A	0.95

a Adjustment factors shown here do not include separate adjustments made to a subset of large energy saving projects that were separately evaluated.

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State of New York
Andrew M. Cuomo, Governor

New York's System Benefits Charge Programs Evaluation and Status Report

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Quarter Ending September 30, 2011

New York State Energy Research and Development Authority
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