New York State Energy Research and Development Authority

System Benefits Charge Program SBC III Post-Program Status Report

through Year-End 2018

Final Report | June 2019

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

NYSERDA's Promise to New Yorkers:

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

Mission Statement:

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

Vision Statement:

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

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System Benefits Charge Program
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through Year-End 2018

Final Report

Prepared by:

New York State Research and Development Authority

June 2019

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Acronyms and Abbreviations

DG-CHP	Distributed Generation-Combined Heat and Power
DPS	Department of Public Service
GWh	gigawatt-hour
MMBtu	million British thermal units
MW	megawatt
NYS	New York State
PSC	Public Service Commission
SBC	system benefits charge

1 Introduction

This report is intended to provide ongoing, high-level tracking of program spending and performance against key energy and non-energy metrics for the now concluded SBC III program. This report will highlight cumulative progress through 2014 (the previous reporting period), through 2018 (the current reporting period), and changes during the current reporting period. As remaining SBC III funds are declining, program activities and associated benefits are declining as well. This report will serve as the penultimate progress update, summarizing financial status and energy benefits related to the SBC III program. A final closeout report will be submitted to the Department of Public Service (DPS) next year, once the New York State Energy Research Development Authority (NYSERDA) completes or closes out all remaining encumbered projects.

2 SBC Portfolio Summary

Table 1. SBC III Financial Overview through December 31, 2018

Source: NYSERDA

	Total Budget (millions)[1]	Total Funds Spent (millions)[1]	% of Budget Spent	Remaining Commitments (millions)[3]
Cumulative through Last Reporting Period (December 31, 2014)	$1,184.50	$1,042.74	88%	$64.9
Incremental during Current Reporting Period (January 2015 – December 2018)	-$75.92[2]	$36.24	N/A	-$51.84
Cumulative through Current Reporting Period (December 31, 2018)	$1,108.58	$1,078.98	97%	$13.1

1 Inclusive 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). Also, the NYS Cost Recovery Fee budget has been adjusted from available interest earnings as allowed by the September 13, 2012 Order and reflects the amount expended to date through December 31, 2018.

2 The incremental decrease to the total budget during the current reporting period reflects a transfer of uncommitted program funds to EEPS II, pursuant to a June 29, 2015 PSC Order, and the sweep of uncommitted SBC program funds at February 29, 2016, pursuant to the PSC Order dated January 21, 2016, authorizing the Clean Energy Fund.

3 Inclusive of funds encumbered and contract pre-encumbrances.

Table 2 shows both the full benefits that have accrued from the SBC investment in the column labeled Cumulative though Current Reporting Period Through Year-End 2018 as well as an accounting of the benefits remaining in effect today from measures still within their useful life in the column labeled Cumulative Savings through Year-End 2018 less Retired Savings.

Table 2. SBC I, II, and II Benefits Summary

See Table notes for additional information[1, 2]

Source: NYSERDA

Benefits	Cumulative through Last Reporting Period Through Year-End 2014	Cumulative though Current Reporting Period Through Year-End 2018	Savings from Retired Measures through 2018[3]	Cumulative Savings through Year-End 2018 less Retired Savings
Electricity Savings from Energy Efficiency and On-Site Generation (Annual GWh)	4,178	4,238	-690	3,548
Peak Demand Reduction[4] (MW)	1,816	1,824	-690	1,134
Net Fuel Savings (Annual MMBtu)	3,840,887	3,867,412	-3,000,000	949,420
Annual Energy Bill Savings to Participating Customers (Millions of dollars)	638			521
Renewable Energy Generation (Annual GWh)	108			108
CO_2 Emissions Reductions (Annual Tons)[5]	1,574,846			2,106,532
Equivalent number of cars removed from NY roadways for one year[6]	308,793			413,045

Table notes are on the next page

[1] This table includes data for SBC I, SBC II, and SBC III only. Data presented in similar tables in NYSERDA's Evaluation and Status reports include SBC and EEPS data.

[2] The energy savings presented in this report use the most current Evaluation Adjustment Factors. The methodology for applying the Evaluation Adjustment Factors is described in detail in Appendix A. Thus, data in this report presenting progress through December 31, 2014 may not match values presented in NYSERDA's 2013 annual report issued in May 2014.

[3] Previously achieved energy savings associated with the retirement of certain installed measures reaching the end of their useful life.

[4] Does not include 11.7 MW of renewable energy generation capacity.

[5] Cumulative Carbon Emissions reductions through 2018 are calculated using an updated factor. NYSERDA's electricity emission reduction factor of 1,160 pounds CO2e/MWh is derived using the marginal emission-rate analysis for CO2 from "Appendix: The Benefits and Costs of Net Energy Metering in New York" Figure 28 and applying a line loss factor of 7.2%. http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=49636&MNO=15-E-0703

[6] Factor used to calculate equivalent number of cars removed from NYS roadways has been updated from 5.1 metric tons CO2e per car-year to 4.71 metric tons CO2e per car-year. This updated factor is applied only to the Cumulative Savings through 2018.

3 SBC III Commercial/Industrial Summary

Table 3. Financial Summary–SBC III Commercial/Industrial Programs (in millions of dollars)

Source: NYSERDA

Program	Revised SBC III Budget[1]	SBC III Spent			SBC III Encumbered[2]			SBC III Committed[3] through Year-End 2018	SBC I, II, Budget[4, 5]	TOTAL SBC I, II, and III Budget[5]	TOTAL SBC I, II, and III Spent Through Year-End 2014
		Through Year-End 2014	Through Year-End 2018	Change	Through Year-End 2014	Through Year-End 2018	Change				
Existing Facilities[6]	136.3	118	125.4	7.4	22.2	3.2	-4.2	128.6	135.4	300	253.4
New York Energy Smart Business Partners	20.7	20.7	20.7	0	0.2	0.0	0.0	20.7	21.1	42.4	41.8
Loan Fund and Financing	26.1	26.1	26	-0.1[7]	0.0	0.0	0.1	26.0	12.3	39.5	38.4
Energy Smart Focus	17.5	17.6	17.5	-0.1	0.0	0.0	0.1	17.5	4.8	23.4	22.4
New Construction Program	110.1	102.8	108	5.2	7.9	1.4	-3.8	109.4	53.1	170.6	155.9
FlexTech Technical Assistance	25.1	24.8	24.9	0.1	0.5	0.1	0.0	25.0	20.4	50.2	45.2
TOTAL C&I[8]	**$335.91**	**$310.00**	**$322.50**	**$12.50**	**$340.90**	**$4.69**	**-$7.81**	**$327.19**	**$247.10**	**$626.10**	**$557.10**

1 SBC III: July 1, 2006 through December 31, 2011. Budgets have been revised to reflect transfers of uncommitted program balances pursuant to multiple PSC Orders and reflect amounts through December 31, 2018.

2 Change in encumbered "Program" funds may show an increase because "encumbered" funds do not include pre-encumbrances that met the definition of committed program funds as of the December 31, 2011 end of the program

3 Encumbered funds associated with signed contracts and purchase orders as well as funds spent.

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

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

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

7 Net negative expenditures result from payback on loans issued using SBC III funds.

8 Totals may not sum due to rounding.

Table 4 shows an accounting of the full benefits that have accrued from the SBC investment, without addressing retirements that may have occurred. Given the limitations of a nearly 20-year data set, retirement information is not available at the individual program level. Furthermore, it would be inappropriate to subtract retirements when comparing program benefits against quantitative energy goals originally set for each program.

The legacy SBC programs focused on electricity savings and did not have fuel savings goals. For transparency, and to maintain alignment with the prior reporting methods, all energy values are shown here, accounting for both the savings and usage required for fuel switches. Carbon and bill savings benefits are calculated on a fully net basis, which is aligned with current practice.

Table 4. Cumulative Annual Benefits Summary–SBC III Commercial/Industrial Programs

See table notes for additional information.[1]

Source: NYSERDA

Program	SBC III Electricity Savings (GWh)					SBC III Peak Demand Savings (MW)					SBC III Fuel Savings (MMBtu)				
	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[3]	% Goal Achieved
Existing Facilities[4]	958.6	966.8	8.2	484	200%	Permanent: 181.2 Callable: 202.4	Permanent: 182.2 Callable: 204.2	Permanent: 1.01 Callable: 1.76	Permanent: 123 Callable: 239	Permanent: 148% Callable: 85%	-63,501	-63,501	0.0	N/A	N/A
New York Energy Smart Business Partners	80.8	80.8	0.0	105	77%	22.2	22.2	0.0	21	106%	N/A	N/A	N/A	N/A	N/A
Loan Fund and Financing	38.2	38.2	0.0	N/A	N/A	39.3	22.2	0.0	N/A	N/A	461,427	461,427	0.0	N/A	N/A
Energy Smart Focus[5]	N/A	N/A	N/A	53	N/A	N/A	N/A	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A
New Construction Program	239.2	256.3	17.1	356	72%	54.5	59.0	4.54	41	144%	8,786	74,851	66,065	N/A	N/A
FlexTech Technical Assistance[6]	709.2	709.2	0.0	409	173%	Permanent: 118.0 Callable: 165.8	Permanent: 118.0 Callable: 165.8	0.0	Permanent: 83.0 Callable: N/A	Permanent: 142% Callable: N/A	-847,011	-847,011	0.0	N/A	N/A
Overlap Removed[7]	226	226	0.0	N/A	N/A	46.9	46.9	0.0	N/A	N/A	247,040	247,040	0.0	N/A	N/A
TOTAL C/I[8]	**1,800.1**	**1,825.2**	**25.2**	**1,407**	**130%**	**736.5**	**744.1**	**7.62**	**517.0**	**144%**	**-687,339**	**-127,194**	**66,065**	**N/A**	**N/A**

Table notes are on the next page

[1] The energy savings presented in this report use the most current Evaluation Adjustment Factors. The methodology for applying the Evaluation Adjustment Factors is described in detail in Appendix A. Thus, data in this report presenting progress through December 31, 2014 may not match values presented in NYSERDA's 2013 annual report issued in May 2014. Program-level retirements are not available and are omitted from this table.

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

[3] There were no New York Energy $mart[SM] goals for fuel savings for Commercial/Industrial sector programs.

[4] 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.

[5] The program recommends on-site generation, which results in an increase in fuel use, offsetting fuel reductions achieved.

[6] The program recommends on-site generation, which results in an increase in fuel use, offsetting fuel reductions achieved.

[7] Overlap factors were updated in Q1 2008.

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

4 SBC III Residential and Low-Income Summary

Table 5. Financial Summary–SBC III Residential and Low-Income Programs (in millions of dollars)

Source: NYSERDA

Program	Revised SBC III Budget[1]	SBC III Spent			SBC III Encumbered[2]			SBC III Committed[3] through Year-End 2018	SBC I, II, Budget[4, 5]	TOTAL SBC I, II, and III Budget[5]	TOTAL SBC I, II, and III Spent Through Year-End 2014
		Through Year-End 2014	Through Year-End 2018	Change	Through Year-End 2014	Through Year-End 2018	Change				
Single Family Home Performance	59.9	60	59.8	-0.2	0	0.0	0.0	59.8	135.4	300	253.4
Multifamily Building Performance	28.2	27.8	28.1	0.3	0.4	0.04	-0.4	28.1	21.1	42.4	41.8
Market and Community Support Residential	53.1	53.1	53.1	0	0.0	0.005	0.0	53.1	12.3	39.5	38.4
Communities and Education	9.6	9.6	9.6	0	0.0	0.0	0.0	9.6	4.8	23.4	22.4
SUB TOTAL Residential	$150.80	$150.50	$150.60	$0.10	$0.40	$0.04	-$0.36	$150.64	$173.60	$405.30	$356.00
Single Family Home Performance	44.9	44.9	44.9	0	0	0.0	0.0	44.9	22.3	69.3	67.2
Multifamily Building Performance	112.8	111.8	112.5	0.7	1.1	0.2	-0.9	112.7	45.4	161.1	157.2
EmPower New York	53.1	53.1	53.1	0	0.0	0.0	0.0	53.1	14.3	67.4	67.4
Buying Strategies & Energy Awareness	11.1	11.1	11.1	0	0.0	0.0	0.0	11.1	4.7	16.3	15.8
SUB TOTAL Low-Income	221.9	220.9	221.6	0.7	1.1	0.2	-$0.90	221.8	86.7	314.1	307.6
TOTAL Residential and Low-Income	**$745.40**	**$310.00**	**$744.40**	**$1.60**	**$340.90**	**$0.48**	**-$2.52**	**$744.88**	**$247.10**	**$626.10**	**$557.10**

Table footnotes on the next page

Table 5 Continued

[1] SBC III: July 1, 2006 through December 31, 2011. Budgets have been revised to reflect transfers of uncommitted program balances pursuant to multiple PSC Orders and reflect amounts through December 31, 2018.

[2] Encumbered funds associated with signed contracts and purchase orders. Does not include funds spent.

[3] Sum of Funds Spent and Encumbered Funds.

[4] SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

[5] Reflects carryover in funds and reallocation as approved by the Public Service Commission in 2007.

[6] Totals may not sum due to rounding.

Table 6 shows an accounting of the full benefits that have accrued from the SBC investment, without addressing retirements that may have occurred. Given the limitations of a nearly 20-year data set, retirement information is not available at the individual program level. Furthermore, it would be inappropriate to subtract retirements when comparing program benefits against quantitative energy goals originally set for each program.

The legacy SBC programs focused on electricity savings and did not have fuel savings goals. For transparency, and to maintain alignment with the prior reporting methods, all energy values are shown here, accounting for both the savings and usage required for fuel switches. Carbon and bill savings benefits are calculated on a fully net basis, which is aligned with current practice.

Table 6. Cumulative Annual Benefits Summary–SBC III Residential and Low-Income Programs

See table notes for additional information.[1]

Source: NYSERDA

Program	SBC III Electricity Savings (GWh)					SBC III Peak DemandSavings (MW)					SBC III Fuel Savings (MMBtu)				
	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[3]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved
Single family Home Performance Program: Existing Homes[4]	7.3	7.3	0.0	31.1	23%	9.1	9.1	0.0	N/A	N/A	812,429	812,429	0.0	743,981	109%
Single family Home Performance Program: New Homes	17.5	17.5	0.0	13.1	134%	12.3	12.3	0.0	N/A	N/A	541,366	541,366	0.0	409,952	132%
Multifamily Performance Program: Existing Buildings[5]	111.1	111.6	0.5	361.3	31%	10.1	10.172	0.07	N/A	N/A	1,184,449	1,212,059	27,610	6,791,300	18%
Multifamily Performance Program: New Buildings	10.4	41.6	31.2	24	173%	2.3	2.786	0.49	N/A	N/A	27,234	31,238	4,004	649,000	5%
Market and Community Support Program	393.4	393.4	0.0	234	168%	69.6	69.6	0.0	N/A	N/A	238,882	238,882	0.0	300,000	80%
EmPower New York	29.2	29.2	0.0	34.9	84%	4.2	4.2	0.0	N/A	N/A	127,746	127,746	0.0	210,441	61%
TOTAL Residential and Low-Income[6]	**568.9**	**600.6**	**31.7**	**698.4**	**86%**	**107.6**	**108.158**	**0.558**	**N/A**	**N/A**	**2,932,106**	**2,963,721**	**31,615**	**9,104,674**	**33%**

1 The energy savings presented in this report use the most current Evaluation Adjustment Factors. The methodology for applying the Evaluation Adjustment Factors is described in detail in Appendix A. Thus, data in this report presenting progress through December 31, 2014 may not match values presented in NYSERDA's 2013 annual report issued in May 2014. Program-level retirements are not available and are omitted from this table.

2 Goals for the New York Energy $mart[SM] Program are specified in NYSERDA's February 28, 2011 revised Operating Plan (resubmitted with revisions April 6, 2011).

3 No peak demand savings goals were set for residential and low-income New York Energy $mart[SM] programs.

4 Cumulative annual net 2014 demand savings for the low-income Assisted Home Performance Program are included in this row.

5 Cumulative annual net 2014 savings for the low-income Assisted Multifamily Program 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.

6 Totals may not sum exactly due to rounding.

5 SBC III Research and Development Summary

Table 7. Financial Summary–SBC III Research and Development Programs (in millions of dollars)

Source: NYSERDA

Program	Revised SBC III Budget[1]	SBC III Spent			SBC III Encumbered[2]			SBC III Committed[3] through Year-End 2018	SBC I, II, Budget[4, 5]	TOTAL SBC I, II, and III Budget[5]	TOTAL SBC I, II, and III Spent Through Year-End 2014
		Through Year-End 2014	Through Year-End 2018	Change	Through Year-End 2014	Through Year-End 2018	Change				
Public Benefit Power Transmission and Distribution Research	13.5	9.6	12.4	2.8	13.4	0.0	-13.4	12.4	0.0	14.7	9.6
End Use Renewable Energy Market[6]	23.8	23.8	23.8	0.0	24.7	0.0	-24.7	23.8	19	43.8	42.8
Clean Energy Infrastructure	46.7	40.9	45	4.1	48	1.6	-46.4	46.6	0.0	52.1	40.9
Distributed Energy Resources: Products and Demonstrations[7]	89.6	79.6	85.5	5.9	92.3	2.7	-89.6	88.2	34	153.2	113.6
Demand Response and Innovative Rate Research	3.7	3.2	3.5	0.3	3.9	0.03	-3.9	3.5	0.0	5.3	3.2
Electric Transportation	5.3	5.2	5.2	0.0	5.8	0.0	-5.8	5.2	0.0	6.0	5.2
Environmental, Monitoring, Evaluation, and Protection	24.1	22.3	23.8	1.5	23.4	0.2	-23.2	24.0	17.7	43.3	40
Industrial and Municipal Process Efficiency[8]	13.8	12.8	13.6	0.8	14.1	0.003	-14.1	13.6	0.0	15.4	12.8
Next Generation and Emerging Technologies	24.4	23	23.9	0.9	25.8	0.2	-25.6	24.1	18.3	46.5	41.3
Wholesale Renewable Energy Market	3.0	3.0	3.0	3.2	3.2	0.0	-68.7	66.9	16.5	19.9	19.5
Other[9]	0.0	<0.1	<0.1	19.5	<0.1	0.0	-315.4	0.0	0.4	0.4	0.4
TOTAL Research and Development[10]	**$247.90**	**$223.40**	**$239.70**	**$39.00**	**$254.60**	**$4.71**	**-$630.83**	**$308.29**	**$105.90**	**$400.60**	**$329.30**

Table notes are on the next page

[1] SBC III: July 1, 2006 through December 31, 2011. Budgets have been revised to reflect transfers of uncommitted program balances pursuant to multiple PSC Orders and reflect amounts through December 31, 2018

[2] Encumbered funds associated with signed contracts and purchase orders as well as funds spent.

[3] Sum of Funds Spent and Encumbered Funds.

[4] SBC I: July 1, 1998 through June 30, 2001; SBC II: July 1, 2001 through June 30, 2006.

[5] Reflects carryover in funds and reallocation as approved by the Public Service Commission in 2007.

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

[7] This includes the DG-CHP Distributed Generation-Combined Heat and Power 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.

[10] Totals may not sum due to rounding.

Table 8 shows an accounting of the full benefits that have accrued from the SBC investment, without addressing retirements that may have occurred. Given the limitations of a nearly 20-year data set, retirement information is not available at the individual program level. Furthermore, it would be inappropriate to subtract retirements when comparing program benefits against quantitative energy goals originally set for each program.

The legacy SBC programs focused on electricity savings and did not have fuel savings goals. For transparency, and to maintain alignment with the prior reporting methods, all energy values are shown here, accounting for both the savings and usage required for fuel switches. Carbon and bill savings benefits are calculated on a fully net basis, which is aligned with current practice.

Table 8. Cumulative Annual Benefits Summary–SBC III Research and Development Programs

See table notes for additional information about this table.[1]

Source: NYSERDA

Program	SBC III Electricity Savings (GWh)					SBC III Peak DemandSavings (MW)					SBC III Fuel Savings (MMBtu)				
	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved	Through Year-End 2014	Through Year-End 2018	Net Change	SBC III Goal[2]	% Goal Achieved
DG-CHP Demonstration Program[3]	472.7	483.0	10.3	N/A	N/A	85.1	87.3	2.2	101	86%	-3,280,593	-3,351,748	-71,155	N/A	N/A
Enabling Technologies for Price Response Load[4,5]	N/A	N/A	N/A	N/A	N/A	-38.1	-38.1	0.0	25	-152%	N/A	N/A	N/A	N/A	N/A
Demand Response and Innovative Rate Research	N/A	N/A	N/A	N/A	N/A	1.0	1.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Renewable Energy Production	4.1	4.1	0.0	N/A	N/A	3.6	3.6	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL[6]	**476.8**	**487.1**	**10.3**	**N/A**	**N/A**	**51.6**	**53.84**	**2.24**	**126**	**N/A**	**-3,280,593**	**-3,351,748**	**-71,155**	**N/A**	**N/A**

1 The energy savings presented in this report use the most current Evaluation Adjustment Factors. The methodology for applying the Evaluation Adjustment Factors is described in detail in Appendix A. Thus, data in this report presenting progress through December 31, 2014 may not match values presented in NYSERDA's 2013 annual report issued in May 2014. Program-level retirements are not available and are omitted from this table.

2 Goals for the New York Energy $mart[SM] Program are specified in NYSERDA's February 28, 2011 revised Operating Plan (resubmitted with revisions April 6, 2011).

3 Savings shown in this row are inclusive of overlap with the FlexTech Technical Assistance Program.

4 MWs enabled under this SBC II 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. Prior to 2011, the MWs enabled under Enabling Technologies for Price Response Load Program were published under the program name Demand Response and Innovative Rate Research.

5 Cumulative annual net demand savings for the Enabling Technologies for Price Response Load Program are negative in Year-End 2014 due to the application of evaluation adjustment factors.

6 Totals may not sum exactly due to rounding.

Appendix A: Explanation of Evaluation Adjustment Factor Application

This appendix describes the approach that NYSERDA has taken in this report toward applying evaluation adjustment factors. The approach has been proposed to staff at DPS for further consideration and discussion and may evolve for future reports.

A.1 Gross Savings Realization Rates

Gross savings realization rates were applied retrospectively to the program years evaluated and subsequent years after those evaluated, until results of the next evaluation are available. Results of the next evaluation are then retrospectively applied in the same manner.[1] No new evaluation studies have been completed in this reporting period.

Evaluation of gross savings involves measurement and verification, engineering analysis, billing analysis and other rigorous approaches to determine the actual energy savings occurring for a sample or population of program participants in a given time period. Evaluated gross savings represent the actual reduction in energy required from the grid/system. Applying gross savings realization rates to the years studied properly aligns the evaluation investment with its value added in program reporting. Applying the latest evaluation results until more recent results are available provides the imperative for routine evaluation of gross savings.

A.2 Net-to-Gross Ratios

Net-to-gross ratios were applied retrospectively to the program years evaluated. Net-to-gross ratios include free ridership, spillover, and measured market effects that can be assigned to a specific program. For subsequent years following the program years evaluated, both of the following values were applied:

[1] With regard to the retrospective application of both realization rates and net-to-gross ratios, it is possible that not every program year will be evaluated, i.e., there may be a gap between evaluation periods. If a gap exists, evaluation contractors should be asked to review findings from the prior studies and recommend a value to be used for the gap year(s).

- A 0.9 default net-to-gross value is applied, per DPS guidance, for SBC3 programs that are now incorporated into the EEPS portfolio.
- A 1.0 default net-to-gross value is applied for non-EEPS programs as has historically been used in reporting.[2]

When results are available from the next evaluation, net-to-gross is again applied retrospectively to replace previously reported savings using the default net-to-gross of 0.9 for EEPS or 1.0 for all other programs. Then the process repeats itself, and the 0.9/1.0 default is used for years following the evaluation period until new results become available.[3]

Evaluation of net savings requires both quantitative analysis as well as qualitative interpretation of analysis results; techniques are used to attain the best possible information as to market conditions and program influence during a specific time frame that is being evaluated. Applying net-to-gross ratios to the years studied will properly align the evaluation investment with its value added in program reporting. Given the dynamics inherent in a changing market, net-to-gross ratios should not be carried forward beyond the program years evaluated as they may overstate or understate net savings from the program. The default value for years following the evaluation study period provides a temporary placeholder adjustment that can be consistently implemented across programs and implementers.

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[2] Net-to-gross factors, whether evaluated or default, for discontinued SBC2 or SBC3 programs that are no longer accruing savings will be held constant (e.g., in many cases these closed programs have not accrued savings for three to seven years).

[3] With regard to the retrospective application of both realization rates and net-to-gross ratios, it is possible that not every program year will be evaluated, i.e., there may be a gap between evaluation periods. If a gap exists, evaluation contractors should be asked to review findings from the prior studies and recommend a value to be used for the gap year(s).

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