



NYSERDA

Clean Energy Fund Quarterly Performance Report Through December 31, 2016

Final Report

February 2017

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.

Clean Energy Fund Quarterly Performance Report Through December 31, 2016

Final Report

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Albany, NY

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1 Overview

The Clean Energy Fund (CEF) was designed to deliver on New York State's commitment to reduce ratepayer collections, drive economic development, and accelerate the use of clean energy and energy innovation.

The CEF supports Governor Andrew M. Cuomo's Clean Energy Standard mandate that requires 50 percent of the State's electricity to come from renewable energy sources by 2030, while reshaping energy efficiency, clean energy, and energy innovation programs.

The CEF offers solutions to:

- Reduce greenhouse gas emissions through increased efficiency and use of renewable energy.
- Make customer energy bills more affordable, delivering \$39 billion in customer bill savings over the life of the CEF.
- Accelerate growth of the State's clean energy economy.
- Mobilize private investment, leveraging \$29 billion over the life of the CEF.
- Provide more value to the customer while reducing ratepayer collections by \$1.5 billion by 2025.

The CEF Order was issued on January 21, 2016.¹ This order required quarterly reporting for the Market Development and Innovation and Research Portfolios about:

- Progress against the initiative-specific milestone.
- CEF goal metric schedules outlined in the Investment Plan Chapters.
- Tracking of expenditures and commitments against their prospective budgets.

¹ Case 14-M-0094 – *Proceeding on Motion of the Commission to Consider a Clean Energy Fund*, Ordering Authorizing the Clean Energy Fund Framework. Issued and effective January 21, 2016.

This report represents quarterly activity through December 31, 2016, and includes achievements of the transition programs that were included in the Resource Acquisition Chapter, which was approved by the New York State Department of Public Service (DPS) on February 29, 2016.² Several initiatives in the Market Development and Innovation and Research Chapters were approved by DPS on May 23, 2016,³ August 17, 2016,⁴ August 31, 2016,⁵ and September 15, 2016⁶ as well.

As of December 31, 2016, the Clean Energy Fund's Transitional Programs have been in operation for 10 months (approved as of February 29, 2016) and the first wave of new initiatives for seven months (approved as of May 23, 2016). The progress of these initiatives are represented throughout this report, and the following table gives insight into each initiative's status beyond what the reported numbers convey during this ramp-up period. In most cases, launched initiatives are achieving the progress anticipated, and where they are not, NYSERDA has made programmatic adjustments to accelerate progress. Notable exceptions to forecast are the Commercial Resource Acquisition Transition initiative, which has been changed and reintroduced to the market, and the Multifamily Resource Acquisition Transition initiatives, which are being revamped.

² Case 14-M-0094 – *Resource Acquisition Approval Letter*. Issued and effective February 29, 2016.

³ Case 14-M-0094 – *DPS Approval of NYSERDA's CEF Investment Plan Chapters*. Issued and effective May 23, 2016.

⁴ Matter 16-00681 - *DPS Approval of NYSERDA's CEF Investment Plan Chapters*. Issued and effective August 17, 2016.

⁵ Matter 16-00681 - *DPS Approval of NYSERDA's CEF Investment Plan Chapters*. Issued and effective August 31, 2016.

⁶ Matter 16-00681 - *DPS Approval of NYSERDA's CEF Investment Plan Chapters*. Issued and effective September 15, 2016.

Table 1. Key Insights, Progress, and Adjustments Per Initiative Under Consideration

Initiative	Key Insights, Progress, and Adjustments under Consideration
Resource Acquisition Transition	
<p>Table 7: Commercial Resource Acquisition Transition and FlexTech</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> • Commercial Implementation Assistance, a program designed to complement utility programs in buying down costs of energy efficiency measures, was redesigned and relaunched in October based on feedback from service providers, customers, and utilities. The initial program design did not yield projects and was revamped and simplified for the market. • FlexTech is lagging forecasts, but is projected to achieve overall program goals as activity accelerates. Companies such as energy service providers and engineering firms, that had leveraged FlexTech under different rules under EEPS, are reincorporating the program into their business development cycle. • Overall attainment of goals is forecasted to lag initial projections by three calendar quarters.
<p>Table 8: Industrial Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> • The Program is lagging the 2016 12-month MWh goals but is projected to attain savings target by Q3 2017. • The program is unlikely to achieve 2016 12-month MMBtu goals given softer return on investment for gas projects due to gas pricing; NYSERDA is aggressively engaged in outreach to potential participants, including oil customers now eligible under CEF.
<p>Table 9: Agriculture Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> • The program is lagging the 2016 12-month MWh goal but is projected to attain savings target by Q2 2017. • The program is unlikely to achieve 2016 12-month MMBtu goals given softer return on investment for gas projects due to gas pricing and customer mix (more farms and fewer greenhouses); NYSERDA is targeting farm sectors (greenhouses, dairy) that use fossil fuels in their process.
<p>Table 10: Multifamily Market Rate Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> • The program, as initially launched, had not yielded projects by the end of this reporting period. NYSERDA plans to propose changes to the Department of Public Service (DPS).
<p>Table 11: Single Family Market Rate Resource Acquisition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> • The program is achieving goals for MWh according to plan, but lower demand for gas savings measures has impacted MMBtu targets.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Resource Acquisition Transition	
<p>Table 12: Low to Moderate Income Single Family Low-Income Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program is achieving most goals according to plan but is slightly behind on MWh goals. NYSERDA will target additional electric reduction opportunities in 2017 in order to achieve the goals.
<p>Table 13: Low to Moderate Income Single Family Moderate-Income Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program is achieving goals at a faster pace than planned.
<p>Table 14: Low- to Moderate-Income Multifamily Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program is currently being redesigned for simplicity and market appeal. NYSERDA has worked extensively with key market participants to address these issues, and a filing to revise and relaunch the program will be submitted to DPS.
<p>Table 15: Commercial New Construction Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program is achieving goals at a faster pace than planned.
<p>Table 16: Low Rise New Construction Market Rate Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program has exceeded the energy efficiency and emissions goals, and is close to achieving the customer bill saving and participant goals.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Resource Acquisition Transition	
<p>Table 17: Low Rise New Construction Low- to Moderate-Income Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program is not yet achieving goals per plan. It is expected that program participation in 2017 will increase if the New York City property tax abatement is reauthorized.
<p>Table 18: Multifamily New Construction Market Rate Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program was launched in August 2016 and is not yet meeting goals according to plan. It is expected that program participation in 2017 will increase if the New York City property tax abatement is reauthorized.
<p>Table 19: Multifamily New Construction Low- to Moderate-Income Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> The program was launched in August 2016 and is not yet meeting goals according to plan. It is expected that program participation in 2017 will increase if the New York City property tax abatement is reauthorized.
<p>Table 20: Anaerobic Digesters Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> Incentive program launched in July 2016. The program is achieving about 75% of energy goals and is meeting bill savings and private investment goals. The program will pivot toward other activities, working with stakeholders to identify market development strategies for 2017 and capitalizing on potential for food waste digestion.
<p>Table 21: Fuel Cells Resource Acquisition Transition</p> <p>Approval Date: February 29, 2016</p>	<ul style="list-style-type: none"> Given market feedback on market potential, NYSERDA is no longer proceeding with the transition program filed in February 2016. NYSERDA is working with stakeholders to identify higher impact strategies to reduce soft costs for fuel cell development, for launch in 2017. A revised Investment Plan will be submitted.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Resource Acquisition Transition	
Table 22: Small Wind Resource Acquisition Transition Approval Date: February 29, 2016	<ul style="list-style-type: none"> The program is not achieving goals according to plan due to smaller sized projects and fewer developers than anticipated.
Table 23: Solar Thermal Resource Acquisition Transition Approval Date: February 29, 2016	<ul style="list-style-type: none"> The program is achieving its energy goals according to plan, although the market lacks a robust number of developers and, as a result, participant goals have not been achieved.
Table 24: Combined Heat and Power (CHP) Resource Acquisition Transition and Power Approval Date: February 29, 2016	<ul style="list-style-type: none"> Incentive program launched in March 2016. Market growth is proceeding. The PSC’s extension of the Indian Point Energy Center Demand Management Program (IPEC/DMP) fund eligibility (to December 31, 2016) enabled NYSERDA to expand funding available for CHP projects, but will extend the timeline for achieving CEF goals, given the allocation methods used for the two programs. Collectively, 50 MW of CHP commitments have been approved through December 31, 2016, of which 19.8 MW are associated with IPEC/DMP funds and 30 MW with the CEF. <p>*Note this accounts only for those projects receiving CEF or CEF/IPEC funds (contracts initiated after 4/1/16) and does not include projects with SBC4/IPEC funds that were initiated prior to 4/1/16. Also, as NYSERDA’s authority to commit IPEC funds expired on 12/31/16, all projects supported after 1/1/17 will be fully funded by the CEF until funds are exhausted.</p>
Market Development	
Tables 26-27: Real Estate Tenant Approval Date: May 23, 2016	<ul style="list-style-type: none"> On track to achieve implementation milestones. Attainment of stated 2016 (i.e., first year) targets is projected to lag by one year.
Table 28-29: Real Time Energy Management (RTEM) Approval Date: May 23, 2016	<ul style="list-style-type: none"> Development of a technical guidance document and training for operators originally planned for 2016 is being postponed due to market feedback until 2018. After consulting with market providers, customers, and industry experts, it is recommended that these milestones be postponed until project level data has been obtained. All other milestones are on track. Participation by service providers and pipeline of potential projects is robust and proceeding according to plan. Incentives and building size eligibility were adjusted based on market feedback. Achievements for 2016 represent a six-month lag in benefits from original projections. Attainment of stated 2016 (i.e., first year) targets is projected approximately one year after launch in Q2 2017 (launched June 2016).

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Market Development	
<p>Tables 30-31: Reforming the Energy Vision (REV) Campus Challenge</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve milestones. • The Program has reached more than one-third of its 2019 participant target.
<p>Tables 32-33: Continuous Energy Improvement On-Site Energy Manger</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve implementation milestones. • Pipeline of interested participants continues to grow, four applicants received to date to participate in first pilot. • Achievements for 2016 represent a lag in benefits from original projections due to timing of launch (launched September 2016). • Attainment of stated 2016 (i.e., first year) targets is projected approximately by Q2 2017.
<p>Tables 34-35: Continuous Energy Improvement Strategic Energy Manger</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • Program launched in late November. • Marketing and outreach of program continues with key Industrial managers / C-suite executives. • Achievements for 2016 represent a lag in benefits from original projections due to timing of launch. • Attainment of stated 2016 (i.e., first year) targets is projected in Q1 2017.
<p>Tables 36-37: Clean Energy Communities Initiative</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve implementation milestones. • Since launch in August, strong interest among communities including 123 High Impact Actions from 68 communities, three of which have been formally designated Clean Energy Communities. • While the program is generally on track, reported results for 2016 represent a lag in reported energy benefits from original projections due to timing of launch (launched August 2016). Program has a robust pipeline in the Regional Greenhouse Gas Initiative (RGGI) quarterly reports and will begin to formally report results once there is committed CEF grant funding to designated Clean Energy Communities. • Attainment of stated 2016 (i.e., first year) targets is projected approximately one year after launch in Q3 2017.
<p>Tables 38-39: Off-Shore Wind Master Plan</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve milestones. • Blueprint completed and published. Stakeholder engagement commenced.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Market Development	
Tables 40-41: Off-Shore Wind Pre-Development Approval Date: May 23, 2016	<ul style="list-style-type: none"> • On track to achieve milestones. • Planning underway for procurements and deploying wind resource measurement systems, site specific environmental and sea floor studies.
Tables 42-43: REV Connect Approval Date: May 23, 2016	<ul style="list-style-type: none"> • Achievement of stated Q3 and Q4 2016 milestones is projected by Q2 2017, with the launch of the initial REV Connect platform. • Expected to launch the initial REV Connect platform to allow submission of project ideas, as well as the project evaluation process, in Q1 2017. • Contractor selected, information resources under revision, and initial market research completed.
Tables 44-45: Reducing Barriers to Energy Storage Deployment Approval Date: August 17, 2016	<ul style="list-style-type: none"> • On track to achieve milestones. • Solicitation issued. Battery safety tests are underway.
Tables 46-47: Electric Vehicles Rebate Approval Date: August 17, 2016	<ul style="list-style-type: none"> • Expected to launch rebate program in Q1 2017.
Table 48-49: Greenhouse Lighting and Systems Engineering (GLASE) Approval Date: September 15, 2016	<ul style="list-style-type: none"> • Proceeding to contract in January 2017. • Reviewing qualifications of proposed Scientific Advisory Board candidates.
Table 50-51: RetrofitNY Approval Date: August 31, 2016	<ul style="list-style-type: none"> • Ongoing pre-launch and planning activities proceeding as planned.
Table 52-53: REVitalize Approval Date: August 31, 2016	<ul style="list-style-type: none"> • Ongoing pre-launch and planning activities proceeding. • Solicitation is under development and will be issued in Q1 2017.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Innovation and Research	
<p>Table 54-55: Low-Income Forum on Energy</p> <p>Approval Date: August 31, 2016</p>	<ul style="list-style-type: none"> • Ongoing pre-launch and planning activities proceeding. • Solicitation for program support is under development and will be issued in Q1 2017.
<p>Table 56: Healthy Homes Feasibility Study</p> <p>Approval Date: August 31, 2016</p>	<ul style="list-style-type: none"> • Ongoing pre-launch and planning activities proceeding. • The feasibility study is under contract and work is underway, with an anticipated completion in Q1 2017.
<p>Table 57-58: Industry Partnerships</p> <p>Approval Date: September 15, 2016</p>	<ul style="list-style-type: none"> • Ongoing pre-launch and planning activities proceeding as planned.
<p>Tables 60-61: Distributed Energy Resource Interconnection</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve milestones. • Contracted with Electric Power Research Institute (EPRI) to analyze technology gaps and create a roadmap. • Mobilized several research/technology consulting firms to provide technical support for DER interconnection improvements in NYS. • Launched a competitive program funding opportunity focused on innovation to reduce DER interconnection burdens in NYS (October 2016). • Developing model for collaboration between NYSERDA, DPS, New York Power Authority (NYPA), utilities, and grid tech companies to ensure road map work is compatible with and complimentary to the development of the Distribution System Implementation Plans (DSIPs). This work will intensify in Q4 as DSIPs are made available.
<p>Tables 62-63: High Performing Grid Modernization</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve milestones. • In addition to the progress noted above in the related DER Interconnection area, NYSERDA issued a competitive program funding opportunity focused on innovation to advance high performing grid modernization (October 2016).
<p>Tables 64-67: Cleantech Startup Growth</p> <p>Approval Date: May 23, 2016</p>	<ul style="list-style-type: none"> • On track to achieve milestones. • Strong response from the competitive program funding opportunity for cleantech incubators. Contract negotiations with the selected projects will begin Q1 2017. Due date for the second round of proposals is scheduled for Q4 2017.

Table 1 continued

Initiative	Key Insights, Progress, and Adjustments under Consideration
Innovation and Research	
Tables 68-69: NextGen HVAC Approval Date: August 17, 2016	<ul style="list-style-type: none"> • First Technology challenge milestone will likely be delayed by one quarter and rolled out in Q1 2017. Resulted from expanded scope of technical analysis and inclusion of more stakeholder input in this early work.
Tables 70-71: Electric Vehicle Innovation Approval Date: August 17, 2016	<ul style="list-style-type: none"> • On track to achieve milestones. • Initial development of 2017 offering underway.

This report reflects direct benefits from participation in NYSERDA’s programs, as shown in the following tables. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 2. CEF Minimum Projected Benefits 2016-2025 and Progress to Date, Commitment Basis (in millions)^{7, 8, 9, 10, 11,12}

		Cumulative Annual Benefits		Lifetime Benefits	
		Cumulative Progress through December 31, 2016	Minimum Projected Benefits 2016-2025	Cumulative Progress through December 31, 2016	Minimum Projected Benefits 2016-2025
Energy Efficiency	MWh	0.38	10.6	5.85	*
	MMBtu	1.23	13.4	21.70	*
	MW	0.00004	*	0.00004	*
Renewable Energy	MWh	0.02	*	0.23	88
	MW	0.000002	*	0.000002	*
CO2 Emission Reductions (metric tons)		0.22	*	3.60	133
Customer Bill Savings (\$ million)		\$52.11	*	\$840.42	\$39,131
Private Investment (\$ million)		\$393.94	*	\$393.94	\$29,356

* Metric to be tracked and reported, though specific target was not ordered.

⁷ The Renewable Energy Minimum Project Benefits Target is based on the estimated benefits of NY-Sun, which are separately reported. As of December 31, 2016, NY Sun has contributed 33,080,125 Lifetime MWh toward this target.

⁸ The Private Investment Target includes estimated benefits from NY-Sun and NY Green Bank. This information will be reported on an annual basis.

⁹ Bill savings represent savings for participants of NYSEERDA programs.

¹⁰ Cumulative Current Annual Targets for the initial Resource Acquisition Transition Chapter were rounded to the nearest 1,000. NYSEERDA will update these to round to three significant figures, consistent with subsequent filings, when that Chapter is next filed.

¹¹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report, as it will take time for the benefits to be realized.

¹² Beginning with Q4 2016, NYSEERDA updated emission factors for natural gas, #2 oil, #6 oil, kerosene, propane, wood and steam to be consistent with emission factors used in the updated NYS Greenhouse Gas Inventory (<https://www.nyserda.ny.gov/About/Publications/EA-Reports-and-Studies/Energy-Statistics>). These factors are derived from EPA’s February 2016 State Inventory Tool release (<https://www.epa.gov/statelocalclimate/state-inventory-and-projection-tool>). Steam emission factors have been updated to be consistent with New York City’s updated Greenhouse Gas Inventory (http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC_GHG_Inventory_2014.pdf).

Table 3. Market Development and Innovation & Research Portfolio Level Budgets and Spending ¹³

Initiative	PSC Ordered Program Budget Funds ^a	Budget Approved as of December 31, 2016 ^b	% of Ordered Budget Funds Approved ^c	Expended Funds ^d	Open Encumbrances ^e	Contract Pre-Encumbrances ^f	Committed Funds ^g	% of Approved Budget Committed ^h	Budget Approved Remaining Balance ⁱ
Market Development									
Program Funds									
NYS Cost Recovery Fee	\$2,386,760,624	\$640,700,928	27%	\$28,995,853	\$15,109,103	\$68,872,020	\$112,976,977	18%	\$527,723,951
Innovation & Research									
Program Funds									
NYS Cost Recovery Fee	\$629,833,404	\$167,052,594	27%	\$410,792	\$194,380	\$50,000	\$655,172	0.4%	\$166,397,422
Administration	\$273,601,311	\$72,658,914	27%	\$13,442,835	\$185,381	\$57,224	\$13,685,439	19%	\$58,973,475
Evaluation	\$130,200,000	\$27,824,000	21%	\$143,229	\$160,000	-	\$303,229	1%	\$27,520,771
Total	\$3,420,395,339	\$908,236,436	27%	\$42,992,709	\$15,648,864	\$68,979,244	\$127,620,817	14%	\$780,615,620

- a CEF Order authorized CEF funding.
- b Funds approved by DPS as of December 31, 2016.
- c The percentage of the approved budget.
- d Invoices processed for payment by NYSERDA.
- e Remaining funding obligated under a contract, purchase order or incentive award.
- f Planned funding for contracts awarded and under negotiation.
- g The sum of Expended Funds, Open Encumbrances and Contract Pre-Encumbrances.
- h The percentage of the committed budget.
- i The difference between Budget Approved Funds and Committed Funds.

¹³ NYSERDA has pre-encumbered an additional \$32.9 million to solicitations with upcoming due dates that are not shown in the above table. When including these funds, NYSERDA has committed 18 percent of the total approved total budget to date. Committed benefits presented in this report do not include benefits associated with awards made as a result of these solicitations.

Table 4. Market Development and Innovation & Research Portfolio Committed Benefits Progress to Date - Annual^{14, 15, 16}

Initiative	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Annual Target (2016)	% of Cumulative Annual Target (2016)	Total Cumulative Annual Target through 2025	% of Total Cumulative Annual Target through 2025
Market Development									
Energy Efficiency (MWh)	3,650	3,517	7,167	370,776	377,943	624,500	61%	1,844,000	20%
Energy Efficiency (MMBtu)	108,549	93,403	201,951	1,023,144	1,225,096	4,554,000	27%	15,030,000	8%
Energy Efficiency (MW)	-	-	-	39	39	*	-	*	-
Renewable Energy (MWh)	74	518	592	16,882	17,473	*	-	*	-
Renewable Energy (MW)	0.01	0.2	0.2	1	2	*	-	*	-
CO2e Reductions (metric tons)	8,246	7,442	15,688	206,799	222,487	*	-	*	-
Customer Bill Savings (\$ million)	\$1.93	\$1.60	\$3.53	\$48.58	\$52.11	*	-	*	-
Private Investment (\$ million)	\$15.43	\$12.34	\$27.77	\$366.17	\$393.94	*	-	*	-
Innovation and Research									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MW)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
Renewable Energy (MW)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Private Investment (\$ million)	-	-	-	-	-	*	-	*	-
Total Energy Efficiency (MWh)	3,650	3,517	7,167	370,776	377,943				
Total Energy Efficiency (MMBtu)	108,549	93,403	201,951	1,023,144	1,225,096				
Total Energy Efficiency (MW)	-	-	-	39	39				
Total Renewable Energy (MWh)	74	518	592	16,882	17,473				
Total Renewable Energy (MW)	0.01	0.2	0.2	1	2				
Total CO2e Reductions (metric tons)	8,246	7,442	15,688	206,799	222,487				
Total Customer Bill Savings (\$ million)	\$1.93	\$1.60	\$3.53	\$48.58	\$52.11				
Total Private Investment (\$ million)	\$15.43	\$12.34	\$27.77	\$366.17	\$393.94				

* Metric to be tracked and reported, though specific target was not ordered.

¹⁴ Targets and benefits include initiatives filed and approved through December 31, 2016.

¹⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report, as it will take time for the benefits to be realized.

¹⁶ Completed projects through September 30, 2016 contains adjustments from programs due to lagged data, QA/QC, and/or updates to emission factors.

Table 5. Market Development and Innovation & Research Portfolio Committed Benefits Progress to Date - Lifetime^{17, 18, 19}

Initiative	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Lifetime Target (2016)	% of Cumulative Lifetime Target (2016)	Total Lifetime Target through 2025	% of Total Lifetime Target through 2025
Market Development									
Energy Efficiency (MWh)	54,901	55,833	110,734	5,736,491	5,847,226	*	-	*	-
Energy Efficiency (MMBtu)	2,706,476	2,233,113	4,939,589	16,757,120	21,696,709	*	-	*	-
Renewable Energy (MWh)	1,168	10,142	11,310	218,292	229,602	*	-	2,524,000	9%
CO2e Reductions (metric tons)	186,320	162,551	348,871	3,252,722	3,601,592	9,290,000	39%	27,870,000	13%
Customer Bill Savings (\$ million)	\$43.33	\$34.72	\$78.04	\$762.38	\$840.42	\$1,508	56%	\$4,974	17%
Private Investment (\$ million)	\$15.43	\$12.34	\$27.77	\$366.17	\$393.94	\$738	53%	\$4,176	9%
Innovation and Research									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Private Investment (\$ million)	-	-	-	-	-	\$102.5	-	\$421.8	-
Total Energy Efficiency (MWh)	54,901	55,833	110,734	5,736,491	5,847,226	-	-	-	-
Total Energy Efficiency (MMBtu)	2,706,476	2,233,113	4,939,589	16,757,120	21,696,709	-	-	-	-
Total Renewable Energy (MWh)	1,168	10,142	11,310	218,292	229,602	-	-	-	-
Total CO2e Reductions (metric tons)	186,320	162,551	348,871	3,252,722	3,601,592	-	-	-	-
Total Customer Bill Savings (\$ million)	\$43.33	\$34.72	\$78.04	\$762.38	\$840.42	-	-	-	-
Total Private Investment (\$ million)	\$15.43	\$12.34	\$27.77	\$366.17	\$393.94	-	-	-	-

* Metric to be tracked and reported, though specific target was not ordered.

¹⁷ Targets and benefits include initiatives filed and approved through December 31, 2016.

¹⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report, as it will take time for the benefits to be realized.

¹⁹ Completed projects through September 30, 2016 contains adjustments from programs due to lagged data, QA/QC and/or updates to emission factors.

2 Resource Acquisition Transition Initiative Specific Results

Table 6. Resource Acquisition Transition Initiative Level Budgets and Spending²⁰

Initiative	Budget Approved as of December 31, 2016 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Resource Acquisition Transition Chapter							
Commercial	\$37,000,000	\$202,172	\$967,524	\$1,304,894	\$2,474,590	7%	\$34,525,410
Industrial	\$44,100,000	\$919,475	\$1,357,570	\$10,333,866	\$12,610,911	29%	\$31,489,089
Agriculture	\$3,600,000	\$582,121	\$1,007,078	\$2,500	\$1,591,699	44%	\$2,008,301
Multifamily Market Rate	\$5,195,862	\$46,554	\$44,834	-	\$91,388	2%	\$5,104,474
Single Family Market Rate	\$18,889,680	\$4,706,961	\$606,876	\$2,570,262	\$7,884,099	42%	\$11,005,581
LMI Single Family	\$107,371,400	\$19,482,436	\$435,917	\$11,284,203	\$31,202,556	29%	\$76,168,844
LMI Multifamily	\$33,862,500	\$123,041	\$385,414	\$250,200	\$758,655	2%	\$33,103,845
Commercial New Construction	\$24,683,975	\$104,002	\$868,351	\$14,051,908	\$15,024,261	61%	\$9,659,714
Low Rise New Construction	\$10,836,000	\$386,414	\$1,311,080	\$1,322,930	\$3,020,424	28%	\$7,815,576
Multifamily New Construction	\$10,155,138	\$121,716	\$758,103	\$2,990,400	\$3,870,219	38%	\$6,284,919
Anaerobic Digesters	\$12,150,000	-	-	\$4,000,000	\$4,000,000	33%	\$8,150,000
Fuel Cells	\$6,000,000	-	-	-	-	0%	\$6,000,000
Small Wind	\$6,090,000	\$430,842	\$938,347	\$7,539	\$1,376,728	23%	\$4,713,272
Solar Thermal	\$3,000,000	\$53,589	\$339,100	\$2,607,311	\$3,000,000	100%	\$0
Combined Heat & Power	\$48,550,000	\$265,275	\$732,150	\$11,670,573	\$12,667,999	26%	\$35,882,001
TOTAL	\$371,484,555	\$27,424,599	\$9,752,345	\$62,396,586	\$99,573,529	27%	\$271,911,026

Table notes are on the next page

²⁰ NYSERDA has committed an additional \$7,890,100 to solicitations with upcoming due dates that are not shown in the above table. When including these funds, NYSERDA has committed 29 percent of the approved budget to date for the Resource Acquisition Transition Chapter. Committed benefits presented in this report do not include benefits associated with awards made as a result of these solicitations.

- a Funds approved by the DPS as of December 31, 2016.
- b Invoices processed for payment by NYSERDA.
- c Remaining funding obligated under a contract, purchase order, or incentive award.
- d Planned funding for contracts awarded and under negotiation.
- e The sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.
- f The percentage of the committed budget.
- g The difference between Budget Approved Funds and Committed Funds.

Table 7. Commercial Resource Acquisition Transition and FlexTech Initiative Results^{21, 22, 23}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	7,485	7,485	76,800	10%	120,800	6%
	MWh Lifetime	-	-	-	123,500	123,500	1,150,000	11%	1,810,000	7%
	MMBtu Annual	-	-	-	60,592	60,592	729,000	8%	1,113,000	5%
	MMBtu Lifetime	-	-	-	999,763	999,763	13,100,000	8%	20,020,000	5%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	7,159	7,159	79,100	9%	122,600	6%
	Lifetime Tons	-	-	-	118,130	118,130	1,300,000	9%	2,014,000	6%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$1.33	\$1.33	\$14.80	9%	\$23.1	6%
	Lifetime Dollars	-	-	-	\$21.94	\$21.94	\$222	10%	\$347	6%
Private Investment (millions)	Dollars	-	-	-	\$1.64	\$1.64	\$88	2%	\$124	1%
Technical Assistance	Participants	-	-	-	53	53	176	30%	320	17%
Implementation Assistance		-	-	-	-	-	70	0%	70	0%

* Metric to be tracked and reported, though specific target was not ordered.

²¹ Technical Assistance includes nine CHP studies in the participant count; however, the impact of these projects (in terms of energy and dollar metrics) is included in the Combined Heat and Power table (Table 24).

²² This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

²³ Participants in the prior period report (September 30, 2016) were incorrectly reported under Implementation Assistance when they should have been reported under Technical Assistance.

Table 8. Industrial Resource Acquisition Transition Initiative Results²⁴

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	61	-	61	153,249	153,310	201,000	76%	292,700	52%
	MWh Lifetime	920	-	920	2,298,731	2,299,652	3,010,000	76%	4,386,000	52%
	MMBtu Annual	-	-	-	740,111	740,111	1,940,000	38%	2,857,000	26%
	MMBtu Lifetime	-	-	-	11,101,660	11,101,660	29,200,000	38%	42,950,000	26%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	32	-	32	119,073	119,106	209,000	57%	305,900	39%
	Lifetime Tons	484	-	484	1,786,098	1,786,583	3,130,000	57%	4,584,000	39%
Customer Bill Savings (millions)	Annual Dollars	\$0.01	-	\$0.01	\$20.20	\$20.21	\$31.7	64%	\$46.4	44%
	Lifetime Dollars	\$0.11	-	\$0.11	\$303.06	\$303.17	\$476	64%	\$696	44%
Private Investment (millions)	Dollars	\$0.02	-	\$0.02	\$156.73	\$156.75	\$174	90%	\$219	72%
IPE	Participants	1	-	1	58	59	250	24%	285	21%
Technical Assistance		-	-	-	19	19	120	16%	320	6%

* Metric to be tracked and reported, though specific target was not ordered.

²⁴ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report, as it will take time for the benefits to be realized.

Table 9. Agriculture Resource Acquisition Transition Initiative Results^{25, 26, 27}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	773	1,010	1,783	2,365	4,147	6,050	69%	12,100	34%
	MWh Lifetime	11,592	15,147	26,739	35,471	62,210	90,800	69%	181,600	34%
	MMBtu Annual	204	517	721	640	1,361	20,500	7%	41,000	3%
	MMBtu Lifetime	3,058	7,761	10,819	9,601	20,420	308,000	7%	616,000	3%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	412	527	939	1,278	2,217	4,270	52%	8,540	26%
	Lifetime Tons	6,177	7,910	14,087	19,174	33,261	64,100	52%	128,200	26%
Customer Bill Savings (millions)	Annual Dollars	\$0.11	\$0.14	\$0.26	\$0.35	\$0.61	\$1.20	51%	\$2.40	25%
	Lifetime Dollars	\$1.72	\$2.16	\$3.88	\$5.23	\$9.1	\$18.0	51%	\$36.0	25%
Private Investment (millions)	Dollars	\$0.76	\$0.92	\$1.68	\$1.91	\$3.59	\$5.43	66%	\$10.9	33%
Participants	Participants	46	56	102	116	218	330	66%	660	33%

* Metric to be tracked and reported, though specific target was not ordered.

²⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

²⁶ Completed projects through September 30, 2016 contains adjustments due to lagged data, updates to emission factors as well as application of a 47 percent adoption rate, consistent with the filed investment plan. This adoption rate will be evaluated and is subject to change as more data is gathered.

²⁷ Consistent with the filed investment plan, the committed and completed projects savings and private investment are based upon a 47 percent adoption rate. This adoption rate will be evaluated and is subject to change as more data is gathered.

Table 10. Multifamily Market Rate Resource Acquisition Transition Initiative Results²⁸

Approval Date: February 29, 2016

Launch Date: May 19, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	1,300	-	2,600	-
	MWh Lifetime	-	-	-	-	-	19,500	-	39,000	-
	MMBtu Annual	-	-	-	-	-	142,000	-	309,000	-
	MMBtu Lifetime	-	-	-	-	-	2,130,000	-	4,630,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	8,300	-	17,900	-
	Lifetime Tons	-	-	-	-	-	125,000	-	269,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$2.30	-	\$5.00	-
	Lifetime Dollars	-	-	-	-	-	\$34.5	-	\$75.0	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$13.0	-	\$27.0	-
Participants	Participants	-	-	-	-	-	10,600	-	38,000	-

* Metric to be tracked and reported, though specific target was not ordered.

²⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 11. Single Family Market Rate Resource Acquisition Transition Initiative Results^{29, 30, 31}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	686	401	1,088	200	1,288	1,330	97%	2,920	44%
	MWh Lifetime	10,292	6,021	16,313	3,002	19,314	19,900	97%	43,800	44%
	MMBtu Annual	35,645	21,006	56,651	10,423	67,074	97,900	69%	215,900	31%
	MMBtu Lifetime	891,132	525,155	1,416,287	260,575	1,676,861	2,450,000	68%	5,390,000	31%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	2,565	1,492	4,057	746	4,803	6,630	72%	14,590	33%
Customer Bill Savings (millions)	Lifetime Tons	60,524	35,178	95,702	17,608	113,310	159,000	71%	350,000	32%
	Annual Dollars	\$0.65	\$0.36	\$1.01	\$0.20	\$1.21	\$1.72	70%	\$3.77	32%
Private Investment (millions)	Lifetime Dollars	\$15.53	\$8.44	\$23.97	\$4.67	\$28.64	\$40.8	70%	\$89.7	32%
	Dollars	\$10.00	\$6.28	\$16.28	\$3.0	\$19.28	\$34.0	57%	\$79.4	24%
Participants	Participants	1,307	791	2,098	386	2,484	4,080	61%	8,976	28%

* Metric to be tracked and reported, though specific target was not ordered.

²⁹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

³⁰ Completed projects through September 30, 2016 contains adjustments due to lagged data, QA/QC, and/or updates to emission factors.

³¹ Cumulative Current Target (2016) and Total Target through Initiative Completion (2019) include discounts based on historical performance, however current benefits have not been discounted. Future impact evaluations will inform the level of realized savings.

Table 12. Low- to Moderate-Income Single Family Low-Income Resource Acquisition Transition Initiative Results^{32, 33, 34}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	1,508	1,111	2,619	1,143	3,763	4,670	81%	14,450	26%
	MWh Lifetime	22,624	16,667	39,291	17,148	56,439	70,000	81%	216,800	26%
	MMBtu Annual	43,562	33,585	77,147	33,665	110,812	109,000	102%	337,000	33%
	MMBtu Lifetime	1,089,055	839,632	1,928,686	841,623	2,770,309	2,710,000	102%	8,390,000	33%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	3,195	2,431	5,626	2,455	8,082	8,570	94%	26,530	30%
Customer Bill Savings (millions)	Lifetime Tons	71,936	54,938	126,875	55,366	182,241	190,000	96%	588,000	31%
	Annual Dollars	\$0.69	\$0.54	\$1.23	\$0.61	\$1.84	\$2.05	90%	\$6.34	29%
Private Investment (millions)	Lifetime Dollars	\$15.46	\$12.03	\$27.49	\$13.34	\$40.82	\$43.8	93%	\$135.63	30%
	Dollars	-	-	-	-	-	*	-	*	-
Participants	Participants	3,207	2,255	5,462	2,174	7,636	8,348	91%	25,848	30%

* Metric to be tracked and reported, though specific target was not ordered.

³² This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

³³ Completed projects through September 30, 2016 contains adjustments due to lagged data, QA/QC, and/or updates to emission factors.

³⁴ Cumulative Current Target (2016) and Total Target through Initiative Completion (2019) included discounts based on historical performance, however current benefits have not been discounted. Future impact evaluations will inform the level of realized savings.

Table 13. Low- to Moderate-Income Single Family Moderate Income Resource Acquisition Transition Initiative Results^{35, 36, 37}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	592	380	972	214	1,186	584	203%	1,624	73%
	MWh Lifetime	8,876	5,699	14,575	3,209	17,784	8,770	203%	24,370	73%
	MMBtu Annual	28,096	18,938	47,034	10,357	57,391	43,200	133%	120,000	48%
	MMBtu Lifetime	702,393	473,460	1,175,854	258,925	1,434,779	1,080,000	133%	3,000,000	48%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	1,927	1,361	3,289	724	4,013	2,740	146%	7,620	53%
Customer Bill Savings (millions)	Lifetime Tons	45,074	32,035	77,109	16,980	94,089	65,400	144%	181,800	52%
	Annual Dollars	\$0.42	\$0.26	\$0.68	\$0.17	\$0.85	\$0.61	139%	\$1.70	50%
Private Investment (millions)	Lifetime Dollars	\$9.84	\$6.00	\$15.84	\$3.96	\$19.79	\$14.4	137%	\$40.04	49%
	Dollars	\$4.53	\$3.26	\$7.79	\$1.72	\$9.51	\$7.2	132%	\$19	51%
Participants	Participants	883	661	1,544	340	1,884	1,798	105%	4,998	38%

* Metric to be tracked and reported, though specific target was not ordered.

³⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

³⁶ Completed projects through September 30, 2016 contains adjustments due to lagged data, QA/QC, and/or updates to emission factors.

³⁷ Cumulative Current Target (2016) and Total Target through Initiative Completion (2019) included discounts based on historical performance, however current benefits have not been discounted. Future impact evaluations will inform the level of realized savings.

Table 14. Low- to Moderate-Income Multifamily Resource Acquisition Transition Initiative Results³⁸

Approval Date: February 29, 2016

Launch Date: May 19, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	443	443	20,600	2%	61,500	2%
	MWh Lifetime	-	-	-	6,651	6,651	309,000	2%	923,000	2%
	MMBtu Annual	-	-	-	7,091	7,091	461,000	2%	1,380,000	2%
	MMBtu Lifetime	-	-	-	106,365	106,365	6,920,000	2%	20,700,000	2%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	610	610	34,900	2%	104,500	2%
	Lifetime Tons	-	-	-	9,154	9,154	524,000	2%	1,568,000	2%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.09	\$0.09	\$10	1%	\$29.9	1%
	Lifetime Dollars	-	-	-	\$1.34	\$1.34	\$150	1%	\$449	1%
Private Investment (millions)	Dollars	-	-	-	-	-	\$76	-	\$301	-
Participants	Participants	-	-	-	414	414	73,000	1%	220,000	1%

* Metric to be tracked and reported, though specific target was not ordered.

³⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 15. Commercial New Construction Resource Acquisition Transition Initiative Results^{39, 40}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	31,287	31,287	20,500	153%	37,900	83%
	MWh Lifetime	-	-	-	625,734	625,734	409,000	153%	758,000	83%
	MMBtu Annual	-	-	-	58,936	58,936	27,100	217%	50,200	117%
	MMBtu Lifetime	-	-	-	1,178,715	1,178,715	541,000	218%	1,003,000	118%
	MW	-	-	-	9	9	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	19,595	19,595	12,200	161%	22,600	87%
	Lifetime Tons	-	-	-	391,903	391,903	244,000	161%	452,000	87%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$4.94	\$4.94	\$3.49	142%	\$6.46	77%
	Lifetime Dollars	-	-	-	\$98.84	\$98.84	\$69.7	142%	\$129	77%
Private Investment (millions)	Dollars	-	-	-	-	-	\$28.6	-	\$106	-
Participants	Participants	-	-	-	44	44	54	81%	100	44%

* Metric to be tracked and reported, though specific target was not ordered.

³⁹ The pipeline savings projection for Commercial New Construction is based on current approved applications and does not include any discount for expected future attrition. The Resource Acquisition Transition Chapter annual savings targets assumed an attrition rate of approximately 50 percent, based on historic program data. Actual attrition will be reflected in the reported values as it occurs.

⁴⁰ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 16. Low Rise New Construction Market Rate Resource Acquisition Transition Initiative Results ^{41, 42}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	30	614	644	2,174	2,817	2,330	121%	4,520	62%
	MWh Lifetime	597	12,277	12,874	43,471	56,345	46,700	121%	90,500	62%
	MMBtu Annual	1,042	19,326	20,368	10,797	31,165	27,400	114%	47,400	66%
	MMBtu Lifetime	20,838	386,528	407,366	215,936	623,302	547,000	114%	947,000	66%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	75	1,356	1,431	1,718	3,149	2,700	117%	4,930	64%
Customer Bill Savings (millions)	Lifetime Tons	1,509	27,111	28,619	34,352	62,972	53,900	117%	98,500	64%
	Annual Dollars	\$0.03	\$0.24	\$0.26	\$0.45	\$0.71	\$0.9	79%	\$1.6	44%
Private Investment (millions)	Lifetime Dollars	\$0.51	\$4.71	\$5.22	\$8.93	\$14.15	\$18.0	79%	\$32.0	44%
	Dollars	\$0.07	\$1.15	\$1.21	\$1.85	\$3.07	\$2.78	110%	\$4.99	61%
Participants	Participants	13	220	233	414	647	993	65%	1,790	36%

* Metric to be tracked and reported, though specific target was not ordered.

⁴¹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

⁴² Completed projects through September 30, 2016 contains adjustments due to lagged data, QA/QC, and/or updates to emission factors.

Table 17. Low Rise New Construction Low- to Moderate-Income Resource Acquisition Transition Initiative Results⁴³

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	1	1	2,496	2,497	3,750	67%	7,600	33%
	MWh Lifetime	-	22	22	49,926	49,949	74,900	67%	151,900	33%
	MMBtu Annual	-	29	29	23,541	23,570	35,400	67%	66,300	36%
	MMBtu Lifetime	-	578	578	470,827	471,405	707,000	67%	1,325,000	36%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	2	2	2,573	2,575	3,870	67%	7,560	34%
	Lifetime Tons	-	43	43	51,453	51,496	77,400	67%	151,100	34%
Customer Bill Savings (millions)	Annual Dollars	-	\$0.0003	\$0.0003	\$0.64	\$0.64	\$1.0	64%	\$2.0	32%
	Lifetime Dollars	-	\$0.01	\$0.01	\$12.83	\$12.83	\$20.0	64%	\$40.0	32%
Private Investment (millions)	Dollars	-	\$0.01	\$0.01	\$5.84	\$5.84	\$6.46	90%	\$12.97	45%
Participants	Participants	-	1	1	1,287	1,288	1,814	71%	3,622	36%

* Metric to be tracked and reported, though specific target was not ordered.

⁴³ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 18. Multifamily New Construction Market Rate Resource Acquisition Transition Initiative Results ⁴⁴

Approval Date: February 29, 2016

Launch Date: August 8, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	341	341	3,780	9%	6,610	5%
	MWh Lifetime	-	-	-	6,817	6,817	75,600	9%	132,300	5%
	MMBtu Annual	-	-	-	8,241	8,241	28,100	29%	47,900	17%
	MMBtu Lifetime	-	-	-	164,822	164,822	562,000	29%	957,000	17%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	617	617	3,480	18%	6,020	10%
	Lifetime Tons	-	-	-	12,349	12,349	69,600	18%	120,400	10%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.09	\$0.09	\$0.80	12%	\$6.46	1%
	Lifetime Dollars	-	-	-	\$1.89	\$1.89	\$16.0	12%	\$28.0	7%
Private Investment (millions)	Dollars	-	-	-	-	-	\$10.2	-	\$17.5	-
Participants	Participants	-	-	-	283	283	2,000	14%	3,500	8%

* Metric to be tracked and reported, though specific target was not ordered.

⁴⁴ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 19. Multifamily New Construction Low- to Moderate-Income Resource Acquisition Transition Initiative Results⁴⁵

Approval Date: February 29, 2016

Launch Date: August 8, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	3,494	3,494	10,400	34%	18,900	18%
	MWh Lifetime	-	-	-	69,877	69,877	208,000	34%	378,000	18%
	MMBtu Annual	-	-	-	56,525	56,525	77,300	73%	136,600	41%
	MMBtu Lifetime	-	-	-	1,130,504	1,130,504	1,550,000	73%	2,740,000	41%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	4,843	4,843	9,570	51%	17,190	28%
	Lifetime Tons	-	-	-	96,866	96,866	191,000	51%	343,000	28%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.85	\$0.85	\$2.20	38%	\$4.00	21%
	Lifetime Dollars	-	-	-	\$16.91	\$16.91	\$44.0	38%	\$80.0	21%
Private Investment (millions)	Dollars	-	-	-	-	-	\$28.1	-	\$50.1	-
Participants	Participants	-	-	-	2,510	2,510	5,500	46%	10,000	25%

* Metric to be tracked and reported, though specific target was not ordered.

⁴⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 20. Anaerobic Digesters Resource Acquisition Transition Initiative Results⁴⁶

Approval Date: February 29, 2016

Launch Date: July 8, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	7,444	7,444	10,000	74%	30,000	25%
	MWh Lifetime	-	-	-	74,438	74,438	100,000	74%	300,000	25%
	MW	-	-	-	1	1	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	3,917	3,917	5,250	75%	15,750	25%
	Lifetime Tons	-	-	-	39,167	39,167	52,500	75%	157,500	25%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$1.29	\$1.29	\$1.33	97%	\$3.99	32%
	Lifetime Dollars	-	-	-	\$12.88	\$12.88	\$13.3	97%	\$39.9	32%
Private Investment (millions)	Dollars	-	-	-	\$9.0	\$9.0	\$7.2	125%	\$18.7	48%
Participants	Participants	-	-	-	2	2	2	100%	6	33%

* Metric to be tracked and reported, though specific target was not ordered.

⁴⁶ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 21. Fuel Cells Resource Acquisition Transition Initiative Results⁴⁷

Approval Date: February 29, 2016

Anticipated Launch Date: TBD

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	5,000	-	15,000	-
	MWh Lifetime	-	-	-	-	-	50,000	-	150,000	-
	MW	-	-	-	-	-	0.6	-	1.8	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	3,000	-	7,800	-
	Lifetime Tons	-	-	-	-	-	26,000	-	78,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.50	-	\$1.50	-
	Lifetime Dollars	-	-	-	-	-	\$5.0	-	\$15.0	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$4.0	-	\$12.0	-
Participants	Participants	-	-	-	-	-	2	-	6	-

* Metric to be tracked and reported, though specific target was not ordered.

⁴⁷ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 22. Small Wind Resource Acquisition Transition Initiative Results^{48,49}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	13	475	487	457	944	2,300	41%	6,900	14%
	MWh Lifetime	254	9,490	9,744	9,130	18,874	46,000	41%	138,000	14%
	MW	0.01	0.22	0.22	0.2	0.4	1	41%	3	14%
CO ₂ e Emission Reduction (metric tons)	Annual Tons	7	250	256	240	497	1,200	41%	3,600	14%
	Lifetime Tons	134	4,993	5,127	4,804	9,931	24,300	41%	72,900	14%
Customer Bill Savings (millions)	Annual Dollars	\$0.002	\$0.065	\$0.067	\$0.07	\$0.14	\$0.40	35%	\$1.2	12%
	Lifetime Dollars	\$0.04	\$1.30	\$1.34	\$1.49	\$2.83	\$8.0	35%	\$24.0	12%
Private Investment (millions)	Dollars	\$0.02	\$0.68	\$0.70	\$1.22	\$1.92	\$4.0	48%	\$12.0	16%
Participants	Participants	1	6	7	22	29	35	83%	105	28%

* Metric to be tracked and reported, though specific target was not ordered.

⁴⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

⁴⁹ Completed projects through September 30, 2016 contains adjustments due to lagged data, QA/QC, and/or updates to emission factors.

Table 23. Solar Thermal Resource Acquisition Transition Initiative Results^{50,51}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	8	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	61	43	104	8,982	9,086	7,000	128%	7,000	130%
	MWh Lifetime	914	652	1,566	134,723	136,289	104,000	130%	104,000	131%
	MW	-	-	-	-	-	*	*	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	32	23	55	4,726	4,781	4,000	118%	4,000	120%
	Lifetime Tons	481	343	824	70,887	71,711	55,000	129%	55,000	130%
Customer Bill Savings (millions)	Annual Dollars	\$0.01	\$0.01	\$0.01	\$1.52	\$1.5	\$1.18	129%	\$1.18	130%
	Lifetime Dollars	\$0.11	\$0.08	\$0.19	\$22.82	\$23.0	\$23.5	97%	\$23.5	98%
Private Investment (millions)	Dollars	\$0.04	\$0.04	\$0.08	\$6.40	\$6.5	\$7.0	91%	\$7.0	93%
Participants	Participants	5	2	7	129	136	190	72%	190	72%
Eligible Installers		6	-	6	-	6	20	30%	20	30%

* Metric to be tracked and reported, though specific target was not ordered.

⁵⁰ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 24. Combined Heat & Power Resource Acquisition Transition Initiative Results^{52, 53, 54, 55, 56}

Approval Date: February 29, 2016

Launch Date: March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	159,847	159,847	175,000	91%	287,000	56%
	MWh Lifetime	-	-	-	2,397,710	2,397,710	2,580,000	93%	4,230,000	57%
	MMBtu Annual	-	-	-	-	-	(980)	-	(1,620)	-
	MMBtu Lifetime	-	-	-	-	-	(14,700)	-	(24,310)	-
	MW	-	-	-	30	30	31	97%	51	59%
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	33,228	33,228	93,000	36%	149,000	22%
	Lifetime Tons	-	-	-	498,416	498,416	1,400,000	36%	2,240,000	22%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$15.06	\$15.06	\$24.7	61%	\$38.1	40%
	Lifetime Dollars	-	-	-	\$225.95	\$225.95	\$370	61%	\$571.0	40%
Private Investment (millions)	Dollars	-	-	-	\$176.54	\$176.54	\$98.0	180%	\$152	116%
Installations	Participants	-	-	-	75	75	43	174%	86	87%
MT Marketplace		-	-	-	3	3	2	150%	24	13%

* Metric to be tracked and reported, though specific target was not ordered.

⁵² Technical assistance energy savings and dollars metrics included for nine CHP studies.

⁵³ Cumulative Current Target (2016) and Total Target through Initiative Completion (2019) contain metrics from the Market Transformation of Marketplace table in the Resource Acquisition Chapter, which could be considered indirect benefit targets. This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

⁵⁴ Committed benefits include three large projects in the early stages of NYSERDA review (with a combined capacity of 27.7 MW) to which refinements will be made in future reports, as needed.

⁵⁵ CHP targets and reporting methods associated with fuel used to run the CHP systems are being examined and may be adjusted in future reports.

⁵⁶ Energy Efficiency values represent MWh savings from the use of CHP systems; natural gas required to run CHP systems (957,068 MMBtu cumulative annual and 14,356,019 MMBtu lifetime) is netted out of the emission reduction and customer bill savings values shown in this table. Emission reductions and customer bill savings are net, including both MWh that add to the benefits and additional natural gas required to run CHP systems which subtract from the benefits.

3 Market Development Initiative Specific Results

Table 25. Market Development Initiative Budgets and Spending ⁵⁷

Initiative	Budget Approved as of December 31, 2016 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Market Characterization & Design Chapter	\$11,500,000	\$256,956	\$156,483	\$75,000	\$488,439	4%	\$11,011,561
Commercial Chapter							
Real Estate Tenant	\$25,500,000	\$28,146	\$1,328,558	\$11,000	\$1,367,703	5%	\$24,132,297
Real Time Energy Management	\$46,500,000	\$23,799	\$438,394	\$573,019	\$1,035,213	2%	\$45,464,788
REV Campus Challenge	\$19,650,000	-	\$125,000	\$284,269	\$409,269	2%	\$19,240,731
Commercial Chapter Total	\$91,650,000	\$51,945	\$1,891,952	\$868,288	\$2,812,184	3%	\$88,837,816
Industrial Chapter							
Continuous Energy Improvement	\$9,980,739	-	-	-	-	0%	\$9,980,739
Industrial Chapter Total	\$9,980,739	-	-	-	-	0%	\$9,980,739
Communities Chapter							
Clean Energy Communities	\$14,218,526	\$12,941	-	-	\$12,941	0.1%	\$14,205,586
Communities Chapter Total	\$14,218,526	\$12,941	-	-	\$12,941	0.1%	\$14,205,586
Large-Scale Renewables Chapter							
Offshore Wind Master Plan	\$5,000,000	\$450,000	\$945,000	\$320,000	\$1,715,000	34%	\$3,285,000
Offshore Wind Pre-Development Activities	\$10,000,000	\$7,666	\$42,335	-	\$50,000	1%	\$9,950,000
Large-Scale Renewables Chapter Total	\$15,000,000	\$457,666	\$987,335	\$320,000	\$1,765,000	12%	\$13,235,000
REV Technical Assistance Chapter							
REV Connect	\$2,500,000	\$59,155	\$2,080,989	-	\$2,140,144	86%	\$359,856
REV Technical Assistance Chapter Total	\$2,500,000	\$59,155	\$2,080,989	-	\$2,140,144	86%	\$359,856
Energy Storage Chapter							
Reducing Barriers to Distributed Deployment	\$24,450,000	-	\$30,000	-	\$30,000	0.1%	\$24,420,000
Energy Storage Chapter Total	\$24,450,000	-	\$30,000	-	\$30,000	0.1%	\$24,420,000
Clean Transportation Chapter							
Electric Vehicles	\$39,500,000	-	-	-	-	0%	\$39,500,000
Clean Transportation Chapter Total	\$39,500,000	-	-	-	-	0%	\$39,500,000

Table 25 continued

Agriculture Chapter							
2030 GLASE	\$5,000,000	-	-	\$5,000,000	\$5,000,000	100%	-
Agriculture Chapter Total	\$5,000,000	-	-	\$5,000,000	\$5,000,000	100%	-
Low- to Moderate-Income Chapter							
RetrofitNY	\$30,503,500	-	-	-	-	0%	\$30,503,500
REVitalize	\$725,000	-	-	-	-	0%	\$725,000
Low-Income Forum on Energy	\$1,300,000	-	-	-	-	0%	\$1,300,000
Healthy Homes Feasibility Study	\$215,000	-	-	\$212,147	\$212,147	99%	\$2,853
Low- to Moderate-Income Chapter Total	\$32,743,500	-	-	\$212,147	\$212,147	1%	\$32,531,353
Workforce Development and Training Chapter							
Industry Partnerships	\$6,845,000	-	\$210,000	-	\$210,000	3%	\$6,635,000
Workforce Development and Training Chapter Total	\$6,845,000	-	\$210,000	-	\$210,000	3%	\$6,635,000
NYS Cost Recovery Fee	\$15,828,608	\$732,593	-	-	\$732,593	5%	\$15,096,015
Total Market Development	\$269,216,373	\$1,571,255	\$5,356,758	\$6,475,435	\$13,403,448	5%	\$255,812,925

- a Funds approved by the DPS as of December 31, 2016.
- b Invoices processed for payment by NYSERDA.
- c Remaining funding obligated under a contract, purchase order, or incentive award.
- d Planned funding for contracts awarded and under negotiation.
- e The sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.
- f The percentage of the budget that has been committed.
- g The difference between Budget Approved Funds and Committed Funds.

⁵⁷ NYSERDA has committed an additional \$11,412,500 to solicitations with upcoming due dates not included in the above table. When including these funds, NYSERDA has committed nine percent of the approved budget to date for the Market Development Chapter. Committed benefits presented in this report do not include benefits associated with awards made as a result of these solicitations.

Table 26. Real Estate Tenant Initiative Results⁵⁸

Approval Date: May 23, 2016

Launch Date: July 19, 2016

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2024)	% of Total Target through Initiative Completion (2024)
Energy Efficiency	MWh Annual	-	-	-	121	121	5,600	2%	124,900	0.1%
	MWh Lifetime	-	-	-	967	967	44,800	2%	998,900	0.1%
	MMBtu Annual	-	-	-	128	128	5,900	2%	131,800	0.1%
	MMBtu Lifetime	-	-	-	1,023	1,023	47,200	2%	1,053,000	0.1%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	70	70	3,300	2%	72,900	0.1%
	Lifetime Tons	-	-	-	563	563	26,000	2%	582,000	0.1%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.02	\$0.02	\$0.776	3%	\$17.3	0.1%
	Lifetime Dollars	-	-	-	\$0.17	\$0.17	\$6.21	3%	\$139	0.1%
Private Investment (millions)	Dollars	-	-	-	\$0.01	\$0.01	\$0.544	2%	\$12.2	0.1%
Participants	Participants	-	-	-	1	1	46	2%	1,349	0.1%

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁴ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 27. Key Milestones for Real Estate Tenant

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016–2020	Tenants will incorporate energy efficiency measures from tenant-specific packages into their designs. Observed gains from the National Resource Defense Council (NRDC), were 25–40% of energy saved above 2007 code; NYSERDA is projecting gains of 15–20% against the 2010 and 2012 code. The actual savings will be identified through measurement and verification (M&V).	The first application for a Tenant Energy Efficiency Package was received in December 2016.
	2018–2024	Building specific packages demonstrate replicability of tenant-specific model to the whole building for development of building-specific packages.	
	2018–2024	Engagement with stakeholders involves all identified Market Actors.	
	2018–2024	Secure commitments from building owners and managers and brokers to provide building-specific packages to new tenants with leasing materials.	
	2018–2024	New tenants use building-specific energy efficiency packages (actual participation identified from results reported by building owner).	
	2018–2024	Projects demonstrate that building-specific packages can be used within the normal timeframe of the tenant fit-out process and do not slow down the process.	
	2018–2024	NYSERDA validates energy models, energy savings, incremental cost, and return on investment for tenant projects.	
	2018–2024	NYSERDA confirms economic savings/value while presenting soft cost (i.e., productivity) opportunities as additional benefits to the market.	
	2018–2024	NYSERDA gathers data on tenant productivity, satisfaction, and wellness through surveys created with each tenant’s Corporate Social Responsibility and Human Resource teams.	
	2018–2024	For buildings that offer tenant efficiency packages, 30% of new tenants use the package to implement energy efficiency measures that go above code.	

Table 27 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020–2025	Market actors seek to develop tenant and/or building-specific packages for new participating buildings, initially with cost share.	
	2020–2025	Tenants and architects and engineers realize the value of energy modeling and packages in the design process (measured by participation in the Intervention and training initiatives).	
	2020–2025	Building owners and managers, architects and engineers, and brokers incorporate package development into their existing business models.	
	2020–2025	Tenants inquire about and demand energy efficiency in prospective spaces.	
	2020–2025	Standardized packages developed for tenant office spaces, if significant commonalities are identified among building-specific packages.	
	2020–2025	Building owners and managers attain lower operating costs and greater asset value.	

Table 28. Real Time Energy Management (RTEM) Initiative Results⁵⁹

Approval Date: May 23, 2016

Launch Date: June 20, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2024)	% of Total Target through Initiative Completion (2024)
Energy Efficiency	MWh Annual	-	-	-	2,447	2,447	20,500	12%	311,000	1%
	MWh Lifetime	-	-	-	19,578	19,578	164,000	12%	2,489,000	1%
	MMBtu Annual	-	-	-	2,098	2,098	9,100	23%	138,200	2%
	MMBtu Lifetime	-	-	-	16,781	16,781	72,800	23%	1,106,000	2%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,399	1,399	11,300	12%	171,000	1%
	Lifetime Tons	-	-	-	11,193	11,193	90,000	12%	1,368,000	1%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.40	\$0.40	\$2.77	15%	\$42.1	1%
	Lifetime Dollars	-	-	-	\$3.2	\$3.2	\$22.2	15%	\$337	1%
Private Investment (millions)	Dollars	-	-	-	\$0.31	\$0.31	\$7.36	4%	\$292	0.1%
Participants	Participants	-	-	-	17	17	30	57%	700	2%

* Metric to be tracked and reported, though specific target was not ordered.

⁵⁹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 29. Key Milestones for Real Time Energy Management

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Secure RTEM Advisor and begin development of market standards	RTEM Advisor is secured and actively participating in the vendor qualification process.
✓	2016	Create and grow a list of qualified RTEM vendors.	The RTEM Request for Qualification (RFQ) was launched in mid-April 2016. There has been a steady in-flow of applications. The RTEM RFQ has received 80 applications to date and 32 vendors are currently approved.
✓	2016	Stimulate interest and market activity with an open enrollment incentive offering.	The RTEM Program Opportunity Notice was launched June 20, 2016. Application submittals are in process and interest is expected to grow as more learn about the magnitude of the program and RTEM vendors are qualified.
✓	2016	The program's criteria for qualification of vendors, hardware, and software is introduced to the market and used as a road map for new vendors with the goal of becoming the industry standard.	The application process to become a qualified vendor has led to interactive conversations that allow firms to clearly identify areas of opportunity to expand their services and abilities. The program's criteria is causing these opportunities to be adopted sooner than would have occurred.
	2016	A Technical Guidance Document is drafted and tested.	After consulting with market providers, customers, and industry experts, it is recommended that this milestone's expected progress timing be adjusted to such a time when project level data has been obtained. Therefore, NYSERDA recommends the progress be adjusted from 2016 to 2018.

Table 29 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	A training platform for facility owners/operators is designed.	After consulting with market providers, customers, and industry experts, it is recommended that this milestone's expected progress timing be adjusted to such a time when customer needs are better defined through project level understanding. Therefore, NYSERDA recommends adjusting the progress from 2016 to 2018.
	2016–2020	Incentives, Qualified Vendor Listing, and Independent RTEM advisor services help convert prospective customers into committed and installed RTEM projects.	The Program received six applications in Q4.
	2016-2020	NYSERDA market support and approach attract new RTEM vendors to the New York State market and increase business development investment of all RTEM vendors.	
	2016–2020	RTEM Advisor supports gaps in market confidence and identifies market approaches to eliminating gaps.	
	2016–2020	Peer-to-peer exchanges and RTEM advisor transfer learnings across the projects supported by NYSERDA and enhance success.	
	2016–2020	Technical Guidance Document is published.	
	2016–2020	NYSERDA in coordination with industry partners standardizes methodologies for calculating/analyzing costs and savings data.	
	2016–2020	Training platform is available and used by facility owners/operators.	

Table 29 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016–2020	Continuous input from industry experts and key stakeholders help with test/measure/adjust methods.	Market indicators suggest innovative business models are embedding RTEM system costs into the service costs, also known as Platform as a Service. The RTEM Program Opportunity Notice was revised in September 2, 2016 to allow for these innovative business models to take full advantage of the program. The second revision to the program was made on December 27, which removed the >50,000 square foot project eligibility requirement to allow smaller sites to be eligible. It was not anticipated that the small sector would be active in the market this early in the program.
	2018–2021	NYSERDA direct supports are ratcheted downward as industry standardization is adopted and results of pilots/studies are shared broadly increasing customer confidence in the benefits and returns of RTEM.	
	2018–2021	Methods for capturing the potential benefits of RTEM for operations and maintenance of buildings are standardized and widely available.	
	2018–2021	Aggregated data sets and applications of RTEM data are robust enough to enable quick and proper evaluation of energy savings projects, thus removing the need for detailed, building specific energy audits to identify potential energy savings, thereby reducing customer acquisition and project costs.	
	2018–2021	NYSERDA explores the utilization of its RTEM data set to advance efforts at demand reduction and peak load shaping as well as its use in predicting and optimizing investments in energy efficiency.	
	2022 and beyond	RTEM is the standard for quality energy metrics, efficient building operations, and accessing behind-the-meter data.	
	2022 and beyond	Qualified list and NYSERDA’s continued support is rendered obsolete due to market standardization and acceptance.	
	2022 and beyond	RTEM is integrated into standard Building Management Systems (BMS) offerings and widely applied in buildings without BMS.	

Table 30. Reforming the Energy Vision (REV) Campus Challenge Initiative Results⁶⁰

Approval Date: May 23, 2016

Anticipated Launch Date: Q1 2017

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	92,630	-
	MWh Lifetime	-	-	-	-	-	*	-	1,389,000	-
	MMBtu Annual	-	-	-	-	-	*	-	574,300	-
	MMBtu Lifetime	-	-	-	-	-	*	-	8,614,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	8,804	-
	MWh Lifetime	-	-	-	-	-	*	-	132,100	-
	MW	-	-	-	-	-	*	-	8	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	83,830	-
	Lifetime Tons	-	-	-	-	-	*	-	1,257,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	\$15.5	-
	Lifetime Dollars	-	-	-	-	-	*	-	\$233	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	\$62.2	-
Participants	Participants	-	-	-	63	63	40	158%	150	42%

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁰ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 31. Key Milestones for REV Campus Challenge

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016–2019	120 out of 250 institutions sign up to be REV Campus Challenge Members.	The REV Campus Challenge has 63 member institutions as of the close of 2016. Of those institutions, 46 were part of a “First Movers” announcement during Earth Week 2016 to highlight the institutions that took the initiative to sign on to the REV Campus Challenge early and demonstrate their commitment to integrating clean energy into their campus, classroom, and community activities.
	2016–2019	Members make progress and receive recognition as demonstrated by new and revised planning, new commitments to sustainability goals and clean energy projects started and completed.	Member progress and opportunities for recognition will be collected during an annual member survey, which will be distributed in 2017.
	2020–2022	140 out of 250 institutions sign up to be REV Campus Challenge Members.	
	2020–2022	Members continue to make progress and receive recognition as demonstrated by new and revised planning, new commitments to sustainability goals and clean energy projects started and completed.	
	2020–2022	15% more NYS institutions participate in clean energy commitment opportunities, conferences/events, peer groups, etc., building a strong support network.	
	2020–2022	Annual/Semi-annual survey of Member institutions provides feedback on clean energy progress and changes in overall campus, student, and community mindset.	
	2022–2025	Members continue to make progress and receive recognition as demonstrated by new and revised planning, new commitments to sustainability goals and clean energy projects started and completed.	
	2022–2025	25% more NYS institutions participate in clean energy commitment opportunities, conferences/events, peer groups, etc., building a strong support network.	
	2022–2025	Annual/semiannual survey of all institutions statewide provides feedback on clean energy progress and changes in overall campus, student, and community mindset.	

Table 32. Continuous Energy Improvement Initiative On-Site Energy Manager Results⁶¹

Approval Date: May 23, 2016

Launch Date: September 12, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	15,000	-	42,000	-
	MWh Lifetime	-	-	-	-	-	225,000	-	630,000	-
	MMBtu Annual	-	-	-	-	-	175,000	-	500,000	-
	MMBtu Lifetime	-	-	-	-	-	2,630,000	-	7,500,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	17,800	-	50,400	-
	Lifetime Tons	-	-	-	-	-	267,000	-	756,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$2.76	-	\$7.81	-
	Lifetime Dollars	-	-	-	-	-	\$41.3	-	\$117	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$20.2	-	\$55.8	-
Participants	Participants	-	-	-	-	-	15	-	40	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶¹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 33. Key Milestones for Continuous Energy Improvement for On-Site Energy Manager

Complete ✓	Time Frame	Milestone	Explanation of Progress
	Years 1-2	List of qualified energy-focused process consultants from which On-site Energy Management expertise can be sought and/or matched with industrial facilities.	The On-site Energy Manager solicitation (Program Opportunity Notice 3334) was released in September 2016 and is accepting applications. Four applications have been received to date to fill the first pilot of 15 participants.
	Years 1-2	C-suite executive buy-in and engagement that provides momentum for energy planning and management activities at industrial sites.	The On-site Energy Manager solicitation (Program Opportunity Notice 3334) was released in September 2016 and is accepting applications. Four applications have been received to date to fill the first pilot of 15 participants.
	Years 1-2	Industrial end user commitment to energy goal creation and realization is key to successful On-site Energy Manager engagements.	The On-site Energy Manager solicitation (Program Opportunity Notice 3334) was released in September 2016 and is accepting applications. Four applications have been received to date to fill the first pilot of 15 participants.
	Years 1-2	Robust tracking and reporting of energy and non-energy benefits of the On-site Energy manager role.	The On-site Energy Manager solicitation (Program Opportunity Notice 3334) was released in September 2016 and is accepting applications. Four applications have been received to date to fill the first pilot of 15 participants.
	Years 2-3	A credible business case that proves the benefits of on-site energy management in industrial facilities. Large sites will save at least 1,200 MWh and 15,000 MMBtu annually. Medium sites will save at least 500 MWh and 5,000 MMBtu annually.	
	Years 2-3	Business case content for consultant marketing plans which address this need in the industrial market.	

Table 33 continued

	Year 3	Long-term energy resource(s) dedicated to energy management, without NYSEDA support (e.g., manufacturer hires energy manager function in-house; continues contracting with On-Site Energy Manager consultant; or contracts with a new consultant).	
	Year 3	Transition of knowledge and tools from pilot On-site Energy Managers to long-term energy resource.	
	Year 3	Successful dissemination of training, road maps, case studies, and vetted consultant lists creates both supply for On-site Energy Manager by qualified technical consultants and demand for the role at industrial sites.	

Table 34. Continuous Energy Improvement Initiative Strategic Energy Management Results⁶²

Approval Date: May 23, 2016

Launch Date: November 22, 2016

Market Development Initiative Specific Results	Units	Completed Projects through June 30, 2016 with Adjustments**	Completed Projects through 7/1/16-9/30/16	Total Completed Projects through September 30, 2016	Current Pipeline Through September 30, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	34,500	-	34,500	-
	MWh Lifetime	-	-	-	-	-	518,000	-	518,000	-
	MMBtu Annual	-	-	-	-	-	267,000	-	267,000	-
	MMBtu Lifetime	-	-	-	-	-	4,000,000	-	4,000,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	33,200	-	*	-
	Lifetime Tons	-	-	-	-	-	498,000	-	498,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$5.18	-	\$5.18	-
	Lifetime Dollars	-	-	-	-	-	\$77.7	-	\$77.7	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$54.6	-	\$54.6	-
Participants	Participants	-	-	-	-	-	*	-	20	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶² This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 35. Key Milestones for Continuous Energy Improvement Strategic Energy Management

Complete ✓	Time Frame	Milestone	Explanation of Progress
	Year 1-2	Facilities understand how energy intensity is embedded in their process and have integrated energy management into their organizational culture. <ul style="list-style-type: none"> • Facilities possess knowledge of Strategic Energy Management (have an energy map, identified goals and metrics, and have developed a project register identifying projects and an action plan for project implementation) and have a system for monitoring, tracking, and making decisions based on their energy use. 	The Strategic Energy Management solicitation (Program Opportunity Notice 3411) was released in November 2016 and is accepting applications to participate in the first pilot.
	Year 2 and beyond	Facility executives value and adopt Strategic Energy Management due to organizational change and systematic energy management that enables them to identify attractive investments for their facility. <ul style="list-style-type: none"> • Continuation of energy champion and team beyond the cohort (for participating facilities) or the adoption of an energy champion and/or team (for new facilities). • Executive support to implement energy-related projects. 	
	Year 2 and beyond	Strategic Energy Management replaces the ad hoc energy project approach resulting in deeper and continuous energy savings and energy decision-making at industrial facilities. <ul style="list-style-type: none"> ✓ Critical staff can express how the energy measures they have implemented have affected their bottom line. 	
	Year 3 and beyond	Market actors seek out developed information and standardized tools as well as contractor support to implement and adopt Strategic Energy Management. <ul style="list-style-type: none"> ✓ Tracked inquiries and dissemination of case studies, training, Strategic Energy Management resources, and vetted consultant lists. 	

Table 36. Clean Energy Communities Initiative Results^{63, 64}

Approval Date: May 23, 2016

Launch Date: August 3, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	16,800	-	73,300	-
	MWh Lifetime	-	-	-	-	-	252,000	-	1,099,000	-
	MMBtu Annual	-	-	-	-	-	302,000	-	1,318,000	-
	MMBtu Lifetime	-	-	-	-	-	4,540,000	-	19,780,000	-
	MW	-	-	-	-	-	7	-	31	-
Renewable Energy	MWh Annual	-	-	-	-	-	25,100	-	109,300	-
	MWh Lifetime	-	-	-	-	-	376,000	-	1,640,000	-
	MW	-	-	-	-	-	14	-	63	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	40,300	-	175,700	-
	Lifetime Tons	-	-	-	-	-	605,000	-	2,631,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$6.64	-	\$28.9	-
	Lifetime Dollars	-	-	-	-	-	\$99.6	-	\$434	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$10.6	-	\$46.2	-
Participants	Participants	-	-	-	-	-	76	-	333	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶³ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

⁶⁴ Due to the split-funded nature of this program, NYSERDA will track and report savings associated with completed High Impact Actions in the Regional Greenhouse Gas Initiative (RGGI) report until Designated Clean Energy Communities apply for and receive a Clean Energy Communities grant.

Table 37. Key Milestones for Clean Energy Communities

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016–2019	80 communities complete, and demonstrate replicability of, four out of ten High-Impact Actions and submit successful grant applications to the Clean Energy Communities Program to complete innovative clean energy projects.	<p>Outreach contractors are actively engaging communities. Many local governments are working to complete High-Impact Actions. Three communities completed at least four actions and are officially designated Clean Energy Communities. In total, 68 Communities completed 123 High-Impact Actions.</p> <p>Anticipated savings from the 123 completed High-Impact Actions (as reported in Regional Greenhouse Gas Initiative (RGGI) reporting), include:</p> <ul style="list-style-type: none"> • 25,252.20 MWh Electricity Savings • 10,571.28 MWh Renewable Generation • 9.01 MW Renewable Generation • 52,694.08 MMBtu Natural Gas Savings • 1,702.78 MMBtu Gasoline Savings
	2016–2019	After realizing the benefits associated with completing High-Impact Actions, many communities go on to pursue the more rigorous Climate Smart Communities (CSC) Certification. The number of Certified CSCs doubles, from 6 currently certified to 12 certified.	There are now nine Certified Climate Smart Communities.
	2016–2019	NYSERDA has conducted market research on impact of initial uptake of High-Impact Actions and has adjusted the Clean Energy Communities Program accordingly. NYSERDA will continuously compile feedback from communities on High-Impact Actions and associated tools and resources, and adjust accordingly.	NYSERDA is in the process of making minor revisions to the Clean Energy Communities program to better accommodate the needs of communities and clarify program requirements.

Table 38. Offshore Wind Master Plan Initiative Results⁶⁵

Approval Date: May 23, 2016

Launch Date: September 15, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 39. Key Milestones for Offshore Wind Master Plan

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Publish an Offshore Wind Master Plan Blueprint to facilitate discussion and stakeholder engagement in the summer of 2016.	Blueprint completed. Blueprint published on 9/15/16.
	2016–2017	Engage stakeholders in multiple meetings in 2016 and 2017 to review Offshore Wind Master Plan Blueprint and receive input for the Offshore Wind Master Plan.	First public Offshore Wind meeting held on 6/29/16. Met with environmental groups on 11/9/16. Met with fishing industry on 11/15/16 (Marine Resources Advisory Council), 12/2/16 (Long Island Traditions), 12/12/16 (Mid-Atlantic Fishery Management Council) and 1/17/17 (Marine Resources Advisory Council). Scheduled meeting with environmental groups for 2/23/17 to review environmental data and gap analysis. Additional meetings with environmental groups, the fishing and maritime communities, coastal communities, labor and other stakeholders being planned for March through July 2017.
	2016–2017	Publish the final Offshore Wind Master Plan, after completion of studies and no later than end of 2017.	Studies and stakeholder outreach have commenced.

Table 40. Offshore Wind Pre-Development Activities Initiative Results⁶⁶

Approval Date: May 23, 2016

Launch Date: December 12, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁶ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 41. Key Milestones for Offshore Wind Pre-Development Activities

Complete ✓	Time Frame	Milestone	Explanation of Progress
		Reports resulting from pre-development work validating New York State Offshore Wind resource and proposing potential additional wind energy areas for development.	Planning and stakeholder outreach started for procurement and deploying of a buoy for measuring wind, wave, and other data. Contractor hired to assist in developing measurement campaign. Additional planning started for environmental and other studies and surveys. Solicitation issued for offshore wind technical assistance in December 2016.
		Reports providing site-specific data needed to support detailed siting, design, and permitting of offshore wind project(s).	Planning and stakeholder outreach started for procurement and deploying of a buoy for measuring site-specific wind, wave and other data. Contractor hired to assist in developing measurement campaign. Additional planning started for site-specific environmental, sea floor, and other studies and surveys.

Table 42. REV Connect Initiative Results⁶⁷

Approval Date: May 23, 2016

Launch Date: August 9, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	-	-	\$0.50	-
Participants	Participants	-	-	-	-	-	*	-	*	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁷ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 43. Key Milestones for REV Connect

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	Q3 2016	Execute contract with partner to operate REV Connect.	REV Connect Contractor competitively selected. Contract executed.
	Q3 2016	Create information resources and summarize best practices.	Initial market research interviews completed and findings summarized. Draft information resources materials completed, reviewed, and under revision.
	Q4 2016	Launch initial REV Connect platform to allow submission of project ideas.	Content outline and site map developed for REV Connect web platform. Web development is ongoing.
	Q4 2016	Develop project evaluation criteria and process.	A draft project evaluation criteria and process is currently under review and will be finalized in Q1 2017.
	Q2 2017	Draft Innovation Plan completed.	

Table 44. Reducing Barriers to Deploying Distributed Energy Storage Initiative Results⁶⁸

Approval Date: August 17, 2016

Anticipated Launch Date: November 2016 issued Request for Proposals (RFP) seeking technical assistance contractors. Q1 2017 issue value stacking pilot competitive solicitation.

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	550	-	4,500	-
	MWh Lifetime	-	-	-	-	-	5,500	-	45,000	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	1	-	8	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	289	-	2,370	-
	Lifetime Tons	-	-	-	-	-	2,890	-	23,700	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.07	-	\$0.60	-
	Lifetime Dollars	-	-	-	-	-	\$0.73	-	\$5.99	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$3.40	-	\$7.30	-
Number of customers engaged (sites for developments)	Participants	-	-	-	-	-	15	-	120	-
Number of vendors engaged	Participants	-	-	-	-	-	8	-	45	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 45. Key Milestones for Reducing Barriers to Deploying Distributed Energy Storage

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Issue solicitation to competitively select technical consultants and organizations to assist with soft cost reduction strategies, quality assurance, and feasibility studies under value stacking pilots.	Solicitation released in November, 2016.
	2017	Lead acid, lithium-ion, and flow batteries are independently tested with results aggregated into first responder training materials for authorities having jurisdiction.	Battery burn and safety testing is underway.
	2017	Technical consultants or organizations to assist with soft cost reduction strategies, quality assurance, and feasibility studies are selected.	
	2017	Launch a competitive program funding value stacking pilots.	Engaging with distribution utilities and New York Independent System Operator (NYISO) to ensure coordination in value stacking pilots offering.
	2017	Expand scope of battery testing lab for additional chemistries to be tested.	
	2017	Model permitting guides are developed.	
	2017	Public platform is launched including use cases, system performance results, and fact sheets.	
	2017	Customers with deployed energy storage systems begin engaging for post installation quality assurance to validate savings.	
	2017	Safety testing is completed on additional emerging commercial chemistries.	
	2017	Market segmentation for NYSERDA customer acquisition activities supported under this investment plan expands to non-interval metered customers.	
	2017	Increasing numbers of customers seek information on storage solutions to mitigate their peak demand and electricity requirements, as determined through vendor interviews and the number of permits submitted to authorities having jurisdiction, surveyed at least annually.	
	2017	Increasing numbers of energy storage vendors are engaged in New York State, as surveyed at least annually.	
	2018	Safety testing is completed on additional emerging commercial chemistries.	
	2018	Model permitting guides are updated.	

Table 45 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Convincing use cases and best fit customer characteristics and acquisition tools are publicized.	
	2018	Pilots convert prospective installations into installed energy storage projects that are used to provide customer benefit and address electric system needs.	
	2019	Independent validation assesses the ability of aggregated customer-sited storage systems to provide locational relief to the distribution utility or NYISO when called upon.	
	2019	During the pilot period, NYSERDA direct support for specific projects is reduced annually as installed cost decreases, revenue opportunities are better quantified, and results of pilots increase performance confidence.	

Table 46. Electric Vehicles Rebate Initiative Results⁶⁹

Approval Date: August 17, 2016

Anticipated Launch Date: Q1 2017

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	58,500	-	1,430,000	-
	MMBtu Lifetime	-	-	-	-	-	585,000	-	14,300,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	3,140	-	76,730	-
	Lifetime Tons	-	-	-	-	-	31,400	-	767,300	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$42.0	-	\$1,026.0	-
Participants	Participants	-	-	-	-	-	900-1500	-	21150-37500	-

* Metric to be tracked and reported, though specific target was not ordered.

⁶⁹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 47. Key Milestones for Electric Vehicles Rebate

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	EV Rebate Program Launch.	Expected to launch Quarter 1, 2017

Table 48. 2030 Greenhouse Lighting and Systems Engineering (GLASE) Initiative Results⁷⁰

Approval Date: September 15, 2016

Anticipated Launch Date: January 1, 2017

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	3,470	3,470	3,470	100%	3,470	100%
	MWh Lifetime	-	-	-	34,700	34,700	34,700	100%	34,700	100%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,826	1,826	1,830	100%	1,830	100%
	Lifetime Tons	-	-	-	18,258	18,258	18,300	100%	18,300	100%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.29	\$0.29	\$0.29	101%	\$0.29	101%
	Lifetime Dollars	-	-	-	\$2.91	\$2.91	\$2.92	100%	\$2.92	100%
Private Investment (millions)	Dollars	-	-	-	-	-	\$9.46	-	\$9.46	-
Participants	Participants	-	-	-	-	-	-	-	25	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷⁰ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 49. Key Milestones for Greenhouse Lighting and Systems Engineering (GLASE)

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	Contract with core Consortium members.	Contract finalized and sent out for signature in January 2017.
	2016	Review and approve Scientific Advisory Panel structure.	Planning discussions underway.
	2017	Review and approve Consortium business plan to attain financial self-sustainability in 2023.	
	2018	Monitor small (6,000 square feet) pilot demonstration of a basic light and shade control system.	
	2018	Publish case study of demonstration.	
	2019	Monitor small (6,000 square feet) pilot demonstration of CO2 supplementation integrated with the light and shade control system.	
	2019	Monitor large (20,000 square feet) pilot demonstration of a basic light and shade control system.	
	2019	Publish case study of demonstrations.	
	2020	Monitor small (6,000 square feet) pilot demonstration of efficient LED lights integrated with the CO2 supplementation and light and shade control system.	
	2020	Monitor large (20,000 square feet) pilot demonstration of CO2 supplementation integrated with the light and shade control system.	
	2020	Publish case study of demonstrations.	
	2021	Monitor large (20,000 square feet) pilot demonstration of efficient LED lights integrated with the CO2 supplementation and light and shade control system.	
	2021	Publish case study of demonstration.	
	2021	Formal training offered to service providers.	

Table 50. RetrofitNY Initiative Results⁷¹

Approval Date: August 31, 2016

Anticipated Launch Date: March, 1 2017

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	187,000	-
	MWh Lifetime	-	-	-	-	-	*	-	3,740,000	-
	MMBtu Annual	-	-	-	-	-	*	-	3,350,000	-
	MMBtu Lifetime	-	-	-	-	-	*	-	67,100,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	290,000	-
	Lifetime Tons	-	-	-	-	-	*	-	5,800,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	\$56	-
	Lifetime Dollars	-	-	-	-	-	*	-	\$1,120	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	\$1,410	-
Participants	Participants	-	-	-	-	-	*	-	100,000	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷¹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 51. Key Milestones for RetrofitNY

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	Criteria to be met by technical solutions are defined.	Criteria have been drafted in collaboration with the organizations that compose the Advisory Committee: NYS Homes and Community Renewal, NY Power Authority, NYC Housing Preservation and Development, NYC Housing Development Corporation, NYC Housing Authority, Community Preservation Corporation, U.S. Department of Housing and Urban Development (HUD). Committee member organizations are in the process of validating these criteria internally.
	2017	Sufficient potential demand for deep energy retrofits is aggregated.	
	2017	Competitive solicitation for the first round of the design-build competition is released.	
	2018	One or more solutions are built and tested through the design-build competition.	
	2020	Solution(s) are adapted to additional building typologies.	
	2020	Financial products that are adapted to affordable housing entities' processes and are compatible with federal and state rules that apply to affordable housing are developed and made available.	
	2022	Retrofit solutions are integrated in the public housing authorities' and affordable housing regulators' preservation strategies.	
	2025	Retrofit solutions are cost effective and NYSERDA subsidies are no longer necessary.	
	2025	Building components and systems required for deep energy retrofits are readily available in the New York market.	
	2025	Financing solutions exists for building owners to purchase these solutions with minimal upfront cost.	
	2025	Solutions are implemented on non-Affordable Housing buildings without subsidy.	

Table 52. REVitalize Initiative Results⁷²

Approval Date: August 31, 2016

Anticipated Launch Date: Q1 2017

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	3,000	-
	MWh Lifetime	-	-	-	-	-	*	-	59,900	-
	MW	-	-	-	-	-	*	-	2.4	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	1,580	-
	Lifetime Tons	-	-	-	-	-	*	-	31,500	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	\$0.5	-
	Lifetime Dollars	-	-	-	-	-	*	-	\$9.5	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	\$5.9	-
Participants	Participants	-	-	-	-	-	*	-	5	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷² This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 53. Key Milestones for REVitalize

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	Issue a competitive solicitation seeking proposals for a community energy planning effort that benefits LMI communities and residents.	The solicitation is under development and will be issued in Q1 2017.
	2017	Selection of five communities to receive financial and technical support, contract development, and contract execution by Q2 2017.	
	2017	Commencement of community planning activities, development of community plan, testing of the toolkit.	
	2017	Community-scale clean energy project development and implementation started.	
	2017	NYSERDA receives feedback from community groups and on the toolkit.	
	2018	Completion of five community energy projects.	
	2019	NYSERDA refines toolkit and conducts technology transfer to communicate effective models of finance and ownership, as well as the toolkit.	

Table 54. Low- Income Forum on Energy Initiative Results⁷³

Approval Date: August 31, 2016

Launch Date: August 31, 2016

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Participants	Participants	37	276	313	-	313	748	42%	7,300	4%

⁷³ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 55. Key Milestones for Low- Income Forum on Energy

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	Issue a competitive solicitation for program support.	The solicitation is currently under development and will be issued during Q1 2017.
	2017	Implement a series of regional meetings across the state in Q2 of 2017.	
	2018	Implement a statewide conference in Q2 of 2018.	
	2019	Issue a competitive solicitation for program support or issue a contract extension for existing implementation services.	
	2019	Implement a series of regional meetings across the state in Q2 of 2019.	
	2020	Implement a statewide conference in Q2 of 2020.	
	2021	Implement a series of regional meetings across the state in Q2 of 2021.	
	2022	Issue a competitive solicitation for program support or issue a contract extension for existing implementation services.	
	2022	Implement a statewide conference in Q2 of 2022.	
	2023	Implement a series of regional meetings across the state in Q2 of 2023.	
	2024	Issue a competitive solicitation for program support or issue a contract extension for existing implementation services.	
	2024	Implement a statewide conference in Q2 of 2024.	

Table 56. Key Milestones for Healthy Homes Feasibility

Approval Date: August 31, 2016

Anticipated Launch Date: Q4 2016

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016	Complete feasibility study and make a determination on whether to continue with the pilot design and implementation phase.	The feasibility study is currently underway. Completion of the study is anticipated in Q1 2017.
	2016	Begin the pilot design phase, if NYSERDA and NYS agency partners decide to go forward.	Pending the completion of the feasibility study, the pilot design phase is anticipated during Q2 2017.
	2017	Pilot design is complete.	
	2017	Commencement of pilot activities.	
	2018	Preliminary determination of health benefits and healthcare cost savings.	
	2021	Dissemination of pilot results which may include peer-reviewed papers, presentations at conferences, and a white paper to share with potential long-term funders including Medicaid, HUD, Foundations, and others.	

Table 57. Industry Partnerships Initiative Results⁷⁴

Approval Date: September 15, 2016

Anticipated Launch Date: Solicitation to be issued January 2017

Market Development Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	90,300	-
	MWh Lifetime	-	-	-	-	-	*	-	722,000	-
	MMBtu Annual	-	-	-	-	-	*	-	598,000	-
	MMBtu Lifetime	-	-	-	-	-	*	-	4,780,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	79,200	-
	Lifetime Tons	-	-	-	-	-	*	-	634,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	\$15.3	-
	Lifetime Dollars	-	-	-	-	-	*	-	\$122	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	\$6.85	-
Participants	Participants	-	-	-	-	-	*	-	24	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷⁴ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 58. Key Milestones for Industry Partnerships

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Convene industry partners for building operation and maintenance.	Building operations and maintenance partners were convened.
	2016	Identify employer champions, those who will help NYSERDA to lead the initiative, for building operations and maintenance.	NYSERDA continues to work to identify industry champions who will help lead the initiative.
✓	2016	Identify common labor-related barriers and potential training interventions.	Barriers have been identified, such as the lack of hands-on or on-site training after classroom training. Potential interventions have been identified and are being tested with industry partners and the market.
	2016	Implement one to two business case demonstrations to show value of operations and maintenance training.	Planning is underway for the first business case demonstration, which is expected to start Q1 2017.
	2016	Begin to collect data from demonstration sites.	
	2016	Identify additional demonstrations (for a total of six business case demonstrations identified and implemented) for implementation in 2017.	Several opportunities for additional business case demonstrations are being investigated.
	2016	Identify additional areas (by sectors, industry or technology) to initiate industry partnership strategy to address workforce development and training needs to advance goals of CEF.	NYSERDA continues to consider potential industries or sectors that are ripe for partnership strategies. Those currently under consideration include large scale renewables, industrial technologies (specifically, compressed air), and geothermal.
	2016	Issue a solicitation to support the development of building operations and maintenance training initiatives that address skill gaps and facilitate career paths.	PON 3442 will be issued in January 2017.
	2017	Issue contracts resulting from the solicitation(s).	PON 3442, an open enrollment solicitation, will begin accepting applications in January 2017 and will continue through April 27, 2017 or while funds are available.

Table 58 continued

	2017	Revise and reissue solicitation, one to two additional times, if necessary based on results and findings from the solicitation issued in 2016.	
	2017	Data collected from demonstration sites to help demonstrate the business case for training.	
	2017	Case studies shared with industry.	
	2017	Templates available to illustrate models and training options.	
	2018	Data collection from all demonstrations completed.	
	2018	Execute any remaining contracts from 2017 solicitation, if applicable.	

4 Innovation & Research Initiative Specific Results

Table 59. Innovation & Research Initiative Budgets and Spending^{75, 76}

Initiative	Budget Approved as of December 31, 2016 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Market Characterization & Design Chapter	\$250,000	-	-	-	-	0%	\$250,000
Grid Modernization Chapter							
DER Interconnection	\$6,300,000	\$400,620	\$184,380		\$585,000	9%	\$5,715,000
High Performing Grid	\$110,500,000	-	-	-	-	0%	\$110,500,000
Grid Modernization Chapter Total	\$116,800,000	\$400,620	\$184,380	-	\$585,000	1%	\$116,215,000
Innovation Capacity and Business Development Chapter							
CleanTech Startup Growth	\$19,000,000	-	-	-	-	0%	\$19,000,000
Innovation Capacity and Business Development Chapter	\$19,000,000	-	-	-	-	0%	\$19,000,000
Building Innovation Chapter							
NextGen HVAC	\$15,000,000	-	\$10,000	\$50,000	\$60,000	0.4%	\$14,940,000
Building Innovation Chapter Total	\$15,000,000	-	\$10,000	\$50,000	\$60,000	0.4%	\$14,940,000
Clean Transportation Chapter							
Electric Vehicles	\$11,850,000	-	-	-	-	0%	\$11,850,000
Clean Transportation Chapter Total	\$11,850,000	-	-	-	-	0%	\$11,850,000
NYS Cost Recovery Fee	\$4,152,594	\$10,172	-	-	\$10,172	0.2%	\$4,142,422
Innovation and Research Chapter Total	\$167,052,594	\$410,792	\$194,380	\$50,000	\$655,172	0.4%	\$166,397,422

^a Funds approved by DPS as of December 31, 2016.

^b Invoices processed for payment by NYSERDA.

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

^d Planned funding for contracts awarded and under negotiation

^e The sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.

^f The percentage of the budget that has been committed.

^g The difference between Budget Approved Funds and Committed Funds.

⁷⁵ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

⁷⁶ NYSERDA has committed an additional \$13,500,000 to solicitations with upcoming due dates that are not included in the table above. When including these funds, NYSERDA has committed eight percent of the approved budget to date for the Innovation and Research Chapter. Committed benefits presented in this report do not include benefits associated with awards made as a result of these solicitations.

Table 60. Distributed Energy Resource Interconnection Initiative Results⁷⁷

Approval Date: May 23, 2016

Launch Date: October 20, 2016

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$3.35	-	\$5.83	-
Participants	Participants	-	-	-	-	-	3	-	13	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷⁷ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 61. Key Milestones for Distributed Energy Resource Interconnection

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	Q3 2016	Contract with a consultant to conduct a comprehensive analysis of technology gaps and create a roadmap for advancement of the technology and tools necessary to support an advanced, integrated, high-performing grid in New York.	Consulting contract established.
✓	Q3 2016	Contract with one or more research/consulting organizations to provide technical knowledge and support for DER interconnection improvements in New York.	Contracts in place with three research/consulting organizations.
✓	Q3 2016	Launch a competitive program funding opportunity focused on innovation to reduce DER interconnection burdens in New York State.	Competitive funding program launched in October 2016 and closed on November 28, 2016.
✓	Q3 2016	Implement a model for collaboration between NYSERDA, NYPA, DPS, NY utilities, and grid tech companies to ensure the Grid Modernization road mapping work is compatible with and complimentary to the development of DSIPs consistent with PSC rules.	Collaboration model framework established and launched in Q4 2016.
	Q1 2017	Contract with awardees selected under the funding opportunity focused on innovation to reduce DER interconnection burdens in New York State.	Funding opportunity has closed and proposals are being evaluated through NYSERDA's traditional investment evaluation process with awards anticipated in late Q1 2017.
	Q2 2017	Grid Modernization Roadmap complete.	

Table 62. High Performing Grid Initiative Results⁷⁸

Approval Date: May 23, 2016

Launch Date: September 16, 2016

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$3.95	-	\$84.25	-
Participants	Participants	-	-	-	-	-	6	-	64	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷⁸ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 63. Key Milestones for High Performing Grid

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Issue broad competitive solicitation #1 guided by utility Distributed System Implementation Plan (DSIP) baseline filings and completed stakeholder market research (e.g., demonstrations, product development, engineering analyses and studies) in technology, tools and methods aimed at dynamic management of the electric grid.	Program Opportunity Notice 3397 released in October 2016, with initial proposal due date of January 11, 2017.
	2017	Enter into contracts for projects awarded under the broad competitive solicitation #1.	
	2017	Identify near-term opportunities for applied research that are aligned with utility supplemental DSIPs and the NY Grid Modernization Roadmap.	
	2017	Issue targeted competitive solicitation #2 guided by utility supplemental DSIPs and the NY Grid Modernization Roadmap.	
	2017	Enter into contracts for projects awarded under the targeted competitive solicitation #2.	
	2018	Identify technology gaps necessary to support community grid operation based on completed NY Prize Stage 1 evaluations.	
	2018	Issue broad competitive solicitation #3.	
	2018	Enter into contracts for projects awarded under the broad competitive solicitation #3.	
	2018	Issue targeted competitive solicitation #4.	
	2019	Enter into contracts for projects awarded under the targeted competitive solicitation #4.	
	2019	Issue broad competitive solicitation #5.	
	2019	Enter into contracts for projects awarded under the broad competitive solicitation #5.	
	2020	Issue targeted competitive solicitation #6.	
	2020	Enter into contracts for projects awarded under the targeted competitive solicitation #6.	
	2020	Issue broad competitive solicitation #7.	
	2021	Enter into contracts for projects awarded under the broad competitive solicitation #7.	
	2021	Issue targeted competitive solicitation #8.	

Table 63 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Enter into contracts for projects awarded under the targeted competitive solicitation #8.	
	2021	Issue broad competitive solicitation #9.	
	2022	Enter into contracts for projects awarded under the broad competitive solicitation #9.	

Table 64. Cleantech Startup Growth Initiative Results⁷⁹

Approval Date: May 23, 2016

Launch Date: October 12, 2016

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$75.0	-	\$225	-
Participants	Participants	-	-	-	-	-	32	-	191	-

* Metric to be tracked and reported, though specific target was not ordered.

⁷⁹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 65. Key Milestones for Cleantech Startup Growth Incubators

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	First competitive solicitation launched.	Solicitation released in October 2016 with due dates in December 2016 and October 2017. Scoring Committee to be held in January 2017.
	2017	Awards from first solicitation are contracted.	
✓	2017	Second competitive solicitation launched.	Announced as part of the first round.
	Starting 2017	Networking Event held.	
	Starting 2017	Entrepreneur Bootcamp held.	
	2018	Awards from second solicitation are contracted.	

Table 66. Key Milestones for Cleantech Startup Growth Ignition Grants

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Formal Voice of Customer exercise is completed.	Customer Discovery/Market Validation exercise has been initiated.
	2017	Solicitation launched.	Solicitation is currently under development. Expected release date is late summer 2017.
	2017	Establish Investment Committee.	
	Starting 2017	Investment Committee Meetings held.	
	Starting 2017	Launch Ignition Grants solicitation and issue awards on ongoing basis.	Solicitation is currently under development. Expected release date is late summer 2017.

Table 67. Key Milestones for Cleantech Startup Growth Geographic Coverage

Complete	Time Frame	Milestone	Explanation of Progress
✓	2016	Competitive solicitation launched.	Solicitation released in October 2016 with due dates in December 2016 and October 2017.
	2017	Awards from solicitation are contracted (~6 months following solicitation due date).	
	2017	Inventory of Entrepreneurial Assets in Southern Tier is completed.	
	2017	Establish Entrepreneurship Training Programs.	
✓	Starting 2017	Networking Events held.	Ongoing networking events have already been held and more are planned for future dates.

Table 68. NextGen HVAC Initiative Results⁸⁰

Approval Date: August 17, 2016

Anticipated Launch Date: Request for Information (RFI) to be released January 2017

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2017)	% of Cumulative Current Target (2017)	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$20.0	-	\$75.0	-
Participants	Participants	-	-	-	-	-	5	-	25	-

* Metric to be tracked and reported, though specific target was not ordered.

⁸⁰ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 69. Key Milestones for NextGen HVAC

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Issue RFI, evaluate and establish technology challenge areas and targets.	RFI issued January 13, 2017, Informational Webinar scheduled for February 2017.
	2016	Issue 1st Technology Challenge.	Challenge under development and expected to be issued Q1 2017.
	2017	Contract projects from 1st Technology Challenge.	
	2017	Review portfolio of activities, solicit market input and reassess technology challenges areas and targets.	
	2017	Issue 2nd Technology Challenge.	
	2018	Contract projects from 2nd Technology Challenge.	
	2018	Review portfolio of activities, benefits to date, solicit market input and reassess technology challenges areas and targets.	
	2018	Issue 3rd Technology Challenge.	
	2019	Contract projects from 3rd Technology Challenge.	

Table 70. Electric Vehicles Innovation Initiative Results⁸¹

Approval Date: August 17, 2016

Anticipated Launch Date: Solicitation to be released Q1, 2017

Innovation & Research Initiative Specific Results	Units	Completed Projects through September 30, 2016 with Adjustments	Completed Projects through 10/1/16-12/31/16	Total Completed Projects through December 31, 2016	Current Pipeline Through December 31, 2016 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target (2016)	% of Cumulative Current Target (2016)	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	*	-	*	-
	Annual Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	*	-	*	-
	Dollars	-	-	-	-	-	\$0.2	-	\$31.7	-
Participants	Participants	-	-	-	-	-	2	-	33	-

* Metric to be tracked and reported, though specific target was not ordered.

⁸¹ This report reflects direct benefits from programs. Indirect benefits are not reflected in this report because it will take time for the benefits to be realized.

Table 71. Key Milestones for Electric Vehicles Innovation

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Support the launch of new business offerings for charging station leasing.	Initial development underway.
	2017	Issue first competitive solicitation for the development and demonstration of EV-enabling technologies.	Initial development underway.
	2017	Contract with projects awarded in first competitive solicitation for the development and demonstration of EV-enabling technologies.	
	2017	Initiate aggregation pilots for EVs and EV charging stations, which will begin engaging customers and facilitating initial bulk purchases.	Initial development underway.
	2018	Complete bench-scale prototypes of economically viable technologies that enable smart charging.	
	2018	Issue second competitive solicitation for the development and demonstration of EV-enabling technologies.	
	2018	Contract with projects awarded in second competitive solicitation for the development and demonstration of EV-enabling technologies.	
	2018	Contract with projects awarded in third competitive solicitation for the development and demonstration of EV-enabling technologies.	
	2018	Fast-charging station network expanded to 30 locations statewide along major interstate corridors.	
	2018	Completion of first collaborative consumer awareness activities.	Consumer awareness activities underway.
	2019	Issue third competitive solicitation for the development and demonstration of EV-enabling technologies.	

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA professionals work to protect the environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York State since 1975.

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